RICOH

RICOH InfoPrint Manager™

Reference

Version 4.15.0

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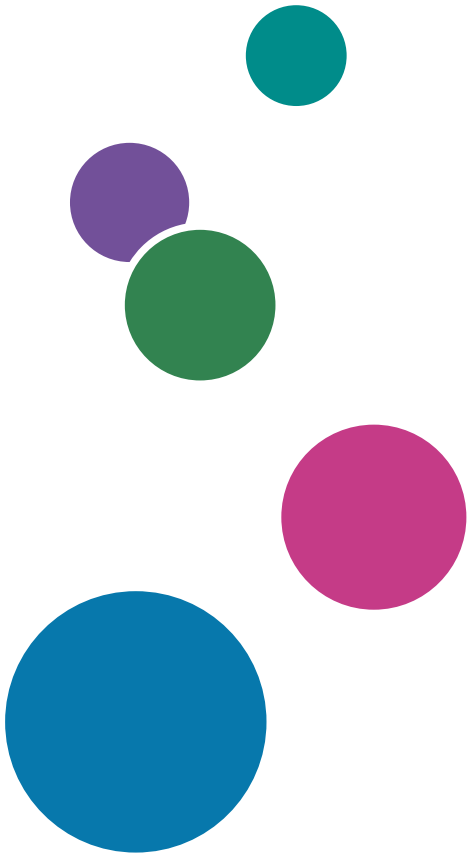
For information not in this manual, refer to the Help System in your product.



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Introduction

Important

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Make sure that you always copy or have backups of important documents or data. Documents or data might be erased due to your operational errors or malfunctions of the software. Also, you are responsible for taking protective measures against computer viruses, worms, and other harmful software.

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- Throughout this publication, references to directory paths indicate the default paths only. If you install RICOH InfoPrint Manager™ or any of its components in a different location, including a different drive, you must adjust the paths accordingly.
  For example, if you install InfoPrint Manager on the `D:` drive of a computer running a Windows® operating system, replace `C:` with `D:` in the directory paths.

Guides for this application

This publication provides information about RICOH InfoPrint Manager™ for AIX, Linux, and Windows, Version 4.15 (Program Number 5648-F40).

This publication includes an overview of InfoPrint Manager and installation and configuration information about the product.

Instruction manuals

These instruction manuals are included:

For information about InfoPrint Manager, see these documents:

- *RICOH InfoPrint Manager for Windows: Planning Guide*, G550-1071
- *RICOH InfoPrint Manager for Windows: Getting Started*, G550-1072
- *RICOH InfoPrint Manager for Windows: Procedures*, G550-1073
- *RICOH InfoPrint Manager for Linux: Planning Guide*, G550-20262
- *RICOH InfoPrint Manager for Linux: Getting Started*, G550-20263
- *RICOH InfoPrint Manager for Linux: Procedures*, G550-20264
- *RICOH InfoPrint Manager for AIX and Linux: Configuring and Tuning Guide*, S550-1062

- *RICOH InfoPrint Manager for AIX: Planning Guide*, G550-1060
- *RICOH InfoPrint Manager for AIX: Getting Started*, G550-1061
- *RICOH InfoPrint Manager for AIX: Procedures*, G550-1066
- *RICOH InfoPrint Manager: High Availability Guidelines*, G550-20261
- *RICOH InfoPrint Manager: Reference*, S550-1052
- *RICOH InfoPrint Manager: PSF, Server, and Transform Messages*, G550-1053
- *RICOH InfoPrint Manager: Secure Print: Installing and Configuring*, G550-20129
- *RICOH InfoPrint Manager: SAP Planning and Configuring Guide*, S550-1051
- *RICOH InfoPrint Manager: Dictionary of Keywords*, S550-1188
- *AFP Conversion and Indexing Facility: User's Guide*, G550-1342
- *Page Printer Formatting Aid for Windows: User's Guide and Reference*, S550-0801
- *RICOH InfoPrint Manager AFP2PDF Transform Feature: Installing and Using*, G550-1057
- *RICOH InfoPrint Manager: Installing InfoPrint Manager Transform Feature*, G550-20160

Help

Property help is available on many screens to provide information for specific tasks and settings.

In addition, the **Help** menu provides access to the HTML version of the instruction manual directly from the user interface.

Note

- A PDF reader, such as Adobe® Acrobat® Reader®, must be installed to view the PDF documentation.

For more information about RICOH printing products, see:

RICOH Commercial and Industrial Printing website at https://www.ricoh-usa.com/en/products/commercial-industrial-printing.

RICOH Software Information Center at https://help.ricohsoftware.com/swinfocenter.

How to read the documentation

Displaying the instruction manual

Use this procedure to view the instruction manuals.

Displaying the instruction manual in PDF format

- InfoPrint Manager includes publications in PDF format on the DVD-ROM supplied with the product.

Displaying the instruction manual in HTML format

- The HTML version of the instruction manual is available directly from the user interface. Start the application, and then click button at the right of the banner and select **Help**.

Displaying property help

Click the ? button next to a property on the user interface to display the property help for that item.

Symbols

The following symbols are used in this manual to help you to identify content quickly.

Important

- This symbol indicates points to pay attention to when using the product. Be sure to read these explanations.

Note

- This symbol indicates helpful supplementary information that is not essential to completing a task.

Bold

Bold type indicates the names of dialogs, menus, menu items, settings, field labels, buttons, and keys.

Italic

Italic type indicates the titles of manuals and variables that you must replace with your own information.

`Monospace`

`Monospace type` indicates computer input and output.

Abbreviations

ACIF

AFP Conversion and Indexing Facility

AFP

Advanced Function Presentation

AIX®

Advanced Interactive Executive

ANSI®

American National Standards Institute

ASCII

American Standard Code for Information Interchange

BCOCA

Bar Code Object Content Architecture

CCSID

coded character set identifier

CMR

color management resource

EBCDIC

Extended Binary Coded Decimal Interchange Code

FOCA

Font Object Content Architecture

GIF

Graphical Interchange Format

GOCA

Graphics Object Content Architecture

IOCA

Image Object Content Architecture

IP

Internet Protocol

IPDS

Intelligent Printer Data Stream

JCL

job control language

JES

Job Entry Subsystem

JPEG

Joint Photographic Experts Group

MO:DCA

Mixed Object Document Content Architecture

MO:DCA-P

Mixed Object Document Content Architecture for Presentation

MVS™

Multiple Virtual Storage

PCL

Printer Command Language

PDF

Portable Document Format

PTOCA

Presentation Text Object Content Architecture

RAT

resource access table

TIFF

Tagged Image File Format

XML

Extensible Markup Language

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About this publication

This publication describes the InfoPrint Manager:

- Commands
- Flags used with AIX or Linux print commands
- Administrative utilities
- Daemon utilities
- Transform commands
- Object attributes
- Environment variables
- Notification events and event classes

This publication is intended for the person responsible for installing, customizing, operating, or administrating InfoPrint Manager.

About the documentation for InfoPrint Manager

InfoPrint Manager provides these types of documentation:

- InfoPrint Manager library in portable document format (PDF) or hard copy
- Online InfoPrint Manager documentation in the RICOH Software Information Center
- Online help for the InfoPrint Manager interfaces and features:
  - InfoPrint Manager Administration GUI, InfoPrint Manager Operations GUI, InfoPrint Manager Web Administration Interface, and InfoPrint Manager Web Management Interface
  - InfoPrint Manager Management Console (Windows only)
  - InfoPrint Manager Management Interface (Linux only)
  - InfoPrint Printing System SMIT interface (AIX only)
  - InfoPrint Select and InfoPrint Submit Express
- Manual (man) pages (AIX or Linux)
- InfoPrint Manager online message catalog
- **readme** files

Manual (man) pages for InfoPrint Manager commands, utilities, and transforms

Online information, in manual (man) page format, is available for all InfoPrint Manager commands and utilities. You can use the AIX or Linux `man` command to view man pages for these InfoPrint Manager commands:

- **acif**
- **dpfcmd**
- **listconv**

- **lprafp**
- **mkfntmap**
- **pdaccount**
- **pdclean**
- **pdcreate**
- **pddelete**
- **pddeviceop**
- **pddisable**
- **pdenable**
- **pdls**
- **pdmod**
- **pdpause**
- **pdpr**
- **pdpromote**
- **pdq**
- **pdreorder**
- **pdresubmit**
- **pdresume**
- **pdrm**
- **pdsap**
- **pdset**
- **pdshutdown**
- **pdspace**
- **psfstat** (AIX only)
- **uconv**

For example, to view online information for the `pdpr` command, enter:

```
man pdpr
```

You can use the AIX `man` command to view this man page for the `-o` flag, which is used to pass information to InfoPrint Manager on AIX print commands:

oflag

You can use the AIX or Linux `man` command to view man pages for these InfoPrint Manager utilities:

- **afpsplit**
- **ainupod1**
- **ainupod2**
- **ainupod3**
- **ainurpt1**
- **ainurpt2**
- **ainurpt3**
- **ainurpt4**
- **ainurpt5**

- **ainurpt6**
- **ainurpt7**
- **ainurpt8**
- **ainurpt9**
- **allocatefs**
- **cmt**
- **ipguiadv**
- **ipguiadvadm**
- **ipguibasic**
- **ipguibasicadm**
- **ipmupdateserver** (Linux only)
- **ipmupdateserverctl** (Linux only)
- **ismu**
- **pdcrdflt**
- **pdcrmed**
- **pdinitports**
- **pdlicmgm**
- **pdmigpp**
- **pdmsg**
- **pdwsinitports**
- **rc.iprsap**
- **rc.pd**
- **setup**
- **start_server**
- **startppo**
- **startsrv**
- **stop_server**

You can use the AIX or Linux **man** command to view man pages for these InfoPrint Manager daemon utilities:

- **agspdld**
- **apped**
- **mvsprsd**
- **pcl2afpd**
- **ps2afpd**
- **startcbd**
- **startippgw**
- **startlpd**
- **startnotd**
- **stopcbd**
- **stopippgw**
- **stoplpd**
- **stopnotd**

You can use the AIX or Linux `man` command to view man pages for these InfoPrint Manager transform commands:

- **afp2pdf**
- **db2afp**
- **d2afp**
- **gif2afp**
- **img2afp**
- **jpeg2afp**
- **line2afp**
- **pcl2afp**
- **pdf2afp**
- **ps2afp**
- **sap2afp**
- **tiff2afp**
- **xml2afp**
- **xml2pdf**

For information about the flags that you can use with the `man` command, see the `man` man page or the AIX or Linux *Commands Reference*.

Note

The syntax representation for the commands, utilities, and transforms has been changed to graphic notation. However, only new manpages and manpages with technical changes are updated.

Manual (man) pages for InfoPrint Manager attributes

The Manual Pages for InfoPrint Manager Attributes are no longer being revised. For the most current information about InfoPrint Manager Attributes, see InfoPrint Manager object attributes, p. 511 in this manual.

InfoPrint Manager online message catalog

InfoPrint Manager supplies a message catalog for the messages that are issued during its operation. For each message, the message catalog includes the text of the message, an explanation, a system action, and a response. You can view all information for a specific InfoPrint Manager error message by issuing the InfoPrint Manager **pdmsg** or **psfmsg** utility followed by the message number.

For example, from the command line enter:

```
pdmsg 5010-096
```

Messages issued by InfoPrint Manager have these prefixes:

- **0420**
- **0421**
- **0422**
- **0423**
- **0424**

- **0425**
- **0426**
- **0427**
- **0428**
- **0429**
- **5010**

See the InfoPrint Manager **pdmsg** man page for a complete description of the **pdmsg** utility.

To view information about an AIX or Linux message, enter the AIX or Linux **info** command with the **-h** flag, followed by the message number. For example, from the command line enter:

```
info -h MessageNumber
```

where *MessageNumber* is the number of the AIX or Linux message.

readme files

The **readme** files on the InfoPrint Manager DVD-ROMs contain information about the contents of the DVD-ROM. However, only seven of the DVD-ROMs shipped with InfoPrint Manager contain readme files. Last-minute information about InfoPrint Manager that the publications and online information do not contain can be found on the Ricoh website in the Release Notes for the operating systems. To view the contents of the **readme** files, you can use the AIX or Linux **more** command or a text editor, such as **vi** on AIX or Linux, or Notepad on Windows.

Viewing PDF publications on an AIX, Linux, or Windows system

InfoPrint Manager provides software publications in PDF files on the publications DVD-ROM. You can also go to the RICOH Software Information Center at https://help.ricohsoftware.com/swinfocenter to download the software publications of InfoPrint Manager for AIX, InfoPrint Manager for Linux, or InfoPrint Manager for Windows.

To view or print the publications on the DVD-ROMs:

1. Log in to AIX as `root` or as a member of the `system` group. For Linux, log in as `root` or as a member of the `sys` group.
2. Insert the InfoPrint Manager publications DVD-ROM into the drive.
3. If your AIX or Linux server or Windows system has an internet browser, such as Mozilla Firefox, select the **setup.html** file in the appropriate language directory and click the descriptions to view the appropriate PDF file.

   For example, if you use English, access the **/cdrom/pubs/setup.html** file.
4. To use the Adobe Acrobat Viewer, enter:

```
cd /usr/lpp/Acrobat3/bin
./acroexch
```

   Click `Help` to learn how to view or print a publication.
5. If you have installed the Adobe Acrobat Viewer on Windows, you can print or view the InfoPrint Manager PDF publications from your Windows system. On Windows, the publications directory is called `d:pubslanguage`, where `d:` is the identifier of your DVD-ROM drive and `language` is the appropriate language for the books.

Conventions used in this publication

This publication uses conventions for:

- Highlighting
- InfoPrint Manager command notation

Note

In the Windows examples, *`install_path`* assumes that when you specify the install path, you include the drive associated with the install path.

Highlighting

This publication uses four different types of highlighting:

Bold

In this publication, bold highlighting identifies commands, attributes, files, directories, and other items whose names the system predefines, such as **pdpr** and **notification-profile**.

Italic

When used in running text, italic highlighting identifies a variable item whose actual name or value you supply, such as *AttributesFileName* or *Notification*. Italics also identify publication titles.

Bold *Italic*

When enclosed in double quotation marks, combined bold and italic highlighting identifies a specific attribute name that you enter exactly as shown and a variable value that you supply with the attribute. For example: **"copy-count=***number***"**

`Monospace`

When used in command examples, information in a monospaced font identifies the exact wording of the command.

InfoPrint Manager command notation

Command syntax notation uses symbols to show specific conditions. Do not enter the following symbols, unless specifically instructed to do so, when actually issuing an InfoPrint Manager command:

Bar

|

Braces

{ }

Note

There are some situations in which you will actually type the brace characters.

Brackets

[ ]

Underlining

–

Ellipsis

...

These symbols have the following meanings when used in the publications and in the online information:

- A vertical bar, |, between values means that you can only enter one of the values with the command. For example:
  job-hold:= {**true** | **false**}

  means that when you set the job-hold attribute, you can specify either true or false, but not both.
- Braces, { }, around values identify required items that you must supply with the command. For example:
  job-hold:= {**true** | **false**}

  means that you must enter either **true** or **false**.
- Brackets, [ ], around values indicate that they are optional. For example:
  resource-context=*directory*[**:***directory*...]

  means that you do not have to enter more than one directory, but that you can have two or more directories, each separated by a colon, **:** .
- An ellipsis, ... , means that you can supply more than one occurrence of a keyword or value with the command. For example:
  resource-context=*directory*[**:***directory*...]

  means that you can enter more than directory name.
- Underlined text identifies the default fixed value that InfoPrint Manager uses if you do not specify a value. For example:
  default-printer-resolution={**240** | **300** | **480** | **600**}

  means that **240** is the default value.

Special characters that are included in commands

When colons, dashes, the equals sign, double quotation marks, single quotation marks, and braces are shown in command syntax notation, you will include them when you issue the command in most cases. These special characters have the following meanings:

- A colon, **:**, separates related values. For example:
  `pdpr -f file1 -x "page-select=3:6" file2`

  means that only pages 3 through 6 of file 2 are to print.
- A dash, **-**, always precedes a flag, for example, **-x**.
- The equals sign, **=**, separates attribute and value pairs. For example:
  `pdmod -x "sides=2" DivSpool12:1011230045`

  means that **2** is the value assigned to the **sides** attribute.
- Double quotation marks, " ", surround multiple attribute and value pairs, such as:
  `-x "sides=2 print-quality=draft"`

For consistency, this publication also shows double quotation marks around single attribute and value pairs in all command examples, although they are not required. For example:

```
-x "document-format=ascii"
```

- Double quotation marks, **" "**, surround text strings that contain spaces, such as:
  `-m "Down for maintenance"`
- Single quotation marks, **''**, surround a text string that contains spaces inside another string that is enclosed in double quotation marks. An example is:
  `-x "sides=2 job-print-after='08:00:00 10/09/98'"`
- Braces, **{}**, surround a value in a notification profile. An example is:
  `-x "notification-profile={delivery-method=electronic-mail}"`

Important

- **Global character used in examples and shell information**
  - The examples using a global character and other examples shown within the InfoPrint Manager publications relate to the Korn shell. Depending on the shell you are using, the examples shown may or may not work. The examples might also show control characters that other shells do not require. Adjust the examples as necessary for the shell you are using.
- **Examples of commands and attributes**
  - This publication shows examples of commands in a format designed for ease of reading. When entering the command, allow the command to wrap characters from one line to the next.
  - Many examples in this publication use spacing of attributes and values for ease of reading and formatting considerations. When entering the attributes and their values on the command line or in attributes files, use the correct syntax.

1. Overview

- **Objects**
- **Commands**

InfoPrint Manager concepts are important to understand.

This section introduces the InfoPrint Manager concepts, and it also includes the Reference table for path names, p. 52.

Objects

InfoPrint Manager performs the management and printing or transmission of jobs by using **InfoPrint Manager objects**.

Object classes

The next table lists the object classes that InfoPrint Manager supports. The destination class is subdivided into logical and actual destinations.

InfoPrint Manager objects

Object Name	Purpose
Auxiliary sheet	Represents a sheet of paper, blank or otherwise, that precedes a job, separates copies in a job, or follows a job; or a user exit program that produces output that can be printed on an auxiliary sheet or logged.
Default document	Represents default attribute values for a document in a job. Also called *initial value document*.
Default job	Represents default attribute values for a job. Also called *initial value job*.
Destination (actual)	Represents the output device that InfoPrint Manager uses to print or send the job. It is not the actual output device. It is a software representation of the features and capabilities of the printer, or of an electronic mailing system. A *physical printer* is an actual destination that represents a printer device. An *email destination* represents an electronic mailing system.
Destination (logical)	Represents an abstract entity to which users submit jobs for printing or transmission. The logical destination provides restrictions and defaults for the job. It also verifies that associated actual destinations capable of handling the jobs exist. Once the logical destination verifies the job, InfoPrint Manager sends it to an associated queue, from which it is routed to an actual destination. The term *logical printer* is used for logical destinations that route jobs to physical printers.
Document	Represents a grouping of data in a job: either a printable file or a resource that is not printable by itself, for example, a font.

Object Name	Purpose
Job	Represents one or more documents submitted together in one request.
Log	Represents a collection of messages or message segments added to a file for data collection purposes. InfoPrint Manager uses two types of logs: error and trace.
Medium	Represents the physical material on which a job prints.
Queue	Manages a collection of jobs that are waiting to be printed or sent and jobs that have been retained after processing. A queue receives jobs from one or more logical destinations and schedules and sends the jobs to actual destinations.
Resource context	Contains directory path information that is used to locate resources needed for processing a job. Resources include fonts, overlays, form definitions, page segments, and page definitions.
Server	Manages and controls the validation, routing, notification, logging, scheduling, and printing or transmission of jobs. The server applies specified defaults to jobs, validates that the destinations on the network can process the jobs, schedules jobs from queues to actual destinations, directs jobs to the actual destination, reports errors, and reports job status.
Transform	Indicates how specific document formats sent to an associated actual destination are to be transformed before printing or storing.

Object name restrictions

These restrictions apply to naming InfoPrint Manager objects:

- You can specify object names up to 255 characters, except for the names of PSF physical printers, and email destinations, which you must limit to 64 characters or less.
- Characters allowed in object names include uppercase A through Z, lowercase a through z, digits 0 through 9, and the special characters hyphen or dash, - , period, . , and underscore, _ .

  Note

  – Do not start an object name with a hyphen.
  – Do not start or end an object name with a period.
- Names for servers used with SAP systems should be restricted to nine characters.
- On Windows systems, object names must be unique and case-insensitive (“object name” is the same as “OBJECT NAME”).

Object attributes

This section has been moved to InfoPrint Manager object attributes, p. 511 as Introducing object attributes, p. 514.

Commands

InfoPrint Manager commands act on objects. They create, modify, and delete objects, and can also return status and other information about the InfoPrint Manager objects.

Flags, command attributes, and arguments

The basic InfoPrint Manager command syntax is:

command [*-flag* ...] [*argument* ...]

The *argument* targets the specific object on which the InfoPrint Manager command operates. Most commands must include an *argument*. All commands can include one or more of:

Flags

Flags consist of a dash, -, followed by a single character. Flags either substitute for command or object attributes or modify the way InfoPrint Manager processes a command. For example, you can use the **-c** flag instead of the **class** command attribute. Some flags have values associated with them.

Use the **-x** and the **-X** flags to enter command attributes or object attributes on the command line or to read in a file containing those attributes at a specific point in the command.

Command attributes

Use command attributes to modify the action of the command and to define the object class on which the command operates. Most of the command attributes have an associated command flag that causes the same action. You cannot use a command flag in an attributes file. You can use the command attribute in an attributes file or on the command line using the **-X** flag or the **-x** flag respectively.

When you enter an attribute and value pair, you must specify the attribute followed by the equals sign, =, followed by the value; do not include spaces between these three items unless you enclose the items in quotation marks. For example, InfoPrint Manager accepts both the *class=destination* and "*class = destination*" formats.

You must begin and end a string of multiple attribute-value pairs with double quotation marks, for example:

```
pdls -x "class=job requested-attributes=current-job-state" 10
```

Object attributes

Use object attributes to apply attribute values to the specified argument. You can use the object attribute in an attributes file or on the command line using the **-X** flag or the **-x** flag respectively.

When you enter an attribute and value pair, you must specify the attribute followed by the equals sign, =, followed by the value.

You must begin and end a string of multiple attribute-value pairs with double quotation marks, for example:

```
pdpr -x "document-format=ascii sides=2 plex=simplex" File1
```

Arguments

The argument specified in a command is the name of the object the command acts on. For servers, the argument is the name of the server. Servers contain all other objects. For some objects, you must specify the name of its server in the form *ServerName:ObjectName*. For other objects, the server name is optional. You must look at each command to determine the exact format allowed.

If you specify multiple arguments in one command, they must belong to the same object class.

Command output: headings and style

Some commands let you specify whether you want the output displayed in line style, column style, or document column style, and whether you want the output displayed with or without headings. Document column (**doccol**) style is a variant of column style used only for jobs. It is like column style except that the attributes for the first document in the job are displayed on the same line as the job attributes, rather than on a separate line as in column style.

These examples show the same information (the **current-job-state** and **destination-name-requested** attributes for a job, plus the **document-format** and **copy-count** attributes for the first document in the job) in the six possible combinations of headings and style:

- Line style, with headings:

```
jw-srv:0524600000: current-job-state          = held
jw-srv:0524600000: destination-name-requested = jw-lp1
jw-srv:0524600000.1: document-format          = ascii
jw-srv:0524600000.1: copy-count               = 1
```

- Line style, without headings:

```
current-job-state          = held
destination-name-requested = jw-lp1
document-format            = ascii
copy-count                 = 1
```

- Column style, with headings:

```
Current    Destination
State      Requested
-------    -----------
held       jw-lp1


Format  Copies
------  ------
ascii   1
```

- Column style, without headings:

```
held  jw-lp1

ascii  1
```

- Document column style, with headings:

```
Current  Destination
State    Requested    Format  Copies
-------  -----------  ------  ------
held     jw-lp1       ascii   1
```

- Document column style, without headings:

```
held  jw-lp1  ascii  1
```


Tips for using commands

Understanding these topics can make using and entering commands easier.

Wildcards

You can use the global character, an asterisk, * , to simplify broadcasting commands to all servers. For example, `STU*:` sends the command to all servers whose names begin with the letters STU. When the global character is present in the *ServerName*, InfoPrint Manager sends the command to each of the servers that match the specified criterion.

Depending on the shell you are using, you might need to enter control characters to keep the shell from interpreting the asterisk, *, before InfoPrint Manager has a chance to operate on it.

Abbreviations

This publication shows attribute names and values in their complete form. Often, you can abbreviate attribute names and values by using the first letter of each word in the name or value. For example, you can use the abbreviation **s-m-s** for the **start-message-supported** attribute, **t** for the **true** value, and specify the attribute and value pair as **s-m-s=t**.

However, sometimes specifying only the first letter in each word is ambiguous, as for the attributes **job-owner** and **job-originator**. Here, specify enough of the name so that it is unique, as in **j-ow** and **j-or**. If the values are ambiguous, InfoPrint Manager rejects the command and issues an error message. Use abbreviated attribute names and values as appropriate.

Attributes file

You might want to predefine specific attribute and value pairs in permanent files and access them when you need those specific values in a command. These files can contain command attributes, object attributes, or both.

Creating an attributes file

You should consider these things when creating an attributes file:

- You can list command attributes and any initially settable or resettable object attributes in an attributes file, including the command attribute **attributes**. Thus, an attributes file can invoke other attributes files.

Note

If an attributes file calls itself, InfoPrint Manager issues an error.

- You can only use a file that contains initially settable attributes with the **pdcreate** or **pdpr** commands. If you include an initially settable attribute in an attributes file and use the file with the **pdset** or **pdmod** commands, InfoPrint Manager rejects the attribute and issues an error message.
- Attributes files must not contain any attributes without values.
- If you are using the Attributes file as an input file for the **pdpr** command with the **-Z** flag, all flags and values associated with the **-Z** flag must be entered on a separate line. For example,

```
-d destination-ld
-t testjob
myfile.afp
```

- When creating an attributes file, consider spelling out the complete attribute names and attribute values rather than using abbreviations.
- You can use spaces between the attribute name and the equals sign to align the equals sign and values. This makes your files easier to read and maintain.
- You can use comment lines in attributes files. The comment starts with a number sign, #, and ends at the end of line.

  For example, an attributes file used to set two-sided printing and to request a specific printer model contains these lines:

```
# These are my document attributes
sides = 2
destination-models-requested = 4019  # 4019 printer only
```

Note

You can include a number sign, #, as part of an attribute value if you precede it immediately with a backslash, \#.

Using an attributes file

InfoPrint Manager provides both a command attribute and a flag to read an attributes file into a command.

Command attribute

-x "attributes=*AttributesFileName***"**

You use the **-x** flag to specify the command attribute **attributes**. This attribute designates and causes InfoPrint Manager to read and use an attributes file, which contains attribute and value pairs (one or more per line), at the current point in the command. Specifying this attribute is equivalent to using the **-X** flag.

Flag

-X *AttributesFileName*

This causes InfoPrint Manager to read and use the designated attributes file containing attribute and value pairs at the current point in the command.

These two examples are equivalent:

```
pdset -X AttrFileAD1.X Serv2-pp
```

```
pdset -x "attributes=AttrFileAD1.X" Serv2-pp
```

Using the command attribute **attributes** or the **-X** flag to designate and read an attributes file has the same effect as specifying multiple attribute and value pairs using the **-x** flag. These attributes require the same syntax as those used with the **-x** flag. For example, both of the previous examples reference this attributes file:

```
# Actual Destination Attributes File
# AttrFileAD1.X
document-formats-supported =ascii ditroff modca-p
maximum-copies-supported   =3
document-types-supported   =printable overlay page-segment
printer-memory             =32
```

It is equivalent to this command:

```
pdset -x "document-formats-supported=ascii ditroff modca-p
   maximum-copies-supported=3 document-types-supported=printable
   overlay page-segment printer-memory=32" Serv2-pp
```

The **-X** and **-x** flags are additive so that InfoPrint Manager uses all attributes and values. If you specify the same object attribute more than once in a command with multiple uses of the **-x** and **-X** command flags or the **attributes** command attribute, or a combination of them, the value read last takes precedence.

Locating an Attributes file for InfoPrint Manager for AIX or InfoPrint Manager for Linux

If you do not specify a full path name for the attributes file, InfoPrint Manager uses the path name from the environment variable **PDPATH** to locate the attributes file. If you do not define **PDPATH** or it contains a null string, InfoPrint Manager looks in your current working directory for the attributes file.

For example, if **PDPATH** contained **/usr/smith** this command:

```
pdpr -X my_attributes.X File1
```

would read the file **/usr/smith/my_attributes.X** to obtain the attribute and values.

Note

For InfoPrint Manager for Windows, you must specify the full path.

Administrative utilities

InfoPrint Manager administrative utilities perform such tasks as setting up a minimum InfoPrint Manager configuration, starting servers, and displaying information about InfoPrint Manager messages.

Daemon utilities for InfoPrint Manager for AIX or InfoPrint Manager for Linux

InfoPrint Manager has some special utilities for starting daemons. Daemons are often called by the same name as the utility that starts them. For example, the daemon that receives data from Download for z/OS is called the **mvsprsd** daemon, or simply **mvsprsd**.

Transform commands

InfoPrint Manager transform commands convert another data stream to the AFP data stream. You can allow InfoPrint Manager to invoke these transforms automatically, or you can invoke them yourself.

Some transforms use options instead of flags. Like flags, options begin with a dash, - , and modify the way InfoPrint Manager processes the transform. Unlike flags, options can have more than one character following the dash.

Environment variables for InfoPrint Manager for AIX or InfoPrint Manager for Linux

InfoPrint Manager and AIX or Linux environment variables affect the way that InfoPrint Manager processes commands and utilities. These environment variables are summarized in InfoPrint Manager environment variables, p. 1149.

Windows Services for InfoPrint Manager for Windows

InfoPrint Manager for Windows uses Windows Services for many functions, including the InfoPrint Manager server, Notification, IPP, and MVS Download Receiver.

Reference table for path names

AIX or Linux Path	Windows Path
/usr/lpp/psf/ps/psfonts.map	***install_path*\ps\fonts.map**
/usr/lpp/psf/psf/bin/db2afp	***install_path*\bin\db2afp.exe**
/usr/lpp/psf/db2afp/afpdfont.rc	***install_path*\bin\afpdfont.rc**
/usr/lpp/psf/jpeg2afp/jpeg2afp.cfg	***install_path*\jpeg2afp\jpeg2afp.cfg**
/usr/lpp/psf/reslib	***install_path*\reslib**
/usr/lpp/afpfonts	***install_path*\fontlib**
/usr/lpp/psf/fontlib	***install_path*\fontlib**
/usr/lpp/ipfonts	***install_path*\Software\IBM Infoprint Fonts \Configuration*pathnam***
inpexit=/usr/lpp/psf/bin/apka2e	**inpexit=c:\Program Files\RICOH\InfoPrint Manager\bin\apka2e**, which assumes you installed in the default path

inpexit=/usr/lpp/psf/bin/asciinpe	**inpexit=c:\Program Files\RICOH\InfoPrint Manager\bin\asciinpe**, which assumes you installed in the default path
inpexit=/usr/lpp/psf/bin/asciinp	**inpexit=c:\Program Files\RICOH\InfoPrint Manager\bin\asciinp**, which assumes you installed in the default path
formdef=memo userlib=/usr/afp/resources	**formdef=memo userlib=d:\afp\resources**
formdef=memo fdeflib=/usr/lib/formdefns	**formdef=memo fdeflib=d:\lib\formdefns**
pagedef=memo userlib=/usr/afp/resources	**pagedef=memo userlib=d:\afp\resources**
pagedef=memo pdeflib=/usr/lib/pagedefns	**pagedef=memo pdeflib=d:\lib\pagedefns**
/usr/lpp/psf/bin/line2afp	***install_path*\bin\line2afp.exe**
/usr/lpp/psf/bin/acif	***install_path*\bin\acif.exe**
/usr/lpp/psf/acif/apkinp.c, apkind.c, apkres.c, apkout.c, apka2e.c, ascinnp.c, dbblank.c	***install_path*\exits\acif\apkinp.c, apkind.c, apkres.c, apkout.c, apka2e.c, ascinnp.c, dbblank.c**
/usr/lpp/psf/bin/apka2e, apkin, apkind, apkres, apkout, apka2e, asciinp, asciinpe, dbblank	***install_path*\bin\apka2e.dll, apkin.dll, apkind.dll, apkres.dll, apkout.dll, apka2e.dll, asciinp.dll, asciinpe.dll, dbblank.dll**
/usr/lpp/psf/acif/apkexits.h	***install_path*\exits\acif\apkexits.h**
/usr/lpp/psf/utils/bin/Makefile	**No Windows equivalent**
No AIX or Linux equivalent	***install_path*\exits\acif\apka2e.dsw, apkinp.dsw, apkind.dsw, apkres.dsw, apkout.dsw, apka2e.dsw, asciinp.dsw, ascinnpe.dsw** (Microsoft Visual C++ 2019 Workspaces for the user exits)
No AIX or Linux equivalent	***install_path*\exits\acif\apka2e.dsp apkinp.dsp apkind.dsp apkres.dsp apkout.dsp apka2e.dsp asciinp.dsp ascinnpe.dsp** (Microsoft Visual C++ 2019 Project files for the user exits)
/usr/lpp/psf/pcl2afp	***install_path*\pcl2afp**
/usr/lpp/psf/pcl2afp/pcl2afp.cfg	***install_path*\pcl2afp\pcl2afp.cfg**
/usr/lpp/psf/pcl2afp/custom.cfg	***install_path*\pcl2afp\custom.cfg**
/usr/lpp/psf/pcl2afp/custom.cfg	***install_path*\pcl2afp\custom.cfg**
/usr/lpp/psf/pcl2afp/pcl2afpd.cfg	***install_path*\pcl2afp\pcl2afpd.cfg**
/usr/lpp/psf/pcl2afp/myfile.cfg	**d:\pcl\myfile.cfg**
/usr/lpp/psf/pcl2afp/gl_before.pc1 myfile.g1 /usr/lpp/psf/pcl2afp/gl_after.pcl	***install_path*\pcl2afp\gl_before.pcl myfile.gl *install_path*\pcl2afp\gl_after.pcl**

/usr/lpp/psf/pcl2afp/sample.pcl	*install_path*\pcl2afp\sample.pcl
/usr/lpp/psf/bin/pcl2afp	*install_path*\bin\pcl2afpd.exe
/usr/lpp/psf/bin/pcl2afpd	*install_path*\bin\pcl2afpd.exe
/usr/lpp/psf/pcl2afp/pcl2afp.cfg	*install_path*\pcl2afp\pcl2afp.cfg
/usr/lpp/psf/pcl2afp/pcl2afpd.cfg	*install_path*\pcl2afp\pcl2afpd.cfg
/var/psf/pcl2afp	*install_path*\var\psf\pcl2afp
/var/lpp/psf/bin/pcl6	*install_path*\bin\pcl6.exe
/usr/lpp/psf/ps2afp/ps2afp.cfg	*install_path*\ps2afp\ps2afp.cfg
/usr/lpp/psf/ps2afp/ps2afpd.cfg	*install_path*\ps2afp\ps2afpd.cfg
/usr/lpp/psf/ps2afp/apped.cfg	*install_path*\ps2afp\apped.cfg
/usr/lpp/psf/bin/apped	*install_path*\bin\apped
/usr/lpp/psf/bin/ps2afp	*install_path*\bin\ps2afp
/usr/lpp/psf/bin/ps2afpd	*install_path*\bin\ps2afpd
/usr/lpp/psf/bin/pdf2afp	*install_path*\bin\pdf2afp
/usr/lpp/psf/bin/ppxps2i	*install_path*\bin\ppxps2i
/usr/lpp/psf/bin/ps2afpi	*install_path*\bin\ps2afpi.vm
/usr/lpp/psf/bin/ps2afpi.vm	*install_path*\bin\ps2afpi
/usr/lpp/psf/bin/ppxps2	*install_path*\bin\ppxps2
/usr/lpp/psf/bin/ps2afp.ps	*install_path*\bin\ps2afp.ps
/usr/lpp/psf/bin/ps2afpe.ps	*install_path*\bin\ps2afpe.ps
/usr/lpp/psf/bin/fontsave	*install_path*\bin\fontsave
/usr/lpp/psf/psfonts.map	*install_path*\bin\psfonts.map
/var/psf/psfonts	*install_path*\var\psfonts
/usr/lpp/psf/bin/sap2afp	*install_path*\bin\sap2afp
/usr/lpp/psf/tiff2afp/tiff2afp.cfg	*install_path*\tiff2afp\tiff2afp.cfg
/var/psf/podaccount.log	*install_path*\var\psf\podaccount.log
/var/psf/audit.log	*install_path*\var\psf\audit.log
/usr/lpp/psf/bin/listconv	*install_path*\bin\listconv.exe
/usr/lpp/psf/bin/uconv	*install_path*\bin\uconv.exe
/usr/lpp/psf/bin/xml2afp	*install_path*\bin\xml2afp
/usr/lpp/psf/bin/xml2pdf	*install_path*\bin\xml2pdf

Note

The **sap2afp** transform is available in a separately priced feature with InfoPrint Manager for AIX, InfoPrint Manager for Linux, and InfoPrint Manager for Windows.

2. InfoPrint Manager Tools

- **InfoPrint Manager commands**
- **The -o flag for AIX print commands and the InfoPrint Manager lprafp command**
- **InfoPrint Manager administrative utilities**
- **Daemon utilities for InfoPrint Manager for AIX or InfoPrint Manager for Linux**
- **InfoPrint Manager transform commands**

InfoPrint Manager commands

This section describes these InfoPrint Manager commands:

Command Name	AIX	Linux	Windows
dpfcmd command: controls DPF receivers in InfoPrint Manager for Windows and InfoPrint Manager for Linux, p. 59	N/A	Linux	Windows
listconv command: list all the default converters in CCSID, p. 62	AIX	Linux	Windows
lprafp command: submits remote jobs in InfoPrint Manager for AIX or InfoPrint Manager for Linux, p. 63	AIX	Linux	N/A
mkfntmap command: maps PostScript fonts, p. 65	AIX	Linux	Windows
pdaccount command: collect accounting information for a specific time period, p. 67	AIX	Linux	Windows
pdclean command: removes all jobs from the specified object, p. 74	AIX	Linux	Windows
pdcreate command: creates InfoPrint Manager objects, p. 77	AIX	Linux	Windows
pddelete command: deletes InfoPrint Manager objects, p. 82	AIX	Linux	Windows
pddisable command: stops destinations from accepting jobs and logs from logging, p. 89	AIX	Linux	Windows
pdenable command: enables destinations to accept jobs and logs to log, p. 93	AIX	Linux	Windows
pddeviceop command: carry out device operation on device associated with specified actual destination, p. 86	AIX	Linux	Windows

pdls command: lists selected attribute values, p. 96	AIX	Linux	Windows
pdmod command: modifies attributes of submitted print jobs, p. 111	AIX	Linux	Windows
pdpause command: pauses jobs, actual destinations, servers, or queues, p. 116	AIX	Linux	Windows
pdpr command: submits jobs, p. 124	AIX	Linux	Windows
pdpromote command: advances a job to the top of a queue, p. 134	AIX	Linux	Windows
pdq command: queries job status, p. 136	AIX	Linux	Windows
pdreorder command: reassigns jobs, p. 141	AIX	Linux	Windows
pdresubmit command: resubmits jobs, p. 143	AIX	Linux	Windows
pdresume command: enables paused objects to resume operation, p. 148	AIX	Linux	Windows
pdrm command: removes jobs, p. 151	AIX	Linux	Windows
pdset command: defines attribute values, p. 154	AIX	Linux	Windows
pdshutdown command: stops servers or actual destinations, p. 160	AIX	Linux	Windows
pdspace command: backspaces or forward spaces a printer, p. 165	AIX	Linux	Windows
uconv command: convert encoding of character set, p. 168	AIX	Linux	Windows

dpfcmd command: controls DPF receivers in InfoPrint Manager for Windows and InfoPrint Manager for Linux

Syntax

dpfcmd [**-a** *copies*] [**-b** *start-page*] [**-c**] [**-d** *actual-destination*] [**-e** *0|1*] [**-f** *number-of-days*] [**-g** *0|1*] [**-i** *inactivity-limit*] [**-j** *job-directory*] [**-k** *0|1|2*] [**-l** *class*] [**-m** *0|1*] [**-n** *description*] [**-o** *submission-priority*] [**-p** *port*] [**-q** *0|1*] [**-r** *resource-directory*] [**-s** *0|1*] [**-t**] [**-u** *number-of-hours*] [**-v** *0|1* [**-w** *0|1*] **command** [*receiver-name*]

Description

Use **dpfcmd** to control InfoPrint Manager DPF receivers. All flags apply only to the **add** and **modify** commands except **-t**.

Required flags

-c

Indicates that a configuration file should be used for the **add** command. It cannot be used together with others flags or with the **modify** command.

The location of the configuration file is

- for Windows:
  - `...\var\dpf\receivers\<receiver-name>\`
- for Linux:
  - `/var/dpf/receivers/<receiver-name>/`

The caller creates all directories and subdirectories in the specified path (*receiver-name*, jobs, and resources directories).

-d *actual-destination*

Identifies the actual destination for the **add** and **modify** commands.

-p *port*

Identifies the port number for the **add** and **modify** commands.

Optional flags

-a *copies* **DEFAULT=1**

Indicates class copies. Only available if class is specified.

-b *start-page* **DEFAULT=1**

Identifies the start page. Only available if class is specified.

-e {0 | 1} DEFAULT=0

Suppresses end sheets for auxiliary sheets.

-f *number-of-days* **DEFAULT=0**

Identifies the number of days for retention period. Only available if class is specified and class disposition is set to **retain** or **print-and-retain**.

-g {0 | 1} DEFAULT=0

Identifies SSL/TLS availability.

-i *inactivity-limit* **DEFAULT=9999**

Identifies the inactivity limit.

-j *job-directory* **DEFAULT=`...\var\dpf\receivers\<receiver-name>\jobs\` (for Windows) DEFAULT=`/var/dpf/receivers/<receiver-name>/jobs/` (for Linux)**

Specifies the full path to jobs directory.

-k {0 | 1 | 2} DEFAULT=0

Identifies class disposition. **0: print**; **1: retain**; **2: print-and-retain**. Only available if class is specified.

-l *class* **DEFAULT=A**

Identifies class.

-m {0 | 1} DEFAULT=0

Suppresses separator sheets for auxiliary sheets.

-n *description* **DEFAULT=***empty string*

Identifies the description of the receiver.

-o *submission-priority* **DEFAULT=50**

Identifies the submission priority.

-q {0 | 1} DEFAULT=0

Obtains printer characteristics at start.

-r *resource-directory* **DEFAULT=`...\var\dpf\receivers\<receiver-name>\` (for Windows) DEFAULT=`/var/dpf/receivers/<receiver-name>/` (for Linux)**

Specifies the full path to the resources directory.

-s {0 | 1} DEFAULT=0

Saves resources.

-t

Enables traces. Disables traces with the **reset_trace** command.

-u *number-of-hours* **DEFAULT=0**

Identifies the number of hours for the retention period. Only available if class is specified and class disposition is set to **retain** or **print-and-retain**.

-v {0 | 1} DEFAULT=0

Identifies the forever retention period. Only available if class is specified and class disposition is set to **retain** or **print-and-retain**.

-w {0 | 1} DEFAULT=0

Suppresses start sheets for auxiliary sheets.

Note

- The default value applies to the **add** command. The default value for the **modify** command is the currently configured value.

Commands

These are the commands to be issued to the DPF receiver. All commands require **receiver-name** except for the **reset_trace** command:

add

Adds the specified receiver.

modify

Modifies the specified receiver.

start

Starts the specified receiver.

pause

Pauses the specified receiver.

resume

Resumes the specified receiver.

cancel

Cancels the specified receiver.

nop

Takes no action on the specified receiver.

stop

Stops the specified receiver.

delete

Deletes the specified receiver.

stmopc

Retrieves a new STM/OPC for the specified receiver.

reset-trace

Resets the trace file and tracing options. Omitting a receiver name resets the DPF service tracing.

receiver name is the name of the target receiver. This name is case sensitive. If there are blanks in the receiver name, enclose the receiver name in double quotes.

Examples

- **Create a DPF receiver**
  To create the receiver, enter:

```
dpfcmd -p 5010 -d my-ld add dpf1
```

- **Modify a DPF receiver**
  To modify the receiver, enter:

```
dpfcmd -g 1 -i 100 modify dpf1
```

- **Start a DPF receiver**
  To start the receiver, enter:


```
dpfcmd start dpf1
```

- **Stop a DPF receiver**
  To stop the receiver, enter:

```
dpfcmd stop dpf1
```

- **Delete a DPF receiver**
  To delete the receiver, enter:

```
dpfcmd delete dpf1
```

listconv command: list all the default converters in CCSID

Syntax

listconv `[-l] [-a] [-c]`

Description

Use the **listconv** command to generate a list of all the default converters in CCSID (coded character set identifier).

Flags

You can use these flags with the **listconv** command.

-l

Provides a complete list of all the default converters in CCSID.

-a

Provides a list of all the aliases of the converters in CCSID.

-c

Provides a CCSID of the converter.

Example

To generate a list of all the default converters in CCSID, enter:

```
listconv -l
```

listconv returns information similar to this:

```
UTF-8 Platform: UCNV_IBM CCSID: 1208  with 7 aliases:
```

```
UTF-8 ibm-1208 ibm-1209 ibm-5304 ibm-5305 cp1208 cp65001

--------------------

UTF-16 Platform: UCNV_IBM  with 4 aliases:
UTF-16 ISO-10646-UCS-2 csUnicode ucs-2

--------------------

UTF-16BE Platform: UCNV_IBM CCSID: 1200  with 9 aliases:
UTF-16BE UTF16_BigEndian x-utf-16be ibm-1200 ibm-1201
ibm-5297 ibm-13488 ibm-17584 cp1201

--------------------

UTF-16LE Platform: UCNV_IBM CCSID: 1202  with 7 aliases:
UTF-16LE UTF16_LittleEndian x-utf-16le ibm-1202 ibm-13490
ibm-17586 cp1200
.
.
.
--------------------

ibm-1153_P100-1999,swaplfnl Platform: UCNV_IBM CCSID: 1153
with 3 aliases:
ibm-1153_P100-1999,swaplfnl ibm-1153,swaplfnl ibm-1153-s390

--------------------

ibm-12712_P100-1998,swaplfnl Platform: UCNV_IBM CCSID: 12712
with 3 aliases:
ibm-12712_P100-1998,swaplfnl ibm-12712,swaplfnl ibm-12712-s390

--------------------

ibm-16804_X110-1999,swaplfnl Platform: UCNV_IBM CCSID: 16804
with 3 aliases:
ibm-16804_X110-1999,swaplfnl ibm-16804,swaplfnl ibm-16804-s390

--------------------

ebcdic-xml-us Platform: UCNV_UNKNOWN  with 1 aliases:
ebcdic-xml-us
```

lprafp command: submits remote jobs in InfoPrint Manager for AIX or InfoPrint Manager for Linux

Syntax

lprafp [**-n**] [**-o** *option*] [**-r** *retries*] [**-q** *delay*] [**-p** *destination*] [**-s** *server*] *FileName* **...**

Description

The **lprafp** command, when compiled on a UNIX client system, allows UNIX users operating on AIX, Linux, non-AIX systems to pass **-o** flag keywords to InfoPrint for use in printing or sending remote jobs. The **-o** flags that are interpreted by InfoPrint can be sent with the remote job.

You can submit a job using a shell script called **LPR**. When you invoke **LPR** with the **-A** flag, **LPR** invokes the **lprafp** command. **lprafp** passes **-o** keywords to InfoPrint. If you invoke the **LPR** shell script without the **-A** flag, **LPR** invokes the operating system's standard print command.

Flags

-n

Indicates that only error messages display when the output is processed. If you do not specify this flag, you receive status information about the job sent to the destination system.

-o *option*

Indicates InfoPrint options, for example:

```
-oformdef=F1SAMPLE
```

You must specify all related **-o** options together in a job (parameter name, then value, without other flags in between) if they are to be passed correctly to InfoPrint Manager.

See the **oflag** man page for descriptions of the **-o** options.

-r {3 | *retries***} DEFAULT=3**

Indicates how many times the **lprafp** program tries to connect with the TCP/IP line printer daemon (**lpd**) on the destination system. This flag defaults to three retries.

-q {10 | *delay***} DEFAULT=10**

Indicates the retry delay in seconds. This flag defaults to ten seconds.

-p *destination*

Indicates the destination name on the server. This flag defaults to the value of the **LPR_PRINTER** environment variable.

-s *server*

Specifies the destination server. This flag defaults to the value of the **LPR_SERVER** environment variable.

Arguments

Use the argument value to identify the specific files you want to submit for printing or transmission. If you specify multiple objects, separate the object names with spaces.

You can use these arguments with the **lprafp** command:

FileName ...

Indicates the files that are to be printed or sent. You can specify global file characters in this argument.

Examples

- **Submitting a remote print job**

  To submit two copies of `/etc/motd` to the logical printer named `laser` on server `alexandria` for printing with an end sheet that shows this came from `bobjones` in department `j12`, enter:

```
LPR -A -ocopies=2 -ode=j12 -odi=bobjones -otrailer=yes -s alexandria \
    -p laser /etc/motd
```

- **Submitting a remote email job**

  To send the file `memo1` to the logical destination `emailbox` on server `alexandria`, enter:

```
LPR -A -s alexandria -p emailbox memo1
```

  Note

  The default document associated with `emailbox` must specify the **email-to-address** attribute.

  Setting environment variables

  To set up the environment so that subsequent print requests are sent to the logical destination named `alexe-lp` on server `alexandria`, enter:

```
export LPR_PRINTER=alexe-lp export LPR_SERVER=alexandria
```

  Note

  The server name can be specified using host name, fully qualified host name, IPv4 or IPv6 addresses.

  To test that your environment variables have been set correctly, enter:

```
LPR -A /etc/motd
```

Files

/usr/lpp/psf/utils/lpr/Makefile

Generates the executable program

/usr/lpp/psf/utils/lpr/getopts.c

Source code

/usr/lpp/psf/utils/lpr/getopts.h

Source code header file

/usr/lpp/psf/utils/lpr/LPR

Shell script for print command

/usr/lpp/psf/utils/lpr/lprafp.c

Source code

/usr/lpp/psf/utils/lpr/lprafp.h

Source code header file

mkfntmap command: maps PostScript fonts

Syntax

mkfntmap *inputfile* ... [**>** *outputfile*]

Description

The **mkfntmap** command creates a font mapping file that contains a list of the PostScript Type 1 fonts specified in the *inputfiles* parameter of the command and their locations.

InfoPrint Manager for AIX or Linux includes the **/usr/lpp/psf/ps/psfonts.map** file.

InfoPrint Manager for Windows includes the ***install_path*\ps\fonts.map** file.

The font map file maps the AFP outline fonts to the directory in which they were installed. If you have additional PostScript fonts or you add new PostScript fonts, use the **mkfntmap** command to create a font mapping file for the new fonts after they are installed.

If you will be using the additional fonts frequently, you should add the fonts to the **preload.ps** file in the **/usr/lpp/psf/ps** directory for InfoPrint Manager for AIX or Linux.

If you will be using the additional fonts frequently, you should add the fonts to the **preload.ps** file in the ***install_path*\ps** directory for InfoPrint Manager for Windows.

The fonts you specify in the **preload.ps** file load before transform processing begins, improving the performance of the PostScript transform.

Note

With InfoPrint Manager for AIX or Linux, the Courier font must exist in at least one of your font mapping files. It is included in the font mapping file, **/usr/lpp/psf/ps/psfonts.map** for InfoPrint Manager for AIX or Linux and the ***install_path*\ps\fonts.map** for InfoPrint Manager for Windows.

Arguments

The argument value identifies the specific object to which the command applies.

The valid argument values for the **mkfntmap** command are:

inputfile …

Specifies the name of the file or files that contain PostScript Type 1 fonts. At least one input file is required, although you can list more than one.

outputfile

Specifies the name of the font mapping file that contains the font mapping for the PostScript Type 1 fonts that were specified in the *inputfiles*. When the output file is created, it can be specified in the **ps2afpd** daemon and **ps2afp** command configuration files. You also can specify the *outputfile* name from the command line with the **-F** flag of the **ps2afp** command. If you do not specify an *outputfile* name, InfoPrint writes the results to standard output.

Examples

- To create a font mapping file of all binary fonts named `atm*`, which have the extension `.pfb`, and call it `atmfonts.map`, enter:

```
mkfntmap atm*.pfb > atmfonts.map
```

- To create a font mapping file of all fonts named `cou*`, and call it `courier.map`, enter:

```
mkfntmap cou* > courier.map
```

pdaccount command: collect accounting information for a specific time period

Syntax

pdaccount [**-H** *host:port*] [**-c server**]
{**-t destination** | **user** | **all** | **error**}
[**-s** *StartTime*] [**-e** *EndTime*]
[**-f**] *ServerName*...

pdaccount -h

Description

Use the **pdaccount** administrative command to collect summary accounting information for a specified time period in a comma delimited format about jobs processed by actual destinations on one or more servers. This information can be filed and imported into a spread sheet to calculate the cost of consumables, the usage rate of printers, the cost for each user, and so forth. You can request summary information or all available information. The summary information includes:

- Total pages printed by a destination or a user for a specified time period
- Total octets printed by a destination or a user for a specified time period

You can also request complete records for a specified time period.

When the **log-accounting-data** actual destination or server attributes are set to **true**, InfoPrint Manager creates an accounting log for each destination and stores the information in the server's accounting.logs subdirectory. When the accounting logs are active, InfoPrint Manager records the following information:

- **actual destination name** (up to 255 characters)
- **job owner** (up to 255 characters)
- **global job-id** without *ServerName*
- **submission-time** (GMT format)
- **submission-time** (date in server's displayable locale and time zone)
- **submission-time** (time in server's displayable locale and time zone)
- **completion-time** (GMT format)
- **completion-time** (date in server's displayable locale and time zone)
- **completion-time** (time in server's displayable locale and time zone)
- **pages-completed**
- **octets-completed**
- **data stream** (first document only)
- **job name** (up ot 255 characters)

For actual destinations that are unable to get pages completed from the printer, the information is obtained from the **job-page-count** attribute (which can be set by the user), or in some cases, InfoPrint Manager determines the information by analyzing the data stream.

When the **additional-accounting-log-attributes** is enabled, these job and document attributes are supported for being included in the accounting log:

- **accounting1-text**
- **accounting2-text**
- **accounting3-text**
- **account-text**
- **actual-destinations-requested**
- **address1-text**
- **address2-text**
- **address3-text**
- **address4-text**
- **auxiliary-sheet-selection**
- **base-printer**
- **building-text**
- **chars**
- **color-bits-per-plane**
- **color-mapping-table**
- **color-profile**
- **color-rendering-intent**
- **color-toner-saver**
- **copy-count**
- **creation-time**
- **default-input-tray**
- **default-medium**
- **department-text**
- **destination-locations-requested**
- **destination-models-requested**
- **destination-name-requested**
- **destination-pass-through**
- **destinations-used**
- **document-comment**
- **document-content**
- **document-file-name**
- **document-finishing**
- **document-type**
- **email-from-address**
- **email-to-address**
- **fax-number**
- **fax-to-email-domain**
- **fax-to-name**
- **font-resolution**
- **form-definition**

- halftone input-tray-select
- job-batch
- job-client-id
- job-comment
- job-copies-completed
- job-deadline-time
- job-discard-time
- job-finishing
- job-media-sheet-count
- job-originator
- job-page-count
- job-priority
- job-retain-until
- job-retention-period
- maintain-original-filename
- media-sheets-completed
- modification-time
- mvs-destination
- mvs-forms
- mvs-segment-id
- name-of-last-accessor
- name-text
- node-id-text
- number-of-documents
- number-up
- octet-count
- originating-job-identification
- output-format
- page-count
- page-definition
- page-select
- plex
- print-quality
- processing-logical-destination-requested
- processing-time
- programmer-text
- promotion-time
- queue-assigned
- record-count
- resource-context
- results-profile
- room-text

- **sheet-range**
- **sides**
- **started-printing-time**
- **subject-text**
- **title-text**
- **user-id-text**
- **user-locale**
- **user-name**
- **x-image-shift**
- **x-image-shift-back**
- **y-image-shift**
- **y-image-shift-back**

For actual destinations that are unable to get pages completed from the printer, the information is obtained from the **job-page-count** attribute (which can be set by the user), or in some cases, InfoPrint Manager determines the information by analyzing the data stream.

Note

Because of the way that InfoPrint Manager pauses and cancels jobs, the totals for the pages completed could be inaccurate.

Flags

You can use these flags with the **pdaccount** command:

-H host:port

Identifies the host and port of the InfoPrint Manager server used for communication. When not specified, the command follows the Configuration logic, to define the host and socket.

-c server

Specifies the object class for the **pdaccount** command. Server is the only class supported for the **pdaccount** command.

-t

Specifies the type of account information that you want collected:

destination

Summary information by destination

user

Summary information by job owner

all

All records for successful jobs are logged

error

All records for jobs with errors are logged

Important

Requesting information for **all** or **error** accounting records can consume a lot of the server's memory since all the data is read into memory to be sent to you. If you have a lot of data to retrieve, you should consider requesting it for smaller time periods and concatenating the returned data.

For example, to retrieve all the accounting records for a one month period, you could issue four **pdaccount** commands like this:

```
pdaccount -t all -s '00:00:00 03/01/00' -e '00:00:00 03/08/00'
Server A >March1.accting.data
pdaccount -t all -s '00:00:00 03/08/00' -e '00:00:00 03/15/00'
Server A >March2.accting.data
pdaccount -t all -s '00:00:00 03/15/00' -e '00:00:00 03/22/00'
Server A >March3.accting.data
pdaccount -t all -s '00:00:00 03/22/00' -e '00:00:00 03/31/00'
Server A >March4.accting.data
```


-s *StartTime*

Specifies the oldest job-completion time for records to include. If this flag is not specified, defaults to the first record in the accounting log.

-e *EndTime*

Specifies the latest job-completion time for records to include. If this flag is not specified, defaults to the last record in the accounting log.

-f

Places the results in a file in the server's directory. If specified, the results of the **pdaccount** command are filed in the server's directory where the command is processed. The file is named **accounting.summary.timestamp**, where timestamp is the time the request was performed. If **-f** is not specified, the results are returned to standard out or can be redirected by the user.

With InfoPrint Manager for AIX or InfoPrint Manager for Linux, the file is placed in `/var/pd/servername`.

With InfoPrint Manager for Windows, the file is placed in ***install_path***`\var\pd`.

-h

Displays a command-specific help message containing information about command syntax and flags. If you use this flag with any other flag or attribute, InfoPrint recognizes only the **-h** flag.

Configuration logic

The command determines which server host and server port to use based on this sequence:

1. Server host and server port specified with the **-H** parameter.
2. Server host and server port specified with the PDHOST and PD_SOCKET envirnonment variables.
3. Uses the defaults for PDHOST=localhost and PD_SOCKET=6874.

Note

This configuration logic enables multiple commands to run on a single machine communicating with one or more InfoPrint Manager servers.

Argument

Use the argument value to identify the specific server or servers that you want to collect accounting information for.

You can use this argument value with the **pdaccount** command:

ServerName

Specifies the server that you want to collect accounting information for.

Examples

Summary information for destinations on Server A

To request summary accounting information for the destinations on `server A` for the period starting at 8 AM on 12/20/99 and ending at 8 AM on 12/24/99, enter this command:

```
pdaccount -t destination -s "08:00:00 12/20/99"
   -e "08:00:00 12/24/99" A
```

The information returned is similar to:

```
Destination, Pages Completed, Octets Completed
Printer1,12997,1989787763
Printer2,2455,17676836
Printer3,86673,189808083
```

Summary information for users on all the servers

To request summary accounting information for users on all the servers for the period starting at 8 AM on 12/20/99 and ending at 8 AM on 12/24/99, enter this command:

```
pdaccount -t user -s "08:00:00 12/20/99" -e "08:00:00 12/24/99" *:
```

The information returned is similar to:

```
Owner, Pages Completed, Octets Completed
gnelson@info1.penn.infoprint.com,1347,1987763
hlava@ips1.penn.infoprint.com,2455,12237676836
root@pumbaa.penn.infoprint.com,86673,189808083
```

All accounting information for destinations on Servers B and C

To request all the data (or raw data) for the destinations on servers B and C for the period starting at 8 AM on 12/20/99 and ending at 8 AM on 12/24/99, enter this command:

```
pdaccount -t all -s "08:00:00 12/20/99" -e "08:00:00 12/24/99" B C
```

The command returns the complete accounting log records for the time period collected from all the accounting logs on the requested servers in no particular sorted order.

Important

Requesting information for **all** accounting records can consume a lot of the server's memory since all the data is read into memory to be sent to you. If you have a lot of data to retrieve, you should consider requesting it for smaller time periods and concatenating the returned data.

For example, to retrieve all the accounting records for a one month period, you could issue four **pdaccount** commands like this:

```
pdaccount -t all -s "00:00:00 03/01/00" -e "00:00:00 03/08/00"
Server A >March1.accting.data
pdaccount -t all -s "00:00:00 03/08/00" -e "00:00:00 03/15/00"
Server A >March2.accting.data
pdaccount -t all -s "00:00:00 03/15/00" -e "00:00:00 03/22/00"
Server A >March3.accting.data
pdaccount -t all -s "00:00:00 03/22/00" -e "00:00:00 03/31/00"
Server A >March4.accting.data
```


pdcapture: collects service details for diagnosing an issue

Syntax

For Windows:

PDCAPTURE.EXE <servername> [drive:][path]

For AIX and Linux:

pdcapture take <servername> <path>

Description

The **pdcapture** command collects all the necessary service details essential for diagnosing your issue. The data is packaged into an archive file, which you can then send to Software Support.

Note

- Depending on the configuration and specifications of your system, the data capture operation may require a significant amount of time to complete. It is advised to proceed with this operation only when necessary and when instructed to do so by the local service representative.

Arguments

The **pdcapture** command uses these arguments:

servername

Specifies the name of the server for the **pdcapture** command. For Windows, use **-noserver** whenever there is no available server.

[drive:][path]

For Windows, specifies the directory and the path where to store the service information.

path

For AIX and Linux, specifies the path to the directory where to store the service information.

Examples

For Windows:

```
pdcapture test_server c:\temp
```

For AIX and Linux:

```
pdcapture take test_server /tmp
```


pdclean command: removes all jobs from the specified object

Syntax

pdclean [**-H** *host:port*] [**-c** *ObjectClass*] [**-m** *"MessageText"*]
[**-x** *"attribute=value …"*] [**-X** *AttributesFileName*]
{*ServerName …* | [*ServerName:*]*DestinationName …* |
[*ServerName:*]*QueueName …*}

pdclean -h

Description

Use the **pdclean** administrative command to remove all jobs from the specified servers, logical destinations, queues, or actual destinations. If you are removing jobs from a server, InfoPrint ignores any **job-retention-period** or **job-retain-until** attribute values. For all other conditions, InfoPrint honors the **job-retention-period** or **job-retain-until** value. If you are removing jobs from a logical destination, InfoPrint removes all jobs from the queue to which the logical destination submitted the jobs. If you are removing jobs from a queue, InfoPrint removes all jobs that the queue contains, regardless of which logical destination or destinations submitted the jobs to the queue.

InfoPrint removes processing jobs, if the actual destination supports this.

InfoPrint Manager issues a confirmation message before cleaning the object, unless your **PD_CONFIRM_DELETE** environment variable has a value of **no**.

Flags

You can use these flags with the **pdclean** command:

-H host:port

Identifies the host and port of the InfoPrint Manager server used for communication. When not specified, the command follows the Configuration logic, to define the host and socket.

-c {destination | queue | server} DEFAULT=destination

Specifies the object class you want for this command. In the valid classes, **destination** is a logical or actual destination.

Using this flag is equivalent to specifying the command attribute **operation-class**.

-m *"MessageText"*

Specifies the message you want associated with the specified destination, queue, or server. You can use this message to indicate the reason why you are cleaning the destination, queue, or server, or any other appropriate comments.

Using this flag is equivalent to specifying the command attribute **message**.

You can list this message by specifying **requested-attributes=message** with the **pdls** command.

-x *"attribute=value ..."*

A single attribute string, consisting of one or more attribute-value pairs.

-X *AttributesFileName*

Specifies the name of a file containing attribute and value pairs you want InfoPrint to insert at the current point in the command.

Using this flag is equivalent to specifying the command attribute **attributes**.

-h

Displays a command-specific help message containing information about command syntax and flags. If you use this flag with any other flag or attribute, InfoPrint recognizes only the **-h** flag.

Configuration logic

The command determines which server host and server port to use based on this sequence:

1. Server host and server port specified with the **-H** parameter.
2. Server host and server port specified with the PDHOST and PD_SOCKET envirnonment variables.
3. Uses the defaults for PDHOST=localhost and PD_SOCKET=6874.

Note

This configuration logic enables multiple commands to run on a single machine communicating with one or more InfoPrint Manager servers.

Command attributes

You can specify these attributes in a **-x** *"attribute=value..."* string or in an attributes file designated with the **-X** *AttributesFileName* flag.

attributes=*AttributesFileName*

Specifies the designated attributes file that InfoPrint reads and inserts at the current point in the command. This file contains attribute and value pairs that InfoPrint uses to expand the command.

operation-class={destination | queue | server} DEFAULT=destination

Specifies the destination, queue, or server you want for this command. In the valid classes, **destination** is a logical or actual destination.

message=*"MessageText"*

Specifies the message you want associated with the destination, queue, or server. You can use this message to indicate the reason why you are cleaning the destination, queue, or server, or any other appropriate comments.

You can list this message by specifying **requested-attributes=message** with the **pdls** command.

Arguments

Use the argument value to specify the destination, queue, or server that you want InfoPrint to clean. If you specify multiple objects, all must be of the same object class and you must separate the object names with spaces.

You can use these arguments with the **pdclean** command:

[ServerName:]DestinationName

Specifies which destinations you want cleaned of jobs.

Cleaning an actual destination removes only those jobs that InfoPrint has assigned to that actual destination.

Cleaning a logical destination removes all jobs submitted through that logical destination that InfoPrint has not yet completed. InfoPrint removes those jobs from the queue associated with that logical destination. InfoPrint removes any jobs currently processing if the actual destination supports this.

[ServerName:]QueueName

Specifies which queues you want cleaned of jobs.

Cleaning a queue deletes all jobs that are in in that queue. InfoPrint removes any jobs currently processing if the actual destination supports this.

ServerName

Specifies which servers you want cleaned of jobs.

Cleaning a server deletes all jobs submitted to any of the logical destinations, or assigned to the actual destinations, residing in that server, including any retained jobs. InfoPrint removes any jobs currently processing if the actual destination supports this.

Examples

Clean a logical destination

To clean logical destination `Myserv-lp` of all jobs, enter the command:

```
pdclean Myserv-lp
```

Clean a server

To clean server `DServ1`, enter the command:

```
pdclean -c server DServ1
```

Clean an actual destination

To clean destination `Mserv-pp` of all jobs and to leave a message, enter the command:

```
pdclean -m "Destination Mserv-pp is down for repairs" Super1:PhysPrt2
```

Suggested reading

For more information, see Attributes file, p. 49:

pdcreate command: creates InfoPrint Manager objects

Syntax

pdcreate [**-H** *host:port*] [**-c** *ObjectClass*] [**-g**] [**-m** *"MessageText"*]
[**-r** *"attribute …"*] [**-s** *StyleName*]
[**-x** *"attribute=value …"*] [**-X** *AttributesFileName*]
{*ServerName:AuxiliarySheetName …* |
ServerName:DefaultDocumentName … |
ServerName:DefaultJobName … |
ServerName:DestinationName … |
ServerName:MediumName … |
ServerName:QueueName … |
ServerName:ResourceContextName … |
ServerName:TransformName …

pdcreate -h

Description

Use the **pdcreate** administrative command to create InfoPrint objects (except servers, logs, documents and jobs) and to set their attributes to specific values.

You can specify any initially settable or resettable attribute for an object with the **pdcreate** command. You can specify an initially settable attribute only when you create an object.

Note

InfoPrint creates servers and logs when the server starts. InfoPrint creates documents and jobs when users submit files for printing or transmission with the **pdpr** command.

You can use the **pdcreate** command to create objects for these object classes:

- **destination** (logical and actual)
- **queue**
- **initial-value-job**
- **initial-value-document**
- **medium**
- **auxiliary-sheet**
- **resource-context**
- **transform**

When you create a destination, it remains in the disabled state and InfoPrint cannot accept any jobs for it until you enable the destination. You must enter the **pdenable** command to enable the destinations.

An object you create with the **pdcreate** command still exists even if the server that contains it terminates normally (shut down) or abnormally. A logical destination or queue returns to its previous state when its server restarts; an actual destination tries to return to its previous state when its server restarts.

Flags

You can use these flags with the **pdcreate** command:

-H host:port

Identifies the host and port of the InfoPrint Manager server used for communication. When not specified, the command follows the Configuration logic, to define the host and socket.

-c {destination | queue | medium | initial-value-job | initial-value-document | auxiliary-sheet | resource-context | transform}

Specifies the object class you want for this command. You can only specify one class per command invocation.

Using this flag is equivalent to specifying the command attribute **operation-class**.

-g

Turns off headings. Using this flag is equivalent to specifying the command attribute **headings= false**.

-m *"MessageText"*

Specifies the message that you want associated with the object you are creating. You can indicate the reason for creating the object or to provide any other comments.

You can list this message by specifying **requested-attributes=message** with the **pdls** command. Using this flag is equivalent to specifying the command attribute **message**.

-r {none | brief | verbose}

Specifies the attribute values you want InfoPrint to display for the specified object.

none

Displays no attributes.

brief

Displays a small subset of important attributes for each object.

verbose

Displays a larger subset of important attributes for each object.

Using this flag is equivalent to specifying the command attribute **requested-attributes**.

-s {column | doccol | line}

When combined with the **-r** flag or the **requested-attributes** command attribute, specifies the format in which you want InfoPrint to display attribute information.

column

Attribute values are displayed in tabular format, so that values of the same attribute for multiple objects line up in columns.

doccol

For jobs only, job attribute values and the document attribute values for the first document in the job are displayed in column format on the same line.

line

Each attribute is displayed on a separate line.

Using this flag is equivalent to specifying the command attribute **style**.

-x *"attribute=value ..."*

A single attribute string, consisting of one or more attribute-value pairs.

-X *AttributesFileName*

Specifies the name of a file containing attribute and value pairs InfoPrint inserts at the current point in the command. Using this flag is equivalent to specifying the command attribute **attributes**.

-h

Displays a command-specific help message containing information about command syntax and flags. If you use this flag with any other flag or attribute, InfoPrint recognizes only the **-h** flag.

Configuration logic

The command determines which server host and server port to use based on this sequence:

1. Server host and server port specified with the **-H** parameter.
2. Server host and server port specified with the PDHOST and PD_SOCKET envirnonment variables.
3. Uses the defaults for PDHOST=localhost and PD_SOCKET=6874.

Note

This configuration logic enables multiple commands to run on a single machine communicating with one or more InfoPrint Manager servers.

Command attributes

You can specify these attributes in a **-x** *"attribute=value ..."* string or in an attributes file designated with the **-X** *AttributesFileName* flag.

attributes=*AttributesFileName*

Specifies the designated attributes file that InfoPrint reads and inserts at the current point in the command. This file contains attribute and value pairs that InfoPrint uses to expand the command.

operation-class={destination | queue | medium | initial-value-job | initial-value-document | auxiliary-sheet | resource-context | transform}

Specifies the object class you want for this command. You can only specify one class per command invocation.

headings={true | false}

Specifies whether you want headings displayed in the output.

message="*MessageText*"

Specifies the message that you want associated with the object you are creating. You can indicate the reason for creating the object or provide other comments.

You can list this message by specifying **requested-attributes=message** with the **pdls** command.

requested-attributes={none | brief | verbose}

Specifies which output attributes you want InfoPrint to display.

none

Displays no attributes.

brief

Displays a small subset of important attributes for each object.

verbose

Displays a larger subset of important attributes for each object.

style={column | doccol | line}

Specifies the presentation format you want for the displayed output.

column

Attribute values are displayed in tabular format, so that values of the same attribute for multiple objects line up in columns.

doccol

For jobs only, job attribute values and the document attribute values for the first document in the job are displayed in column format on the same line.

line

Each attribute is displayed on a separate line.

Arguments

Use the argument values to identify the specific object you are creating. If you specify multiple objects, separate the object names with spaces.

Note

Regardless of which object you create, you must use *ServerName:* with the **pdcreate** command.

You can use these arguments with the **pdcreate** command:

- *ServerName:DestinationName*
- *ServerName:QueueName*
- *ServerName:DefaultJobName*
- *ServerName:DefaultDocumentName*
- *ServerName:MediumName*
- *ServerName:AuxiliarySheet*
- *ServerName:ResourceContextName*

- *ServerName:TransformName*

Examples

Create a queue

To create the queue `Serv1-p3-queue`, on the server `Serv1`, enter the command:

```
pdcreate -c queue Serv1:Serv1-p3-queue
```


Create a logical destination

To create the logical destination `Destination3-Serv1` in the server `Serv1` and specify the queue you want associated with that destination, enter the command:

```
pdcreate -x "associated-queue=Serv1-p3-queue" Serv1:Destination3-Serv1
```

Create an actual destination

To create the PSF TCP/IP-attached actual destination `Destination3` in the server `Serv1` and specify the queue you want associated with that destination, enter the command:

```
pdcreate -x "destination-realization=actual
   associated-queue=Serv1-p3-queue attachment-type=tcpip
   destination-model=InfoPrint4000-ID5-ID6
   destination-tcpip-internet-address=martha.infoprint.com
   destination-tcpip-port-number=5001"  Serv1:Destination3
```

Create a default document

To create the default document `LP3ivd`, enter the command:

```
For InfoPrint Manager for AIX or Linux:
pdcreate -c initial-value-document -m "Created 04/01/1997"
   -x "copy-count=1 document-format=line-data page-definition=MyPageDef
   resource-context-page-definition=/usr/lpp/psf/mypdlib sides=1
   descriptor='IVD for LogPrt3'" Serv1:LP3ivd
```

```
For InfoPrint Manager for Windows:
pdcreate -c initial-value-document -m "Created 04/01/1997"
   -x "copy-count=1 document-format=line-data page-definition=MyPageDef
   resource-context-page-definition=install_path\psf\mypdlib sides=1
   descriptor='IVD for LogPrt3'" Serv1:LP3ivd
```

Create a default job

To create the default job `MyJobTemplate` using the attributes specified in the attributes file named `MyJobAttributes.X`, enter the command:

```
pdcreate -c initial-value-job -X MyJobAttributes.X
server3:MyJobTemplate
```

Create a medium

To create a medium representing a transparency with the identifier `my-clear-medium` in the server `Serv1`, enter the command:

```
pdcreate -c medium -x "descriptor='letter size, common transparency'
   medium-type=transparency medium-color=transparent medium-size=letter
   medium-sides=1 medium-dimensions=215.9:355.6" Serv1:my-clear-medium
```

Create a medium in all active servers

To create the medium `A4-blue` in all active servers, enter the command:

```
pdcreate -c medium \*:A4-blue
```


Create queue and its notification profile

To create a notification profile for `Serv1-p3-queue` in server `Serv1`, enter the command:

```
pdcreate -c queue -x
"notification-profile={event-identifiers=job-modified
   queue-state-changed delivery-method=message
   event-comment='This is a modification of job or status event'
   delivery-address=dave@cowboy locale=En_US}" Serv1:Serv1-p3-queue
```

Create a PSF TCP/IP printer with smart defaults

To create a PSF TCP/IP printer with smart defaults, enter:

```
pdcreate -x "dest-real=actual assoc-queue=muffins-q attach-type=tcpip
 dest-tcpip-inter-addr=9.17.162.56" muffins:ip21
```

Retrieve an archived object

To create a logical destination from an archived file, enter:

```
pdcreate -c destination -X logdest.archive ServerName:logicaldestname
```

Suggested reading in hardcopy

For information about:

- Attributes file, see Attributes file, p. 49
- Headings and style, see Command output: headings and style, p. 48
- Attributes for InfoPrint objects, see InfoPrint Manager object attributes, p. 511.
- For introductory information about object attributes and their use with commands, see Introducing object attributes, p. 514, which includes information about non-settable, initially settable, and resettable attributes.

pddelete command: deletes InfoPrint Manager objects

Syntax

pddelete [**-H** *host:port*] [**-c** *ObjectClass*] [**-m** *"MessageText"*]
[**-x** *"attribute=value …"*] [**-X** *AttributesFileName*]
{*ServerName …* | *ServerName:AuxiliarySheetName …* |

ServerName:DefaultDocumentName ... |
ServerName:DefaultJobName ... |
[*ServerName:*]*DestinationName ...* |
ServerName:MediumName ... |
[*ServerName:*]*QueueName ...* |
ServerName:ResourceContextName ... |
ServerName:TransformName ... |
LocalJobID ... | *GlobalJobID ...*}

pddelete -c job [**-m** *"MessageText"*] **-r** *JobRetentionPeriod*
[**-x** *"attribute=value ..."*] [**-X** *AttributesFileName*]
{*LocalJobID ...* | *GlobalJobID ...*}

pddelete -h

Description

Use the **pddelete** administrative command to delete InfoPrint objects.

InfoPrint Manager issues a confirmation message before deleting objects, unless your **PD_CONFIRM_DELETE** environment variable is set to **no**.

InfoPrint does not delete jobs with a non-zero value for the **job-retain-until** or **job-retention-period** attribute (either previously set or set with this command) until the retention deadline arrives or the retention period expires.

Flags

You can use these flags with the **pddelete** command:

-H host:port

Identifies the host and port of the InfoPrint Manager server used for communication. When not specified, the command follows the Configuration logic, to define the host and socket.

-c {destination | job | queue | medium | initial-value-job | initial-value-document | auxiliary-sheet | resource-context | transform | server}

Specifies the object class you want for this command.

Using this flag is equivalent to specifying the command attribute **operation-class**.

-m *"MessageText"*

Specifies the message you want to associate with the object that you want to delete. You can use this message to indicate the reason for deleting the object or to provide any other comments.

If the command operates on a job with a non-zero value for the **job-retention-period** or **job-retain-until** attribute (either previously set or set with this command), you can list this message by specifying **requested-attributes=job-message-from-administrator** with the **pdls** command. Otherwise, InfoPrint deletes this message with the object and you cannot retrieve it. If you do not specify **-m**, the message already stored with the object remains unchanged and InfoPrint deletes it as previously described.

Using this flag is equivalent to specifying the command attribute **message**.

-r *JobRetentionPeriod*

You can only use this flag if the object class is **job**. InfoPrint rejects the command if you use this flag with any other class.

If the job has a retention period or retention deadline, you must specify this flag with a zero (0) value to delete the job. If not specified, InfoPrint uses the present retention period or retention deadline for the job.

Using this flag is equivalent to specifying the object attribute **job-retention-period**.

-x *"attribute=value ..."*

A single attribute string, consisting of one or more attribute-value pairs.

-X *AttributesFileName*

Specifies the name of a file containing attribute and value pairs you want InfoPrint to insert at the current point in the command.

Using this flag is equivalent to specifying the command attribute **attributes**.

-h

Displays a command-specific help message containing information about command syntax and flags. If you use this flag with any other flag or attribute, InfoPrint recognizes only the **-h** flag.

Configuration logic

The command determines which server host and server port to use based on this sequence:

1. Server host and server port specified with the **-H** parameter.
2. Server host and server port specified with the PDHOST and PD_SOCKET envirnonment variables.
3. Uses the defaults for PDHOST=localhost and PD_SOCKET=6874.

Note

This configuration logic enables multiple commands to run on a single machine communicating with one or more InfoPrint Manager servers.

Command attributes

You can specify these attributes in a **-x** *"attribute=value ..."* string or in an attributes file designated with the **-X** *AttributesFileName* flag.

attributes=*AttributesFileName*

Specifies the designated attributes file that InfoPrint reads and inserts at the current point in the command. This file contains attribute and value pairs that InfoPrint uses to expand the command.

operation-class={destination | job | queue | medium | initial-value-job | initial-value-document | auxiliary-sheet | resource-context | transform | server}

Specifies the object class you want for this command.

message=*"MessageText"*

Specifies the message you want to associate with the object you want to delete. You can use this message to indicate the reason for deleting the object or to provide any other comments.

If the command operates on a job with a non-zero value for the **job-retention-period** or **job-retain-until** attribute (either previously set or set with this command), you can list this message by specifying **requested-attributes=job-message-from-administrator** with the **pdls** command. Otherwise, InfoPrint deletes this message with the object and you cannot retrieve it.

If you do not specify the **message** attribute, the message stored with the object remains unchanged and InfoPrint deletes it as previously described.

Arguments

Use the argument value to identify the specific object you want to delete. If you specify multiple objects, separate the object names with spaces.

You can use these arguments with the **pddelete** command:

ServerName

You must remove all jobs contained in this server before you can delete it.

ServerName:AuxiliarySheetName

You cannot delete this auxiliary sheet if any of the actual destinations that reference it are enabled.

ServerName:DefaultDocumentName

You cannot delete this default document if any of the logical destinations that reference it are enabled.

ServerName:DefaultJobName

You cannot delete this default job if any of the logical destinations that reference it are enabled.

LocalJobID **or** *GlobalJobID*

InfoPrint deletes a job based on the specified value in its **job-retention-period** or **job-retain-until** attribute.

You can identify your own jobs by either the local job ID or the global job ID. You must identify other users' jobs by the global job ID.

ServerName:MediumName

You cannot delete this medium if any of the actual destinations that reference it are enabled.

[ServerName:]DestinationName

You must remove all the jobs from an actual destination before you can delete it.

[ServerName:]QueueName

You must disable all logical destinations associated with the queue before you can delete the queue. You must remove all jobs (including paused jobs) from the queue before you can delete the queue.

ServerName:ResourceContextName

You cannot delete this resource context if any of the actual destinations that reference it are enabled.

ServerName:TransformName

There is no restriction.

Examples

Delete a job using a local ID

To delete job 5, enter the command:

```
pddelete -c job 5
```

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Delete logical destinations

To delete logical destinations srA-lp11 and srA-lp15, enter the command:

```
pddelete srA-lp11 srA-lp15
```

Delete a default job

To delete the default IVJ_2 from the server DivServ2, enter the command:

```
pddelete -c initial-value-job  DivServ2:IVJ_2
```

Delete a server

To delete the server Serv1, enter the command:

```
pddelete -c server Serv1
```

Suggested reading

For more information, see Attributes file, p. 49

pddeviceop command: carry out device operation on device associated with specified actual destination

Syntax

pddeviceop [**-H** *host:port*] [**-c** *destination*]
{**-t** **online** | **offline** | **reset** | **lock-op-panel** | **unlock-op-panel** }
-m *"Message text"* **-x** *"attribute=value"*
-X *AttributesFileName* [**SrvName:**]**DestName**

pddeviceop -h

Description

Use the **pddeviceop** administrative command to perform an operation on the printer device that the specified actual destination represents.

For the operation to work with SNMPv1, the actual destination must have **snmp-active** specified as **true**, it must support this type of operation, it must have the **snmp-write-community-name** actual

destination attribute set to the correct value, and you must have write permission to the specified actual destination.

For the operation to work with SNMPv3, the actual destination must have **snmp-active** specified as **true**, it must support this type of operation, it must have **snmpv3-username** actual destination attribute set to the correct value, and you must have write permission to the specified actual destination.

For more information, see snmp-write-community-name, p. 762 and snmpv3-username, p. 760.

Flags

You can use these flags with the **pddeviceop** command:

-H host:port

Identifies the host and port of the InfoPrint Manager server used for communication. When not specified, the command follows the Configuration logic, to define the host and socket.

-c *destination*

Specifies the operation class of **destination** that represents an actual destination. This is the only allowed class.

Using this flag is equivalent to specifying the command attribute **operation-class**.

-m *"Message Text"*

Specifies the message you want associated with the destination. You can use this message to describe the device operation you are performing on the destination or to provide any other comments.

If you do not specify the **-m** flag, the message already stored with the object remains unchanged.

You can list this message by specifying **requested-attributes=message** with the **pdls** command. Using this flag is equivalent to specifying the command attribute **message**.

-t {online | offline | reset | lock-op-panel | unlock-op-panel} [-x *"attribute=value"*

Specifies the type of device operation you want performed:

offline

online

reset

lock-op-panel

unlock-op-panel

-x *"attribute=value"*

Consists of a single attribute string, containing one or more attribute-value pairs.

-X *AttributeFileName*

Specifies the name of a file containing attribute and value pairs that you want InfoPrint to insert at the current point in the command. Using this flag is equivalent to specifying the command attribute **attributes**.

-h

Displays a command-specific help message containing information about command syntax and flags. If you use this flag with any other flag or attribute, InfoPrint recognizes only the **-h** flag.

Configuration logic

The command determines which server host and server port to use based on this sequence:

1. Server host and server port specified with the **-H** parameter.
2. Server host and server port specified with the PDHOST and PD_SOCKET envirnonment variables.
3. Uses the defaults for PDHOST=localhost and PD_SOCKET=6874.

Note

This configuration logic enables multiple commands to run on a single machine communicating with one or more InfoPrint Manager servers.

Command attributes

You can specify these attributes in a **-x** *"attribute=value ..."* string or in an attributes file designated with the **-X** *AttributesFileName* flag.

attributes=*AttributesFileName*

Specifies the designated attributes file that InfoPrint reads and inserts at the current point in the command. This file contains attribute and value pairs that InfoPrint uses to expand the command.

operation-class=*destination***DEFAULT=destination**

Specifies the object class of **destination**, which represents a PSF physical printer. This is the only allowed class.

device-operation-type={online|offline|reset|lock-op-panel|unlock-op-panel}

Specifies the type of device operation you want performed:

offline

online

reset

lock-op-panel

unlock-op-panel

message=*"MessageText"*

Specifies the message you want to associate with the destination. You can use this message to describe the device operation you are performing on the destination or to provide any other comments.

If you do not specify this attribute, the message already stored with the object remains unchanged.

You can list this message by specifying **requested-attributes=message** with the **pdls** command.

Argument

Use the argument value to identify the specific actual destination you want to work with:

ServerName: ***DestinationName***

Examples

Lock the operation panel on a device

To lock the operation panel on the device associated with actual destination `prt5-ad`, enter the command:

```
pddeviceop -t lock-op-panel prt5-ad
```

Reset the printer

To reset the *ip21* printer, enter:

```
pddeviceop -t reset ip21
```

Turn the printer offline

To turn the *ip21* printer offline, enter:

```
pddeviceop -t offline ip21
```

Turn the printer online

To turn the *ip21* printer online, enter:

```
pddeviceop -t online ip21
```

pddisable command: stops destinations from accepting jobs and logs from logging

Syntax

pddisable [**-H** *host:port*] [**-c** *ObjectClass*] [**-m** *"MessageText"*]
[**-x** *"attribute=value …"*] [**-X** *AttributesFileName*]
{*ServerName …* | *ServerName:LogName …* |
[*ServerName:*]*DestinationName …* |
[*ServerName:*]*QueueName …*}

pddisable -h

Description

Use the **pddisable** administrative command to stop actual destinations or logical destinations from accepting jobs, or to stop logs from logging data.

When you disable a destination, it does not accept jobs submitted with **pdpr** or **pdresubmit** commands. The destination still accepts other commands. All previously submitted jobs and currently processing jobs continue unaffected.

Note

1. Use the **pdenable** command to enable a destination to accept jobs again and to enable the logging function of a log again.
2. Use the **pddisable** and **pdenable** commands to prevent or allow input to the object. Use the **pdpause** and **pdresume** commands to prevent or allow output from the object.

Flags

You can use these flags with the **pddisable** command:

-H host:port

Identifies the host and port of the InfoPrint Manager server used for communication. When not specified, the command follows the Configuration logic, to define the host and socket.

-c {destination | log | queue | server} DEFAULT=destination

Specifies the object class you want for this command. In the valid classes, **queue** disables all associated logical destinations, **destination** is for a logical or actual destination, and **server** disables all destinations in the server.

Using this flag is equivalent to specifying the command attribute **operation-class**.

-m *"MessageText"*

Specifies the message you want associated with the destination, log, queue, or server. You can use this message to indicate the reason for disabling the object or to provide any other comments.

If you do not specify the **-m** flag, the message already stored with the object remains unchanged.

When you issue a command against a server, InfoPrint propagates the message to the **message** attribute of the destinations residing in the server. InfoPrint does not change the server **message** attribute. When you issue a command against a queue, InfoPrint propagates the message to the **message** attribute of the logical destinations associated with the queue. InfoPrint does not change the queue **message** attribute.

You can list this message by specifying **requested-attributes=message** with the **pdls** command. Using this flag is equivalent to specifying the command attribute **message**.

-x *"attribute=value ..."*

A single attribute string, consisting of one or more attribute-value pairs.

-X *attributes file name*

Specifies the name of a file containing attribute and value pairs you want inserted at the current point in the command.

Using this flag is equivalent to specifying the command attribute **attributes**.

-h

Displays a command-specific help message containing information about command syntax and flags. If you use this flag with any other flag or attribute, InfoPrint recognizes only the **-h** flag.

Configuration logic

The command determines which server host and server port to use based on this sequence:

1. Server host and server port specified with the **-H** parameter.
2. Server host and server port specified with the PDHOST and PD_SOCKET envirnonment variables.
3. Uses the defaults for PDHOST=localhost and PD_SOCKET=6874.

Note

This configuration logic enables multiple commands to run on a single machine communicating with one or more InfoPrint Manager servers.

Command attributes

This section describes the command attributes for **pddisable**:

attributes=*AttributesFileName*

Specifies the designated attributes file that InfoPrint reads and inserts at the current point in the command. This file contains attribute and value pairs that InfoPrint uses to expand the command.

operation-class={destination | log | queue | server} DEFAULT=destination

Specifies the object class you want for this command. In the valid classes, **queue** disables all associated logical destinations, **destination** is for a logical or actual destination, and **server** disables all destinations in the server.

message=*"MessageText"*

Specifies the message you want to associate with the destination, log, queue, or server. You can use this message to indicate the reason for disabling the object or to provide any other comments.

If you do not specify this attribute, the message already stored with the object remains unchanged.

When you issue a command against a server, InfoPrint propagates the message to the **message** attribute of the destinations residing in the server. InfoPrint does not change the server **message** attribute.

When you issue a command against a queue, InfoPrint propagates the message to the **message** attribute of the logical destinations associated with the queue. InfoPrint does not change the queue **message** attribute.

You can list this message by specifying **requested-attributes=message** with the **pdls** command.

Arguments

Use the argument value to identify the specific object you want to disable. If you specify multiple objects, separate the object names with spaces.

You can use these arguments with the **pddisable** command:

ServerName

Specifies the server you want to disable. Disabling a server disables all destinations residing in the server.

ServerName:LogName

Specifies the log you want to disable. Disabling a log stops it from logging data.

[ServerName:]DestinationName

Specifies the destination you want to disable. Disabling a destination stops it from accepting print or transmission requests. Any jobs currently assigned to an actual destination continue processing.

[ServerName:]QueueName

Specifies the queue you want to disable. Disabling a queue disables all of the logical destinations associated with that queue.

Examples

Disable a logical destination

To disable logical destination `Serv1-lp` on server `Serv1`, enter:

```
pddisable Serv1-lp
```

InfoPrint does not require the server name.

Disable an actual destination

To disable actual destination `Serv1-pp` on server `Serv1`, enter:

```
pddisable Serv1-pp
```

InfoPrint does not require the server name.

Disable all destinations in a server

To disable the logical and actual destinations contained in the server `ServG1` and assign a message to the destinations, enter:

```
pddisable -c server -m "Unavailable due to testing" ServG1
```

Disable all logical destinations associated with a queue

To disable the logical destinations associated with the queue `production-q1` on server `servera`, enter:

```
pddisable -c queue production-q1
```

InfoPrint does not require the server name.

Suggested reading

For more information, see Attributes file, p. 49.

pdenable command: enables destinations to accept jobs and logs to log

Syntax

pdenable [**-H** *host:port*] [**-c** *ObjectClass*] [**-m** *"MessageText"*]
[**-x** *"attribute=value ..."*] [**-X** *AttributesFileName*]
{*ServerName ...* | *ServerName:LogName ...* |
[*ServerName:*]*DestinationName ...* |
[*ServerName:*]*QueueName ...*}

pdenable -h

Description

Use the **pdenable** administrative command to enable the logging function of logs or to enable logical destinations or actual destinations to accept jobs.

Note

1. Use the **pdenable** and **pddisable** commands to allow or prevent input to an object. Use the **pdresume** and **pdpause** commands to allow or prevent output from the object.
2. To stop destinations from accepting jobs, use the **pddisable** command.
3. To stop logs from logging data, use the **pddisable** command.

Flags

You can use these flags with the **pdenable** command:

-H host:port

Identifies the host and port of the InfoPrint Manager server used for communication. When not specified, the command follows the Configuration logic, to define the host and socket.

-c {destination | log | queue | server} DEFAULT=destination

Specifies the object class you want for this command. In the valid classes, **queue** enables all associated logical destinations, **destination** is for a logical or actual destination, and **server** enables all destinations in that server.

Using this flag is equivalent to specifying the command attribute **operation-class**.

-m *"MessageText"*

Specifies the message you want to associate with the destination, log, queue, or server you want to enable. You can use this message to indicate the reason for enabling the object or to provide any other comments. If you do not specify the **-m** flag, the message already stored with the destination, log, queue, or server remains unchanged.

When you enter the command against a server, InfoPrint propagates the message to the **message** attribute of the destinations residing in that server. InfoPrint does not change the server **message** attribute.

When you enter the command against a queue, InfoPrint propagates the message to the **message** attribute of the logical destinations associated with the queue. InfoPrint does not change the queue **message** attribute.

You can list this message by specifying **requested-attributes=message** with the **pdls** command.

Using this flag is equivalent to specifying the command attribute **message**.

-x *"attribute=value ..."*

A single attribute string, consisting of one more attribute-value pairs.

-X *attributes file name*

Specifies the name of a file containing attribute and value pairs you want InfoPrint to insert at the current point in the command.

Using this flag is equivalent to specifying the command attribute **attributes**.

-h

Displays a command-specific help message containing information about command syntax and flags. If you use this flag with any other flag or attribute, InfoPrint recognizes only the **-h** flag.

Configuration logic

The command determines which server host and server port to use based on this sequence:

1. Server host and server port specified with the **-H** parameter.
2. Server host and server port specified with the PDHOST and PD_SOCKET envirnonment variables.
3. Uses the defaults for PDHOST=localhost and PD_SOCKET=6874.

Note

This configuration logic enables multiple commands to run on a single machine communicating with one or more InfoPrint Manager servers.

Command attributes

You can specify these attributes in a **-x** *"attribute=value ..."* string or in an attributes file designated with the **-X** *AttributesFileName* flag:

attribute=*AttributesFileName*

Specifies the designated attributes file that InfoPrint reads and inserts at the current point in the command. This file contains attribute and value pairs that InfoPrint uses to expand the command.

operation-class={destination | log | queue | server}

DEFAULT=destination

Specifies the object class you want for this command. In the valid classes, **queue** enables all associated logical destinations; **destination** is for a logical or actual destination; and **server** enables all destinations in that server.

message=*"MessageText"*

Specifies the message you want to associate with the destination, log, queue, or server you want to enable. You can use this message to indicate the reason for enabling the object or to provide any

other comments. If you do not specify the **-m** flag, the message already stored with the destination, log, queue, or server remains unchanged.

When you enter the command against a server, InfoPrint propagates the message to the **message** attribute of the destinations residing in that server. InfoPrint does not change the server **message** attribute.

When you enter the command against a queue, InfoPrint propagates the message to the **message** attribute of the logical destinations associated with the queue. InfoPrint does not change the queue **message** attribute.

You can list this message by specifying **requested-attributes=message** with the **pdls** command.

Using this flag is equivalent to specifying the command attribute **message**.

Arguments

Use the argument value to identify the specific object you want to enable. If you specify multiple objects, separate the object names with spaces.

You can use these arguments with the **pdenable** command:

ServerName

Specifies the server you want to enable. When you enter the **pdenable** command against a server, InfoPrint tries to enable all of its destinations.

When a server initializes again after being shut down, whether the destinations are either enabled or disabled depends on:

- The state of the destination when the system was shut down
- The ability of the server to communicate with its associated queue

ServerName:LogName

Specifies the log you want to enable. Enabling a log allows it to begin accepting input (logging).

[ServerName:]DestinationName

Specifies the destination you want to enable. When first created, destinations are in the disabled state. You cannot enable destinations unless you associate them with an existing queue. Any other objects referenced by the destination must also exist. These are:

- For logical destinations
  - Default jobs
  - Default documents
- For actual destinations
  - Media
  - Auxiliary-sheets
  - Resource-contexts

[ServerName:]QueueName

Specifies the queue you want to enable. When you enter the **pdenable** command against a queue, InfoPrint tries to enable all of its associated logical destinations.

Examples

Enable logical destinations

To enable logical destinations `Serv1-lp` and `draft-lp` on server `Serv1`, enter:

```
pdenable  Serv1-lp  draft-lp
```


Enable all destinations in a server

To enable all logical and actual destinations contained in the server `ServG1`, enter the command:

```
pdenable -c server ServG1
```

Suggested reading

For more information, see Attributes file, p. 49.

pdls command: lists selected attribute values

Syntax

pdls [**-H** *host:port*] [**-A**] [**-c** *ObjectClass*] [**-f** *"FilterCriteria"*] [**-F**] [**-g**] [**-j**]
[**-r** *RequestedAttribute* **...**] [**-R** *serverName*] [**-s** *StyleName*] [**-U**]
[**-x** *"attribute=value ..."*] [**-X** *AttributesFileName*]
[*ServerName* **...** | *ServerName:AuxiliarySheetName* **...** |
ServerName:DefaultDocumentName **...** |
ServerName:DefaultJobName **...** |
ServerName:LogName **...** | *ServerName:MediumName* **...** |
[*ServerName:*]*DestinationName* **...** |
[*ServerName:*]*QueueName* **...** |
ServerName:ResourceContextName **...** |
ServerName:TransformName **...** |
LocalJobID[*.DocNumber*] **...** |
GlobalJobId[*.DocNumber*] **...**]

pdls -h

Description

Use the **pdls** command to request that InfoPrint Manager display selected attribute values for one or more jobs or other InfoPrint Manager objects.

- By default, InfoPrint Manager creates a filter when listing jobs that only lets you see your jobs. The jobs have a predefined value for the filter that is equal to the job attribute **user-name**; this value is your login identity when you submit a job. You can add to this filter to further restrict the jobs for which InfoPrint Manager returns information.

- You must suppress the default filter by using the **-U** flag or turn off all filtering with the **-F** flag to see more than your own jobs.
- If you only specify the *ServerName* as the command argument, InfoPrint Manager displays the attribute values for all objects belonging to the object class you specify.
- In general, you can only list the attributes of the object class you are requesting. However, you can view attributes of intial-value-jobs (IVJs) and inital-value-documents (IVDs) associated with a logical destination through the logical destination.
- The **all-device** option on the **-r** flag can only be used with actual destinations that have **snmp-active** specified as **true**.
- If SNMP is enabled on an actual destination, you can also be able to query information directly from the device associated with the actual destination by querying for device attributes. See "Setting up SNMP" in *RICOH InfoPrint Manager for AIX: Procedures, RICOH InfoPrint Manager for Linux: Procedures, or RICOH InfoPrint Manager for Windows: Procedures*.
- The contents and the order of the information returned from queries of device attributes can vary between queries and between devices.
- The results returned from queries of device attributes will not be translated.
- You can list the attribute values for specific jobs by using the local ID or the global ID. You must have submitted the job to use the local ID.

Note

1. There is a situation when you must use the global ID. If the InfoPrint communications daemon responsible for the mapping of local ID-to-global ID values is not available, this can prevent InfoPrint Manager from tying the local ID to the global ID. If this situation exists, you must use the global ID, the name of the server, or an argument specification using global characters.
2. There is a possible situation that can occur if your administrator has set the **PDIDTABLE** environment variable to a low value, for example 10. You submit a series of jobs during a short time span such that the number of jobs you have in process is larger than the value set, say 14. You will have two jobs with the local IDs of 1, 2, 3, and 4. However, InfoPrint Manager no longer associates the first four jobs with a local ID because those local IDs now belong to the 11th, 12th, 13th, and 14th jobs. Therefore, you must use the global ID to take action on any of the first four jobs.
3. If the **PDIDTABLE** environment variable is set to 0, jobs cannot be referenced by the local IDs.

Flags

You can use these flags with the **pdls** command:

-H host:port

Identifies the host and port of the InfoPrint Manager server used for communication. When not specified, the command follows the Configuration logic, to define the host and socket.

-c {job | auxiliary-sheet | document | initial-value-document | initial-value-job | log | medium | destination | queue | resource-context | transform| server} DEFAULT=job

Specifies the object class of the object whose attributes you want to list. All object classes are valid.

Using this flag is equivalent to specifying the command attribute **operation-class**.

-A

Use this flag to display information about a logical destination and its associated actual destinations. Associated actual destinations are defined as those listed on a logical destinations default job's **actual-destinations-requested** attribute, or if no actual destinations are listed, then all the actual destinations associated with the same queue as the logical destination.

If the target of the request is an actual destination or other object class, the flag is ignored.

Using this flag is equivalent to specifying the **pdls associated-actual-destinations** command attribute.

-f *"FilterCriteria"*

Specifies the filter criteria you want to use in selecting from the candidate objects. Among the candidate objects, InfoPrint returns only those matching the filter expression. See the command attribute **filter**, for filter expression details.

Using this flag is equivalent to specifying the command attribute **filter**.

-F

Turns off all filtering, both specified and default. See the **-U** flag for suppressing only the default.

-g

Turns off headings.

Using this flag is equivalent to specifying the command attribute **headings=false**.

-i

Use this flag to display only job attributes.

-r {brief | verbose | archive |*"attribute …"* **| all | all-device | none} DEFAULT=brief**

Specifies the group of attributes that you want to display for the specified job, auxiliary sheet, document, default document, default job, log, medium, destination, queue, resource-context, or server.

brief

Displays a small subset of important attributes for each object.

verbose

Displays a larger subset of important attributes for each object.

archive

Writes only initially settable and resettable attributes to an archive file (see Create an archive file, p. 109).

attributes …

Displays the attributes you specify.

all

Displays all attributes.

all-device

Displays all device attributes from the device associated with an actual destination.

none

Displays no attributes.

If you specify more than one of these values, InfoPrint displays all the attributes requested.

Using this flag is equivalent to specifying the command attribute **requested-attributes**.

-R *servername*

Displays information for retained jobs only.

Using this flag is equivalent to specifying the command attribute **retained-jobs-only**.

-s {column | doccol | line} DEFAULT={ column | line }

Specifies the format in which you want InfoPrint to display the attributes.

column

Attribute values are displayed in tabular format, so that values of the same attribute for multiple objects line up in columns. This is the default for **-r brief** and **-r verbose**.

doccol

For jobs only, job attribute values and the document attribute values for the first document in the job are displayed in column format on the same line.

line

Each attribute is displayed on a separate line. This is the default for **-r all**, **-r** *"attribute …:"*, and **-r archive**.

Using this flag is equivalent to specifying the command attribute **style**.

-U

Suppresses the default user-name filter.

-x *"attribute=value …"*

Consists of a single attribute string, containing one or more attribute-value pairs.

-X *AttributesFileName*

Specifies the name of the file containing attribute and value pairs you want InfoPrint to insert at the current point in the command.

Using this flag is equivalent to specifying the command attribute **attributes**.

-h

Displays a command-specific help message containing information about command syntax and flags. If you use this flag with any other flag or attribute, InfoPrint recognizes only the **-h** flag.

Configuration logic

The command determines which server host and server port to use based on this sequence:

1. Server host and server port specified with the **-H** parameter.
2. Server host and server port specified with the PDHOST and PD_SOCKET envirnonment variables.
3. Uses the defaults for PDHOST=localhost and PD_SOCKET=6874.

Note

This configuration logic enables multiple commands to run on a single machine communicating with one or more InfoPrint Manager servers.

Command attributes

You can specify these attributes in a **-x** *"attribute=value ..."* string or in an attributes file designated with the **-X** *AttributesFileName* flag.

attributes=*AttributesFileName*

Specifies the designated attributes file that InfoPrint reads and inserts at the current point in the command. This file contains attribute and value pairs that InfoPrint uses to expand the command.

associated-actual-destinations=true|false

Specifies whether you want to have information displayed for a logical destination's associated actual destinations as well as the logical destination specified as the command argument. Associated actual destinations are defined as those listed on a logical destinations default job's **actual-destinations-requested** attribute, or if no actual destinations are listed, then all the actual destinations associated with the same queue as the logical destination.

operation-class={job | associated-actual-destination | auxiliary-sheet | document | initial-value-document | initial-value-job | log | medium | destination | queue | resource-context | transform | server}

Specifies the object class of the object whose attributes you want listed. All object classes are valid.

filter=*"FilterCriteria"*

Specifies the selection criteria you want InfoPrint to use to select a subset from the candidate objects (if you request attribute values for multiple objects). A filter is a logical expression consisting of relations of attributes to attribute values. Among the objects you specify, InfoPrint returns only objects whose attribute values match the filter expression.

You can only use attributes for the object class (**job**, **auxiliary-sheet**, **document**, **initial-value-document**, **initial-value-job**, **log**, **medium**, **destination**, **queue**, **resource-context**, **transform**, or **server**) that you specify in the command. The filter can contain an attribute other than one of those you are requesting.

Attribute operators for filters

Operation	Operator	Strings	Integers	Time Format
Equal	==	Yes	Yes	Yes
Match first part of a value	=*	Yes	Yes	Yes
Match last part of a value	*=	Yes	Yes	Yes
Match any part of a value; such as a sub-string	*=*	Yes	Yes	Yes

Operation	Operator	Strings	Integers	Time Format
Attribute present (any value)	==*	Yes	Yes	Yes
Note When you test for attribute presence, InfoPrint evaluates the filter item as true when the attribute has a **value**, not just when the attribute exists. You might need a false value to satisfy the requirement, as long as the false value conforms to the general syntax.				
Match approximately; for case-insensitive sub-string	~=	Yes	No	No
Note 1. An approximate match occurs when at least half of the target string, regardless of starting position, matches the filter value. 2. A case-insensitive match occurs when the target string can have a mix of uppercase and lowercase characters, but the characters do match.				
Match a value greater than that specified	>	No	Yes	Yes
Match a value less than that specified	<	No	Yes	Yes

This list shows the filter syntax:

1. A filter item consisting of an attribute name, operator, and value. Attribute operators for filters, p. 100 shows the operators and the data formats you can use to separate the attribute and value.
2. In Attribute operators for filters, p. 100, the attribute-present operation consists of an attribute name followed by the equality operator followed by an * in place of an attribute value. For example:

```
-f "media-ready==*"
```

   If the attribute has no value, InfoPrint evaluates the filter item as false. InfoPrint evaluates the filter item as true if the attribute has any assigned value.
3. InfoPrint can compare each attribute in a filter item to only one attribute value. To compare an attribute to more than one value, or to filter more than one attribute, separate the filter items with one of these operators:

   The AND operator ("&&")

   FilterItem && FilterItem

   The expression evaluates to true only if both filter items evaluate to true.

   The OR operator ("||")

   FilterItem || FilterItem

The expression evaluates to true if either of the filter items evaluate to true.

4. To evaluate a filter item as false, use the NOT operator before the filter item and enclose the filter item in parentheses.

   Note

   With InfoPrint Manager for AIX or InfoPrint Manager for Linux, depending on the shell you are using, you might need to place quotation marks before and after the parentheses.

   The NOT operator !

   ! (FilterItem)

   If the filter item evaluates to true, the expression is false.

   If the filter item evaluates to false, the expression is true.

5. When you use multiple logical operators in a filter, InfoPrint evaluates them in an order of precedence. You can override the order of precedence by using parentheses, ( ).

   Note

   Depending on the shell you are using, you might need to place quotation marks before and after the parentheses. See Filter syntax, p. 102 for the order of precedence.

The next table summarizes the filter syntax. The table lists the operators in the order of precedence from highest to lowest.

Filter syntax

Operators	Placement
Parentheses: **( )**	Around filter items
Relational operators: **> <**	Between attribute and value
Equality operators: **==**	Between attribute and value
String matching: **=* *= *=* ~=**	Between attribute and value
NOT Operator: **!**	Before (filter-item) only
AND operator: **&&**	Between two filter items
OR operator: **||**	Between two filter items

headings= {true | false} DEFAULT=true

Specifies whether you want the output displayed with or without headings.

message-count=*number*

When you request the **log-messages** log attribute, this specifies the number of previous messages you want to see starting from the last message logged. The value you can specify for *number* can be an integer from 1 through 2147483647.

Use this command attribute with the **log-messages** log attribute to query for error log information. For example:

```
pdls -c log -r log-messages -x "message-count=4" Serv1:
```

displays the last four messages contained in the error log for server `Serv1`.

requested-attributes={brief | verbose | archive | *"attribute ...:"* all | all-device | none} DEFAULT= brief

Specifies the group of attributes you want to display for the specified job, auxiliary-sheet, document, default document, default job, log, medium, destination, queue, resource-context, or server object.

brief

Displays a small subset of important attributes for each object.

verbose

Displays a larger subset of important attributes for each object.

archive

Writes only initially settable and resettable attributes to an archive file (see Create an archive file, p. 109).

attribute …

Displays the attributes you specify.

all

Displays all attributes.

all-device

Displays all device attributes from the device associated with an actual destination.

none

Displays no attributes.

If you specify more than one of these values, InfoPrint displays all the attributes requested.

retained-jobs-only= {true | false}

Displays information for retained jobs only.

style={column | doccol | line} DEFAULT={ column | line }

The format in which you want the attributes displayed.

column

Attribute values are displayed in tabular format, so that values of the same attribute for multiple objects line up in columns. This is the default for **requested-attributes=brief** and **requested-attributes=verbose**.

doccol

For jobs only, job attribute values and the document attribute values for the first document in the job are displayed in column format on the same line.

line

Each attribute is displayed on a separate line. This is the default for **requested-attributes= all**, **requested-attributes=***"attribute …:"*, and **requested-attributes=archive**.

when=now

When you specify **when=now** with object class destination, the InfoPrint Server returns its current information regarding the destinations instead of performing SNMP queries to get any updates. If

you have many SNMP destinations, the use of this command attribute improves the performance of your **pdls** request.

For example, to list the brief attributes of all the destinations in Server1 and request that Server1 does not make SNMP queries to get the latest information but just returns its most current information, use this command:

```
pdls -c dest -xwhen=now Server1:
```


Arguments

Use the argument value to identify the specific object whose attributes you want to display. If you specify multiple objects, separate the object names with spaces.

You can use these arguments with the **pdls** command:

- *ServerName:*
- *ServerName:AuxiliarySheetName*
- *ServerName:DefaultDocumentName*
- *ServerName:DefaultJobName*
- *ServerName:LogName*
- *ServerName:MediumName*
- *[ServerName:]DestinationName*
- *[ServerName:]QueueName*
- *ServerName:ResourceContextName*
- *ServerName:TransformName*
- *LocalJobID[.DocNumber]*
- *GlobalJobID[.DocNumber]*

Note

When you only specify `ServerName:` as the argument of the command (without an object name), InfoPrint returns the attribute values for all of the objects in the object class that you specify for that server and that meet the filter criteria.

Examples

List full attribute information for a document

To display attribute information for the first document in a job with a local ID of 13, enter the command:

```
pdls -c document -r all 13.1
```

List minimum information for a document

To find the minimum information (document number, format, and file name) about the second document in a job with a local ID of 13, enter the command:

```
pdls -c document 13.2
```

Query the status of a logical destination and it associated actual destinations

To query the status of a logical destination named LD201 and its associated actual destinations enter either of these commands:

```
pdls -c dest -A                    -r enabled,dest-state LD201
```

InfoPrint displays information similar to:

```
LD201:  enabled                = true
ip1352: enabled                = false
ip1352: destination-state      = needs-key-operator
np17pp: enabled                = false
np17pp: destination-state      = needs-attention
1120psf: enabled               = false
1120psf: destination-state     = needs-key-operator
1145: enabled                  = true
1145: destination-state        = idle
```


List selected attributes for a queue

To list the values of the brief attributes and the **backlogged** attribute for the queue `Charlie-q`, enter the command:

```
pdls -c queue -r "brief backlogged" Charlie-q
```

InfoPrint displays information similar to:

```
Charlie-q:  queue-name        = Charlie-q
Charlie-q:  queue-state       = ready
Charlie-q:  associated-server = Charlie
Charlie-q:  backlogged        = false
```

List document formats supported by destinations

To display the document formats supported by the logical and actual destinations in `Serv1`, enter the command:

```
pdls -c destination -r document-formats-supported -s line Serv1:
```

InfoPrint displays information similar to:

```
Serv1-lp:  document-formats-supported =
Serv1-pp:  document-formats-supported = ascii
                                        dbcs-ascii
                                        ditroff
                                        line-data
                                        modca-p
                                        pdf
                                        postscript
                                        tiff
Srv1-pp2:  document-formats-supported = ascii
                                        dbcs-ascii
                                        ditroff
                                        line-data
```

List the retention-period defaulted by a logical destination and the name of the intial-value-job being used

To list the retention-period defaulted by a logical destination and the name of the initial value job being used, enter the command:

```
pdls -c destination -r retention-period,
destination-initial-value-job
Dserv-lp
```

InfoPrint displays information similar to:

```
Dserv-lp:job-retention-period=1:00
Dserv-lp:destination-initial-value-job=retain
```


Filter destinations by attribute

To determine the logical destinations and actual destinations that support the selected attributes on any server, enter the command:

```
pdls -c destination -f "content-orientation-supported==landscape &&
   plexes-supported==tumble && sides-supported==2"
   -r "destination-realization associated-queue" \*:
```

Note

With AIX or Linux, including the backslash before the global character prevents the Korn shell from interpreting the * as a filename wildcard. InfoPrint displays information similar to:

```
Serv3-lp:  destination-realization = logical
Serv3-lp:  associated-queue        = Serv3-q
Serv4-lp:  destination-realization = logical
Serv4-lp:  associated-queue        = Serv4-q
Serv3-pp:  destination-realization = actual
Serv3-pp:  associated-queue        = Serv3-q
Serv4-pp:  destination-realization = actual
Serv4-pp:  associated-queue        = Serv4-q
```

Filter jobs by attribute

To list all jobs that have requested more than one copy and that InfoPrint has assigned to actual destination `mysrv-pp`, enter the command:

```
pdls -U -f "copy-count>1 && destination-assigned==mysrv-pp" "*:"
```

Note

With AIX or Linux, placing the quotation marks before the global character and after the colon prevents the Korn or Bash shell from interpreting the * as a filename wildcard.

Filter jobs by user name (include a user)

To list all jobs owned by the user named `Smith`, enter this command:

```
pdls -f "job-owner==Smith" -U Serv1:
```

Filter jobs by user name (exclude a user)

To list all jobs not owned by the user named `Smith`, enter the command:

```
pdls -f "!(job-owner==Smith)" -U Serv1:
```

Filter jobs by user name (substring) InfoPrint Manager for AIX or Linux

To list jobs owned by users with a given substring in their names (substring matching) use one of these filters with the **pdls** command:

- Initial string match:

```
pdls -U -f "job-owner=*Jones" Serv1:
```

- Any substring match:

```
pdls -U -f "job-owner*=*one" Serv1:
```

- Final string match:

```
pdls -U -f "job-owner*=nes" Serv1:
```

All of these commands return jobs owned by `Jones`.

Note

These examples use the Korn shell.

Filter jobs by user name (approximate match) InfoPrint Manager for AIX or Linux

To list jobs owned by all users with a name close to `Jones` (an approximate match), enter the command:

```
pdls -U -f "job-owner~=jones" Serv1:
```

Note

This example uses the Korn shell.

Display the server associated with a destination

To query for the name of the server containing logical destination `draft-lp`, enter the command:

```
pdls -c destination -r associated-server draft-lp
```

InfoPrint displays information similar to:

```
draft-lp:  associated-server=Serv1
```

List the attributes specified in a default document

To query for the attributes specified in the default document `spl7ivd` contained in `Serv7`, enter the command:

```
pdls -c initial-value-document -r all Serv7:spl7ivd
```

InfoPrint displays information similar to:

```
spl7ivd:  carriage-control-type             =
spl7ivd:  chars                             =
spl7ivd:  content-orientation               =
spl7ivd:  initial-value-document-identifier = spl7ivd
spl7ivd:  associated-server                 = Serv7
spl7ivd:  logical-destination-ready         = Serv7-lp
spl7ivd:  copy-count                        = 2
spl7ivd:  sides                             = 2
spl7ivd:  document-format                   = line-data
```

Note

The list that InfoPrint returns contains all possible attributes for a default document (those without values and those with values).

List all job attributes

To list all attributes of jobs 10 and 12, enter the command:

```
pdls -r all 10 12
```

List brief job attributes

To list just the brief job attributes of jobs 10 and 12, enter the command:

```
pdls -j 10 12
```

Display status of all jobs

To list the status of all jobs you have submitted to the default logical destination, Dserv-lp, enter the command:

```
pdls -f "destination-name-requested==Dserv-lp" Serv1:
```

InfoPrint displays information similar to:

```
                                 Current    Intervening Destination Destinations
Job ID              Name         State      Jobs        Requested   Assigned
--- --------------- ----------   ---------  ----------- ----------- --------
4   SplX:1099222204 Wkly-report  processing 0           Dserv-lp    Dserv-pp
5   SplX:1114222205 Test-report  processing 0           Dserv-lp    Laser-pp
6   SplX:1224222206 Trip-report  pending    2           Dserv-lp
1   SplX:0988222201 Dept-memo12  retained               Dserv-lp
```

Display status of all pending jobs

To list the job status of all pending jobs submitted to the default logical destination, Dserv-lp, enter the command:

```
pdls -f "destination-name-requested==Dserv-lp &&
   current-job-state==pending" Serv1:
```

InfoPrint displays information similar to:

```
                                 Current   Intervening Destination Destinations
Job ID              Name         State     Jobs        Requested   Assigned
--- --------------- -----------  --------- ----------- ----------- ------------
6   SplX:1224222206 Trip-report  pending   2           Dserv-lp
```

List the brief attributes of a logical destination

To list the **brief** attributes of logical destination Dserv-lp, enter the command:

```
pdls -c destination Dserv-lp
```

InfoPrint displays information similar to:

```
Destination  Realization  Enabled  Queue
-----------  -----------  -------  -----
Dserv-lp     logical      true     Dserv-q
```

With AIX or Linux, if you do not specify a destination name, InfoPrint displays the brief attributes of all the destinations that share the same server with your default logical destination (as defined by your **PDPRINTER** environment variable).

List document formats supported by a destination

To list the document formats supported by the actual destination `srv37-pp` in the line style with headings, which is the default style for an attribute list, enter the command:

```
pdls -c destination -r document-formats-supported srv37-pp
```

InfoPrint displays information similar to:

```
srv37-pp: document-formats-supported =  modca-p
                                        pdf
                                        postscript
```


Create an archive file

To create an archive file for a server and store it in a file, enter the command:

```
pdls -c server -r archive Serv1 > Serv1.archive
```

Query device input trays

To query the device input trays of the device associated with the `prt5-ad` actual destination, enter:

```
pdls  -c destination -r device-input-trays prt5-ad
```

InfoPrint displays information similar to this:prt5-ad: device-input-trays=

```
{capacity=250 level=250 medium={name="na-letter-white"}
   empty=false name="Tray 1"}
{capacity=550 level=550 medium={source="Tray 2"} unit=sheet
   empty=false name="Tray 2"}
{capacity=1 medium={dimensions=(11.0in,8.5in)} unit=sheet
   empty=false name="Letter"}
```

Query device marker supplies, device state, and device location

To query the device marker supplies, device state, and device location for the device associated with the `prt5-ad` actual destination, enter:

```
pdls -c destination
   -r device-marker-supplies,device-state,device-location  prt5-ad
```

InfoPrint displays information similar to this:

```
prt5-ad: device-marker-supplies =""
prt5-ad: device-state=idle
prt5-ad: device-location=""
```

Query the device-serial-number for all devices paused on Server monolith

To query the device-serial-number for all the devices associated with all the actual destinations that are paused on Server monolith, enter:

```
pdls -c destination -r device-serial-number -f"dest-state==paused &&
   dest-realization==actual" monolith:
```

Where `prt5-ad` is the only actual destination paused, InfoPrint displays information similar to this:

```
prt5-ad: device-serial-number0000000000000000
```

Query the device contact and device location

To query the device contact and the device location, enter

```
pdls -cp -r device-contact, device-location ip21
```

Which results in:

```
ip21: device-contact = laboperator
ip21: device-location = swtlab
```


Check server attributes

To check serverr attributes, enter

```
pdls -cp -r snmp-active,user-snmp,snmp-device-conditions
            device-state,probelm-message, warning-message ip21
```

Which results in:

```
ip21: snmp-active = true
ip21: use-snmp = true
ip21: snmp-device-conditions = input-tray-empty
                  offline
                  media-low
ip21: device-state = stopped
ip21: problem-message =
ip21: warning-message = "5010-837 Printer ip21 is offline."
```

Check printer attributes

To check printer attributes, enter

```
pdls -cp -r snmp-active,user-snmp,snmp-device-conditions
            device-state,probelm-message, warning-message ip21
```

Which results in:

```
ip21: snmp-active = true
ip21: use-snmp = true
ip21: snmp-device-conditions = input-tray-empty
                  media-low
ip21: device-state = idle
ip21: problem-message =
ip21: warning-message = "5010-829 Printer ip21 is running
                  but is low on paper."
```

Query to see if the panel is locked

To query to see if the operator panel is locked, enter

```
pdls -cp -4 device-op-panel-locked ip21
```

Which results in:

```
ip21: device-op-panel-locked = true
```

Archive a job

To archive a job, enter

```
pdls -c job -r archive ServerName:JobGlobalID > job.archive
```

Suggested reading in hardcopy

For information about:

- Global character support for server names, see Wildcards, p. 49
- Attributes file, see Attributes file, p. 49
- Headings and style, see Command output: headings and style, p. 48
- Attributes for InfoPrint objects, see InfoPrint Manager object attributes, p. 511
- For introductory information about object attributes and their use with commands, see Introducing object attributes, p. 514, which includes information about non-settable, initially settable, and resettable attributes.

pdmod command: modifies attributes of submitted print jobs

Syntax

pdmod [**-H** *host:port*] [**-g**] [**-m** *"MessageText"*] [**-n** *CopyCount*]
[**-r** *attribute …*] [**-s** *StyleName*] [**-t** *JobName*]
[**-x** *"attribute=value …"*] [**-X** *AttributesFileName*]
{*LocalJobID … | GlobalJobID …*}

pdmod -h

Description

Use the **pdmod** command to modify the values of job and document attributes of previously submitted jobs.

You can specify any resettable job and document attributes. See the **pd_att_job** and **pd_att_document** man pages for descriptions of all job and document attributes.

You can only modify preprocessing, pending, held, paused, or retained jobs. In general, you cannot modify processing or printing jobs. The only exception is if you modify only **job-hold=true**, the job will be canceled from the printer and then modified.

Modifying an existing job might affect the scheduling of the job.

The next table lists the four modification operators.

pdmod operators

Operator	Syntax	Description
Replace	*attribute=value*	Replaces the entire value of the *attribute* with *value*, or if not already present, adds the attribute-value pair to the job.
Add values	*attribute+=value*	Adds the value *value* to the *attribute*. You cannot add values to single-valued attributes. An add request that duplicates values on a multi-valued attribute has no effect on the job.

Operator	Syntax	Description
Remove values	*attribute-=value*	Removes the value *value* from the *attribute*. A remove request for a nonexistent value has no effect on the object. A remove request for the last or only value of an attribute is equivalent to a reset-to-default request.
Reset to default	*attribute==*	Sets the *attribute* to the default values according to the job-defaulting hierarchy. If you supply values with a reset request, InfoPrint ignores them.

If you do not specify a value with a replace, add, or remove request, InfoPrint issues an error and rejects the request to change the attribute value for the object.

Note

If InfoPrint does not accept a modification, InfoPrint rejects the whole request and the job continues as before.

Use the global job identifier to identify jobs belonging to another person.

If the **ignore-ivo-values** attribute is set to true on the server and the request is to default or remove a value and there are no values left for that attribute, InfoPrint Manager ignores the value of the job and document default attribute when setting its value. See the ignore-ivo-values, p. 1105 attribute.

Flags

You can use these flags with the **pdmod** command:

-H host:port

Identifies the host and port of the InfoPrint Manager server used for communication. When not specified, the command follows the Configuration logic, to define the host and socket.

-g

Turns off headings.

Using this flag is equivalent to specifying the command attribute **headings=false**.

-m "*MessageText*"

Specifies the message you want to store in the **job-message-from-administrator** attribute. You can use the message to give the reason why you are modifying the job or to provide any other comments. If you do not specify the **-m** flag, the message already stored with the job remains unchanged.

You can list this message by specifying **requested-attributes=job-message-from-administrator** with the **pdls** command.

Using this flag is equivalent to specifying the command attribute **message**.

-n *CopyCount*

Specifies the number of document copies.

Using this flag is equivalent to specifying the object attribute **copy-count**.

-r {none | brief | verbose} DEFAULT=none

Specifies the attribute values you want to display for the specified object.

none

Displays no attributes.

brief

Displays a small subset of important attributes for each object.

verbose

Displays a larger subset of important attributes for each object.

Using this flag is equivalent to specifying the command attribute **requested-attributes**.

-s {column | doccol | line} DEFAULT=column

When combined with the **-r** flag or the **requested-attributes** command attribute, specifies the format in which you want InfoPrint to display the attributes.

column

Attribute values are displayed in tabular format, so that values of the same attribute for multiple objects line up in columns.

doccol

For jobs only, job attribute values and the document attribute values for the first document in the job are displayed in column format on the same line.

line

Each attribute is displayed on a separate line.

Using this flag is equivalent to specifying the command attribute **style**.

-t *JobName*

Specifies the new name you want for the job.

Using this flag is equivalent to specifying the object attribute **job-name**.

-x *"attribute=value …"*

Consists of an attribute string, containing one or more attribute-value pairs. Prefix the attribute value with the replace operator, =, to replace a value, with the add-values operator, +=, to add a value, or the remove-values operator, with no attribute value to set the attribute to its default value.

-X *AttributesFileName*

Specifies the name of a file containing attribute and value pairs you want InfoPrint to insert at the current point in the command.

Using this flag is equivalent to specifying the command attribute **attributes**.

-h

Displays a command-specific help message containing information about command syntax and flags. If you use this flag with any other flag or attribute, InfoPrint recognizes only the **-h** flag.

Configuration logic

The command determines which server host and server port to use based on this sequence:

1. Server host and server port specified with the **-H** parameter.
2. Server host and server port specified with the PDHOST and PD_SOCKET envirnonment variables.
3. Uses the defaults for PDHOST=localhost and PD_SOCKET=6874.

Note

This configuration logic enables multiple commands to run on a single machine communicating with one or more InfoPrint Manager servers.

Command attributes

You can specify these attributes in a **-x** *"attribute=value ..."* string or in an attributes file designated with the **-X** *AttributesFileName* flag.

attributes=*AttributesFileName*

Specifies the designated attributes file that InfoPrint reads and inserts at the current point in the command. This file contains attribute and value pairs that InfoPrint uses to expand the command.

headings={true | false} DEFAULT=true

Specifies if you want InfoPrint to display headings on the output.

message=*"MessageText"*

Specifies the message you want to store in the **job-message-from-administrator** attribute. You can use the message to give the reason why you are modifying the job or to provide any other comments. If you do not specify the **message** attribute, the message already stored with the job remains unchanged.

You can list this message by specifying **requested-attributes=job-message-from-administrator** with the **pdls** command.

requested-attributes={none | brief verbose} DEFAULT=none

Specifies which attributes you want displayed.

none

Displays no attributes.

brief

Displays a small subset of important attributes for each object.

verbose

Displays a larger subset of important attributes for each object.

style={column | doccol | line} DEFAULT=column

Specifies the presentation format that you want for the displayed output.

column

Attribute values are displayed in tabular format, so that values of the same attribute for multiple objects line up in columns.

doccol

For jobs only, job attribute values and the document attribute values for the first document in the job are displayed in column format on the same line.

line

Each attribute is displayed on a separate line.

Arguments

Use the argument value to identify the specific object that you want to modify. If you specify multiple objects, separate the object names with spaces.

LocalJobID **or** *GlobalJobID*

Specifies the local or global job identifier.

Examples

- **Modify content orientation**

  To modify the job with a local ID of `10` and change the orientation to landscape, enter the command:

```
pdmod -x "content-orientation=landscape" 10
```

- **Modify job hold condition**

  To modify the job attribute **job-hold** to **false** for job `10` so that InfoPrint can schedule the job (previously submitted with **job-hold** set to **true**), enter the command:

```
pdmod -x "job-hold=false" 10
```

- **Modify job comment**

  To modify the job attribute **job-comment** to `Test Results 100` for job `10`, enter the command:

```
pdmod -x "job-comment='Test Results 100'" 10
```

- **Modify the number of sides that print**

  To modify the document attribute **sides** to specify that all documents in the job with global identifier `DivSpool2:1011222243` should print on both sides, enter the command:

```
pdmod -x "sides=2" DivSpool2:1011222243
```

- **Add a destination location request**

  To add a destination location request to job 10, enter the command:

```
pdmod -x "destination-locations-requested+='bldg.10 room 1-15'" 10
```

- **Remove a destination location request**

  To remove a destination location request from job `10`, enter the command:

```
pdmod -x "destination-locations-requested-='bldg.25 room 3-22'" 10
```

- **Remove all destination location requests**

  To remove all destination locations requested from job 10, enter the command:

```
pdmod -x "destination-locations-requested==" 10
```

- **Combining modifications**

  To modify job `17`, by changing the content-orientation and removing the hold on the job, enter the command:

```
pdmod -x "content-orientation=landscape job-hold=false" 17
```

Suggested reading in hardcopy

For information about:

- Attributes files, see Attributes file, p. 49
- Headings and style, see Command output: headings and style, p. 48
- Job defaulting-hierarchy, see pdpr command: submits jobs, p. 124
- Job attributes, see Attributes for jobs and default jobs, p. 907
- Document attributes, see Attributes for documents and default documents, p. 784
- For introductory information about object attributes and their use with commands, see Introducing object attributes, p. 514, which includes information about non-settable, initially settable, and resettable attributes.

pdpause command: pauses jobs, actual destinations, servers, or queues

Syntax

pdpause [**-H** *host:port*] [**-c** **destination**] [**-m** *"MessageText"*] [**-n**]
[**-x** *"attribute=value …"*] [**-X** *AttributesFileName*]
[**-w** {**now** | **after-current-copy** | **after-current-job**}]
[*ServerName:*]*DestinationName* **…**

pdpause -j [**-m** *"MessageText"*]
[**-x** *"attribute=value …"*] [**-X** *AttributesFileName*]
[**-w** {**now** | **after-current-copy**}] [*ServerName:*]*DestinationName* **…**

pdpause -c job [**-m** *"MessageText"*] [**-x** *"attribute=value …"*]
[**-X** *AttributesFileName*] [**-w** {**now** | **after-current-copy**}]
{*LocalJobID …* | *GlobalJobID …*}

pdpause -c queue [**-m** *"MessageText"*] [**-x** *"attribute=value …"*]
[**-X** *AttributesFileName*] [*ServerName:*]*QueueName* **…**

pdpause -c server [**-m** *"MessageText"*] [**-n**]
[**-x** *"attribute=value …"*] [**-X** *AttributesFileName*]
[**-w** {**now** | **after-current-copy** | **after-current-job**}]
ServerName **…**

pdpause -h

Description

Use the **pdpause** administrative command to pause an object that holds jobs or to pause a job.

You can pause these objects:

- Jobs that are

  - **pending**
  - **held**
  - **ripping**
  - **imposing**
  - **processing**
  - **printing**
- Actual destinations
- Queues
- Servers (pauses all of the queues and actual destinations contained in a server)

To resume a paused object, use the **pdresume** command.

Note

1. Use the **pdpause** and **pdresume** commands to prevent or allow output from the object.
2. Use the **pddisable** and **pdenable** commands to prevent or allow input to the object.
3. You cannot pause PSF upload-TCP/IP-attached physical printers.
4. You cannot pause jobs on a PSF-other or a PSF-command actual destination.
5. You cannot pause an Anyplace queue.

Flags

You can use these flags with the **pdpause** command:

-H host:port

Identifies the host and port of the InfoPrint Manager server used for communication. When not specified, the command follows the Configuration logic, to define the host and socket.

-c {destination | queue | job | server} DEFAULT=destination

Specifies the object class you want to pause. In the valid classes, **destination** is an actual destination.

Using this flag is equivalent to specifying the command attribute **operation-class**.

-i

This flag is only valid when you use it with object-class **destination**. Use this flag to pause the currently printing job on the specified actual destination. The actual destination must be a physical printer, not an email destination.

-m *"MessageText"*

Specifies the message you want to associate with the specified destination, queue, job, or server that you are pausing. You can use this message to indicate the reason that you are pausing the object or to provide any other comments.

When pausing a server, InfoPrint propagates the message to the **message** attribute of the actual destinations and queues residing in the server.

If the command operates on a destination or a queue, you can list this message by specifying **requested-attributes=message** with the **pdls** command.

When the command operates on a job, the specified text becomes the value of the **job-message-from-administrator** attribute. You can list this message by specifying **requested-attributes=job-message-from-administrator** with the **pdls** command.

If you do not specify the **-m** flag, the message already stored with the destination, queue, job, or server remains unchanged.

Using this flag is equivalent to specifying the command attribute **message**.

-n

Causes the destination to do an NPRO (move the last printed page to the stacker). Using this flag is equivalent to specifying the command attribute **non-process-runout=true**.

This flag is valid only with object class **destination** or **server**. It is not valid with the **-j** flag. It is valid only for PSF physical printers and for servers containing them.

-w {now | after-current-copy | after-current-job} DEFAULT=now

Specifies when to pause the destination, job, or server. If you specify:

now

and the paused object is a:

destination

The destination pauses as soon as possible. How long this takes depends on the output device.

job

The job pauses as soon as possible. If the job is processing or printing, how long this takes depends on the output device.

Note

If you only want to get the job off the printer immediately, you can use the **pdmod** command:

```
pdmod -xjob-hold=true
```

This will send the job back to the held queue and reprint all the pages in the job.

server

The server pauses as soon as possible. How long this takes depends on the output devices represented by the destinations in the server.

after-current-copy

and the paused object is a:

destination

The destination pauses after the current copy of the current job finishes printing.

job

The job pauses after the current copy finishes printing.

server

The server pauses after the current copy of the current job on each actual destination in the server finishes printing.

This value is valid only for PSF physical printers, for jobs printing on PSF physical printers, and for servers containing PSF physical printers.

after-current-job

and the paused object is a:

destination

The destination pauses after the current job finishes printing.

server

The server pauses after the current job on each actual destination in the server finishes printing.

This value is not valid for jobs, including jobs paused with the **-j** flag. It is valid only for PSF physical printers and for servers containing PSF physical printers.

Specifying this flag is equivalent to specifying the command attribute **when**.

-x *"attribute=value …"*

A single attribute string, consisting of one or more attribute-value pairs.

-X *AttributesFileName*

Specifies the name of a file containing attribute and value pairs you want inserted at the current point in the command.

Using this flag is equivalent to specifying the command attribute **attributes**.

-h

Displays a command-specific help message containing information about command syntax and flags. This flag and any other flag are mutually exclusive (if you use it with any other flag or attribute, InfoPrint recognizes only the **-h** flag).

Configuration logic

The command determines which server host and server port to use based on this sequence:

1. Server host and server port specified with the **-H** parameter.
2. Server host and server port specified with the PDHOST and PD_SOCKET envirnonment variables.
3. Uses the defaults for PDHOST=localhost and PD_SOCKET=6874.

Note

This configuration logic enables multiple commands to run on a single machine communicating with one or more InfoPrint Manager servers.

Command attributes

You can specify these attributes in a **-x** *"attribute=value …"* string or in an attributes file designated with the **-X** *AttributesFileName* flag.

attributes=*AttributesFileName*

Specifies the designated attributes file that InfoPrint reads and inserts at the current point in the command. This file contains attribute and value pairs that InfoPrint uses to expand the command.

operation-class={destination | queue | job | server} DEFAULT=destination

Specifies the object class that you want to pause. In the valid classes, **destination** is an actual destination.

message="*MessageText*"

2

Specifies the message that you want to associate with the specified destination, queue, job, or server that you are pausing. You can use this message to indicate the reason you are pausing the object or to provide any other comments.

When pausing a server, InfoPrint propagates the message to the **message** attribute of the actual destinations and queues residing in the server. InfoPrint does not change the server **message** attribute.

If the command operates on a destination or a queue, you can list this message by specifying **requested-attributes=message** with the **pdls** command.

When the command operates on a job, the specified text becomes the value of the **job-message-from-administrator** attribute. You can list this message by specifying **requested-attributes=job-message-from-administrator** with the **pdls** command.

If you do not specify the **message** attribute, the message already stored with the destination, queue, job, or server remains unchanged.

non-process-runout={true | false} DEFAULT=false

Specifies whether the destination should do an NPRO (move the last printed page to the stacker). This attribute is valid only with object class **destination** or **server**. It is not valid with the **-j** flag. It is valid only for PSF physical printers and for servers containing them.

when={now | after-current-copy | after-current-job} DEFAULT=now

Specifies when to pause the destination, job, or server. If you specify:

now

and the paused object is a:

destination

The destination pauses as soon as possible. How long this takes depends on the output device.

job

The job pauses as soon as possible. If the job is processing or printing, how long this takes depends on the output device.

Note

If you only want to get the job off the printer immediately, you can use the **pdmod** command:

```
pdmod -xjob-hold=true
```

This will send the job back to the held queue and reprint all the pages in the job.

server

The server pauses as soon as possible. How long this takes depends on the output devices represented by the destinations in the server.

after-current-copy

and the paused object is a:

destination

The destination pauses after the current copy of the current job finishes printing.

job

The job pauses after the current copy finishes printing.

server

The server pauses after the current copy of the current job on each actual destination in the server finishes printing.

This value is valid only for PSF physical printers, for jobs printing on PSF physical printers, and for servers containing PSF physical printers.

after-current-job

and the paused object is a:

destination

The destination pauses after the current job finishes printing.

server

The server pauses after the current job on each actual destination in the server finishes printing.

This value is not valid for jobs, including jobs paused with the **-j** flag. It is valid only for PSF physical printers and for servers containing PSF physical printers.

Arguments

Use the argument value to identify the specific object that you want to pause. If you specify multiple objects, all of the objects must belong to the same class and you must separate the object names with spaces.

You can use these arguments with the **pdpause** command:

LocalJobID... **or** *GlobalJobID*...

Specifies the jobs that you want to pause as determined by a local job identifier or global job identifier. In most cases someone other than the job submitter will pause a job and must identify it by the global job ID. Job submitters who do have authority to pause jobs can identify their own jobs by the local job ID.

These actions take place when you cause InfoPrint to pause:

A ripping or imposing job:

- The job stops. If the first pages of the job have started to print or send while the last pages are ripping or imposing, the job is treated like a printing job.
- The job state changes to paused.
- The destination remains available to accept work.

- InfoPrint can assign other jobs to the destination.

A processing or printing job:

- The job stops.
  - If you specify **-w=after-current-copy**, the job stops after the current copy finishes printing.
  - Otherwise, the job stops as soon as possible. How long this takes depends on the type of output device printing or sending the job.

  Note

  If you only want to get the job off the printer immediately, you can use the **pdmod** command:

```
pdmod -xjob-hold=true
```

  This will send the job back to the held queue and reprint all the pages in the job.
- The job state changes to paused.
- The destination remains available to accept work.
- InfoPrint can assign other jobs to the destination.

A pending job:

InfoPrint prevents scheduling of the job but does not affect any destination.

A held job:

InfoPrint prevents the job from becoming pending, even if you or InfoPrint removes the reason for the job hold. For example, the specified **job-print-after** time expires.

Paused jobs remain in the queue until someone resumes or cancels them. InfoPrint allows modification of a paused job, but you cannot resubmit the job until you issue a **pdresume** command for the job.

Note

If you modify a paused job, it resumes at the beginning, not at the point where it paused.

[ServerName:]DestinationName

Specifies the destinations you want to pause. The action taken depends on whether you include the **-j** flag in the command.

Without the -j flag:

- The destination stops.
  - If you specify **-w=after-current-job**, the destination stops after the current job finishes printing.
  - If you specify **-w=after-current-copy**, the destination stops after the current copy finishes printing.
  - Otherwise, the destination stops as soon as possible. How long this takes depends on the type of output device.
- InfoPrint changes the destination state to paused.

- InfoPrint leaves the job state unchanged; the job is still assigned to the destination.

The actual destination still accepts jobs from its associated queue up to the maximum-concurrent-jobs limit, but does not print them.

With the -j flag:

- The job now printing on the destination stops.

  Note

  The actual destination must be a physical printer, not an email destination.

  – If you specify **-w=after-current-copy**, the job stops after the current copy finishes printing.

  – Otherwise, the job stops as soon as possible. How long this takes depends on the type of printer device.

  – If you only want to get the job off the printer immediately, you can use the **pdmod** command:

```
pdmod -xjob-hold=true
```

  This will send the job back to the held queue and reprint all the pages in the job

- InfoPrint changes the job state to paused.
- The destination remains available to accept work.
- InfoPrint can assign other jobs to the destination.

The actual destination can still accept jobs from its associated queue and process them.

Note

You cannot pause logical destinations because they do not hold jobs.

[ServerName:]QueueName

Specifies the queues you want to pause.

Pausing a queue halts the distribution of jobs from the queue to the actual destinations associated with the queue. Pausing a queue does not prevent it from accepting jobs from its associated logical destinations.

ServerName

Specifies the server on which you want the command to operate. A server does not have a paused state. Issuing the command against a server pauses all queues and actual destinations contained in the server.

Examples

- **Pause an actual destination**

  To pause actual destination `molly-pp` and include a message as to why you are pausing the destination, enter the command:

```
pdpause -m "Toner is low, refilling" molly-pp
```

- **Pause a currently printing job**

  To pause the currently printing job on destination `molly-pp`, enter the command:

```
pdpause -j molly-pp
```

- **Pause a queue**

  To pause the queue `Div1Q2`, enter the command:

```
pdpause -c queue  Div1Q2
```

- **Pause all queues in a server**

  To pause all of the queues in server `DivServ1`, enter the command:

```
pdpause -c server DivServ1
```

- **Pause an actual destination after the current copy with NPRO**

  To pause actual destination `molly-pp` after the current copy and move the last printed sheet to the stacker, enter the command:

```
pdpause -w after-current-copy -n molly-pp
```

Suggested reading

For more information, see Attributes file, p. 49.

pdpr command: submits jobs

Syntax

pdpr [**-H** *host:port*] [{**-d** | **-p**} *DestinationName*]
[**-f** *FileName* **...**]
[**-l**] [**-n** *CopyCount*] [**-N** *NotificationMethod*]
[**-r** *attribute ...*] [**-s** *StyleName*] [**-t** *JobName*]
[**-x** *"attribute=value ..."*] [**-X** *AttributesFileName*]
[**-Z** *InputFileName*] {**-** | *FileName* **...**}

pdpr -h

Description

Use the **pdpr** command to submit jobs to destinations. Each job can contain multiple printable documents (including ZIP files containing one or more printable documents) and, for jobs sent to PSF physical printers or email destinations, any number of resources.

With InfoPrint Manager for AIX or InfoPrint Manager for Linux, the target destination name defaults to the value of the **PDPRINTER** environment variable. You can override the default by specifying the name of another destination using the **-d** or **-p** flag or the job attribute **destination-name-requested**.

When the server accepts the job request, InfoPrint Manager assigns a unique global ID (job identifier) and a local ID to it. Only the job submitter can use the local ID. The job submitter can use either the global ID or the local ID in subsequent commands, such as **pdmod**, **pdrm**, or **pdls**. Anyone else who accesses the job, such as an administrator, must use the global ID.

InfoPrint Manager sets the values for job and document attributes from these possibilities:

1. Values specified in the **pdpr** command using the **-x** *"attribute=value ..."* flag or the **-X** *AttributesFile* flag.

   Note

   If multiple values for the same attribute are specified in the **pdpr** command, InfoPrint Manager uses the last value read, except for those attributes that can have different values for different documents in the same job.
2. The values of a default job specified by the job attribute **initial-value-job** or the values for a default document specified by the document attribute **initial-value-document**.
3. The values of a default job specified by the **destination-initial-value-job** attribute or the values of a default document specified by the **destination-initial-value-document** attribute of the logical destination to which the user submitted the job.
4. Server defaults for required attribute values not specified through the previous methods.

You must be authorized to submit jobs to the specified destination if the logical destination is protected (the value of its **authorize-jobs** attribute is **true**).

If the server cannot locate an actual destination (associated with the requested logical destination) supporting the job and document attributes, InfoPrint Manager rejects the job.

Flags

You can use these flags with the **pdpr** command:

-H host:port

Identifies the host and port of the InfoPrint Manager server used for communication. When not specified, the command follows the Configuration logic, to define the host and socket.

-d *TargetDestinationName*

The target destination can be either the actual destination name if **logical-destination-assigned** is set on the actual destination or the logical destination name to which you want to submit the job.

With InfoPrint Manager for AIX or InfoPrint Manager for Linux, if you do not specify this flag (or the equivalent **-p** flag), InfoPrint Manager uses the **PDPRINTER** environment variable to determine the destination.

Using this flag is equivalent to specifying the **destination-name-requested** attribute.

-f *FileName*

Specifies files you want included in the job. Use this flag only with file identifiers that are **not placed at the end of the command**. For example, to print all pages of `file1` and pages 3 through 6 of `file2`, enter:

```
pdpr -f file1 -x page-select=3:6 file2
```

-l

Creates symbolic links to the job files rather than making temporary copies when used with InfoPrint Manager for AIX or InfoPrint Manager for Linux. When InfoPrint Manager assigns the job to an actual destination, the server uses the links to the job files to locate the original files and copies them (if needed) at that time. This can be useful when printing large files or jobs.

Note

1. Use this flag only for jobs submitted locally to AIX or Linux servers; you cannot use it when submitting jobs from a workstation client or to a Windows server.
2. When InfoPrint Manager job encryption is enabled, this flag is ignored.
3. You must use caution when using this flag because:
    1) Depending on when you make changes to the files and when the server prints them, the printed output might or might not reflect the changes.
    2) If you delete the file before the job prints or while the job is printing, the printed output might fail or be incomplete.
    3) When you are using an AIX or Linux client and sending a **pdpr** command with **PDHOST** or **-H** flag, you cannot specify the **-l** flag.

-n {1 | *CopyCount***} DEFAULT=1**

Specifies the number of document copies that you want to print.

If you do not specify the **-n** flag, the copy count defaults to one (1).

Using this flag is equivalent to specifying the document attribute **copy-count=*CopyCount***.

Note

You cannot use the **-n** flag or the document attribute **copy-count** if the job contains inline resources. Use the job attribute **results-profile** instead.

-N {message | email | job-log| none} DEFAULT=message

Specifies the delivery method that you want to use for notification of job events for this job.

Note

Using this flag and its value causes InfoPrint Manager to generate a **notification-profile** attribute value for this job.

-p *TargetDestinationName*

The target destination can be either the actual destination name if **logical-destination-assigned** is set on the actual destination or the logical destination name to which you want to submit the job.

With InfoPrint Manager for AIX or InfoPrint Manager for Linux, if you do not specify this flag (or the equivalent **-d** flag), InfoPrint Manager uses the **PDPRINTER** environment variable to determine the destination.

Using this flag is equivalent to specifying the **destination-name-requested** attribute.

-r {none | brief | verbose} DEFAULT=none

Identifies the job attribute values that you want to display for the job just created.

none

Displays no attributes.

brief

Displays a small subset of important attributes for the job.

verbose

Displays a larger subset of important attributes for the job.

Using this flag is equivalent to specifying the command attribute **requested-attributes**.

-s {column | doccol | line} DEFAULT=column

When combined with the **-r** flag or the **requested-attributes** command attribute, specifies the format in which you want the attributes displayed.

column

Attribute values are displayed in tabular format, so that values of the same attribute for multiple objects line up in columns.

doccol

For jobs only, job attribute values and the document attribute values for the first document in the job are displayed in column format on the same line.

line

Each attribute is displayed on a separate line.

Using this flag is equivalent to specifying the command attribute **style**.

-t *JobName*

Specifies the name you want to assign to the job.

Using this flag is equivalent to specifying the job attribute **job-name**.

-x *"attribute=value ..."*

Consists of a single attribute string containing one or more attribute-value pairs.

Any document attribute defined with the **-x** flag affects all files whose names follow that **-x** flag on the command line, unless you reset that attribute.

To reset an attribute to the default value, specify *AttributeName*==. For example, to reset the **document-type** attribute to its default value, **printable**, specify

```
document-type==
```

-X *AttributesFileName*

Specifies the name of a file containing attribute and value pairs that you want InfoPrint Manager to insert at the current point in the command.

Any document attribute in the file defined with the **-X** flag affects all files whose names follow that **-X** flag on the command line, unless you reset that attribute.

To reset an attribute to the default value, specify *AttributeName*==. For example, to reset the **document-type** attribute to its default value, **printable**, specify

```
document-type==
```

Using this flag is equivalent to specifying the command attribute **attributes**.

-Z *InputFileName*

Specifies the name of a file containing command flags, command attributes, or the names of files to be printed, that you want InfoPrint Manager to insert at the current point in the command. Use this flag when the command is too long to fit on the command line.

For more information about the format of the ***InputFileName***, see Attributes file, p. 49.

-

Entering a dash (hyphen) causes the command to read from standard input (STDIN). If you use this flag, it must occur at the end of the command after any other flags or command attributes.

-h

Displays a command-specific help message containing information about command syntax and flags. If you use this flag with any other flag or attribute, InfoPrint Manager recognizes only the **-h** flag).

Configuration logic

The command determines which server host and server port to use based on this sequence:

1. Server host and server port specified with the **-H** parameter.
2. Server host and server port specified with the PDHOST and PD_SOCKET envirnonment variables.
3. Uses the defaults for PDHOST=localhost and PD_SOCKET=6874.

Note

This configuration logic enables multiple commands to run on a single machine communicating with one or more InfoPrint Manager servers.

Command attributes

You can specify these attributes in a **-x** *"attribute=value ..."* string or in an attributes file designated with the **-X** *AttributesFileName* flag.

attributes=*AttributesFileName*

Specifies the designated attributes file that InfoPrint Manager reads and inserts at the current point in the command. This file contains attribute and value pairs that InfoPrint Manager uses to expand the command.

Any document attribute in the attributes file affects all files whose names follow that **attributes** command attribute on the command line, unless you reset that attribute.

To reset an attribute to the default value, specify *AttributeName*==. For example, to reset the **document-type** attribute to its default value, **printable**, specify

```
document-type==
```

headings={true | false}

Specifies whether you want InfoPrint Manager to display headings with the attributes.

requested-attributes={none | brief | verbose} DEFAULT=none

Specifies which job attributes you want InfoPrint Manager to display.

none

Displays no attributes.

brief

Displays a small subset of important attributes for each object.

verbose

Displays a larger subset of important attributes for each object.

style={column | doccol | line} DEFAULT=column

Specifies the presentation format in which you want InfoPrint Manager to display the output.

column

Attribute values are displayed in tabular format, so that values of the same attribute for multiple objects line up in columns.

doccol

For jobs only, job attribute values and the document attribute values for the first document in the job are displayed in column format on the same line.

line

Each attribute is displayed on a separate line.

Job and document attributes used with the command

There are two types of object attributes used with the **pdpr** command, per-job and per-document. You can specify these attributes in a **-x**"*attribute=value ...*" string or in an attributes file designated with the **-X** *AttributesFileName* flag. You can specify any initially settable or resettable job or document attribute with the **pdpr** command. See Attributes for documents and default documents, p. 784 and Attributes for jobs and default jobs, p. 907 for descriptions of job and document attributes. See Chapter 3 of the *RICOH InfoPrint Manager: Reference* guide for descriptions of job and document attributes.

- **Per-job attributes**
  Per-job attributes apply to the job as a whole and can occur anywhere in the **pdpr** command.
- **Per-document attributes**
  If you specify some document attributes before the first document (file) on the command line, those attributes apply to all documents (files) you specify for this job. If you specify a different document attribute between the first and second document (files), that attribute applies to the second document and any following document you specify for this job. This progression of attributes to files continues until the last document (file) specified.

  The value for a given attribute must be the same for all the documents in the job except for those listed in Per-document attribute listing, p. 787. Even for those attributes, the value must be the same for all documents in the job if the documents are in ASCII format.

Arguments

Use the argument value to identify the name of a file that you want to print. If you specify multiple file identifiers, separate the file identifiers with spaces. Each file becomes a document in the job. Unless you end the command with the **-** flag, indicating that **pdpr** is to read from standard input, you must place at least one file identifier without the **-f** flag at the end of the command.

FileName

Specifies the document that you want to print. Precede the file name by any per-document attributes.

If you specify a multi-document job, and if InfoPrint Manager cannot support one or more of the documents in the job, InfoPrint Manager rejects the job and issues an error message.

As of the 4.15.0 release, the **pdpr** command supports ZIP file input. Ensure that the system running **pdpr** has sufficient disk space to unpack the ZIP files. Additionally, ZIP file names must adhere to the naming conventions and restrictions of the operating system in use.

Examples

- **Print a job on the default logical destination**

  To submit the file `File1` to your default logical destination, enter the commands:

```
pdpr File1
```

- **Print a job on a specified logical destination**

  To submit the file `File1` to the logical destination `fred-lp`, enter the command:

```
pdpr -d fred-lp File1
```

- **Print a job on a specified actual destination**

  To submit the file `File5` for printing on actual destination `draft-pp`, enter the command:

```
pdpr -p fred-lp -x "actual-destinations-requested=draft-pp" File5
```

  Or if the `draft-pp` actual destination has its **logical-destinations-assigned** attribute set to `fred-lp`:

```
pdpr -p draft-pp File5
```

- **Print a multi-document job**

  To submit the files `File1` and `File2` to the default logical destination, enter the command:

```
pdpr File1 File2
```

- **Print a job**

  To print a job on the default logical destination on a specific InfoPrint Manager system. To submit the file File1 to your default logical destination on server infoprint1, communicating on port 6876, enter the command:

```
pdpr -H infoprint1:6876 File1
```

- **Email a job**

  To submit the file `report.ps` to the logical destination `mailbox` for electronic mailing to `julia@kingston`, enter the command:

```
pdpr -d mailbox -x "email-to-address=julia@kingston
   subject-text='Status Report'" report.ps
```

- **Print multiple copies of each document in a job**

  To submit a job to the default logical destination and to specify two copies of each file in the job, enter one of these commands:

```
pdpr -n 2 File1 File2 File3 File4 ? pdpr -x "copy-count=2"
   File1 File2 File3 File4
```

  InfoPrint Manager prints two copies of `File1`, followed by two of `File2`, and so forth for each file in the job.

  Note

  You cannot use the **-n** flag or the document attribute **copy-count** if the job contains inline resources. Use the job attribute **results-profile** instead.

- **Print multiple copies of a job**

  To submit the job to the default logical destination and to specify two copies of the complete job, enter the command:

```
pdpr -x "results-profile=::2" b Contents Body1 Body2 Append
```

  InfoPrint Manager prints a single copy of each file in the job, and then prints a second set in the same manner.

- **Print multiple copies of documents and jobs**

  To submit a job to the default logical destination and to specify two copies of the complete job with each copy of the job containing three copies of each file, enter the command:

```
pdpr -n 3 -x "results-profile=::2" b Contents Body1 Body2 Append
```

  InfoPrint Manager prints three copies of `b`, followed by three copies of `Contents` and so until the first copy of the job completes. Then InfoPrint Manager prints a second set in the same manner.

- **Specify job name**

  To submit the file `File1` to your default logical destination and to specify the job name, enter the command:

```
pdpr -t CmdRef File1
```

- **Print a duplexed job**

  To submit the file `File1` to the default logical destination and to specify normal-duplexed printing, enter the command:

```
pdpr -x "sides=2 plex=simplex" File1
```

- **Specify document format**

  To submit the file `PSFile2` to the default logical destination and to specify a document format of ASCII, enter the command:

```
pdpr -x "document-format=ascii" PSFile2
```

- **Request status**

  To submit the file `File1` to the default logical destination and to receive brief status information, enter the command:

```
pdpr -r brief File1
```

  InfoPrint Manager displays information similar to:

```
                              Current     Destination    Destinations
Job  ID               Name    State       Requested      Assigned
---  --------------   -----  ---------   -------------  ------------
8    sp15:0754100002  File1  pending     LogPrt1
```

- **Delay printing**

  To submit the file `BigJob` to the default logical destination and to delay printing until after 6:30 p.m. on May 2, 1997, enter the command:

```
pdpr -x "job-print-after='18:30:00 05/02/97'" BigJob
```

- **Specify a symbolic link**

  To submit the file `BigJob` to a logical destination `LogPrt4` without copying the file, enter the command:

```
pdpr -p LogPrt4 -l BigJob
```

Note

This example only applies to InfoPrint Manager for AIX or InfoPrint Manager for Linux.

- **Specify job discard time**

  To submit the file `BigJob` to the default logical destination and to specify that InfoPrint Manager is to discard the job if it has not printed by 5:00 p.m., enter the command:

```
pdpr -x "job-discard-time=17:00:00" BigJob
```


- **Retain a job**

  To submit the file `File1` to the default logical destination requesting feedback of job attributes (brief group), and to specifying a retention period of 90 minutes so you can print more copies after you have looked at the first copy, enter the command:

```
pdpr -r brief -x "job-retention-period=90" File1
```

  Note the job number (local ID) so you can use that number when you want to print more copies in the time allotted.

- **Specify default job and document**

  To submit the file `File1` to the default logical destination and use the job attribute values specified in the default job `ivj23` and the document attribute values specified in the default document `ivd44`, enter the command:

```
pdpr -x "initial-value-document=ivd44 initial-value-job=ivj23" File1
```

- **Specify attributes files for a job**

  To submit the file `File5` to the default logical destination and to specify the two attributes files `default.att` and `special.att`, enter the command:

```
pdpr -X default.att -X special.att File5
```

- **Specify different attribute values for different documents**

  To submit the files `File5`, `File6`, and `File7` to the default logical destination and to specify that:

  – Each document starts on a new sheet of paper

  – You want to print pages 11 through 20 of `File5`, all pages of `File6`, and all pages of `File7`

  – Each document has a different estimated page count

  enter the command:

```
pdpr -x "start-on-new-sheet=true page-select=11:20 page-count=10"
   -f File5 -x "page-select== page-count=3" -f File6
   -x "page-count=19" File7
```

- **Override an attribute value in an attributes file**

  To submit the file `File1` to the default logical destination and override the value of 2 for the **sides** attribute specified in a given attributes file, enter the command:

```
pdpr -X default.att -x "sides=1" File1
```

- **Request feedback concerning the job as each event happens**

  To submit the file `File1` to the default logical destination and to have all possible event notifications sent to you by electronic mail, enter the command:

```
pdpr -x "notification-profile={event-identifiers=job-modified
   class-job-problem class-job-attention
   delivery-method=electronic-mail}" File1
```

- **Specify destination location**

  To submit the file `File5` for printing on one of the printer devices located in Building 20, Room 17, enter the command:

```
pdpr -d LogPrt20 -x "destination-locations-requested=bld20.rm17" File5
```

- **Specify a medium**

  To submit the file `MyAddress` to logical destination `MServ-lp` and to specify a default medium of `number-10-envelope` for the job, enter the command:

```
pdpr -p MServ-lp -x "default-medium=number-10-envelope" MyAddress
```

- **Specify a command input file**

  To submit a job and read the command flags, command attributes, and names of files to be printed from the file `pdinput` instead of from the command line, enter the command:

```
pdpr -Z pdinput
```

- **Specify a code page for ASCII jobs**

  To print the files `File1` and `File2` and to specify the code page `IBM-863`, enter the commands:

```
pdpr -d LogPrtPSF -x "default-character-mapping=IBM-863" File1 File2
```

- **Print a range of pages**

  To print pages 1 through 10 of the file `a.pdf`, enter the command:

```
pdpr -d FDCSP002 -x "results-profile=::2: image-width=14i
image-length=10i page-select=2:4" a.pdf
```

- **Print a job that contains only one ZIP file**

  To submit a ZIP file `File1.zip` to a logical destination, enter the command:

```
pdpr -d LD File1.zip
```

- **Print a multi-job that contains ZIP files**

  To submit the ZIP files `File1.zip` and `File2.zip` to a logical destination, enter the command:

```
pdpr -d LD File1.zip File2.zip
```

  To submit a non-ZIP file `File1` and a ZIP file `File2.zip` to a logical destination, enter the command:

```
pdpr -d LD File1 File2.zip
```

Suggested reading

For information about:

- Attributes file, see Attributes file, p. 49
- Headings and style, see Command output: headings and style, p. 48
- Document attributes, see Attributes for documents and default documents, p. 784
- Document attributes that can have different values for each document in a job, see Per-document attribute listing, p. 787
- Job attributes, see Attributes for jobs and default jobs, p. 907

pdpromote command: advances a job to the top of a queue

Syntax

pdpromote [**-H** *host:port*] [**-m** *"MessageText"*] [**-x** *"attribute=value …"*]
[**-X** *AttributesFileName*] {*LocalJobID* | *GlobalJobID*}

pdpromote -h

Description

Use the **pdpromote** administrative command to move a pending job before any currently-queued jobs. The job becomes the first job in the queue. If you then promote another job, it becomes the first job in the queue ahead of the job previously promoted.

A move to the beginning of the queue does not necessarily guarantee that the job is the next job to be printed or sent. The jobs currently printing on each of the actual destinations associated with the queue continue printing. The server assigns the promoted job to the first actual destination that:

- Becomes available
- Uses the **job-priority** scheduler
- Is capable of handling the promoted job

You can change the priority level of a job by setting the **job-priority** attribute with the **pdmod** or the **pdset** command. However, InfoPrint promotes a job regardless of its priority to the top of the queue when you use the **pdpromote** command.

Flags

You can use these flags with the **pdpromote** command:

-H host:port

Identifies the host and port of the InfoPrint Manager server used for communication. When not specified, the command follows the Configuration logic, to define the host and socket.

-m *"MessageText"*

Specifies the message you want to store in the **job-message-from-administrator** attribute. You can use this message to indicate why you want to promote the job or to provide any other comments. If you do not specify the **-m** flag, the message already stored with the job remains unchanged.

You can list this message by specifying **requested-attributes=job-message-from-administrator** with the **pdls** command.

Using this flag is equivalent to specifying the command attribute **message**.

-x *"attribute=value …"*

A single attribute string, consisting of one or more attribute and value pairs.

-X *AttributesFileName*

Specifies the name of a file containing attribute and value pairs that you want InfoPrint to insert at the current point in the command.

Using this flag is equivalent to specifying the command attribute **attributes**.

-h

Displays a command-specific help message containing information about command syntax and flags. If you use this flag with any other flag or attribute, InfoPrint recognizes only the **-h** flag.

Configuration logic

The command determines which server host and server port to use based on this sequence:

1. Server host and server port specified with the **-H** parameter.
2. Server host and server port specified with the PDHOST and PD_SOCKET envirnonment variables.
3. Uses the defaults for PDHOST=localhost and PD_SOCKET=6874.

Note

This configuration logic enables multiple commands to run on a single machine communicating with one or more InfoPrint Manager servers.

Command attributes

You can specify these attributes in a **-x** *"attribute=value ..."* string or in an attributes file designated with the **-X** *AttributesFileName* flag.

attributes=*AttributesFileName*

Specifies the designated attributes file that InfoPrint reads and inserts at the current point in the command. This file contains attribute and value pairs that InfoPrint uses to expand the command.

message=*"MessageText"*

Specifies a message you want to store in the **job-message-from-administrator** attribute. You can use this message to indicate why you want to promote this job or to provide any other comments. If you do not specify the **message** attribute, the message already stored with the job remains unchanged.

You can list this message by specifying **requested-attributes=job-message-from-administrator** with the **pdls** command.

Arguments

Use the argument value to identify the specific object that you want InfoPrint to promote. You can use these arguments with the **pdpromote** command:

LocalJobID **or** *GlobalJobID*

Specifies the job you want to promote. By default, end users do not have permission to promote jobs. Therefore, in most cases someone other than the job submitter will promote a job and must identify it by the global job ID. Job submitters who do have permission to promote jobs can identify their own jobs by the local job ID.

When you specify a job with the **pdpromote** command, it becomes the first job in the queue. If another job is then promoted, it becomes the first job in the queue (ahead of the job previously promoted).

Example

To promote job `Serv1:1099600001` and add a job message from the administrator, enter the command:

```
pdpromote -m "This job must be printed in 10 minutes" Serv1:1099600001
```

Suggested reading

For more information, see Attributes file, p. 49.

pdq command: queries job status

Syntax

pdq [**-H** *host:port*] [**-f** *"FilterCriteria"*] [{**-d** | **-p**} *DestinationName*] [**-F**] [**-g**] [**-j**] [**-r** *attribute …*] [**-s** *StyleName*] [**-U**] [**-x** *"attribute=value …"*] [**-X** *AttributesFileName*] [*LocalJobID*[*.DocNumber*] **…** | *GlobalJobID*[*.DocNumber*] **…**]

pdq -h

Description

Use the **pdq** command to list the status of some or all jobs submitted to a logical destination or assigned to an actual destination.

With InfoPrint Manager for AIX or InfoPrint Manager for Linux, if you omit both the *LocalJobID* and the *GlobalJobID* and do not name a destination, InfoPrint lists all the jobs in the queue associated with the default logical destination, as defined by the **PDPRINTER** environment variable.

If you do not specify a value for the **-r** flag or the command attribute **requested-attributes**, the **pdq** command defaults to the value **brief**. By default, you can list the attribute values only for the jobs you submit.

InfoPrint lists the jobs in the order in which the queue considers them for printing.

You can use the filtering option so that InfoPrint returns status only for some jobs. The jobs have a predefined value for the filter that is equal to the job attribute **user-name**; InfoPrint sets this value to your login identity when you submit a job.

Flags

You can use these flags with the **pdq** command:

-H host:port

Identifies the host and port of the InfoPrint Manager server used for communication. When not specified, the command follows the Configuration logic, to define the host and socket.

-d *DestinationName*

Queries all jobs in the queue associated with this destination, or all jobs assigned to this actual destination. The results depend on the destination realization and the value of the queue attribute **assign-to-destination**, as shown in the table.

Results of the pdq Command

Destination Realization	assign-to-destination	pdq Returns
Logical	**true** or **false**	All jobs in the queue associated with the logical destination
Actual	**true**	All jobs assigned to the actual destination
Actual	**false**	All jobs in the queue associated with the actual destination

-f *"FilterCriteria"*

Specifies the filter selection criteria that you want to use for the jobs. Among the jobs, InfoPrint returns only those matching the filter expression.

Using this flag is equivalent to specifying the command attribute **filter**.

-F

Turns off all filtering, both specified and default. See the **-U** flag for only turning the default filter off.

-g

Turns off headings.

Using this flag is equivalent to specifying the command attribute **headings=false**.

-i

Returns only the job attributes.

-p *DestinationName*

Same as **-d** *DestinationName*.

-r {brief | verbose | archive | *"attribute …"* **| all | none} DEFAULT=brief**

Specifies the group of attributes you want to display.

brief

Displays a small subset of important attributes for each object.

verbose

Displays a larger subset of important attributes for each object.

archive

Writes only initially settable and resettable attributes to an archive file.

attribute …

Displays the attributes you specify.

all

Displays all attributes.

none

Displays no attributes.

If you specify more than one of these values, InfoPrint displays all the attributes requested.

Using this flag is equivalent to specifying the command attribute **requested-attributes**.

-s {column | doccol | line} DEFAULT=column

Specifies the format in which you want InfoPrint to display the attributes.

column

Attribute values are displayed in tabular format, so that values of the same attribute for multiple objects line up in columns.

doccol

For jobs only, job attribute values and the document attribute values for the first document in the job are displayed in column format on the same line.

line

Each attribute is displayed on a separate line.

Using this flag is equivalent to specifying the command attribute **style**.

-U

Suppresses the default user-name filter.

-x *"attribute=value ..."*

Consists of a single attribute string, containing one or more attribute and value pairs.

-X *AttributesFileName*

Specifies the name of a file containing attribute and value pairs that you want InfoPrint to insert at the current point in the command.

Using this flag is equivalent to specifying the command attribute **attributes**.

-h

Displays a command-specific help message containing information about command syntax and flags. If you use this flag with any other flag or attribute, InfoPrint recognizes only the **-h** flag.

Configuration logic

The command determines which server host and server port to use based on this sequence:

1. Server host and server port specified with the **-H** parameter.
2. Server host and server port specified with the PDHOST and PD_SOCKET envirnonment variables.
3. Uses the defaults for PDHOST=localhost and PD_SOCKET=6874.

Note

This configuration logic enables multiple commands to run on a single machine communicating with one or more InfoPrint Manager servers.

Command attributes

You can specify these attributes in a **-x** *"attribute=value ..."* string or in an attributes file designated with the **-X** *AttributesFileName* flag.

attributes=*AttributesFileName*

Specifies the designated attributes file that InfoPrint reads and inserts at the current point in the command. This file contains attribute and value pairs that InfoPrint uses to expand the command.

filter="*FilterCriteria*"

Specifies the filter selection criteria you want used if you request attribute values for multiple objects. InfoPrint selects only some of the candidate jobs based on the filtering criteria. A filter is a logical expression consisting of relationships between attributes and attribute values. Among the specified jobs, InfoPrint only returns those whose attribute values match the filter expression.

The **filter** command attribute functions the same way for the **pdq** command as for the **pdls** command.

headings={true | false} DEFAULT=true

Specifies whether you want InfoPrint to display headings for the requested attributes.

requested-attributes={brief | verbose | archive | *"attribute …"* **| all | none} DEFAULT=brief**

Specifies the group of attributes you want to display.

brief

Displays a small subset of important attributes for each object.

verbose

Displays a larger subset of important attributes for each object.

archive

Writes only initially settable and resettable attributes to an archive file.

attribute …

Displays the attributes you specify.

all

Displays all attributes.

none

Displays no attributes.

If you specify more than one of these values, InfoPrint displays all the attributes requested.

style={column | doccol | line} DEFAULT=column

Specifies the presentation format in which you want InfoPrint to display the attributes.

column

Attribute values are displayed in tabular format, so that values of the same attribute for multiple objects line up in columns.

doccol

For jobs only, job attribute values and the document attribute values for the first document in the job are displayed in column format on the same line.

line

Each attribute is displayed on a separate line.

Arguments

Use the argument value to identify the specific object for which you want the status. If you specify multiple objects, separate the object names with spaces.

You can use these arguments with the **pdq** command:

LocalJobID[.DocNumber]

Specifies the job or documents you want InfoPrint to list as determined by a local ID or a local ID and document number. If you specify multiple arguments on the command line, separate the arguments with spaces.

GlobalJobID[.DocNumber]

Specifies the job or documents you want InfoPrint to list as determined by a global ID or a global ID and document number. If you specify multiple arguments on the command line, separate the arguments with spaces.

With InfoPrint Manager for AIX or InfoPrint Manager for Linux, if you omit the **-d** *DestinationName* or **-p** *DestinationName* flag and the *LocalJobID* or *GlobalJobID* argument, InfoPrint lists all of the jobs in the queue associated with your default logical destination, defined by your **PDPRINTER** environment variable.

Examples

- **Query all jobs on the default logical destination with InfoPrint Manager for AIX or InfoPrint Manager for Linux**

  To list all your jobs sent to your default logical destination `Dsrv-lp`, enter the command:

```
pdq
```

  InfoPrint displays information similar to:

```
                                        Intervening  Destination Destin
Job  ID              Name   State       Jobs         Requested   Assign
---  --------------- ------ ----------  -----------  ----------- ------
13   spl4:1104221000 File1  processing  0            Dsrv-lp     Dsrv-p
14   spl4:1105226030 JobA   pending     7            Dsrv-lp
15   spl4:1133000058 MyJob  pending     8            Dsrv-lp
```

  Note

  If you enter the command:

```
pdq -U
```

  InfoPrint displays status information for all jobs in the queue associated with your default logical destination.

- **Query all your jobs on a logical destination**

  To list all jobs that you sent to logical destination `dizzy-lp`, enter the command:

```
pdq -d dizzy-lp
```

- **Query all users' jobs on a logical destination**

  To list all jobs that any user sent to logical destination `dizzy-lp`, enter the command:

```
pdq -U -d dizzy
```

- **Query all your jobs assigned to an actual destination**
  To list all jobs that you submitted and that InfoPrint assigned to actual destination `proof-pp`, enter the command:

```
pdq -p proof-pp
```

Note

If the value of **assign-to-destination** is **false** for the queue associated with `proof-pp`, InfoPrint lists all your jobs in the queue.

Suggested reading in hardcopy

For information about:

- Filters, see the **pdls** command attribute **filter**.
- Attributes file, see Attributes file, p. 49.
- Headings and style, see Command output: headings and style, p. 48
- Job attributes, see Attributes for jobs and default jobs, p. 907
- Document attributes, see Attributes for documents and default documents, p. 784

pdreorder command: reassigns jobs

Syntax

pdreorder [**-H** *host:port*] {**-a** [*TargetServerName:*]*TargetJobID* |
-b [*TargetServerName:*]*TargetJobID* |
-p [*TargetServerName:*]*TargetDestinationName* |
-s *TargetServerName* | **-u** *TargetServerName*}
[**-m** *"MessageText"*] [**-x** *"attribute=value …"*]
[**-X** *AttributesFileName*] [*ServerName:*]*GlobalJobID* **...**

pdreorder -h

Description

Enter the **pdreorder** command to request InfoPrint to reassign a job to a actual destination or to the unassigned jobs area in the same server or another server. You can assign the job to the actual destination where another job is assigned and specify that it should be printed or sent before or after the other job. You can reassign the job to a specified actual destination, request the server to reschedule the job, or request the server to make the job an unassigned job.

If a job is reordered to an actual destination that does not support the job's attribute values, the job is held and the **required-resources-not-supported** attribute lists the unsupported values.

Note

A reorder job request is rejected if you are moving the job to another server **and** the document format is dpf-ipds.

Flags

You can use these flags with the pdreorder command:

-H host:port

Identifies the host and port of the InfoPrint Manager server used for communication. When not specified, the command follows the Configuration logic, to define the host and socket.

-a *[TargetServerName:]TargetJobId*

Specifies that the reordered job should be assigned to print or send after the target job on the same actual destination.

-b *[TargetServerName:]TargetJobId*

Specifies that the reordered job should be assigned to print or send before the target job on the same actual destination.

-m *"MessageText"*

Specifies the message you want associated with the reordered job. You can use this message to indicate the reason why the job is being reordered or other comments. Using this flag is equivalent to specifying the command attribute **message**.

You can list this message by specifying **requested-attributes=job-message-from-administrator** with the **pdls** command.

-p *[TargetServerName:]TargetDestinationName*

Specifies that the job should be reassigned to the target actual destination.

-s *TargetServerName*

Specifies that the job should be moved to the target server and that the target server should assign it to an actual destination.

-u *TargetServerName*

Specifies that the job should be moved to the target server as an unassigned job.

-x *"attribute=value …"*

Consists of a single attribute string, containing one or more attribute-value pairs.

-X *AttributesFileName*

Specifies the name of a file containing attribute and value pairs that you want InfoPrint to insert at the current point in the command line. Using this flag is equivalent to specifying the command attribute **attributes**.

-h

Displays a command-specific help message containing information about command syntax and flags. If you use this flag with any other flag or attribute, InfoPrint recognizes only the **-h** flag.

Configuration logic

The command determines which server host and server port to use based on this sequence:

1. Server host and server port specified with the **-H** parameter.
2. Server host and server port specified with the PDHOST and PD_SOCKET envirnonment variables.

3. Uses the defaults for PDHOST=localhost and PD_SOCKET=6874.

Note

This configuration logic enables multiple commands to run on a single machine communicating with one or more InfoPrint Manager servers.

Command attributes

You can specify these attributes in a **-x** *"attribute=value ..."* string or in an attributes file designated with the **-X** *AttributesFileName* flag.

attributes=*AttributesFileName*

Specifies the designated attributes file that InfoPrint reads and inserts at the current point in the command. This file contains attribute and value pairs that InfoPrint uses to expand the command.

message=*"MessageText"*

Specifies the message you want associated with the reordered job. You can use this message to indicate the reason why the job is being reordered or other comments.

You can list this message by specifying **requested-attributes=job-message-from-administrator** with the **pdls** command.

Arguments

Use the argument value to identify the specific object for which you want the status. If you specify multiple objects, separate the object names with spaces.

You can use these arguments with the **pdreorder** command:

[ServerName:]GlobalJobID

The global ID of the job to be reassigned.

Examples

- To reorder job `1099600001` so that it prints after job `1099500047`, enter the command:

```
pdreorder -a 1099500047 1099600001
```

- To reassign job `2000004341` from server `molly` to server `david` and have `david` assign it to an actual destination, enter the command:

```
pdreorder -s david molly:2000004341
```

pdresubmit command: resubmits jobs

Syntax

pdresubmit [**-H** *host:port*] [**-c** *ObjectClass*] [**-g**] [**-i**][**-r** *"RequestedAttribute ..."*]
[**-s** *StyleName*]
[**-x** *"attribute=value ..."*] [**-X** *AttributesFileName*]
[*ServerName:*]*TargetLogicalDestinationName*
{*LocalJobID* **...** | *GlobalJobID* **...** |
[*ServerName:*]*QueueName* **...** |

[*ServerName:*]*DestinationName* **...**}

pdresubmit -h

Description

Use the **pdresubmit** command to resubmit an existing job to a specific logical destination. The logical destination can be in the same server as the logical destination to which the job was first submitted or a different server. You can only resubmit jobs that have the current job state of **held**, **pending**, **retained**, or **unknown**.

If the logical destination specified is in a different server, the old server resubmits the job with all of its current attributes to the new server. InfoPrint includes any default attributes associated with the old server so that the new job remains as similar as possible to the old job. If the new server accepts the job, it assigns a new global job identifier and the old global job identifier becomes not valid.

When you specify the **-i** flag, InfoPrint Manager deletes all the attributes with values in the default job and default document referenced by the current logical destination attributes **destination-initial-value-job** and **destination-initial-value-document** from the job and the job documents. The InfoPrint Manager server updates the job and document objects with the attribute values from the target destination default objects.

Logical destinations and queues can also be arguments for this command. If a logical destination is the argument, InfoPrint resubmits all of the jobs submitted to the old logical destination to the specified new logical destination. If a queue is the argument, InfoPrint resubmits all of the jobs in the old queue to the specified logical destination. InfoPrint validates all of the resubmitted jobs again. If the newly specified logical destination does does not support them, they remain in the queue that they were in originally.

If the new logical destination cannot accept the job for some reason, InfoPrint issues an error message and the job stays where it was.

Note

1. InfoPrint does not change the global job identifier for the job if you resubmit the job to a logical destination on the same server.
2. InfoPrint changes the global job identifier for the job if you resubmit the job to a logical destination on a different server. However, if you are the job-owner, you can still use the same local job identifier.
3. The resubmit job request is rejected if the move is to another server **and** the document format is dpf-ipds.

Flags

You can use these flags with the **pdresubmit** command:

-H host:port

Identifies the host and port of the InfoPrint Manager server used for communication. When not specified, the command follows the Configuration logic, to define the host and socket.

-c {job | queue | destination} DEFAULT=job

Specifies the object class that you want for this command. In the valid classes, **destination** only applies to logical destinations.

Using this flag is equivalent to specifying the command attribute **operation-class**.

-g

Turns off headings.

Using this flag is equivalent to specifying the command attribute **headings=false**.

-i

Resets the job and document attributes default values.

Using this flag is equivalent to specifying the command attribute **ignore-ivo=true**.

When the target destination is on the same server, these apply:

- Before moving the job to the new destination, InfoPrint Manager does not delete the **document-format** attribute from the job documents attributes.
- The InfoPrint Manager server does not update the **job-scheduling** attribute. The **job-scheduling** attribute indicates how the associated job is scheduled.
- InfoPrint Manager server attempts to recalculate **job-page-count** and **total-job-octets** attributes.
- InfoPrint Manager server sets a retention period attribute only if one is not already set in the job. The retention period attributes are **job-retain-until** (Job only), **job-retention-period** and **retain-forever**.

-r {none | brief verbose} DEFAULT=none

Specifies the group of attributes you want InfoPrint to display for the specified job, queue, or destination.

none

Displays no attributes.

brief

Displays a small subset of important attributes for each object.

verbose

Displays a larger subset of important attributes for each object.

Using this flag is equivalent to specifying the command attribute **requested-attributes**.

-s {column | doccol | line} DEFAULT=column

When combined with the **-r** flag or the **requested-attributes** command attribute, this flag specifies the format in which you want the attributes displayed.

column

Attribute values are displayed in tabular format, so that values of the same attribute for multiple objects line up in columns.

doccol

For jobs only, job attribute values and the document attribute values for the first document in the job are displayed in column format on the same line.

line

Each attribute is displayed on a separate line.

Using this flag is equivalent to specifying the command attribute **style**.

-x *"attribute=value ..."*

Consists of a single attribute string, containing one or more attribute-value pairs.

-X *AttributesFileName*

Specifies the name of a file containing attribute and value pairs that you want InfoPrint to insert at the current point in the command.

Using this flag is equivalent to specifying the command attribute **attributes**.

-h

Displays a command-specific help message containing information about command syntax and flags. if you use this flag with any other flag or attribute, InfoPrint recognizes only the **-h** flag.

Configuration logic

The command determines which server host and server port to use based on this sequence:

1. Server host and server port specified with the **-H** parameter.
2. Server host and server port specified with the PDHOST and PD_SOCKET envirnonment variables.
3. Uses the defaults for PDHOST=localhost and PD_SOCKET=6874.

Note

This configuration logic enables multiple commands to run on a single machine communicating with one or more InfoPrint Manager servers.

Command attributes

You can specify these attributes in a **-x** *"attribute=value ..."* or in an attributes file designated with the **-X** *AttributesFileName* flag.

attributes=*AttributesFileName*

Specifies the designated attributes file that InfoPrint reads and inserts at the current point in the command. This file contains attribute and value pairs that InfoPrint uses to expand the command.

operation-class={job | queue | destination} DEFAULT=job

Specifies the object class you want for this command. In the valid classes, **destination** only applies to logical destinations.

headings={true | false} DEFAULT=true

Specifies whether you want InfoPrint to display headings for the requested attributes.

requested-attributes={none | brief verbose} DEFAULT=none

Specifies the group of attributes you want InfoPrint to display for the specified job, queue, or destination.

none

Displays no attributes.

brief

Displays a small subset of important attributes for each object.

verbose

Displays a larger subset of important attributes for each object.

style={column | doccol | line} DEFAULT=column

Specifies the format that you want InfoPrint to display the attributes in.

column

Attribute values are displayed in tabular format, so that values of the same attribute for multiple objects line up in columns.

doccol

For jobs only, job attribute values and the document attribute values for the first document in the job are displayed in column format on the same line.

line

Each attribute is displayed on a separate line.

Arguments

Use the argument value to identify the specific object you want to resubmit. If you specify multiple objects, all must belong to the same class and you must separate the object names with spaces.

You must use this argument:

[ServerName:]TargetLogicalDestinationName

Specifies the name of the new logical destination.

You must use one of these arguments with the **pdresubmit** command:

LocalJobID **or** *GlobalJobID*

Specifies the job you want resubmitted as determined by a local or global job identifier. In most cases someone other than the job submitter will resubmit a job and must identify it by the global job ID. Job submitters who do have permission to use **pdresubmit**, either because they belong to the **printq** group or because the file permissions have been changed, can identify their own jobs by the local job ID.

[ServerName:]DestinationName

Causes InfoPrint to resubmit to the target logical destination all jobs currently submitted to the specified logical destination.

[ServerName:]QueueName

Causes InfoPrint to resubmit to the target logical destination all jobs that are currently in the specified queue.

Examples

- **Resubmit jobs**

  To resubmit jobs `server1:1098223002` and `server2:1099223003` to logical destination `local-lp`, enter the command:

```
pdresubmit local-lp server1:1098223002 server2:1099223003
```

- **Resubmit jobs to a new logical destination and replace the default values**

To resubmit job `server1:1098223004` from logical destination `dept1-lp` to logical destination `local-lp` and to ask to reset the `dept1-lp` default values and to retrieve the `local-lp` default values, enter the command:

```
pdresubmit -i local-lp server1:1098223004
```

- **Resubmit all jobs from one logical destination to another**

  To resubmit all jobs submitted to logical destination `dept1-lp` to logical destination `local-lp`, enter the command:

```
pdresubmit local-lp -c destination dept1-lp
```

Suggested reading

For more information, see Attributes file, p. 49.

pdresume command: enables paused objects to resume operation

Syntax

pdresume [**-H** *host:port*] [**-c** *ObjectClass*] [**-m** *"MessageText"*]
[**-x** *"attribute=value …"*] [**-X** *AttributesFileName*]
{*LocalJobID* **…** | *GlobalJobID* **…** |
ServerName **…** | [*ServerName:*]*DestinationName* **…** |
[*ServerName:*]*QueueName* **…**}

pdresume -h

Description

Use the **pdresume** administrative command to cause InfoPrint to restart paused jobs, actual destinations, queues, or servers.

Note

Use the **pdresume** and **pdpause** commands to allow or prevent output from the object, whereas you use the **pdenable** and **pddisable** commands to allow or prevent input to the object.

Flags

You can use these flags with the **pdresume** command:

-H host:port

Identifies the host and port of the InfoPrint Manager server used for communication. When not specified, the command follows the Configuration logic, to define the host and socket.

-c {destination | queue | job | server} DEFAULT=destination

Specifies the object class you want for this command. In the valid classes, **destination** is an actual destination.

Note

- You cannot resume PSF upload-TCP/IP-attached physical printers.
- You cannot resume an Anyplace queue

Using this flag is equivalent to specifying the command attribute **operation-class**.

-m *"MessageText"*

Specifies the message you want associated with the specified destination, queue, job, or server. You can use this message to indicate the reason for resumption or to provide any other comments.

When resuming a server, InfoPrint propagates the message to the **message** attribute of the actual destinations and queues residing in the server. InfoPrint does not change the server **message** attribute.

If the command operates on a job, you can list this message by specifying **requested-attributes= job-message-from-administrator** with the **pdls** command. If the command operates on a destination, queue, or server you can list this message by specifying **requested-attributes= message** with the **pdls** command.

If you do not specify the **-m** flag, the message already stored with the object remains unchanged.

Using this flag is equivalent to specifying the command attribute **message**.

-x *"attribute=value ..."*

A single attribute string, consisting of one or more attribute-value pairs.

-X *AttributesFileName*

Specifies the name of a file containing attribute and value pairs that you want InfoPrint to insert at the current point in the command.

Using this flag is equivalent to specifying the command attribute **attributes**.

-h

Displays a command-specific help message containing information about command syntax and flags. If you use this flag with any other flag or attribute, InfoPrint recognizes only the **-h** flag.

Configuration logic

The command determines which server host and server port to use based on this sequence:

1. Server host and server port specified with the **-H** parameter.
2. Server host and server port specified with the PDHOST and PD_SOCKET envirnonment variables.
3. Uses the defaults for PDHOST=localhost and PD_SOCKET=6874.

Note

This configuration logic enables multiple commands to run on a single machine communicating with one or more InfoPrint Manager servers.

Command attributes

You can specify these attributes in a **-x** *"attribute=value ..."* string or in an attributes file designated with the **-X** *AttributesFileName* flag.

attributes=*AttributesFileName*

Specifies the designated attributes file that InfoPrint reads and inserts at the current point in the command. This file contains attribute and value pairs that InfoPrint uses to expand the command.

operation-class={destination | queue | job | server} DEFAULT=destination

Specifies the object class you want for this command. In the valid classes, **destination** is an actual destination.

Note

- You cannot resume PSF upload-TCP/IP-attached physical printers.
- You cannot resume an Anyplace queue.

message="*MessageText*"

Specifies the message you want to associate with the specified destination, queue, job, or server. You can use this message to indicate the reason for resumption or to provide any other comments.

When resuming a server, InfoPrint propagates the message to the **message** attribute of the actual destinations and queues residing in the server. InfoPrint does not change the server **message** attribute.

If the command operates on a job, you can list this message by specifying **requested-attributes= job-message-from-administrator** with the **pdls** command. If the command operates on a destination, queue, or server, you can list this message by specifying **requested-attributes= message** with the **pdls** command.

If you do not specify the **message** attribute, the message already stored with the object remains unchanged.

Arguments

Use the argument value to identify the specific destination, queue, job, or server you want to start processing again (resume operating). If you specify multiple objects, all of the objects must belong to the same class and you must separate the object names with spaces.

You can use these arguments with the **pdresume** command:

LocalJobID... **or** *GlobalJobID*...

Specifies the job you want to resume as determined by a local job identifier or global job identifier. In most cases, someone other than the job submitter will resume a job and must identify it by the global job ID. Job submitters who do have authority to resume jobs can identify their own jobs by the local job ID.

A resumed job does not automatically return to its previous state. For example, if the **job-hold** or **print-after** attributes of a paused job were modified, returning to its previous state would cause InfoPrint to hold the job even after it was resumed.

Resuming a job that was not previously assigned to an actual destination allows InfoPrint to schedule it.

Resuming a job that was processing when it was paused causes InfoPrint to restore it to the **pending** state and try to schedule it on the original actual destination. If the original destination is not available, InfoPrint schedules the job on another actual destination that can support the job checkpoint format and begins processing the job where it stopped. If InfoPrint cannot find another actual destination that supports the checkpoint format, InfoPrint places the job in the **held** state. You can resubmit the job, which means that InfoPrint will start the job from the beginning.

Resuming a job that had any attributes modified while it was paused causes it to restart from the beginning.

[ServerName:]DestinationName

Specifies the destination you want to resume operation.

Resuming an actual destination allows it to start processing jobs that InfoPrint has assigned to it.

[ServerName:]Queue

Specifies the queue you want to resume operating.

Resuming a queue resumes the distribution of jobs to actual destinations associated with that queue.

ServerName

Specifies the server on which you want the command to operate. A server does not have a **paused** state. Issuing the command to a server resumes all of the paused queues and actual destinations that are located in that server. The queues can then continue to distribute jobs to actual destinations; and the actual destinations can start processing jobs.

Examples

- **Resume an actual destination**

  To resume actual destination `Csrv-pp` and issue a message, enter the command:

```
pdresume -m "Toner refilled" Csrv-pp
```

- **Resume a queue**

  To resume the queue `Div1-q`, enter the command:

```
pdresume -c queue Div1-q
```

- **Resume all queues and actual destinations in a server**

  To resume all of the queues and actual destination in the server `Mrk-server3`, enter the command:

```
pdresume -c server Mrk-server3
```

Suggested reading

For more information, see Attributes file, p. 49.

pdrm command: removes jobs

Syntax

pdrm [**-H** *host:port*] [**-m** *"MessageText"*] [**-r** *JobRetentionPeriod*]
[**-x** *"attribute=value …"*] [**-X** *AttributesFileName*]
{*LocalJobID* **…** | *GlobalJobID* **…**}

pdrm -h

Description

Use the **pdrm** command to remove (delete) previously submitted jobs.

Note

1. If the job you specify is currently printing or sending, InfoPrint can only remove it at a pausable point in the job. The pausable point at which the InfoPrint can remove the job depends on the type of output device. A pausable point might be immediate or it might be the next page, sheet, document, or job boundary. If there is no such point before the end of job, InfoPrint does not remove the job.
2. When you request InfoPrint to remove a job with a non-zero value for the **job-retention-period**, **job-retain-until**, or **retain-forever** attribute, InfoPrint retains the job as specified by the retention-period attributes.
3. You can remove your own jobs by specifying either the local ID or the global ID for the job. You can remove jobs belonging to another person by specifying the global ID for the job.

   InfoPrint issues a confirmation message before deleting jobs, unless the environment variable **PD_CONFIRM_DELETE** for the person requesting the job removal has a value of **no**.

Flags

You can use these flags with the **pdrm** command:

-H host:port

Identifies the host and port of the InfoPrint Manager server used for communication. When not specified, the command follows the Configuration logic, to define the host and socket.

-m *"MessageText"*

Specifies the message you that want to associate with the specified job. The specified text becomes the value of the **job-message-from-administrator** attribute. You can use it to provide the reason you are removing the job or to provide any other comments. If you do not specify the **-m** flag, the message already stored with the job remains unchanged.

You can list this message by specifying **requested-attributes=job-message-from-administrator** with the **pdls** command.

Using this flag is equivalent to specifying the command attribute **message**.

-r *JobRetentionPeriod*

Specifies the period of time you want the server to retain the job before InfoPrint deletes the job. If specified, this retention period takes precedence over the previous job-retention period set for the job. If you do not specify a retention period with the **-r** flag, InfoPrint uses the current value of the **job-retain-until**, **job retention-period**, or **retain-forever** attribute.

Using this flag is equivalent to specifying the job object attribute **job-retention-period**.

-x *"attribute=value ..."*

Consists of a single attribute string, containing one or more attribute-value pairs.

-X *AttributesFileName*

Specifies the name of a file containing attribute and value pairs that you want InfoPrint to insert at the current point in the command.

Using this flag is equivalent to specifying the command attribute **attributes**.

-h

Displays a command-specific help message containing information about command syntax and flags. If you use this flag with any other flag or attribute, InfoPrint recognizes only the **-h** flag.

Configuration logic

The command determines which server host and server port to use based on this sequence:

1. Server host and server port specified with the **-H** parameter.
2. Server host and server port specified with the PDHOST and PD_SOCKET envirnonment variables.
3. Uses the defaults for PDHOST=localhost and PD_SOCKET=6874.

Note

This configuration logic enables multiple commands to run on a single machine communicating with one or more InfoPrint Manager servers.

Command attributes

You can define these attributes in a **-x** *"attribute=value ..."* string or in an attributes file designated in the **-X** *AttributesFileName* flag.

attributes=*AttributesFileName*

Specifies the designated attributes file that InfoPrint reads and inserts at the current point in the command. This file contains attribute and value pairs that InfoPrint uses to expand the command.

message=*"MessageText"*

Specifies the message that you want InfoPrint to store in the **job-message-from-administrator** attribute. You can use it to provide the reason you are removing the job or to provide any other comments. If you do not specify the **message** attribute, the message already stored with the job remains unchanged.

You can list this message by specifying **requested-attributes=job-message-from-administrator** with the **pdls** command.

Arguments

Use the argument value to identify the specific job you want to remove. You must use one of these arguments for the **pdrm** command:

LocalJobID **or** *GlobalJobID*

Specifies the local ID or global ID of the job that you want InfoPrint to remove.

This argument must appear last in the command. To remove more than one job, separate the job identifiers with spaces.

Examples

- **Remove your own job**

  To remove your job with the local ID of `15`, enter the command:

```
pdrm 15
```

- **Remove another user's job**

  To remove the job with global ID `Server1:1011223002` on server `Server1`, enter the command:

```
pdrm Server1:1011223002
```

- **Remove job regardless of retention time**

To remove your job with the local ID of 10 as soon as possible, regardless of any previously specified **job-retention-period** attribute value, enter the command:

```
pdrm -r 0 10
```

pdset command: defines attribute values

Syntax

pdset [**-H** *host:port*] [**-c** *ObjectClass*] [**-g**] [**-m** *"MessageText"*]
[**-r** *"attribute …"*] [**-s** *StyleName*]
[**-x** *"attribute=value …"*] [**-X** *AttributesFileName*]
{*ServerName* **…** | *ServerName:AuxiliarySheetName* **…** |
ServerName:DefaultDocumentName **…** |
ServerName:DefaultJobName **…** |
[*ServerName:*]*DestinationName* **…** | *ServerName:LogName* **…** |
ServerName:MediumName **…** | [*ServerName:*]*QueueName* **…** |
ServerName:ResourceContextName **…** |
ServerName:TransformName **…** |
LocalJobID **…** |
GlobalJobID **…**}

pdset -h

Description

Use the **pdset** administrative command to define or modify the values of object attributes.

If SNMPv1 is enabled on an actual destination and the **snmp-write-community-name** attribute on the actual destination is set properly, you can set information directly on the device associated with the actual destination by setting device-specific actual destination attributes. If SNMPv3 is enabled on an actual destination and the **snmpv3-username** attribute on the actual destination is set properly, you can set information directly on the device associated with the actual destination by setting device-specific actual destination attributes. For more information about device-specific attributes, see "About SNMP communication" in *RICOH InfoPrint Manager for AIX: Procedures, RICOH InfoPrint Manager for Linux: Procedures, or RICOH InfoPrint Manager for Windows: Procedures*. For a description of the individual device-specific actual destination attributes, see InfoPrint Manager object attributes, p. 511.

You must disable an actual destination before you can modify its attributes. However, you do not need to disable an actual destination to change values for device-specific information, such as the **device-contact** or **device-location** attributes.

You cannot set actual destination and device-specific attributes in the same **pdset** command.

For more information about device-specific attributes, see "Working with SNMP Printers" in *RICOH InfoPrint Manager for AIX: Procedures, RICOH InfoPrint Manager for Linux: Procedures, or RICOH InfoPrint Manager for Windows: Procedures*.

The next table lists the four modification operators.

pdset operators

Operator	Syntax	Description
Replace	*attribute=value*	Replaces the entire value of the *attribute* with *value* or adds the attribute to the object, if not already present.
Add values	*attribute+=value*	Adds the *value* to the *attribute*. You cannot add values to single-valued attributes. InfoPrint Manager honors an add request that duplicates values on a multi-valued attribute without warning.
Remove values	*attribute-=value*	Removes the *value* from the *attribute*. InfoPrint Manager ignores a remove request for a nonexistent value, without warning or error. A remove request for the last or only value of an attribute is equivalent to a reset-to-default request.
Reset to default	*attribute==*	Sets the *attribute* value to the default. If you supply values with a **reset-to-default** request, InfoPrint Manager ignores them.

If you do not specify a value with a replace, add, or remove request, InfoPrint Manager issues an error and rejects the request to change the object.

You can only use the **Replace** operator of the **pdset** command with device-specific attributes.

You can only change values for resettable attributes using the **pdset** command. Using this command for non-settable or initially settable attributes results in an error.

See InfoPrint Manager object attributes, p. 511 for lists of all resettable attributes by object and a description of each attribute.

Changes made to objects are permanent and remain changed even if you shut down and then restart the system (except for logs).

If the **ignore-ivo-values** attribute is set to true on the server and the request is to default or remove a value and there are no values left for that attribute, InfoPrint Manager ignores the value of the job and document default attribute when setting its value. See the ignore-ivo-values, p. 1105 attribute.

Flags

You can use these flags with the **pdset** command:

-H host:port

Identifies the host and port of the InfoPrint Manager server used for communication. When not specified, the command follows the Configuration logic, to define the host and socket.

-c {destination | job | server | queue | auxiliary-sheet | document | initial-value-job | initial-value-document | medium | resource-context | transform | log} DEFAULT=destination

Specifies the object class that you want for this command. In the valid classes, **destination** is for a logical destination or actual destination.

Using this flag is equivalent to specifying the command attribute **operation-class**.

-g

Turns off headings.

Using this flag is equivalent to specifying the command attribute **headings=false**.

-m *"MessageText"*

Specifies the message that you want to associate with the object that you want to modify. You can use this message to indicate the reason why you are modifying or setting object attributes or to provide any other comments.

If the command operates on a job, you can list this message by specifying **requested-attributes= job-message-from-administrator** with the **pdls** command. Otherwise, you can list this message by specifying **requested-attributes=message** with the **pdls** command.

If you do not specify the **-m** flag, the message already stored with the object remains unchanged.

Using this flag is equivalent to specifying the command attribute **message**.

-r {none | brief | verbose} DEFAULT=none

Specifies the attribute values that you want to display for the specified object.

none

Displays no attributes.

brief

Displays a small subset of important attributes for each object.

verbose

Displays a larger subset of important attributes for each object.

Using this flag is equivalent to specifying the command attribute **requested-attributes**.

-s {column | doccol | line} DEFAULT=column

Specifies the format in which you want InfoPrint Manager to display the attributes.

column

Attribute values are displayed in tabular format, so that values of the same attribute for multiple objects line up in columns.

doccol

For jobs only, job attribute values and the document attribute values for the first document in the job are displayed in column format on the same line.

line

Each attribute is displayed on a separate line.

Using this flag is equivalent to specifying the command attribute **style**.

-x *"attribute=value ..."*

A single attribute string, consisting of one or more attribute-value pairs. Prefix the attribute value with the replace operator, = , to replace a value, the add-value operator, += , to add a value or the remove-value operator, -= , to remove a value. Use the reset-to-default operator, == , with no attribute value to set the value to its default.

-X *AttributesFileName*

Specifies the name of a file containing attribute and value pairs that you want InfoPrint Manager to insert at the current point in the command.

Using this flag is equivalent to specifying the command attribute **attributes**.

-h

Displays a command-specific help message containing information about command syntax and flags. If you use this flag with any other flag or attribute, InfoPrint Manager recognizes only the **-h** flag.

Configuration logic

The command determines which server host and server port to use based on this sequence:

1. Server host and server port specified with the **-H** parameter.
2. Server host and server port specified with the PDHOST and PD_SOCKET environment variables.
3. Uses the defaults for PDHOST=localhost and PD_SOCKET=6874.

Note

This configuration logic enables multiple commands to run on a single machine communicating with one or more InfoPrint Manager servers.

Command attributes

You can specify these attributes in a **-x** "*attribute=value …*" string or in an attributes file designated with the **-X** *AttributesFileName* flag.

attributes=*AttributesFileName*

Specifies the designated attributes file that InfoPrint Manager reads and inserts at the current point in the command. This file contains attribute and value pairs that InfoPrint Manager uses to expand the command.

operation-class={destination | job | server | queue | auxiliary-sheet | document | initial-value-job | initial-value-document | medium | resource-context | transform | log} DEFAULT=destination

Specifies the object class you want for this command. In the valid classes, **destination** is for a logical destination or actual destination.

headings={true | false} DEFAULT=true

Specifies if you want InfoPrint Manager to display headings on the output.

message="*MessageText*"

Specifies the message that you want to associate with the object you are modifying. You can use this message to indicate the reason that you are modifying the object attributes or to provide any other comments.

If the command operates on a job, you can list this message by specifying **requested-attributes=job-message-from-administrator** with the **pdls** command. Otherwise, you can list this message by specifying **requested-attributes=message** with the **pdls** command.

If you do not specify the **message** attribute, the message already stored with the object remains unchanged.

requested-attributes={none | verbose | brief} DEFAULT=none

Specifies the attribute values that you want to display for the specified object.

none

Displays no attributes.

brief

Displays a small subset of important attributes for each object.

verbose

Displays a larger subset of important attributes for each object.

style={column | doccol | line} DEFAULT=column

Specifies the presentation format in which you want the output displayed.

column

Attribute values are displayed in tabular format, so that values of the same attribute for multiple objects line up in columns.

doccol

For jobs only, job attribute values and the document attribute values for the first document in the job are displayed in column format on the same line.

line

Each attribute is displayed on a separate line.

Arguments

Use the argument value to identify the specific object for which you want to set or modify attributes. If you specify multiple objects, separate the object names with spaces.

You can use these arguments with the **pdset** command:

- *ServerName:AuxiliarySheetName*
- *ServerName:DefaultJobName*
- *ServerName:DefaultDocumentName*
- *ServerName:MediumName*
- *ServerName:LogName*
- *[ServerName:]DestinationName*
- *[ServerName:]QueueName*
- *ServerName:ResourceContextName*
- *ServerName:TransformName*
- *ServerName*
- *LocalJobID*
- *GlobalJobID*

By default, end users do not have permission to modify jobs. Therefore, usually someone other than the job submitter will modify a job and must identify the job by the global job ID. Job submitters who do have permission to modify jobs can identify their own jobs by the local job ID.

Examples

- **Specify a descriptor for a server**

  To set a description for the server `Server1` and identify the processor name containing it and the TCP/IP address for the processor, enter the command:

```
pdset -c server -x "descriptor='Server Server1 is installed on
   cowboy.  The TCP/IP address for cowboy is 9.99.9.143.'" Server1
```

- **Change the operator to receive messages**

  To identify a new person to receive start and stop messages for actual destination `Serv4-pp`, enter the command:

```
pdset -c destination -x "notify-operator=electronic-mail:ro@cowboy"
   Serv4-pp
```

- **Set the job size range**

  To set the size of jobs that users can submit to actual destination `small-pp`, enter the command:

```
pdset -x "job-size-range-supported=0:10000
   job-size-range-ready=0:10000" small-pp
```

- **Specify media supported by an actual destination**

  To specify the media supported by a given actual destination and the media currently loaded in the printer device, enter the command:

```
pdset -x "media-supported=letter na-letter-colored
    legal na-legal-colored A4 A4-colored
    psf-tray-characteristics=top:letter
    bottom:A4" Serv4-pp
```

- **Set a message**

  To set the message for server `Serv2`, enter the command:

```
pdset -c server -m "printing system now ok" Serv2
```

- **Setting the snmp-write-community-name**

  If SNMPv1 is active, to set the **snmp-write-community-name**, enter:

```
pdset -cp -x s-w-c-n=ibmpsc_admin ip21
```

- **Setting the snmpv3-username**

  If SNMPv3 is active, to set the **snmpv3-username**, enter:

```
pdset -cp -x s-u=ibmpsc_admin ip21
```

- **Setting the device location**

  If SNMPv1 is active and **snmp-write-community-name** is set appropriately or if SNMPv3 is active and **snmpv3-username** is set appropriately, and you want to set the device location on the device associated with the `prt5-ad` actual destination, enter:

```
pdset -x"device-location='First floor, Bldg 005/Boulder, Colorado'"
   prt5-ad
```

- **Transferring objects by changing the `associated-server` attribute value**

  – **Transferring a queue to a different server**

  To transfer the `print-queue1` queue from its current server to the `server2` server, enter:

```
pdset -c queue -x "associated-server=server2" print-queue1
```

This command transfers `print-queue1` and all its associated logical destinations to `server2`.

– **Transferring an actual destination to a different server**
To transfer the `printer1-ad` actual destination from its current server to the `server2` server, enter:

```
pdset -c destination -x "associated-server=server2" printer1-ad
```

Suggested reading in hardcopy

For information about:

- Attributes for InfoPrint Manager objects, see InfoPrint Manager object attributes, p. 511
- Attributes file, see Attributes file, p. 49
- Headings and style, see Command output: headings and style, p. 48
- For introductory information about object attributes and their use with commands, see Introducing object attributes, p. 514, which includes information about non-settable, initially settable, and resettable attributes.

pdshutdown command: stops servers or actual destinations

Syntax

pdshutdown [**-H** *host:port*] [**-c** **server**] [**-m** *"MessageText"*] [**-w** *time*]
[**-x** *"attribute=value …"*] [**-X** *AttributesFileName*]
ServerName

pdshutdown [**-c** **destination**] [**-m** *"MessageText"*]
[**-x** *"attribute=value …"*] [**-X** *AttributesFileName*]
[**-s** [**-n**]] [*ServerName***:**]*DestinationName*

pdshutdown -h

Description

Use the **pdshutdown** administrative command to terminate a server process or shut down a PSF physical printer, or email destination.

You can shut down a server either immediately or after it finishes processing some or all of its current jobs.

InfoPrint prevents the server from accepting new jobs while the server is shutting down and after it has shut down. Destinations in the server that were enabled at shut down time are enabled when the server restarts. Destinations in the server that were disabled at shut down time are disabled when the server restarts.

Note

To restart a server after shut down, use the **startsrv** or **start_server** utility. See startsrv utility: starts a server in InfoPrint Manager for AIX or InfoPrint Manager for Linux, p. 245 or start_server utility: starts a server for a Basic InfoPrint Manager Installation in InfoPrint Manager for AIX or InfoPrint Manager for Linux, p. 244.

Shutting down an actual destination:

- Terminates all communication with the output device
- Pauses the job printing or sending on the actual destination
- Terminates all jobs processing on the actual destination and puts these jobs in the **pending** state
- Releases jobs assigned to the actual destination so that you can reschedule them on another actual destination
- Disables the actual destination

You can shut down a PSF physical printer either immediately or after synchronizing the current job's checkpoint data with the pages that have actually printed.

Note

1. To restart an actual destination after shut down, use the **pdenable** command. See pdenable command: enables destinations to accept jobs and logs to log, p. 93. See the **pdenable** man page.
2. Synchronize the checkpoint data for a controlled shut down, for example, when you want to do maintenance that will take some time.
3. If InfoPrint cannot communicate with the output device, shut down the actual destination so that you can reschedule the jobs assigned to it. Do not synchronize the checkpoint data. If you try, the command will hang, waiting for the output device to respond.

   If you shut down without synchronization, the shut down will take effect and allow any previously hung commands to complete.
4. A job paused by a destination shut down without synchronization can reprint some pages when printing is resumed.
5. To interrupt the actual destination for only a short time, consider pausing it rather than shutting it down. When you pause an actual destination, scheduled jobs remain scheduled. When you shut down an actual destination, scheduled jobs are requeued.

Flags

You can use these flags with the **pdshutdown** command:

-H host:port

Identifies the host and port of the InfoPrint Manager server used for communication. When not specified, the command follows the Configuration logic, to define the host and socket.

-c {server | destination} DEFAULT=server

Specifies the object class you want to shut down. In the valid classes, **destination** is a PSF physical printer, or email destination.

Using this flag is equivalent to specifying the command attribute **operation-class**.

-m *"MessageText"*

Specifies the message that you want to associate with the server or actual destination being shut down. You can use this message to indicate the reason for the shut down or to provide any other comments.

You can list this message by specifying **requested-attributes=message** with the **pdls** command. If you do not specify the **-m** flag, the message already stored with the object remains unchanged.

Using this flag is equivalent to specifying the command attribute **message**.

-n

Causes the PSF physical printer to do an NPRO (move the last printed page to the stacker). Using this flag is equivalent to specifying the command attribute **non-process-runout=true**.

This flag is valid only with object class **destination**, and only if you also specify **-s**. It is not valid for email destinations.

-s

Synchronizes the checkpoint data for the current job with the pages that have actually printed. This permits the job to resume at the point of synchronization. Using this flag is equivalent to specifying the command attribute **synchronize=true**. Do not use this flag if InfoPrint cannot communicate with the printer device.

This flag is valid only with object class **destination**. It is not valid for email destinations.

-w {after-current | now | after-all} DEFAULT=after-current

Specifies when you want a server to shut down. When the value is:

now

InfoPrint cancels and requeues any currently printing jobs, then shuts down the server. You must resubmit the jobs using the **pdresubmit** command when the server restarts.

after-current

The server continues to accept requests other than print requests until the currently-printing jobs finish printing, then the server shuts down.

after-all

The server continues to accept all requests except print requests until all scheduled jobs finish printing, then the server shuts down.

Using this flag is equivalent to specifying the command attribute **when**.

This flag is valid only with object class **server**.

-x *"attribute=value …"*

A single attribute string, consisting of one or more attribute-value pairs.

-X *AttributesFileName*

Specifies the name of a file containing attribute and value pairs that you want InfoPrint to insert at the current point in the command.

Using this flag is equivalent to specifying the command attribute **attributes**.

-h

Displays a command-specific help message containing information about command syntax and flags. If you use this flag with any other flag or attribute, InfoPrint recognizes only the **-h** flag.

Configuration logic

The command determines which server host and server port to use based on this sequence:

1. Server host and server port specified with the **-H** parameter.

2. Server host and server port specified with the PDHOST and PD_SOCKET envirnonment variables.
3. Uses the defaults for PDHOST=localhost and PD_SOCKET=6874.

Note

This configuration logic enables multiple commands to run on a single machine communicating with one or more InfoPrint Manager servers.

Command attributes

You can specify these attributes in a **-x** *"attribute=value ..."* string or in an attributes file designated with the **-X** *AttributesFileName* flag.

attributes=*AttributesFileName*

Specifies the designated attributes file that InfoPrint reads and inserts at the current point in the command. This file contains attribute and value pairs that InfoPrint uses to expand the command.

operation-class={server | destination} DEFAULT=server

Specifies the object class you want to shut down. In the valid classes, **destination** is a PSF physical printer, or email destination.

message=*"MessageText"*

Specifies the message you want associated with the server or actual destination being shut down. You can use this message to indicate the reason for the shut down or to provide any other comments.

You can list this message by specifying **requested-attributes=message** with the **pdls** command. If you do not specify the **message** attribute, the message already stored with the object remains unchanged.

non-process-runout={true | false} DEFAULT=false

Specifies whether the PSF physical printer should do an NPRO (move the last printed page to the stacker).

This attribute is valid only with object class **destination**, and only if you also specify **synchronize=true**. It is not valid for email destinations.

synchronize={true | false} DEFAULT=false

Specifies whether to synchronize the checkpoint data for the current job with the pages that have actually printed. A value of **true** permits the job to resume at the point of synchronization. Do not specify **synchronize=true** if InfoPrint cannot communicate with the printer device.

This attribute is valid only with object class **destination**. It is not valid for email destinations.

when={after-current | now | after-all} DEFAULT=after-current

Specifies when you want a server to shut down. When the value is:

now

InfoPrint cancels and requeues any currently printing jobs, then shuts down the server. You must resubmit the jobs using the **pdresubmit** command when the server restarts.

after-current

The server continues to accept requests other than print requests until the currently-printing jobs finish printing, then the server shuts down.

after-all

The server continues to accept all requests except print requests until all scheduled jobs finish printing, then the server shuts down.

This attribute is valid only with object class **server**.

Argument

Use the argument value to identify the specific server or actual destination that you want to shut down.

You can use these argument values with the **pdshutdown** command:

ServerName

Specifies the server that you want to shut down.

[ServerName:]DestinationName

Specifies the actual destination that you want to shut down.

Examples

- **Shut down a server**

  To shut down server `Server1`, to abort all jobs that are currently printing, and to set a message, `Down for maintenance`, enter the command:

```
pdshutdown -w now -m "Down for maintenance" Server1
```

- **Shut down an actual destination**

  To shut down actual destination `Serv9-ad`, enter the command:

```
pdshutdown -c destination Serv9-ad
```

- **Shut down a PSF physical printer and update job checkpoint data**

  To shut down PSF physical printer `Serv9-pp` after synchronizing the printer with the currently printing job's checkpoint data, enter the command:

```
pdshutdown -c printer -s Serv9-pp
```

  Note

  The PSF physical printer must be able to communicate with the printer device to perform the synchronize function.

- **Shut down a PSF physical printer, update job checkpoint sata, and do NPRO**

  To shut down PSF physical printer `Serv9-pp` after synchronizing the currently printing job's checkpoint data and do an NPRO, enter the command:

```
pdshutdown -c destination -s -n Serv9-pp
```

Suggested reading

For information about Attributes file, see Attributes file, p. 49.

pdspace command: backspaces or forward spaces a printer

Syntax

pdspace [**-H** *host:port*] [**-c** **destination**] {**-b** *SideCount* | **-f** *SideCount*} [**-n**] [**-x** *"attribute=value …"*] [**-X** *AttributesFileName*] [*ServerName:*]*DestinationName* **...**

pdspace -h

Description

Use the **pdspace** command to backspace or forward space the job currently printing a given number of sides on the specified PSF physical printer. If the job is printing on one side of the medium, one side is equivalent to one sheet. If the job is printing on two sides of the medium (duplex), two sides are equivalent to one sheet.

Note

1. The functions of this command only apply to PSF IPDS actual destinations.
2. Before using the **pdspace** command, make sure that SNMP has been enabled on the printer.
3. While all PSF IPDS actual destinations support the **pdspace** command, installing the level of microcode especially written for backspacing or forward spacing makes sure that the printer stops quicker and the appropriate page prints. For example, the microcode that supports **pdspace** for the Ricoh continuous form printers stops the printers in less than 5 seconds after the **pdspace** is submitted.
4. You cannot backspace or forward space ASCII print jobs.

You can enter the **pdspace** command while the printer is stopped, paused, or running.

- If the printer has been stopped by pressing the **STOP** button on the printer device, the printer operator must press the **START** or **READY** button before the printer can start printing again. You cannot force a stopped printer to do a nonprocess runout (NPRO) by specifying the **-n** flag; but the operator can force an NPRO by pressing the **NPRO** button.
- If the printer has been paused with the **pdpause** command, you must enter the **pdresume** command before the printer can start printing again.
- If the printer is running, the **pdspace** command takes effect as soon as possible. However, some pages continue to print before the command takes effect because the printer might not stop immediately.
- Another way to use the **pdspace** command for Ricoh continuous form printers follows:

  1. Stop the printer with the **pdpause** command.
  2. When the printer stops, specify **pdspace** and the backspace or forward space should be accurate from the last printed page.
  3. To begin printing again, enter the **pdresume** command.

The printer backspaces or forward spaces the number of sides you specify, except that:

- The printer will not backspace or forward space to the back side of a duplexed sheet. If a backspace or forward calculation points to the back side of a duplexed sheet, the printer backspaces or forward spaces to the front side of that sheet.

- When backspacing, if you specify a side count of -1, the job restarts printing on page 1 with a new header sheet.
- When backspacing, if you specify more sides than have already printed, the job restarts printing on page 1 without a header sheet.
- When forward spacing, if you specify more sides than there are sides left to print, the job terminates.

Note

1. InfoPrint backspaces or forward spaces from the last printed sheet: any count is one less than you would normally expect. For example, if you backspace 10 sides starting at page 39, the job resumes on page 30 because page 39 is counted as one of the pages backspaced.
2. A backspace or forward space request is accepted for dpf-ipds jobs, but unpredictable results will occur.

Flags

You can use these flags with the **pdspace** command:

-H host:port

Identifies the host and port of the InfoPrint Manager server used for communication. When not specified, the command follows the Configuration logic, to define the host and socket.

-b *SideCount*

Specifies the number of sides to backspace before continuing to print. Using this flag is equivalent to specifying the command attribute **back-space**.

-c destination DEFAULT=destination

Specifies the object class of **destination**, which represents a PSF physical printer. This is the only allowed class. Using this flag is equivalent to specifying the command attribute **class**.

-f *SideCount*

Specifies the number of sides to forward space before continuing to print. Using this flag is equivalent to specifying the command attribute **forward-space**.

-n

Causes the printer to do an NPRO (move the last printed page to the stacker) before restarting printing. An NPRO makes it easier to see exactly where the spacing took place. Using this flag is equivalent to specifying the command attribute **non-process-runout=true**.

-x *"attribute=value …"*

Consists of a single attribute string, containing one or more attribute-value pairs.

-X *AttributesFileName*

Specifies the name of a file containing attribute and value pairs that you want InfoPrint to insert at the current point in the command. Using this flag is equivalent to specifying the command attribute **attributes**.

-h

Displays a command-specific help message containing information about command syntax and flags. If you use this flag with any other flag or attribute, InfoPrint recognizes only the **-h** flag.

Configuration logic

The command determines which server host and server port to use based on this sequence:

1. Server host and server port specified with the **-H** parameter.
2. Server host and server port specified with the PDHOST and PD_SOCKET envirnonment variables.
3. Uses the defaults for PDHOST=localhost and PD_SOCKET=6874.

Note

This configuration logic enables multiple commands to run on a single machine communicating with one or more InfoPrint Manager servers.

Command attributes

You can define these attributes in a **-x** *"attribute=value ..."* string or in an attributes file designated in the **-X** *AttributesFileName* flag.

attributes=*AttributesFileName*

Specifies the designated attributes file that InfoPrint reads and inserts at the current point in the command. This file contains attribute and value pairs that InfoPrint uses to expand the command.

back-space=*SideCount*

Specifies the number of sides to backspace before continuing to print.

operation-class=destination DEFAULT=destination

Specifies the object class of **destination**, which represents a PSF physical printer. This is the only allowed class.

forward-space=*SideCount*

Specifies the number of sides to forward space before continuing to print.

Note

You cannot forward space from the beginning of a job; the job has to start to print before you can space. To start printing on a page other than page one, you can submit the job and hold it, and then use **Change Page Range to Process** on the Job menu in the InfoPrint Manager Administration GUI or the InfoPrint Manager Operations GUI. (However, **Change Page Range to Process** is not available in the GUIs by default, so you have to customize the GUIs to add it by clicking **Options** and then **Customize**.)

non-process-runout={true | false} DEFAULT=false

Specifies whether the printer should do an NPRO (move the last printed sheet to the stacker) before restarting printing. An NPRO makes it easier to see exactly where the spacing took place.

Arguments

Use the argument value to identify the specific physical printer on which the job backspaces.

[*ServerName:*]*DestinationName*

Examples

- **Backspacing 22 sides**

To backspace the currently printing job on physical printer `jrSrv-pp` by 22 sides, enter the command:

```
pdspace -b22 jrSrv-pp
```

- **Forward spacing 22 sides**
  To forward space the currently printing job on physical printer `mySrv-pp` by 22 sides, enter the command:

```
pdspace -f22 mySrv-pp
```

- **Forward spacing a paused printer 10 sides with NPRO**
  To pause physical printer `carlo-pp`, forward space the job that was printing by 10 sides, move the last printed sheet to the stacker, and resume printing, enter the commands:

```
pdpause carlo-pp pdspace -f10 -n carlo-pp pdresume carlo-pp
```

- **Backspacing to a specific side**
  To backspace exactly to page 62 in the job printing on physical printer `mySrv-pp`:

  1. Use *one* of these methods to interrupt printing:
     - Press the **STOP** button to stop the printer device.
     - Enter this command to pause the physical printer:

```
pdpause mySrv-pp
```

  2. At the operator viewing point, check to see what page was printing when the job stopped.
  3. Calculate the number of sides to backspace. For example, if the job stopped at page 97:

```
97 - 62 + 1 = 36
```

     You must add one because page 97 is counted as the first side to backspace.
  4. Enter the command:

```
pdspace -b36 mySrv-pp
```

  5. Use *one* of these methods to resume printing:
     - If you pressed **STOP**, press **START** to restart the printer device.
     - If you paused the physical printer, enter this command to resume it:

```
pdresume mySrv-pp
```

uconv command: convert encoding of character set

Syntax

uconv [**-f** *FromCode*] [**-t** *Tocode* [*Filename*]]

Description

Use the **uconv** command to convert the encoding of characters read from either standard input or the specified file from one coded character set (CCSID) to another and then write the results to standard output.

The **uconv** command follows the ICU (International Components for Unicode) standard. That is, it internally converts characters in *FromCode* coded character set to Unicode (UTF-16) before converting back to the *ToCode* coded character set. For more information about the ICU standard, including APIs that can be used with **uconv**, visit the ICU Home Page.

You can use the **listconv** command to show the available CCSIDs. For more information, see listconv command: list all the default converters in CCSID, p. 62.

Flags

You can use these flags with the **uconv** command:

-f FromCode

Specifies the coded character set in which the input data is encoded. The space between the **-f** flag and *FromCode* is required. The input data set should consist of characters in the coded character set identified by *FromCode*.

-t ToCode [FileName]

Specifies the code paeg in which the output data is encoded. The space between the **-t** flag and *ToCode* is required.

If *FileName* is not specified, **uconv** reads from the standard input.

Exit status

The **uconv** command returns these exit statuses:

0

Input data successfully converted.

1

File cannot be opened.

2

Code set converter is not supported.

3

Bad block size.

4

Unknown callback

Note

If you want to run the **uconv** command, you can either set the environment variable ICU_DATA to point to the `/usr/lpp/psf/bin` (for AIX or Linux) or `<install_path>\bin` (for Windows) or you can run the command following these examples:

Examples

To convert the contents of the `ibm850.txt` file from coded character set IBM-850 to UTF-16 and store the results in `utf.tmp` file, enter:

- for AIX or Linux:

```
ICU_DATA=/usr/lpp/psf/bin/ uconv -f IBM-850 -t UTF-16 ibm850.txt > utf.tmp
```

- for Windows:

```
ICU_DATA=<install_path>\bin uconv -f IBM-850 -t UTF-16 ibm850.txt > utf.tmp
```

To convert an ASCII coded character set to an EBCDIC coded character set, open a Command Prompt window and type:

- for AIX or Linux:

```
ICU_DATA=/usr/lpp/psf/bin/ uconv -f 850 -t 500 input.txt > output.txt
```

- for Windows:

```
ICU_DATA=<install_path>\bin uconv -f 850 -t 500 input.txt > output.txt
```

To convert a Japanese ASCII coded character set to a Japanese EBCDIC coded character set, open a Command Prompt window and type:

- for AIX or Linux:

```
ICU_DATA=/usr/lpp/psf/bin/ uconv -f 932 -t 939 input_jpn.txt > output_jpn.txt
```

- for Windows:

```
ICU_DATA=<install_path>\bin uconv -f 932 -t 939 input_jpn.txt > output_jpn.txt
```

The -o flag for AIX print commands and the InfoPrint Manager lprafp command

You can use the AIX print commands, **enq**, **lp**, and **qprt**, to print jobs.

AIX uses the **-o** flag on the AIX print commands or on the InfoPrint **lprafp** command to pass information to the backend program. This program handles the details of printing or sending your job.

-o flag not valid on pdpr command

You cannot use the **-o** flag on the InfoPrint **pdpr** command, nor can you use it to specify InfoPrint object attributes. Use the **-o** keywords only on the AIX print commands **enq**, **lp**, and **qprt** or the InfoPrint **lprafp** command.

Similar or equivalent InfoPrint object attributes are listed for each **-o** flag keyword. Use these attributes only on the **pdpr** command.

To pass flags or options to a transform command when you submit DBCS ASCII, EUC, GIF, JPEG, line-data, PCL, PDF, PostScript, or TIFF files with the **pdpr** command, use the InfoPrint **other-transform-options** document attribute instead of the **-o** flag.

This information is provided for the -o flag:

- Syntax for the -o flag, p. 171
- Description for the -o flag, p. 171
- Limitations for the -o flag, p. 171
- The -o flag, p. 171
- Examples for the -o flag, p. 193

Syntax for the -o flag

You can use any one of these AIX commands to submit an InfoPrint job:

- **enq** [**-P** *DestinationName*] [**-o***keyword=value* ...] *FileName* ...
- **lp** [**-d** *DestinationName*] [**-o***keyword=value* ...] *FileName* ...
- **qprt** [**-P** *DestinationName*] [**-o***keyword=value* ...] *FileName* ...

Description for the -o flag

The AIX print commands (**enq**, **lp**, and **qprt**) enqueue requests to a shared system resource. For InfoPrint, this resource is a printer device, or electronic mailing system.

Limitations for the -o flag

If you specify a data type value that causes an InfoPrint transform program to be run before the file is printed on a PSF physical printer, the transform program writes the MO:DCA-P output to a temporary file in the directory specified by the **PDBASE** environment variable or in one of its subdirectories. No single user can create a MO:DCA-P file larger than the amount of free space in the file system containing this directory. If many users are submitting jobs that invoke transform programs, the directory might fill up and prevent all users from successfully running the transform programs.

The -o flag

The AIX print commands use these flag to pass information to InfoPrint:

-o*keyword=value*

Is the information to be passed to InfoPrint. You can specify as many keyword-value pairs in the AIX print command as you like, provided that each of them starts with the **-o** flag.

Note

You can specify other flags associated with the AIX print commands or with the **lprafp** command, for example, the **-N** flag (number of copies) of the **enq** and **qprt** commands. Some of these flags are equivalent to the **-o** values you can specify with the AIX print commands.

For information about the other flags for the **enq**, **lp**, and **qprt** commands, see the appropriate man page or *AIX Commands Reference*.

For information about the other flags for the **lprafp** command, see lprafp command: submits remote jobs in InfoPrint Manager for AIX or InfoPrint Manager for Linux, p. 63.

Specifying -o attribute-value pairs

In InfoPrint, options appear as strings after the **-o** flag in the format *keyword=value*. For example,

```
enq -P DestinationName -obin=2 -oduplex=no FileName
```

Consider these situations when using **-o** with an AIX print command or with the **lprafp** command:

- The **-o** flag is not valid on the **pdpr** command. Use the similar or equivalent InfoPrint attributes listed for each **-o** keyword.
- Do not specify InfoPrint attributes with the **-o** flag.
- All **-o** keywords override the equivalent flags specified with the print commands (such as the **-N** flag of the **enq** and **qprt** commands).
- If you specify the same keyword with the **-o** flag multiple times, InfoPrint uses only the value of the last occurrence.
- When using keywords with the **-o** flag, you can use blanks between the keyword and the **-o** flag (for example **-o bin=1**). You cannot, however, use blanks between the keyword and the value (for example, **-o bin=1** is valid; **-o bin = 1** is not). Values that have blanks must be enclosed with single quotes or double quotes (for example, **-odocname="Tim Memo"**).
- When using another flag with the **-o** flag, you cannot use blanks between the second flag and its value. For example, **-o-w6i** is valid; **-o-w 6i** is not.
- The keywords used with the **-o** flag *are not* case-sensitive. For example, **-o BIN=1** and **-o bin=1** are both valid.
- Values for some keywords (such as path names or form definition names), *are* case-sensitive; for example:

```
enq -P3900A -oformdef=F100S /usr/lpp/psf/README
```

  and

```
enq -P3900A -oformdef=F100S /usr/lpp/psf/readme
```

  specify two different files to submit, just as:

```
enq -P3900A -osfo=/usr/lpp/psf/VMfonts myfile
```

  and

```
enq -P3900A -osfo=/usr/lpp/psf/vmfonts myfile
```

  specify two different directories to search for fonts.

  In addition, the first example below is valid and the second one is not because the **-F** keyword used with the **ps2afp** command must be uppercase.

```
enq -P3900A -odatatype=postscript -o-FFontMapFile
enq -P3900A -odatatype=postscript -o-fFontMapFile
```

- These flags show the minimum version of the keyword, as well as the complete keyword. For example, you can abbreviate the **-obin** keyword to two letters: **-obi**.

-o attribute-value pairs

You can use these keyword-value pairs with the AIX print commands **enq**, **lp**, or **qprt**, or with the **lprafp** command, to pass information to InfoPrint:

{-oac | -oaccount}=*account*

Specifies the account information that InfoPrint prints on start, end, and separator sheets. The account information can also be used for audit and accounting purposes.

This command keyword is equivalent to the InfoPrint document attribute **account-text**.

You must specify a value of **full** for one of the InfoPrint actual destination auxiliary sheet attributes (**accounting-exit**, **audit-exit**, **printer-start-sheet**, **printer-end-sheet**, or **printer-separator-sheet**) for InfoPrint to use this information.

The value is:

account

Any 1 to 20 characters of account information.

-oaddress1=*address1*

Specifies the first line of address information that InfoPrint prints on start, end, and separator sheets. The address information can also be used for audit and accounting purposes.

This command keyword is equivalent to the InfoPrint document attribute **address1-text**.

You must specify a value of **full** for one of the InfoPrint actual destination auxiliary sheet attributes (**accounting-exit**, **audit-exit**, **printer-start-sheet**, **printer-end-sheet**, or **printer-separator-sheet**) for InfoPrint to use this information.

The value is:

address1

Any 1 to 90 characters of address information.

-oaddress2=*address2*

Specifies the second line of address information that InfoPrint prints on start, end, and separator sheets. Other information is the same as for **-oaddress1.**

This command keyword is equivalent to the InfoPrint document attribute **address2-text**.

-oaddress3=*address3*

Specifies the third line of address information that InfoPrint prints on start, end, and separator sheets. Other information is the same as for **-oaddress1.**

This command keyword is equivalent to the InfoPrint document attribute **address3-text**.

-oaddress4=*address4*

Specifies the fourth line of address information that InfoPrint prints on start, end, and separator sheets. Other information is the same as for **-oaddress1.**

This command keyword is equivalent to the InfoPrint document attribute **address4-text**.

{-obi | -obin}={1 | 2 to 255 | 65 | 100}

Determines the input bin used for the job. This keyword overrides the value specified in the form definition. If you do not specify the **-obin** keyword, InfoPrint uses the bin value specified in the form definition you provide for printing the job. If you do not specify the **-obin** keyword and you use the default form definition to print your job, the input bin value in the printer profile or in that form definition is used.

This command keyword is similar to the InfoPrint document attribute **default-input-tray**.

Values are:

1

Selects the primary bin for the printer device. This is the default.

2 to 255

You can specify bin 2 to bin 255. See your printer documentation for more information about the bins available on the printer device.

65

Selects the envelope bin on certain printer devices.

100

Selects manual feed on certain printer devices.

{-obu | -obuilding}=*building*

Specifies the building information that InfoPrint prints on start, end, and separator sheets. The building information can also be used for audit and accounting purposes.

This command attribute is equivalent to the InfoPrint document attribute **building-text**.

You must specify a value of **full** for one of the InfoPrint actual destination auxiliary sheet attributes (**accounting-exit**, **audit-exit**, **printer-start-sheet**, **printer-end-sheet**, or **printer-separator-sheet**) for InfoPrint to use this information.

The value is:

building

Any 1 to 90 characters of building information.

{-ocd | -ocdp | -ocod | -ocodepage}={850 | 437 | 860 | 863 | 865} DEFAULT=850

Specifies the ASCII input code page used for the job; that is, the "keyboard" code that InfoPrint uses to translate the ASCII code points it finds in the job.

This command attribute is similar to the InfoPrint document attribute **default-character-mapping**.

Values are:

850

Defaults to the IBM code page 850.

nnn

Other possible input code page values are 437 (a subset of the IBM code page 850), 860 (Portuguese), 863 (French Canadian), or 865 (Nordic); however, none of these IBM code pages are directly supported by AIX. If you are using a different ASCII code page as your keyboard code page, you can select 437, 860, 863, or 865, depending on which code page is the closest match to the one you are currently using.

Note

1. This parameter is used only for ASCII jobs. If you specify **-odatatype=dbcsascii**, InfoPrint ignores the value you specify for the **-ocodepage** keyword and value.
2. The InfoPrint ASCII data type does not support the non-U.S. code pages supported by AIX (for example, IBM 932 and the variations of ISO8859). InfoPrint supports code pages 437, 860, 863, and 865 so that you can select the code page that most closely matches the one you are currently using, if you are located outside the United States and using the ASCII data type.
3. If you are printing single-byte ASCII code points that are part of code page 943 (Japan), 950 (Traditional Chinese), or an Extended UNIX Code (EUC) code set for Japan, China, or Korea, you must use the **db2afp** command to print the file, even though the entire file is single-byte ASCII.

{-ocop | -ocopies}={1 to 255} DEFAULT=1

Specifies the number of copies of the job. If you also specify one of the copy flags for the AIX print command (the **-N** flag of the **enq** and **qprt** commands, or the **-n** flag of the **lp** command), the value you specify with the **-ocopies** keyword overrides the value specified with the **-N** or **-n** flag.

This command keyword is equivalent to the InfoPrint document attribute **copy-count**.

Values are:

1

The minimum number of copies. This is the default.

255

The maximum number of copies.

{-odatac | -odatack}={block | blkchar | blkpos | unblock} DEFAULT=block

Determines what type of errors in the job cause InfoPrint to issue error messages.

This command keyword is similar to the InfoPrint document attribute **data-fidelity-problem-reported**.

The value you assign to this keyword can significantly affect IPDS printer performance as described in this list.

Values are:

block

Block print-positioning errors and invalid-character errors; that is, do not report these errors or issue error messages for these types of errors. This value produces the best printer performance.

Print-positioning errors occur when the printer device tries to print outside the valid printable area of the form. Invalid-character errors include attempts to use a code point that is not assigned to a character in an AFP font.

block is the default.

blkchar

Block invalid-character errors; that is, do not report these errors. However, InfoPrint reports print-positioning errors and issues error messages for them.

blkpos

Block print-positioning errors; that is, do not report these errors. However, InfoPrint reports invalid-character errors and issues error messages for them.

unblock

Report all print-positioning errors and invalid-character errors. If the job has many errors, selecting **unblock** could decrease your IPDS printer device's performance because of the constant communication between the printer device and InfoPrint, and because of the repositioning that must occur to continue printing the next page after the page containing the error. You might use this value when diagnosing problems with InfoPrint.

{-odatat | -odatatype}={ascii | afpds | dbcsascii | ditroff | gif | jpeg | line | modcap | pcl | pdf | postscript | sap | tiff} DEFAULT=ascii

Specifies the type of the input data stream. If you do not specify the **-odatatype** keyword, InfoPrint reads the first few lines of the file to determine if the file is an AFP data stream. If InfoPrint does not find AFP data stream commands in the file, it assumes a data type of ASCII.

If you are printing PostScript, ditroff, S/370 line data, PCL, double-byte character set (DBCS) ASCII, Extended UNIX Code (EUC) on a PSF physical printer, or if you are printing ASCII data that you want to format with a page definition on a PSF physical printer, specifying the particular data type alerts InfoPrint to execute the appropriate transform command (such as **ps2afp**, **d2afp**, **line2afp**, **pcl2afp**, or **db2afp**) before printing the file. In this way, you can specify transform-specific options with the **-o** flag. See -o keywords and values for specific data types, p. 186 for more information.

This command keyword is equivalent to the InfoPrint document attribute **document-format**.

Values are:

{as | ascii}

The type of data is an ASCII data stream with embedded controls for an InfoPrint 4201-2 Proprinter or 5202 printer. You can also specify **ascii** to print "flat" ASCII (no embedded formatting controls except for newline characters) without using a page definition.

ascii is the default.

{af | afpds}

The type of data is an Advanced Function Presentation data stream.

gif

The type of data is Graphical Interchange Format.

jpeg

The type of data is Joint Photographic Experts Group.

{db | dbcsascii}

The type of data is double-byte character set (DBCS) ASCII for Japanese or Traditional Chinese, or Extended UNIX Code (EUC) for Japanese, Traditional Chinese, or Korean. DBCS ASCII can contain controls for an InfoPrint *5577* or *5587* printer. When you specify this value, InfoPrint automatically runs the **db2afp** command to transform the DBCS ASCII or EUC into printable AFP data. InfoPrint ignores any values specified with the **-ocodepage** flag and keyword.

If you are printing EUC data, you must also specify **-o-e** (the **db2afp -e** flag) along with **-odatatype=dbcsascii**.

{d | ditroff}

The type of data is ditroff, which is a device-independent data stream (troff files that have been formatted for InfoPrint using the **troff -Tafp** command). When you specify this value, InfoPrint automatically runs **d2afp** to transform the ditroff into printable AFP data.

{l | line}

The type of data is S/370 line data or is ASCII data that you want to format with a page definition. When you specify this value, InfoPrint automatically runs **line2afp** to transform the ASCII or line data into printable AFP data.

Note

If the input file is ASCII, but you want to use fonts that have EBCDIC code points, you must also specify a **line2afp** input exit program to convert the ASCII file to EBCDIC. InfoPrint supplies two input exit programs that perform this function:

- **/usr/lpp/psf/bin/apka2e**, which is appropriate for ASCII files that only contain line feed controls (not carriage returns and form feeds)
- **/usr/lpp/psf/bin/asciinpe**, which is appropriate for ASCII files that contain line feed, carriage returns, and form feeds.

You specify an exit program using the **-oinpexit** keyword-value pair on the AIX print command.

{mo | modcap}

The type of data is a Mixed Object: Document Content Architecture for Presentation data stream.

{pc | pcl}

The type of data is PCL. When you specify this value, InfoPrint automatically runs **pcl2afp** to transform the PCL into printable AFP data.

pdf

The type of data is PDF. When you specify this value, InfoPrint automatically runs **pdf2afp** to transform the PDF into printable AFP data.

{ps | postscript}

The type of data is PostScript. When you specify this value, InfoPrint automatically runs **ps2afp** to transform the PostScript into printable AFP data.

sap

The type of data is an OTF data stream.

You cannot submit ABAP List Format files with the **-odatatype=sap** flag and keyword-value pair. If you submit an ABAP List Format file, InfoPrint will convert it to line data, try to print it, and fail. You must first use **sap2afp** to convert the ABAP List Format file to line data, then submit it with the **-odatatype=line** flag and keyword-value pair.

tiff

The type of data is Tag Image File Format.

{-ode | -odepartment}=*department*

Specifies the department information that InfoPrint prints on start, end, and separator sheets. The department information can also be used for audit and accounting purposes.

This command keyword is equivalent to the InfoPrint document attribute **department-text**.

You must specify a value of **full** for one of the InfoPrint actual destination auxiliary sheet attributes (**accounting-exit**, **audit-exit**, **printer-start-sheet**, **printer-end-sheet**, or **printer-separator-sheet**) for InfoPrint to use this information.

The value is:

department

Any 1 to 90 characters of department information.

{-odi | -odistribution}=*distribution*

Specifies the distribution information that InfoPrint prints on start, end, and separator sheets.

If you do not specify the **-odistribution** keyword for local jobs, no distribution information prints. For remote jobs, the value defaults to the information provided by AIX (usually the user ID and the name of the host from which the job was submitted; for example, **bob@sys1**).

The value is:

distribution

Any 1 to 90 characters of distribution information. Whether all of these characters print depends on the user exit program.

{-odo | -odocname | -ojobn | -ojobname}=*JobName*

Identifies the document name or job name associated with this job. If you do not specify the **-odocname** or **-ojobname** keyword for ASCII or AFP data stream jobs, InfoPrint uses the file name of the first file in the job.

If you do not specify the **-odocname** keyword for other types of data, InfoPrint creates a temporary file for the transform output and uses that temporary file name for the job name. To retain the original name of the input file for these types of data, you can specify a job name with this keyword.

The **-odocname** command keyword is equivalent to the InfoPrint document attribute **document-file-name**. The **-ojob** command keyword is equivalent to the InfoPrint job attribute **job-name**.

The value is:

JobName

You can enter a job name of up to 255 characters. The user-exit programs supplied with the start, end, and separator sheets assume a maximum of 50 characters for the job name. To display more than 50 characters, change the user-exit programs to use the number of characters you need. Use single quotes (') or double quotes (") if the document name or job name contains spaces (blanks).

{-odu | -oduplex}={no | yes | tumble}

Specifies whether the job prints on one or both sides of the paper and how successive pages are oriented. This keyword overrides the value specified in the form definition. If you do not specify the **-oduplex** keyword, InfoPrint uses the duplex printing value specified in the form definition you provide for printing the job. If you do not specify the **-oduplex** keyword and you use the default form definition to print your job, the duplex printing value in the printer profile or in that form definition is used.

This command keyword is similar to the InfoPrint document attributes **plex** and **sides**.

Values are:

{n | no}

The job prints on one side of the sheet. This is the default.

{y | yes}

The job prints on both sides of the sheet, top edge to top edge.

{t | tumble}

The job prints on both sides of the sheet. The top edge of one side is the bottom edge of the other side.

-ofileformat={record | record,*n* **| stream[,lf |crlf] }**

This flag is only valid when used in conjuntion with a data type of line data. Specifies the format of the input file. If you do not specify **-ofileformat**, **stream** is the default.

For information about how to specify the correct file format and how to transfer files to ACIF from AIX, Linux, and Windows, see "Appendix A: Helpful Hints" in the *AFP Conversion and Indexing Facility: User's Guide*, S544-5285.

Values are:

record

The input file is formatted in S/390 record format, where the first two bytes of each line specify the length of the line. Files with **record** format typically are z/OS or VM files that have a variable record format and are downloaded to AIX, Linux, or Windows.

record,*n*

The input file is formatted in such a way that each record (including AFP data stream and MO:DCA-P records) is a fixed length, *n* bytes long. The value of *n* is a number from 1 to 32767. The encapsulated size of the AFP structured field must be less than the size of *n*. Files with **record,***n* format typically are z/OS or VM files that have a fixed record format and are downloaded to AIX, Linux, or Windows.

stream[,lf |crlf]

The input file has no length information; it is a stream of data separated by one or more newline characters. The AFP portion (if any) of the input file has its length information encapsulated in the structured field. Files with **stream** format typically come from a workstation operating system, such as AIX, Linux, or Windows.

lf

This subparameter identifies the newline character sequence. **lf** indicates that the newline character is a line feed. Files with **stream,lf** are typically files from a workstation running a UNIX operating system like AIX, linux, or hpux.

crlf

This subparameter identifies the newline character sequence. **crlf** indicates that the new line character sequence is a carriage return followed by a line feed. Files with **stream,crlf** are typically files form a workstation running a Windows or DOS operating system.

stream is the default.

This option is equivalent to the **new-line-options** document attribute on the **pdpr** command.

{-of | -oformdef}=*FormDefinitionName*

Specifies the name of the form definition InfoPrint uses for the job. The form definition defines the placement of the page of data on the form, the input and output bins to use, duplex printing, and so on.

If you do not specify the **-oformdef** keyword, InfoPrint looks in the input file for an inline form definition. If the input file does not contain a form definition, InfoPrint uses the default form definition for that InfoPrint actual destination.

This command keyword is equivalent to the InfoPrint document attribute **form-definition**.

The value is:

FormDefinitionName

Any form definition located in one of the directories defined in the search path.

You can specify a form definition name between 1 and 8 characters in length.

{-oh | -oheader}={yes | no} DEFAULT=yes

Specifies whether InfoPrint prints a start sheet before the job.

This command keyword is similar to the InfoPrint job attribute **auxiliary-sheet-selection**.

Values are:

{y | yes}

Print the start sheet specified by the actual destination attribute **printer-start-sheet** before the job. If there are multiple files in a single job, a start sheet is printed before the first file only. This is the default.

{n | no}

Do not print a start sheet.

{-omsgc | -omsgcount}={9999 | 1 to 9998 | 0}

Specifies the number of messages or groups of related messages that InfoPrint prints with the job. A message group consists of one error or warning message, followed by one or more secondary messages.

This command keyword is similar to the InfoPrint document attribute **maximum-messages-printed**.

Values are:

9999

All messages print. This is the default.

1 to 9998

A specified number of messages print.

0

No messages print.

Note

When InfoPrint reaches the message count value, InfoPrint processing continues; however, InfoPrint prints no additional messages.

{-ona | -oname}=*name*

Specifies the name information that InfoPrint prints on start, end, and separator sheets. The name information can also be used for audit and accounting purposes.

This command keyword is equivalent to the InfoPrint document attribute **name-text**.

You must specify a value of **full** for one of the InfoPrint actual destination auxiliary sheet attributes (**accounting-exit**, **audit-exit**, **printer-start-sheet**, **printer-end-sheet**, or **printer-separator-sheet**) for InfoPrint to use this information.

The value is:

name

Any 1 to 90 characters of name information.

{-onewlineencoding=utf-16 | utf-8 | ascii | ebcdic}

Specifies the encoding for the newline.

This command keyword is similar to the InfoPrint document keyword **new-line-option-data-encoding**.

{-ono | -onodeid}=*NodeID*

Specifies the node ID information that InfoPrint prints on start, end, and separator sheets. The node ID information can also be used for audit and accounting purposes.

This command keyword is equivalent to the InfoPrint document attribute **node-id-text**.

You must specify a value of **full** for one of the InfoPrint actual destination auxiliary sheet attributes (**accounting-exit**, **audit-exit**, **printer-start-sheet**, **printer-end-sheet**, or **printer-separator-sheet**) for InfoPrint to use this information.

The value is:

NodeID

Any 1 to 20 characters of nodeid information.

{-oou | -ooutbin}={ 1 | 2 to 65535}

Determines the output bin used for the job. If you do not specify the **-ooutbin** keyword, the output bin value in the printer profile is used.

This command keyword is similar to the InfoPrint document attribute **output-bin** and the InfoPrint actual destination attribute **output-bin-numbers**.

Values are:

1

Selects the primary output bin for the printer device. This is the default.

2 to 65535

You can specify bin 2 to bin 65535. See your printer documentation for more information about the bins available on the printer device.

{-oov | -ooverlay}=*OverlayName*

Specifies the name of an overlay to be printed on every page of the job.. Overlays can also be specified in a form definition. Any overlay you name here is printed in addition to overlays named in the form definition.

This command keyword is equivalent to the InfoPrint document attribute **overlay**.

The value is:

OverlayName

Any overlay located in one of the directories defined in the search path.

You can specify an overlay name between 1 and 8 characters.

{-opa | -opassthru}=PassthruFlags

Identifies any other information provided when the job is submitted.

You specify this information in this format:

-opassthru={*PassthruFlag=value*, [*PassthruFlag=value*,]...}

These flags are supported by the user-exit program supplied with InfoPrint:

class

Identifies the 1-character class keyword provided by TCP/IP for MVS for those jobs submitted to InfoPrint from MVS hosts through the Network Print Facility (NPF), or Download for z/OS.

destination

Identifies the 1-to 8-character destination keyword provided for those jobs submitted to InfoPrint from MVS hosts through the Network Print Facility (NPF), or Download for z/OS.

forms

Identifies the 1-to 8-character forms keyword provided for those jobs submitted to InfoPrint from MVS hosts through the Network Print Facility (NPF), or Download for z/OS.

segmentid

Identifies the 1-to 10-character segmentation identifier provided by TCP/IP for MVS for those jobs submitted to InfoPrint from MVS hosts through the Network Print Facility (NPF), or Download for z/OS.

This command keyword is equivalent to the InfoPrint document attributes **mvs-class**, **mvs-destination**, **mvs-forms**, and **mvs-segment-id**.

{-opr | -oprogrammer}=*programmer*

Specifies the programmer information that InfoPrint prints on start, end, and separator sheets. The programmer information can also be used for audit and accounting purposes.

This command keyword is equivalent to the InfoPrint document attribute **programmer-text**.

You must specify a value of **full** for one of the InfoPrint actual destination auxiliary sheet attributes (**accounting-exit**, **audit-exit**, **printer-start-sheet**, **printer-end-sheet**, or **printer-separator-sheet**) for InfoPrint to use this information.

The value is:

programmer

Any 1 to 40 characters of programmer information.

{-oresp | -orespath}=*PathList*

Specifies the search order that InfoPrint uses for all Advanced Function Printing (AFP) resources.

This command keyword is equivalent to the InfoPrint document attribute **resource-context-user**.

If you specify this keyword, InfoPrint adds this hierarchy of search orders after the *PathList* that you specify:

- For fonts:
  1. The paths named in the **-osrchfontlib** keyword
  2. The paths named in the InfoPrint default document attribute **resource-context-user**
  3. The paths named in the InfoPrint default document attribute **resource-context-font**
  4. The paths named in the InfoPrint default document attribute **resource-context**
  5. The paths named in the **PSFPATH** environment variable
  6. The paths named in the InfoPrint actual destination attribute **resource-context-font**
  7. The directory **/usr/lpp/psf/reslib**
  8. The directory **/usr/lpp/ipfonts**
  9. The directory **/usr/lpp/afpfonts**
  10. The directory **/usr/lpp/psf/fontlib**
- For other resources:
  1. The paths named in the InfoPrint default document attribute **resource-context-user**
  2. The paths named in the InfoPrint default document attributes **resource-context-form-definition**, **resource-context-overlay**, **resource-context-page-definition**, or **resource-context-page-segment**,
  3. The paths named in the InfoPrint default document attribute **resource-context**
  4. The paths named in the **PSFPATH** environment variable
  5. The paths named in the InfoPrint actual destination attributes **resource-context-form-definition**, **resource-context-overlay**, **resource-context-page-definition**, or **resource-context-page-segment**,
  6. The directory **/usr/lpp/psf/reslib**

If you do not specify this keyword, InfoPrint uses the search orders listed above.

The value is:

PathList

Any valid search path on the system where the job prints. You must use a colon (:) to separate multiple paths.

{-oro | -oroom}=*room*

Specifies the room information that InfoPrint prints on start, end, and separator sheets. The room information can also be used for audit and accounting purposes.

This command keyword is equivalent to the InfoPrint document attribute **room-text**.

You must specify a value of **full** for one of the InfoPrint actual destination auxiliary sheet attributes (**accounting-exit**, **audit-exit**, **printer-start-sheet**, **printer-end-sheet**, or **printer-separator-sheet**) for InfoPrint to use this information.

The value is:

room

Any 1 to 90 characters of room information.

{-osep | -oseparator}={ yes | no}

Specifies whether InfoPrint prints separator sheets between copies of the job.

This command keyword is similar to the InfoPrint job attribute **auxiliary-sheet-selection**.

Values are:

{y | yes}

Print the separator sheet specified by the actual destination attribute **printer-separator-sheet** between copies of the job. This is the default.

{n | no}

Do not print separator sheets.

{-osfo | -osrchfo | -osrchfontlib}=*PathList*

Specifies one or more paths InfoPrint searches for the fonts required by the job.

This command keyword is equivalent to the InfoPrint document attribute **resource-context-font**.

If you do not specify this keyword, InfoPrint uses this search order:

1. The paths named in the **-orespath** keyword
2. The paths named in the InfoPrint default document attribute **resource-context-user**
3. The paths named in the InfoPrint default document attribute **resource-context-font**
4. The paths named in the InfoPrint default document attribute **resource-context**
5. The paths named in the **PSFPATH** environment variable
6. The paths named in the InfoPrint actual destination attribute **resource-context-font**
7. The directory **/usr/lpp/psf/reslib**
8. The directory **/usr/lpp/ipfonts**
9. The directory **/usr/lpp/afpfonts**
10. The directory **/usr/lpp/psf/fontlib**

The value is:

PathList

Any valid search path on the system where the job prints. You must use a colon (:) to separate multiple paths.

{-oti | -otitle}=*title*

Specifies the title information that InfoPrint prints on start, end, and separator sheets. The title information can also be used for audit and accounting purposes.

This command keyword is equivalent to the InfoPrint document attribute **title-text**.

You must specify a value of **full** for one of the InfoPrint actual destination auxiliary sheet attributes (**accounting-exit**, **audit-exit**, **printer-start-sheet**, **printer-end-sheet**, or **printer-separator-sheet**) for InfoPrint to use this information.

The value is:

title

Any 1 to 90 characters of title information.

{-otr | -otrailer}={yes | no}

Specifies whether an end sheet prints after the job.

This command keyword is similar to the InfoPrint job attribute **auxiliary-sheet-selection**.

Values are:

{y | yes

Print the end sheet specified by the actual destination attribute **printer-end-sheet** after the job. This is the default.

{n | no}

Do not print an end sheet.

{-ous | -ouserid}=*UserID*

Specifies the user ID information that InfoPrint prints on start, end, and separator sheets. The user ID information can also be used for audit and accounting purposes.

This command keyword is equivalent to the InfoPrint document attribute **user-id-text**.

You must specify a value of **full** for one of the InfoPrint actual destination auxiliary sheet attributes (**accounting-exit**, **audit-exit**, **printer-start-sheet**, **printer-end-sheet**, or **printer-separator-sheet**) for InfoPrint to use this information.

The value is:

UserID

Any 1 to 20 characters of userid information.

{-oxo | -oxoffset}=*nnnn.nnnu*

Specifies the X offset of the logical page origin from the physical page origin. This keyword overrides any X offset value in the form definition. If you do not specify the **-oxoffset** keyword, InfoPrint uses the X offset value specified in the form definition you provide for printing the job.

This command keyword is equivalent to the InfoPrint document attribute **x-image-shift**.

The value is:

nnnn.nnnu

A numeric value that establishes the X (across) coordinate of the logical page origin, as shown in the figure below. *nnnn.nnn* is a number that can optionally contain a decimal point, and *u* is the units in inches (*i*) or millimeters (*m*).

If you do not specify a unit (*i* or *m*), then InfoPrint uses pels as the unit type. You cannot specify fractional values (that is, you cannot use a decimal point) for pels.

Note

If you specify a value that is outside of the printable area, you will get a print-positioning error. To determine the printable area of printer devices, see *Advanced Function Presentation: Printer Information*.

{-oyo | -oyoffset}=*nnnn.nnnu*

Specifies the Y offset of the logical page origin from the physical page origin. This keyword overrides any Y offset value in the form definition. If you do not specify the **-oyoffset** keyword, InfoPrint uses the Y offset value specified in the form definition you provide for printing the job.

This command keyword is equivalent to the InfoPrint document attribute **y-image-shift**.

The value is:

nnnn.nnnu

Any numeric value that establishes the Y (down) coordinate of the logical page origin. *nnnn.nnn* is a number that can optionally contain a decimal point, and *u* is the units in inches (*i*) or millimeters (*m*).

If you do not specify a unit (*i* or *m*), InfoPrint uses pels as the unit type. You cannot specify fractional values (that is, you cannot use a decimal point) for pels.

Note

If you specify a value that is outside of the printable area, you will get a print-positioning error. To determine the printable area of printer devices, see *Advanced Function Presentation: Printer Information*.

-o keywords and values for specific data types

You can also use **-o** to specify keywords (transform command flags or options) that apply to these specific data types:

- Double-byte character set (DBCS) ASCII data
- Extended UNIX code (EUC) data
- Graphical Interchange Format (GIF) data
- Joint Photographic Experts Group (JPEG) data
- Line data
- PCL data
- Portable Document Format (PDF) data
- PostScript data
- Tag Image Format File (TIFF) data

For example, to specify that the finished width of a PostScript image is 6 inches, enter:

```
enq -P3825C -odatatype=ps -o-w6i memo1.ps
```

DBCS ASCII data and EUC data

If you are printing DBCS (double-byte) ASCII or Extended UNIX Code (EUC) data:

- Specify **-odatatype=dbcsascii** for DBCS ASCII or **-odatatype=dbcsascii -o-e** for EUC with the **enq**, **lp**, **qprt**, or **lprafp** command; or allow InfoPrint to identify the data type.
- InfoPrint automatically runs the **db2afp** transform command.
- You can use these **db2afp** flags on the command line with **enq**, **lp**, **qprt** or **lprafp**:
  - **-o-e**
  - **-o-lja**
  - **-o-lch**
  - **-o-lko** (EUC only)

  For information about these flags, see db2afp command: transforms DBCS data to AFP, p. 314.

You cannot use the **db2afp -o** flag to specify an output file.

Note

The **db2afp** transform must be installed on the workstation where InfoPrint is installed.

GIF data

If you are printing GIF data:

- Specify **-odatatype=gif** with the **enq**, **lp**, **qprt**, or **lprafp** command; or allow InfoPrint to identify the data type.
- InfoPrint automatically runs the **gif2afp** transform command.
- You can use these **gif2afp** options on the command line with **enq**, **lp**, **qprt**, or **lprafp**. For those options that accept a value, do not put a blank between the option and the value.
  - **-o-a***ImageType*
  - **-o-alg***ProcessingAlgorithms*
  - **-o-C***ConfigurationFile*
  - **-o-clean***cleanup*
  - **-o-cmp***compression*
  - **-o-cmr***colorResourceName*
  - **-o-crop***CropFactors*
  - **-o-fit**{**trim** | **scale**}
  - **-o-gcorr***GrayscaleMappingTable*
  - **-o-ink***color*
  - **-o-inv**
  - **-o-j***ScanOffsetFileName*
  - **-o-l***ImageLength*
  - **-o-M***MemoryBound*
  - **-o-ms***space*
  - **-o-msf***SpaceFraction*
  - **-o-nosniff**
  - **-o-noterm**
  - **-o-nov**
  - **-o-outcolor***OutputColorModel*
  - **-o-p***PageRange*
  - **-o-pagetype***PageType*
  - **-o-paper***PaperSize*
  - **-o-r***resolution*
  - **-o-respath***ResourceSearchPath*
  - **-o-rot***rotation*
  - **-o-scale***ImageSize*
  - **-o-sniff**
  - **-o-tag**{*none* | *normal* | *passthru*}
  - **-o-term**

- **-o-thresh***HalftoneFile*
- **-o-v**
- **-o-w***ImageWidth*
- **-o-x***LeftMargin*
- **-o-y***TopMargin*

For information about these options, see gif2afp command: transforms GIF data to AFP, p. 322.

You cannot use the print command **-o** flag to pass the **gif2afp -o** option to specify an output file, or the **@**, **-f**, and **-z** options to specify input files.

Note

The **db2afp** transform must be installed on the workstation where InfoPrint is installed.

JPEG data

If you are printing JPEG data:

- Specify **-odatatype=jpeg** with the **enq**, **lp**, **qprt**, or **lprafp** command; or allow InfoPrint to identify the data type.
- InfoPrint automatically runs the **jpeg2afp** transform command.
- You can use these **jpeg2afp** options on the command line with **enq**, **lp**, **qprt**, or **lprafp**. For those options that accept a value, do not put a blank between the option and the value.
  - **-o-a***ImageType*
  - **-o-alg***ProcessingAlgorithms*
  - **-o-C***ConfigurationFile*
  - **-o-cmp***compression*
  - **-o-cmr***colorResourceName*
  - **-o-crop***CropFactors*
  - **-o-fit**{**trim** | **scale**}
  - **-o-force**
  - **-o-gcorr***GrayscaleMappingTable*
  - **-o-j***ScanOffsetFileName*
  - **-o-l***ImageLength*
  - **-o-M***MemoryBound*
  - **-o-ms***space*
  - **-o-msf***SpaceFraction*
  - **-o-noterm**
  - **-o-nov**
  - **-o-outbits***NumberOfOutputBits*
  - **-o-outcolor***OutputColorModel*
  - **-o-p***PageRange*
  - **-o-pagetype***PageType*
  - **-o-paper***PaperSize*
  - **-o-r***resolution*
  - **-o-respath***ResourceSearchPath*

- **-o-rot***rotation*
- **-o-scale***ImageSize*
- **-o-tag**{*none* | *normal* | *passthru*}
- **-o-term**
- **-o-thresh***HalftoneFile*
- **-o-v**
- **-o-w***ImageWidth*
- **-o-wrkdir***WorkDirectory*
- **-o-x***LeftMargin*
- **-o-y***TopMargin*

For information about these options, see jpeg2afp command: transforms JPEG data to AFP, p. 343.

You cannot use the print command **-o** flag to pass the **jpeg2afp -o** option to specify an output file, or the **@**, **-f**, and **-z** options to specify input files.

Note

The **db2afp** transform must be installed on the workstation where InfoPrint is installed.

Line data

If you are printing S/370 line data, or you are printing ASCII data that you want to format with a page definition:

- Specify **-odatatype=line** with the **enq**, **lp**, **qprt**, or **lprafp** command; or allow InfoPrint to identify the data type.
- InfoPrint automatically runs the **line2afp** transform command.
- You can use these **line2afp** flags on the command line with **enq**, **lp**, **qprt**, or **lprafp**:

  - **-occ=***value*
  - **-occtype=***value*
  - **-ochars=***FontName[, …]*
  - **-oformdef=***FormDefinitionName*
  - **-oimageout=***value*
  - **-oinpexit=***ProgramName*
  - **-omsgdd=***FileName*
  - **-ooutexit=***ProgramName*
  - **-opagedef=***PageDefinitionName*
  - **-oparmdd=***FileName*
  - **-opdeflib=***PathList*
  - **-oprmode=***value*
  - **-oresexit=***ProgramName*
  - **-otrc=***value*
  - **-ouserlib=***PathList*

  For information about these flags, see *AFP Conversion and Indexing Facility: User's Guide* or the **line2afp** man page.

  You cannot use **line2afp** flags for the input file (**inputdd**) or the output file (**outputdd**).

When you are using **line2afp** flags with an AIX print command, you should not use **line2afp** flags that do the same thing as InfoPrint-specific **-o** flags. Use the InfoPrint-specific **-o** flags instead:

- Use **enq -odatatype=line -orespath=** instead of **enq -odatatype=line -ofdeflib=**
- Use **enq -odatatype=line -osrchfontlib=** instead of **enq -odatatype=line -ofontlib=**
- Use **enq -odatatype=line -orespath=** instead of **enq -odatatype=line -oovlylib=**
- Use **enq -odatatype=line -orespath=** instead of **enq -odatatype=line -opseglib=**
- Use **enq -odatatype=line -orespath=** instead of **enq -odatatype=line -oreslib=**

Note

The **line2afp** transform and **acif** command must be installed on the workstation where InfoPrint is installed.

PCL data

If you are printing PCL data:

- Specify **-odatatype=pcl** with the **enq**, **lp**, **qprt**, or **lprafp** command; or allow InfoPrint to identify the data type.
- InfoPrint automatically runs the **pcl2afp** transform command.
- You can use these **pcl2afp** flags on the command line with **enq**, **lp**, **qprt**, or **lprafp**. For those flags that accept a value, do not put a blank between the flag and the value.
  - **-o-a***OutputType*
  - **-o-c**
  - **-o-C***ConfigurationFile* (the configuration file must be specified as a full path name)
  - **-o-j***nnnn*
  - **-o-l***nnnn.nnnu*
  - **-o-M***nnnnn*
  - **-o-p***PageRange*
  - **-o-P***nnnnn*
  - **-o-q**
  - **-o-r***nnn*
  - **-o-S***ServerName*
  - **-o-s***nnnn*
  - **-o-w***nnnn.nnnu*
  - **-o-x***nnnn.nnnu*
  - **-o-y***nnnn.nnnu*

  For information about these flags, see pcl2afp command: transforms PCL data to AFP, p. 390.

  You cannot use the **pcl2afp -o** flag to specify an output file.

  Note

  The **pcl2afp** transform must be installed on the workstation where InfoPrint is installed.

PostScript and PDF data

If you are printing PostScript or PDF data:

- Specify **-odatatype=ps** or **-odatatype=pdf** with the **enq**, **lp**, **qprt**, or **lprafp** command; or allow InfoPrint to identify the data type.
- InfoPrint automatically runs the **ps2afp** transform command. (The **pdf2afp** command is another name for **ps2afp**.)
- You can use these **ps2afp** flags on the command line with **enq**, **lp**, **qprt**, or **lprafp**. For those flags that accept a value, do not put a blank between the flag and the value.

  – **-o-a***OutputType*
  – **-o-c**
  – **-o-cmr***colorResourceName*
  – **-o-C***ConfigurationFile* (the configuration file must be specified as a full path name)
  – **-o-F***FontMapFile[,...]* (the font map files must be specified as full path names)
  – **-o-g***PageRange*
  – **-o-j***nnnn*
  – **-o-l***nnnn.nnnu*
  – **-o-M***nnnnn*
  – **-o-p***PageRange*
  – **-o-P***nnnnn*
  – **-o-q**
  – **-o-r***nnn*
  – **-o-S***ServerName*
  – **-o-s***nnnn*
  – **-o-tag**{*none* | *normal* | *passthru*}
  – **-o-w***nnnn.nnnu*
  – **-o-x***nnnn.nnnu*
  – **-o-y***nnnn.nnnu*

  For information about these flags, see pdf2afp and ps2afp commands: transform PDF or PostScript data to AFP, p. 419.

  You cannot use the **ps2afp -o** flag to specify an output file.

  Note

  The **ps2afp** transform must be installed on the workstation where InfoPrint is installed.

TIFF data

If you are printing TIFF data:

- Specify **-odatatype=tiff** with the **enq**, **lp**, **qprt**, or **lprafp** command; or allow InfoPrint to identify the data type.
- InfoPrint automatically runs the **tiff2afp** transform command.
- You can use these **tiff2afp** options on the command line with **enq**, **lp**, **qprt**, or **lprafp**. For those options that accept a value, do not put a blank between the option and the value.

  – **-o-a***ImageType*
  – **-o-alg***ProcessingAlgorithms*
  – **-o-calib***calibration*

- **-o-choice***ImageChoice*
- **-o-C***ConfigurationFile*
- **-o-clean***cleanup*
- **-o-cmp***compression*
- **-o-cmr***colorResourceName*
- **-o-crop***CropFactors*
- **-o-fit**{**trim** | **scale**}
- **-o-force**
- **-o-gcorr***GrayscaleMappingTable*
- **-o-ink***color*
- **-o-inv**
- **-o-j***ScanOffsetFileName*
- **-o-l***ImageLength*
- **-o-M***MemoryBound*
- **-o-mp**
- **-o-ms***space*
- **-o-msf***SpaceFraction*
- **-o-nomp**
- **-o-nosniff**
- **-o-noterm**
- **-o-nov**
- **-o-outbits***NumberOfOutputBits*
- **-o-outcolor***OutputColorModel*
- **-o-p***PageRange*
- **-o-pagetype***PageType*
- **-o-paper***PaperSize*
- **-o-r***resolution*
- **-o-respath***ResourceSearchPath*
- **-o-rot***rotation*
- **-o-scale***ImageSize*
- **-o-sgcorr***ScannerCorrection*
- **-o-sniff**
- **-o-tag**{*none* | *normal* | *passthru*}
- **-o-term**
- **-o-thresh***HalftoneFile*
- **-o-v**
- **-o-w***ImageWidth*
- **-o-wrkdir***WorkDirectory*
- **-o-x***LeftMargin*
- **-o-y***TopMargin*

For information about these options, see tiff2afp command: transforms TIFF data to AFP, p. 481.

You cannot use the print command **-o** flag to pass the **tiff2afp -o** option to specify an output file, or the **@**, **-f**, and **-z** options to specify input files.

Note

The **tiff2afp** transform must be installed on the workstation where InfoPrint is installed.

Examples for the -o flag

This section describes examples for the **-o** flag:

- To submit the ASCII file `myfile` to the InfoPrint logical destination called `Xserv-lp` with four copies printed on one side of hole-punched paper, which is stored in the secondary bin of the printer device, enter:

```
enq -P Xserv-lp -obin=2 -ocopies=4 -oduplex=n myfile
```

  InfoPrint includes a form definition that specifies single-sided printouts of hole-punched paper from bin 2. If this form definition (**F1H10120**) is installed in the default directory, you could alternatively type:

```
enq -P Xserv-lp -ocopies=4 -oformdef=F1H10120 myfile
```

- To submit AFP data stream files `file1` and `file2` to the InfoPrint logical destination called `dtsrv-lp`, with a search path for fonts of `/home/afpfonts`, enter:

```
lp -d dtsrv-lp -osrchfontlib=/home/afpfonts file1 file2
```

- To submit the PostScript file `myfile` to the InfoPrint logical destination called `servB-lp` (which has a resolution of 300 pels), with a form definition of `F1PP0120`, with no reported block-positioning errors for the resulting image, and with a maximum of 100 printed messages, enter:

```
qprt -P servB-lp -o-r300 -odatac=blkpos -odatat=ps -of=F1PP0120
   -omsgc=100 myfile
```

InfoPrint Manager administrative utilities

This section describes these InfoPrint Manager administrative utilities:

Utility Name	AIX	Linux	Windows
afpsplit utility: extracts pages from a MO:DCA-P file, p. 196	AIX	Linux	Windows
ainupod1 utility: generates accounting information by user, p. 199	AIX	Linux	Windows: must be issued from the ***install_path*** **\bin** directory
ainupod2 utility: generates accounting information by job, p. 201	AIX	Linux	Windows: must be issued from the ***install_path*** **\bin** directory
ainupod3 utility: generates accounting information for a user, p. 202	AIX	Linux	Windowsv: must be issued from the ***install_path*** **\bin** directory

ainurpt1 utility: generates accounting information by actual destination, p. 203	AIX	Linux	Windows: must be issued from the ***install_path*** **\bin** directory
ainurpt2 utility: generates accounting information by user, p. 204	AIX	Linux	Windows: must be issued from the ***install_path*** **\bin** directory
ainurpt3 utility: generates accounting information for a user, p. 205	AIX	Linux	Windows: must be issued from the ***install_path*** **\bin** directory
ainurpt4 utility: generates audit information by destination, p. 206	AIX	Linux	Windows: must be issued from the ***install_path*** **\bin** directory
ainurpt5 utility: generates audit information by user, p. 207	AIX	Linux	Windows: must be issued from the ***install_path*** **\bin** directory
ainurpt6 utility: generates audit information for a user, p. 208	AIX	Linux	Windows: must be issued from the ***install_path*** **\bin** directory
ainurpt7 utility: generates job-completion information for a destination, p. 209	AIX	Linux	Windows: must be issued from the ***install_path*** **\bin** directory
ainurpt8 utility: generates post-print accounting data by job submittor, p. 210	AIX	Linux	Windows: must be issued from the ***install_path*** **\bin** directory
ainurpt9 utility: generates detailed entries of times and pages printed, p. 211	AIX	Linux	Windows: must be issued from the ***install_path*** **\bin** directory
allocatefs utility: allocates drives for InfoPrint Manager for AIX file systems, p. 212	AIX	N/A	N/A
allocfs.sh utility: allocates drives for InfoPrint Manager for Linux file systems, p. 213	N/A	Linux	N/A
cfu utility: displays and builds coded fonts in InfoPrint Manager for AIX InfoPrint Manager for Linux, p. 214	AIX	Linux	N/A
cmt utility: builds color mapping table source and object files, p. 216	AIX	Linux	Windows

install.sh utility: starts the InfoPrint Manager Installer for Linux, p. 218	N/A	Linux	N/A
ipguiadv and ipguibasic utilities: start the InfoPrint Manager Operations GUI with InfoPrint Manager for AIX or InfoPrint Manager for Linux, p. 221	AIX	Linux	Windows: use icou only
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afpsplit utility: extracts pages from a MO:DCA-P file

Syntax

afpsplit [**-f** *page*] [**-p** *page*] [**-r** *ranges*] [**-fext** *Formdef* [**-def**]] [**-c** *paths*] [**-o** *OutputFile*] [*InputFile*]

Description

Enter the **afpsplit** command to extract a page or a range of pages from an AFP MO:DCA-P document and create MO:DCA-P output.

You might use the **afpsplit** command to create a separate file starting at the 25th page and ending at the 50th page of a 200-page document. After you use the **afpsplit** command to create a file, you can view, store, print, or send that file.

Note

1. **afpsplit** removes structured index fields from MO:DCA-P files. This does not affect the appearance of printed files, but index entries are no longer available for viewing.
2. **afpsplit** writes error messages to STDERR.

Flags

-f *page*

Specifies the forward space function, where *page* indicates the number of pages (0-999999999) that you can forward space from the beginning of the input file to start extracting the page or range of pages. To start extracting on page *n*, forward space *n-1* pages.

If you do not specify the **-f** flag, the extraction starts at the beginning of the file. If you specify more than one **-f** flag, the last one you specify is used.

-p *page*

Specifies the page end function, where *page* indicates the number of pages (0-999999999) to be extracted.

If you do not specify the **-p** flag, all pages from the forward space point to the end of the input file are included in the output file. If you specify more than one **-p** flag, the last one you specify is used.

-r *ranges*

Specifies the page ranges that can be extracted from the input file, where the ranges syntax is -rs1:e1,s2:e2..., *si* is the start value and *ei* is the end value of the *i* interval. Up to 10 intervals can be specified with this parameter.

Note

- If the **-fext** flag is used, then the start and end interval values might be modified internally by the medium controls. As a result, some pages can appear more than once in the MO:DCA-P output.

The delimitator between start and end value is ':'. The delimitator between page ranges is ','. If no start value is specified for an interval, the first page is considered as start value. If no end value is specified for an interval, 999999999 is considered as end value. There must be at least one valid interval for the **-r** flag to work properly. The intervals are sorted ascending internally. This flag cannot be used in combination with **-mm**, **-f**, and **-p** flags.

-fext *Formdef*

Specifies an external form definition as a source for the medium controls. In this case, the medium controls are read only from the specified *Formdef*.

- Any medium controls invocation in the *InputFile* need to refer to a medium map defined in the external *formdef*.

- Any medium controls defined inline, in the input document inline resource group, are ignored.

Note

- If the external *Formdef* is not located in the default system resources directory, use the **-c** flag for defining custom resource paths.

-def

Specifies the external *formdef* as a default source for the medium controls. In this case, the medium controls are first searched inline, in the input document resource group. If any medium maps are found, they are used in the output document. Any medium map invocation need to refer a medium map defined here. If no medium maps are found in the document resource group, then the search continues in the external *formdef*.

The **-def** flag can only be used together with the **-fext** flag. Otherwise, no medium controls are applied to the output document, even if the input file contains medium maps.

-c *paths*

Specifies custom paths to search for the external *formdef*. One or more paths can be specified. Paths format:

Windows:

path;path;path

AIX/Linux:

path:path:path

The **-c** flag can only be used together with the **-fext** flag.

Note

- At least one path needs to be defined for afpsplit to search for it. If the **-fext** flag is not used, then the **-c** flag has no effect. If no *formdef* is found in any of the path supplied, an error is triggered.

-o *OutputFile*

Specifies the name of the file for the page or range of pages produced by **afpsplit**.

If you do not specify this flag, **afpsplit** uses standard output (STDOUT).

Argument

The valid argument value for the **afpsplit** utility is:

InputFile

Specifies the input file.

If you do not specify an input file, **afpsplit** uses standard input (STDIN).

Example

To extract pages 21-30 from a MO:DCA-P input file called `input.afp` and use the **pdpr** command to print those 10 pages on printer `serv1-lp`, enter:

```
afpsplit -f 20 -p 10 input.afp | pdpr -p serv1-lp
```

```
afpsplit -f 20 -p 10 -fext FDDUP4UP -o output.afp input.afp
```

This usual example would extract 10 pages, starting from page 20. However, by adding the **-fext** parameter, the output document could contain more that 10 pages. This is because both the start page, 20 in this case, and end page, 30 in this case, can be on a physical sheet that has more than one page. Depending on the medium maps defined, one physical sheet can have up to 8 pages, when duplex and 4Up are specified. One possible output can be the following:

If the medium control is a simplex 4Up, starting from the beginning of the document, the first sheet will contain pages from 1 to 4, second sheet pages from 5 to 8, ending with the last sheet containing pages from 29 to 32. Therefore, the output document contains pages from 20 to 32, as page 30 is on the eighth sheet.


```
afpsplit -r5:10,13:20,30:35 -fext DEFFORMD -def -o output.afp input.afp
```

In this case, page ranges are specified in the afpsplit call. The **-def** parameter only changes the priority of the medium controls. The medium controls in the input document can format the output document the same way. Depending on how medium controls are defined and invoked, the output pages can overlap. This is done internally, taking into consideration any medium controls that can affect the output result.

If the same simplex 4Up medium map is used, the output intervals will be:

- 5:10 to 5:12
- 13:20 to 13:24
- 30:35 to 28:36

In this case, the intervals do not overlap. When overlapping occurs, some pages will be copied twice in the output document.

Example with -r flag

Consider the input file has 100 pages.

This instance extracts pages 10 to 14, 20 to 30 and 80 to 100 to the output_file.afp:

```
afpsplit -r10:14,20:30,80: -o output_file.afp input_file.afp
```

This instance extracts pages 1 to 10 (from interval ":10"), 30 to 40 and 90 to 100 (from interval "90:112") to the output_file.afp. The last interval is discarded, since it exceeds the maximum number of pages in the input file:

```
apfsplit -r30:40,:10,90:112,130:140 -o output_file.afp input_file.afp
```

These instances generate an error because there is not at least one valid interval or the intervals overlaps:

```
afpsplit -r101:104,120:140,160: -o output_file.afp input_file.afp
afpsplit -r10:14, 40:,12:20 -o output_file.afp input_file.afp
```

ainupod1 utility: generates accounting information by user

Syntax

ainupod1

Description

For InfoPrint Manager for AIX or InfoPrint Manager for Linux, use the **ainupod1** utility to generate a report of accounting information for all jobs printed or sent on all defined PSF actual destinations, sorted by user ID. This information is derived from the **/var/psf/podaccount.log** file. By default, basic InfoPrint installations set the value of the **accounting-exit** actual destination attribute to **job-ticket**, which invokes a user exit program that writes accounting information to this file.

For InfoPrint Manager for Windows, use the **ainupod1** utility to generate a report of accounting information for all jobs printed or sent on all defined PSF actual destinations, sorted by user ID. This information is derived from the ***install_path*\var\psf\podaccount.log** file. By default, basic InfoPrint installations set the value of the **accounting-exit** actual destination attribute to **job-ticket**, which invokes a user exit program that writes accounting information to this file.

Note

On Windows, this command must be run from the ***install_path*\bin** directory.

Example

To generate accounting information for all users, enter:

```
ainupod1
```

ainupod1 returns information similar to:

```
    Accounting Report by Customer ID

 Customer   Jobs   Pages   Bin1   Bin2
 --------   ----   -----   ----   ----
 apple         6       8      8      0
 donald       18    2297   1511      0
```

Suggested reading

For information about:

- Auxiliary sheets, see Attributes for auxiliary-sheet objects, p. 775.
- Other utilities that generate accounting reports from the **podaccount.log** file, see ainupod2 utility: generates accounting information by job, p. 201 and ainupod3 utility: generates accounting information for a user, p. 202.
- Utilities that generate accounting reports from the **accounting.log** file, see ainurpt1 utility: generates accounting information by actual destination, p. 203, ainurpt2 utility: generates accounting information by user, p. 204, and ainurpt3 utility: generates accounting information for a user, p. 205.
- Utilities that generate audit reports, see ainurpt4 utility: generates audit information by destination, p. 206, ainurpt5 utility: generates audit information by user, p. 207, and ainurpt6 utility: generates audit information for a user, p. 208.

ainupod2 utility: generates accounting information by job

Syntax

ainupod2

Description

For InfoPrint Manager for AIX or InfoPrint Manager for Linux, use the **ainupod2** utility to generate a report of accounting information for all jobs printed or sent on all defined PSF actual destinations, sorted by job ID. This information is derived from the **/var/psf/podaccount.log** file. By default, basic InfoPrint installations set the value of the the **accounting-exit** actual destination attribute to **job-ticket**, which invokes a user exit program that writes accounting information to this file.

For InfoPrint Manager for Windows, use the **ainupod2** utility to generate a report of accounting information for all jobs printed or sent on all defined PSF actual destinations, sorted by job ID. This information is derived from the ***install_path*\var\psf\podaccount.log** file. By default, basic InfoPrint installations set the value of the **accounting-exit** actual destination attribute to **job-ticket**, which invokes a user exit program that writes accounting information to this file.

Note

On Windows, this command must be run from the ***install_path*\bin** directory.

Example

To generate accounting information for all jobs, enter:

```
ainupod2
```

ainupod2 returns information similar to:

```
         Accounting Report by Job ID

    Job ID      Jobs   Pages    Bin1  Bin2
 ------------  -----  ------   ----  ----
 E1A0540F.3F8      7      48     48     0
 E1B0440B.B0B     10     196    175     0
 NONE             53      94     94     0
```

Suggested reading

For information about:

- Auxiliary sheets, see Attributes for auxiliary-sheet objects, p. 775.
- Other utilities that generate accounting reports from the **podaccount.log** file, see ainupod1 utility: generates accounting information by user, p. 199 and ainupod3 utility: generates accounting information for a user, p. 202.
- Utilities that generate accounting reports from the **accounting.log** file, see ainurpt1 utility: generates accounting information by actual destination, p. 203, ainurpt2 utility: generates accounting information by user, p. 204, and ainurpt3 utility: generates accounting information for a user, p. 205.

- Utilities that generate audit reports, see ainurpt4 utility: generates audit information by destination, p. 206, ainurpt5 utility: generates audit information by user, p. 207, and ainurpt6 utility: generates audit information for a user, p. 208.

ainupod3 utility: generates accounting information for a user

Syntax

ainupod3

Description

For InfoPrint Manager for AIX or InfoPrint Manager for Linux, use the **ainupod3** utility to generate a report of accounting information for all jobs printed or sent on all defined PSF actual destinations by a given user. This information is derived from the **/var/psf/podaccount.log** file. By default, basic InfoPrint installations set the value of the the **accounting-exit** actual destination attribute to **job-ticket**, which invokes a user exit program that writes accounting information to this file.

For InfoPrint Manager for Windows, use the **ainupod3** utility to generate a report of accounting information for all jobs printed or sent on all defined PSF actual destinations by a given user. This information is derived from the ***install_path*\var\psf\podaccount.log** file. By default, basic InfoPrint installations set the value of the **accounting-exit** actual destination attribute to **job-ticket**, which invokes a user exit program that writes accounting information to this file.

Note

On Windows, this command must be run from the ***install_path*\bin** directory.

Example

To generate accounting information for user `donald`, enter:

```
ainupod3
```

When **ainupod3** prompts you for a user ID, enter:

```
donald
```

ainupod3 returns information similar to:

```
              Print Activity Report for donald

  Start      Start    Destination  Pages    Copies         Job
  Date       Time         ID       Printed  Requested  Identification
----------  --------  -----------  -------  ---------  --------------
07/26/1997  15:36:32  e1                45          1  E1B0440B.B0B
07/31/1997  08:24:24  3900-p4           15          1  i1a11908.54d
08/01/1997  08:28:48  e1               131          1  e1a1050c.431
```

Suggested reading

For information about:

- Auxiliary sheets, see Attributes for auxiliary-sheet objects, p. 775.

- Other utilities that generate accounting reports from the **podaccount.log** file, see ainupod1 utility: generates accounting information by user, p. 199 and ainupod2 utility: generates accounting information by job, p. 201.
- Utilities that generate accounting reports from the **accounting.log** file, see ainurpt1 utility: generates accounting information by actual destination, p. 203, ainurpt2 utility: generates accounting information by user, p. 204, and ainurpt3 utility: generates accounting information for a user, p. 205.
- Utilities that generate audit reports, see ainurpt4 utility: generates audit information by destination, p. 206, ainurpt5 utility: generates audit information by user, p. 207, and ainurpt6 utility: generates audit information for a user, p. 208.

ainurpt1 utility: generates accounting information by actual destination

Syntax

ainurpt1

Description

For InfoPrint Manager for AIX or InfoPrint Manager for Linux, use the **ainurpt1** utility to generate a report of accounting information for all jobs printed or sent on all defined PSF actual destinations, sorted by actual destination. This information is derived from the **/var/psf/accounting.log** file. By default, InfoPrint installations set the value of the the **accounting-exit** actual destination attribute to **accounting-log**, which invokes a user exit program that writes accounting information to this file.

For InfoPrint Manager for Windows, use the **ainurpt1** utility to generate a report of accounting information for all jobs printed or sent on all defined PSF actual destinations, sorted by actual destination. This information is derived from the ***install_path*\var\psf\accounting.log** file. By default, InfoPrint installations set the value of the the **accounting-exit** actual destination attribute to **accounting-log**, which invokes a user exit program that writes accounting information to this file.

Note

On Windows, this command must be run from the ***install_path*\bin** directory.

Example

To generate accounting information for all PSF enter:

```
ainurpt1
```

ainurpt1 returns information similar to:

```
Destination Jobs Pages Bin1 Bin2 Fonts Resident Overlays Hard Soft DORs
----------- ---- ----- ---- ---- ----- -------- -------- ---- ---- ----
ksrv-p1     120  1200   88   32    10        0        0    0    0   15
ksrv-p2      72   981   72    0     4        0        0    0    0    0
```

Suggested reading

For information about:

- Auxiliary sheets, see Attributes for auxiliary-sheet objects, p. 775.

- Other utilities that generate accounting reports from the **accounting.log** file, see ainurpt2 utility: generates accounting information by user, p. 204 and ainurpt3 utility: generates accounting information for a user, p. 205.
- Utilities that generate accounting reports from the **podaccount.log** file, see ainupod1 utility: generates accounting information by user, p. 199, ainupod2 utility: generates accounting information by job, p. 201, and ainupod3 utility: generates accounting information for a user, p. 202.
- Utilities that generate audit reports, see ainurpt4 utility: generates audit information by destination, p. 206, ainurpt5 utility: generates audit information by user, p. 207, and ainurpt6 utility: generates audit information for a user, p. 208.

ainurpt2 utility: generates accounting information by user

Syntax

ainurpt2

Description

For InfoPrint Manager for AIX or InfoPrint Manager for Linux, use the **ainurpt2** utility to generate a report of accounting information for all jobs printed or sent on all defined PSF actual destinations, sorted by user. This information is derived from the **/var/psf/accounting.log** file. By default, InfoPrint installations set the value of the the **accounting-exit** actual destination attribute to **accounting-log**, which invokes a user exit program that writes accounting information to this file.

For InfoPrint Manager for Windows, use the **ainurpt2** utility to generate a report of accounting information for all jobs printed or sent on all defined PSF actual destinations, sorted by user. This information is derived from the ***install_path*\var\psf\accounting.log** file. By default, InfoPrint installations set the value of the the **accounting-exit** actual destination attribute to **accounting-log**, which invokes a user exit program that writes accounting information to this file.

Note

On Windows, this command must be run from the ***install_path*\bin** directory.

Example

To generate accounting information for all users, enter:

```
ainurpt2
```

ainurpt2 returns information similar to:

```
Userids Jobs Pages Bin1 Bin2 Fonts Resident Overlays Hard Soft DORs
------- ---- ----- ---- ---- ----- -------- -------- ---- ---- ----
billing  120  1200   88   32    10        0        0    0    0   11
repgen    72   981   72    0     4        0        0    0    0    4
```

Suggested reading

For information about:

- Auxiliary sheets, see Attributes for auxiliary-sheet objects, p. 775.

- Other utilities that generate accounting reports from the **accounting.log** file, see ainurpt1 utility: generates accounting information by actual destination, p. 203 and ainurpt3 utility: generates accounting information for a user, p. 205.
- Utilities that generate accounting reports from the **podaccount.log** file, see ainupod1 utility: generates accounting information by user, p. 199, ainupod2 utility: generates accounting information by job, p. 201, and ainupod3 utility: generates accounting information for a user, p. 202.
- Utilities that generate audit reports, see ainurpt4 utility: generates audit information by destination, p. 206, ainurpt5 utility: generates audit information by user, p. 207, and ainurpt6 utility: generates audit information for a user, p. 208.

ainurpt3 utility: generates accounting information for a user

Syntax

ainurpt3

Description

For InfoPrint Manager for AIX or InfoPrint Manager for Linux, use the **ainurpt3** utility to generate a report of accounting information for all jobs printed or sent on all defined PSF actual destinations by a given user. This information is derived from the **/var/psf/accounting.log** file. By default, advanced InfoPrint installations set the value of the the **accounting-exit** actual destination attribute to **accounting-log**, which invokes a user exit program that writes accounting information to this file.

For InfoPrint Manager for Windows, use the **ainurpt3** utility to generate a report of accounting information for all jobs printed or sent on all defined PSF actual destinations by a given user. This information is derived from the ***install_path*\var\psf\accounting.log** file. By default, advanced InfoPrint installations set the value of the the **accounting-exit** actual destination attribute to **accounting-log**, which invokes a user exit program that writes accounting information to this file.

Note

On Windows, this command must be run from the ***install_path*\bin** directory.

Example

To generate accounting information for user `kathy`, enter:

```
ainurpt3
```

When **ainurpt3** prompts you for a user ID, enter:

```
kathy
```

ainurpt3 returns information similar to:

```
          Report for kathy

Start      Start    Destination Pages    Job
Date       Time          ID     Printed  Name
---------- -------- ------------ -------  -------------------------
06/02/1997 12:53:47 ksrv-p1       1190   /net/home/kathy/May.billing
06/03/1997 15:42:31 hsrv-p1        944   /net/home/kathy/May.reports
```

Suggested reading

For information about:

- Auxiliary sheets, see Attributes for auxiliary-sheet objects, p. 775.
- Other utilities that generate accounting reports from the **accounting.log** file, see ainurpt1 utility: generates accounting information by actual destination, p. 203 and ainurpt2 utility: generates accounting information by user, p. 204.
- Utilities that generate accounting reports from the **podaccount.log** file, see ainupod1 utility: generates accounting information by user, p. 199, ainupod2 utility: generates accounting information by job, p. 201, and ainupod3 utility: generates accounting information for a user, p. 202.
- Utilities that generate audit reports, see ainurpt4 utility: generates audit information by destination, p. 206, ainurpt5 utility: generates audit information by user, p. 207, and ainurpt6 utility: generates audit information for a user, p. 208.

ainurpt4 utility: generates audit information by destination

Syntax

ainurpt4

Description

For InfoPrint Manager for AIX or InfoPrint Manager for Linux, use the **ainurpt4** utility to generate a report of audit information for all jobs printed or sent on all defined PSF actual destinations, sorted by actual destination. This information is derived from the **/var/psf/audit.log** file. To write information to this file, specify **accounting-log** as the value of the **audit-exit** actual destination attribute.

For InfoPrint Manager for Windows, use the **ainurpt4** utility to generate a report of audit information for all jobs printed or sent on all defined PSF actual destinations, sorted by actual destination. This information is derived from the ***install_path*\var\psf\audit.log** file. To write information to this file, specify **accounting-log** as the value of the **audit-exit** actual destination attribute

Note

On Windows, this command must be run from the ***install_path*\bin** directory.

Example

To generate audit information for all PSF enter:

```
ainurpt4
```

ainurpt4 returns information similar to:

```
Destination Job  Page  Bin1 Bin2 Fonts Resident Overlays Hard Soft DORs
----------- ---- ----  ---- ---- ----- -------- --------  ---- ---- ----
ksrv-p1     120  1200   88   32    10        0        0    0    0   15
ksrv-p2      72   981   72    0     4        0        0    0    0    0
```

Suggested reading

For information about:

- Auxiliary sheets, see Attributes for auxiliary-sheet objects, p. 775.
- Other utilities that generate audit reports, see ainurpt5 utility: generates audit information by user, p. 207 and ainurpt6 utility: generates audit information for a user, p. 208.
- Utilities that generate accounting reports from the **accounting.log** file, see ainurpt1 utility: generates accounting information by actual destination, p. 203, ainurpt2 utility: generates accounting information by user, p. 204, and ainurpt3 utility: generates accounting information for a user, p. 205.
- Utilities that generate accounting reports from the **podaccount.log** file, see ainupod1 utility: generates accounting information by user, p. 199, ainupod2 utility: generates accounting information by job, p. 201, and ainupod3 utility: generates accounting information for a user, p. 202.

ainurpt5 utility: generates audit information by user

Syntax

ainurpt5

Description

For InfoPrint Manager for AIX or InfoPrint Manager for Linux, use the **ainurpt5** utility to generate a report of audit information for all jobs printed or sent on all defined PSF actual destinations, sorted by user. This information is derived from the **/var/psf/audit.log** file. To write information to this file, specify **accounting-log** as the value of the **audit-exit** actual destination attribute.

For InfoPrint Manager for Windows, use the **ainurpt5** utility to generate a report of audit information for all jobs printed or sent on all defined PSF actual destinations, sorted by user. This information is derived from the ***install_path*\var\psf\audit.log** file. To write information to this file, specify **accounting-log** as the value of the **audit-exit** actual destination attribute.

Note

On Windows, this command must be run from the ***install_path*\bin** directory.

Example

To generate audit information for all users, enter:

```
ainurpt5
```

ainurpt5 returns information similar to:

```
Userids Jobs Pages Bin  Bin  Fonts Resident Overlay  Hard Sof DORs
------- ---- ----- ---- ---- ----- -------- -------- ---- --- ----
billing  120  1200   88   32    10        0        0    0   0   11
repgen    72   981   72    0     4        0        0    0   0    4
```

Suggested reading

For information about:

- Auxiliary sheets, see Attributes for auxiliary-sheet objects, p. 775.

- Other utilities that generate audit reports, see ainurpt4 utility: generates audit information by destination, p. 206 and ainurpt6 utility: generates audit information for a user, p. 208.
- Utilities that generate accounting reports from the **accounting.log** file, see ainurpt1 utility: generates accounting information by actual destination, p. 203, ainurpt2 utility: generates accounting information by user, p. 204, and ainurpt3 utility: generates accounting information for a user, p. 205.
- Utilities that generate accounting reports from the **podaccount.log** file, see ainupod1 utility: generates accounting information by user, p. 199, ainupod2 utility: generates accounting information by job, p. 201, and ainupod3 utility: generates accounting information for a user, p. 202.

ainurpt6 utility: generates audit information for a user

Syntax

ainurpt6

Description

For InfoPrint Manager for AIX or InfoPrint Manager for Linux, use the **ainurpt6** utility to generate a report of audit information for all jobs printed or sent on all defined PSF actual destinations by a given user. This information is derived from the **/var/psf/audit.log** file. To write information to this file, specify **accounting-log** as the value of the **audit-exit** actual destination attribute.

For InfoPrint Manager for Windows, use the **ainurpt6** utility to generate a report of audit information for all jobs printed or sent on all defined PSF actual destinations by a given user. This information is derived from the ***install_path*\var\psf\audit.log** file. To write information to this file, specify **accounting-log** as the value of the **audit-exit** actual destination attribute.

Note

For Windows, this command must be run from the ***install_path*\bin** directory.

Example

To generate audit information for user `kathy`, enter:

```
ainurpt6
```

When **ainurpt6** prompts you for a user ID, enter:

```
kathy
```

ainurpt6 returns information similar to:

```
          Report for kathy

Start      Start     Destination  Pages     Job
Date       Time          ID       Printed   Name
---------- --------  -----------  -------    ---------------------------
06/02/1997 12:53:47  ksrv-p1      1190      /net/home/kathy/May.billing
06/03/1997 15:42:31  hsrv-p1       944      /net/home/kathy/May.reports
```

Suggested reading

For information about:

- Auxiliary sheets, see Attributes for auxiliary-sheet objects, p. 775.
- Other utilities that generate audit reports, see ainurpt4 utility: generates audit information by destination, p. 206 and ainurpt5 utility: generates audit information by user, p. 207.
- Utilities that generate accounting reports from the **accounting.log** file, see ainurpt1 utility: generates accounting information by actual destination, p. 203, ainurpt2 utility: generates accounting information by user, p. 204, and ainurpt3 utility: generates accounting information for a user, p. 205.
- Utilities that generate accounting reports from the **podaccount.log** file, see ainupod1 utility: generates accounting information by user, p. 199, ainupod2 utility: generates accounting information by job, p. 201, and ainupod3 utility: generates accounting information for a user, p. 202.

ainurpt7 utility: generates job-completion information for a destination

Syntax

ainurpt7

Description

For InfoPrint Manager for AIX or InfoPrint Manager for Linux, use the **ainurpt7** utility to generate a report of job-completion information sorted by actual destination. This information is derived from the **/var/psf/jobcompletion.log** file. To write information to this file:

1. Decide which actual destination you want to include information for.
2. For each actual destination, set the **accounting-exit=accounting-log** or specify the name of your own **accounting-log auxiliary sheet object**.
3. In the **accounting-log auxiliary sheet object** or specify the name of your own **accounting-log auxiliary sheet object**, set **psf-post-print-accounting-name=ainuxjobcompletion**.

For InfoPrint Manager for Windows, use the **ainurpt7** utility to generate a report of job-completion information sorted by actual destination. This information is derived from the ***install_path*\var\psf\jobcompletion.log** file. To write information to this file:

1. Decide which actual destination you want to include information for.
2. For each actual destination, set the **accounting-exit=accounting-log** or specify the name of your own **accounting-log auxiliary sheet object**.
3. In the **accounting-log auxiliary sheet object** or specify the name of your own **accounting-log auxiliary sheet object**, set **psf-post-print-accounting-name=ainuxjobcompletion**.

Note

For Windows, this command must be run from the ***install_path*\bin** directory.

Example

To generate job-completion information for all destinations, enter:

```
ainurpt7
```

Suggested reading

For information about:

- Auxiliary sheets, see Attributes for auxiliary-sheet objects, p. 775.
- Other utilities that generate job-completion information reports, see ainurpt8 utility: generates post-print accounting data by job submittor, p. 210 and ainurpt9 utility: generates detailed entries of times and pages printed, p. 211.
- Utilities that generate accounting reports from the **accounting.log** file, see ainurpt1 utility: generates accounting information by actual destination, p. 203, ainurpt2 utility: generates accounting information by user, p. 204, and ainurpt3 utility: generates accounting information for a user, p. 205.
- Utilities that generate accounting reports from the **podaccount.log** file, see ainupod1 utility: generates accounting information by user, p. 199, ainupod2 utility: generates accounting information by job, p. 201, and ainupod3 utility: generates accounting information for a user, p. 202.

ainurpt8 utility: generates post-print accounting data by job submittor

Syntax

ainurpt8

Description

For InfoPrint Manager for AIX or InfoPrint Manager for Linux, use the **ainurpt8** utility to generate a report of post-print accounting data sorted by job submittor. This information is derived from the **/var/psf/jobcompletion.log** file.

For InfoPrint Manager for Windows, use the **ainurpt8** utility to generate a report of post-print accounting data sorted by job submittor. This information is derived from the ***install_path*\var\psf\jobcompletion.log** file.

Note

For Windows, this command must be run from the ***install_path*\bin** directory.

Example

To generate post-print accounting report for all job submittors, enter:

```
ainurpt8
```

Suggested reading

For information about:

- Auxiliary sheets, see Attributes for auxiliary-sheet objects, p. 775.

- Other utilities that generate job-completion information reports, see ainurpt7 utility: generates job-completion information for a destination, p. 209 and ainurpt9 utility: generates detailed entries of times and pages printed, p. 211.
- Utilities that generate accounting reports from the **accounting.log** file, see ainurpt1 utility: generates accounting information by actual destination, p. 203, ainurpt2 utility: generates accounting information by user, p. 204, and ainurpt3 utility: generates accounting information for a user, p. 205.
- Utilities that generate accounting reports from the **podaccount.log** file, see ainupod1 utility: generates accounting information by user, p. 199, ainupod2 utility: generates accounting information by job, p. 201, and ainupod3 utility: generates accounting information for a user, p. 202

ainurpt9 utility: generates detailed entries of times and pages printed

Syntax

ainurpt9

Description

For InfoPrint Manager for AIX or InfoPrint Manager for Linux, use the **ainurpt9** utility to generate a report of job-completion information sorted by jobs. This information is derived from the **/var/psf/jobcompletion.log** file.

For InfoPrint Manager for Windows, use the **ainurpt9** utility to generate a report of detailed entries of times and pages printed for sorted by job submittor. This information is derived from the ***install_path*\var\psf\jobcompletion.log** file.

Note

For Windows, this command must be run from the ***install_path*\bin** directory.

Example

To generate detailed entries of times and pages printed for all job submittors, enter:

```
ainurpt9
```

Suggested reading

For information about:

- Auxiliary sheets, see Attributes for auxiliary-sheet objects, p. 775.
- Other utilities that generate job-completion information reports, see ainurpt7 utility: generates job-completion information for a destination, p. 209 and ainurpt8 utility: generates post-print accounting data by job submittor, p. 210.
- Utilities that generate accounting reports from the **accounting.log** file, see ainurpt1 utility: generates accounting information by actual destination, p. 203, ainurpt2 utility: generates accounting information by user, p. 204, and ainurpt3 utility: generates accounting information for a user, p. 205.

- Utilities that generate accounting reports from the **podaccount.log** file, see ainupod1 utility: generates accounting information by user, p. 199, ainupod2 utility: generates accounting information by job, p. 201, and ainupod3 utility: generates accounting information for a user, p. 202.

allocatefs utility: allocates drives for InfoPrint Manager for AIX file systems

Syntax

allocatefs [**-d** **hdisk***n*] |

allocatefs [**-s** *volume_group*] |

allocatefs [**-f** *filesystem* [**hdisk***n* **hdisk***n* [**hdisk***n*...]] |

allocatefs **-?**

Description

Use the **allocatefs** utility to allocate drives and specify a volume group for the InfoPrint Manager for AIX file systems.

Flags

The **allocatefs** utility uses these flags:

-d

Specifies the drive you want InfoPrint to use when allocating the three shared file systems **/var/psf**, **/var/psf/segments**, and **/var/pddir**.

-s

Specifies an existing shared volume group you want InfoPrint to use when allocating the three shared file systems **/var/psf**, **/var/psf/segments**, and **/var/pddir**.

This presumes that the AIX administrator wants to put these shared file systems into a particular volume group.

-f

Allocates either the **/var/pd** or the **/var/pddir** file system.

You can assign a minimum of two drives and a maximum of four drives for these file systems. This script automatically determines disk size and stripes the drives together.

?

Displays help for the **allocatefs** utility.

Arguments

The argument value identifies the server to which the utility applies.

Valid argument values for the **allocatefs** utility are:

hdisk*-n*

Specifies the disk drives on your system for allocating the different file systems.

For the **-f** flag, you must specify an hdisk where **/var/psf**, **/var/psf/segments**, and **/var/pddir** will all be placed.

For the **-f** flag, you must specify each file system (either **/var/pd** or **/var/psf/segments**) in a separate command and provide from two to four disks as the second sets of arguments with each command.

shared_volume_group

Specifies the existing shared volume group name that you want to use for allocating the three shared file systems **/var/psf**, **/var/psf/segments**, and **/var/pddir**.

For the **-s** flag, you must specify the name of the predefined shared volume group where **/var/psf**, **/var/psf/segments**, and **/var/pddir** will all be placed.

Examples

- To allocate the shared file systems **/var/psf**, **/var/psf/segments**, and **/var/pddir** on hdisk*n*, enter:

```
allocatefs -d hdisk1
```

- To allocate all shared filesystems to an existing shared volume group (**my_vg**), enter:

```
allocatefs -s my_vg
```

- To allocate the file system **/var/pd** across hdisk2 and hdisk3, enter:

```
allocatefs -f /var/pd hdisk2 hdisk3
```

- To allocate the file system **/var/psf/segments** across hdisk4 through hdisk6, enter:

```
allocatefs -f /var/psf/segments hdisk4 hdisk5 hdisk6
```

allocfs.sh utility: allocates drives for InfoPrint Manager for Linux file systems

Syntax

allocfs.sh **-c** *<lv-name>* **-s** *<lv-size>* **-v** *<vg-name>*

allocfs.sh **-d** *<lv-name>* **-v** *<vg-name>*

allocfs.sh **-l** [**-v** *<vg-name>*]

allocfs.sh **-h**

Description

Use the **allocfs.sh** utility to allocate drives and specify a volume group for the InfoPrint Manager for Linux file systems.

Flags

The **allocfs.sh** utility uses these flags:

-c *<lv-name>* | *--create=<lv-name>* | *--create <lv-name>*

Creates a logical volume. See below the available logical volume names.

-d *<lv-name> | - -delete=<lv-name> | - -delete <lv-name>*

Deletes a logical volume. See below the available logical volume names.

-h | - -help

Displays the help for the **allocfs.sh** utility.

-l | - -list

Lists all available volume groups. If a volume group is specified, it lists all the available logical volumes in the volume group.

-s *<lv-size> | - -size=<lv-size> | - -size <lv-size>*

Specifies the logical volume size in megabytes.

-v *<vg-name> | - -volume=<vg-name> | - -volume <vg-name>*

Uses the specified volume group.

Logical volume names:

The available logical volume names are:

Mount point	Logical volume	Minimum size
`/var/pd`	`lvpd`	10240 MiB
`/var/psf`	`lvpsf`	5120 MiB
`/var/psf/segmnets`	`lvpsfs`	10240 MiB
`/ipdata`	`lvipd`	5120 MiB

cfu utility: displays and builds coded fonts in InfoPrint Manager for AIX InfoPrint Manager for Linux

Syntax

cfu [**-d** | **-b**] *CodedFontName* [*BuildFileName*]

Description

cfu, the Coded Font Utility, displays and builds coded fonts for use with InfoPrint. The main purpose of the **cfu** utility is to allow users of double-byte raster fonts to indicate which font sections in the coded font should be downloaded to the printer and which font sections can be found resident in the printer. This is useful when:

- You have added user-defined characters to a font section
- The printer-resident version of a font differs from the system-resident version of a font, and you want to make sure that InfoPrint downloads the system version.

You can also add and delete sections from the coded font and change which character sets and code pages are referenced in the coded font.

You can also use the **cfu** utility to build single-byte coded fonts by specifying a font character set name and a code page name.

You can use the **cfu** utility in two ways:

- In the display mode of the **cfu** utility, you provide a coded font name as input. The **cfu** utility generates a build file that can be used as input to the build mode of the **cfu** utility.
- In the build mode of the **cfu** utility, you provide a build file name as input. The **cfu** utility generates a coded font.

Flags

The **cfu** utility uses these flags:

-d

Display mode displays the contents of a coded font. Output is written to standard output. This is the default mode if no flag is entered.

-b

Build mode builds a new coded font using the *build file name*, or standard input if the *build file name* is omitted.

Build file format

Each non-commented line in the build file defines one repeating group in the Coded Font Index structured field. Repeating group definitions can not span more than one line and fields in each line must be delimited with blanks. A pound sign (#) at the beginning of a line indicates a comment.

A repeating group definition has these format:

- Field 1 is the section identifier of the repeating group. The format is **X'***hh***'**, where *hh* is the hexadecimal section identifier. Both the **X** character and the single quotation marks are required.
- Field 2 is the character set name. Only the first 8 characters are used.
- Field 3 is the code page name. Only the first 8 characters are used.
- Field 4 is the section resident indicator:

  1

  Use the printer-resident section if possible.

  0

  Download the section.

  Note

  This field is only meaningful for double-byte raster fonts.

This is an example of a repeating group:

```
# SectId  CharSet   CodePage  Resident
# ------  -------   --------  ------
  X'41'   C0Z24F41  T1Z24F41    0
```

Arguments

The valid argument values for the **cfu** utility are:

CodedFontName

The name of the coded font for display mode or the new coded font name in build mode. **cfu** will not overwrite existing coded fonts in build mode.

Note

In build mode, the *coded font name* is also the internal coded font name in the Begin Coded Font structured field.

BuildFileName

The input file used to build a new coded font. If *build file name* is omitted, **cfu** reads from standard input.

Examples

- To display the contents of the coded font `X0Z24F`, enter either of these commands:

```
cfu X0Z24F
cfu -d X0Z24F
```

- To build a new coded font with the name `X0Z24F` using build file `X0Z24F.bld`, enter:

```
cfu -b X0Z24F X0Z24F.bld
```

Suggested reading

See *Data Stream and Object Architectures: Font Object Content Architecture Reference* for more information about coded font structured fields.

cmt utility: builds color mapping table source and object files

Syntax

cmt **-i** *input file* [**-o** *output file*] [**-n** *internal CMT name*] [**-t**]

Description

cmt, the Color Mapping Table Utility, generates color mapping table source and object files. If the input file is an object color mapping table, **cmt** generates a source output file; and if the input file is a source file, **cmt** generates an object file. Object color mapping tables are used to map OCA (Object Content Architecture) colors and fills to printer specific colors.

Flags

The **cmt** utility uses the these flags:

-i

The file name of the input file. The input file can be a source or object file. When you use the **cmt** utility, you must specify this flag.

-o

The file name of the output file. If this flag is not specified, **stdout** is used. This is a optional flag.

-n

The name that appears on the MO:DCA Begin Object Container (BOC) structured field. This is a optional flag.

-t

Use this flag to turn on trace. This is a optional flag.

Color mapping table source file

The source file describes the contents of the color mapping table object file.

Each mapping definition of one source color or fill to a target color is bracketed by the keywords **BeginMappingDef:** and **EndMappingDef:**. The **cmt** utility requires one mapping definition for each source target mapping.

Each source definition in a mapping definition is bracketed by the keywords **BeginSourceDef:** and **EndSourceDef:**. The **cmt** utility requires one source definition for each mapping definition.

Valid keywords and values for a source definition follow:

ColorSpace

You must specify **OCA**, **Highlight**, or **GOCA**.

ColorValue

You must specify a value that depends upon the value specified for **ColorSpace**:

- When **ColorSpace=OCA**, **ColorValue** is a one string component of these values:
  Default
  Blue
  Red
  Pink
  Green
  Cyan
  Yellow
  Black
  Brown
  Medium
  White
  Dark Blue
  Orange
  Purple
  Dark Green
  Turquoise
  Dark Turquoise
  Mustard
  Gray
  Pink
  Magenta

Note

1. The binary representation for all **OCA** colors are supported by the **cmt** utility.
2. When you specify the colors that are two words, specify an underscore between the two words. For example, when you want to use **Dark Blue**, specify **Dark_Blue**.

- When **ColorSpace=Highlight**, the **ColorValue** has one component, integer 0 through 3, for example:

```
ColorValue: 2
```

- When **ColorSpace=GOCA**, the **ColorValue** has one component, integer 0 through 16 or 64, for example:

```
ColorValue: 13
```

Each target definition in a mapping definition is bracketed by the keywords `BeginTargetDef` and `EndTargetDef` The **cmt** utility requires one target definition in each mapping definition. Valid keywords and values for a target definition follow:

ColorSpace

You must specify **RGB**, **CMYK**, **Highlight**, or **CIELAB**.

ColorValue

You must specify a value determined by the value specified by **ColorSpace** as follows:

- When **ColorSpace=RGB**, the **ColorValue** has three components from 0 through 255. For example, 33 167 247.
- When **ColorSpace=CMYK**, the **ColorValue** has four components from 0 through 255. For example, 135 26 37 255.
- When **ColorSpace=CIELAB**, the **ColorValue** has three components with the first integer from 0 through 100, and the second and third integers from -127 through 127. For example 65 -120 111.

PercentShading

Valid values are integers 0 through 100. This optional value defaults to 100.

PercentCoverage

Valid values are integers 0 through 100. This optional value defaults to 100.

install.sh utility: starts the InfoPrint Manager Installer for Linux

Syntax

Interactive install:

install.sh [**-c** *<color-option>*] [**-i**] [**-r**] [**-s** *<mount point>*]

Unattended install:

install.sh **-a** *<response file>* [**-s** *<mount point>*] [**-r**] [**-v** | **-V**]

Unattended multi-system install:

install.sh **-m** [**-s** *<mount point>*] [**-r**]

Uninstall:

install.sh -u
install.sh --uninstall-and-clean

Help:

install.sh [-h]

Description

This utility installs and configures RICOH InfoPrint Manager software onto local or remote Linux systems. InfoPrint Manager Installer installs the InfoPrint Manager server, InfoPrint Manager clients are installed using rpm commands against desired packages. For more details about installing Linux clients, see *RICOH InfoPrint Manager for Linux: Getting Started*.

Note

You can install the InfoPrint Manager server or the InfoPrint Manager Linux client in any of these languages:

- English
- French
- German
- Italian
- Japanese
- Spanish

If the InfoPrint Manager Linux client and server do not use the same language, the InfoPrint Manager server must run in English.

Flags

The **install.sh** utility uses these flags:

-h | - -help

Displays the help for the **install.sh** utility.

-a *<response file> | - -response-file <response file> | - -response-file=<response file>*

Specifies a response file for use in an unattended installation. By default, unattended installations do not display any Installer screens. Furthermore, when the **-a** flag is used, the default mount point is `/ip_remote`. All unattended installations must be performed using an InfoPrint Manager Software Server, not the InfoPrint Manager for Linux DVD-ROMs. See the "Network Installation Setup" section below for more information on how to set up and use a InfoPrint Manager Software Server.

-c *<0|1> | - -color=<0|1> | - -color <0|1>*

Enables or disables coloring the default answer option when using the interactive installer. The default value is 1.

-i | - -ipin-only

Creates `ipin_response` file and skips installation of InfoPrint Manager when using the interactive installer.

-m | - -multi-system

Performs unattended installations on one or more remote systems. To use this flag, you must have first created an InfoPrint Manager Software Server on the local machine. For more information on how to set up an InfoPrint Manager Software Server, see the "Network Installation Setup" section below. After the Software Server is in place, you must copy response files to its `/ip_remote/auto` subdirectory to define the installations you wish to perform. The default mount point for unattended installations is `/ip_remote`. The **-m** flag causes the defined remote installations to be performed serially, that is the installation on the second system begins only after the installation on the first system is completed.

-s *<mount point> | - -mount-point <mount point> | - -mount-point=<mount point>*

Specifies a non-default InfoPrint Manager Software Server mount point. The default mount point for all unattended installations is `/ip_remote`.

-r | -R | - -refresh

Reinstalls InfoPrint Manager.

-u | - -uninstall

Uninstalls InfoPrint Manager without erasing objects.

- -uninstall-and-clean

Uninstalls InfoPrint Manager including erasing of objects.

-v | - -ha-failover

Installs InfoPrint Manager on the High Availability Failover server. This action prevents an attempt to mount the `/var` file systems and does not start the InfoPrint Manager server.

-v | - -ha-primary

Sets up the High Availability primary server and ensures that all the appropriate file systems are available.

Network Installation Setup

When deploying InfoPrint Manager on a large network of Linux systems, you may find it easier to perform network installations. A network installation is performed from an NFS file system, not the InfoPrint Manager for Linux DVD-ROMs. We call the system that exports this file system an InfoPrint Manager Software Server.

To create an InfoPrint Manager Software Server, use the `mk_ip_remote` script included on the CD-ROM with this utility. You must be logged on to the system as the root user to run `mk_ip_remote`, and `mk_ip_remote` must be copied to the hard disk before it is executed. The `mk_ip_remote` script creates, by default, a file system called `ip_remote`, large enough to hold all InfoPrint Manager rpm files. It NFS-exports this file system read-only to all systems.

To "pull" software from an InfoPrint Manager Software Server, you must first NFS-mount the `ip_remote` file system on your local machine from the Software Server machine. After the file system is mounted, you may use the Installer GUI to install InfoPrint Manager, or you may choose to do an unattended installation. If you want to use the Installer GUI, you must use the **-s** flag to redefine the mount point as `ip_remote`. To do the unattended installation, you must use the **-a** flag to specify a response file that defines your installation options.

If you want to "push" software from an InfoPrint Manager Software Server onto remote systems, you do not need to mount the `ip_remote` file system on the remote machines. However, you must make sure

that the root user on the Software Server has the authority to open remote shells on each remote system. You must also create a response file to define each remote installation. These files must be copied into the `ip_remote/auto` directory.

Note

- You can use a mount point other than `ip_remote` on the Software Server and/or remote systems. When using a different mount point, make sure to use the **-s** flag to redefine the mount point. `mk_ip_remote` also accepts the **-s** flag.

Example

To install InfoPrint Manager for Linux from the DVD-ROM, follow these steps:

1. Log on to Linux as **root**.
2. Insert the latest InfoPrint Manager server Service DVD-ROM into the drive.
3. Mount the InfoPrint Manager ISO file to a location of your choice.
4. Enter:

```
/path/to/mount/point/install.sh
```

   Change */path/to/mount/point/* accordingly.

   Note

   - Use the **-s** flag to specify a nondefault DVD-ROM or InfoPrint Manager Software Server mount point:

```
/path/to/mount/point/install.sh -s /path/to/a/different/mount/point
```

ipguiadv and ipguibasic utilities: start the InfoPrint Manager Operations GUI with InfoPrint Manager for AIX or InfoPrint Manager for Linux

Syntax

ipguiadv

ipguibasic

Description

Enter the **ipguiadv** or **ipguibasic** utility to start the InfoPrint Manager Operations GUI on InfoPrint Manager for AIX or InfoPrint Manager for Linux.

Each view is designed to be most useful in a specific environment, but you can open any view in any environment.

For InfoPrint Manager for AIX or InfoPrint Manager for Linux:

ipguiadv

Starts the view for a standard InfoPrint Manager Operations GUI.

ipguibasic

Starts the view for a basic InfoPrint Manager Operations GUI.

Example

With InfoPrint Manager for AIX or InfoPrint Manager for Linux, to start the InfoPrint Manager Operations GUI, displaying the view for a basic InfoPrint installation, enter:

```
ipguibasic
```


ipguiadvadm and ipguibasicadm utilities: start the InfoPrint Manager Administration GUI for InfoPrint Manager for AIX or InfoPrint Manager for Linux

Syntax

ipguiadvadm

ipguibasicadm

Description

Enter the **ipguiadvadm** or **ipguibasicadm** utility to start the InfoPrint Manager Administration GUI on InfoPrint Manager for AIX or InfoPrint Manager for Linux as follows:

ipguiadvadm

Starts the view for a standard InfoPrint Manager Administration GUI.

ipguibasicadm

Starts the view for a basic InfoPrint Manager Administration GUI.

Each view is designed to be most useful in a specific environment, but you can open any view in any environment.

Example

With InfoPrint Manager for AIX or InfoPrint Manager for Linux, to start the InfoPrint Manager Administration GUI, displaying the view for a basic InfoPrint installation, enter:

```
ipguibasicadm
```

ismu utility: backs up and restores InfoPrint Manager objects

Syntax

ismu [{**-p** | **--pdname=**{**all** | *server_name*}]
[{**-a** | **--pdarchive** | **-r** | **--pdrestore** | **-m** | **--pdmodify_to=***server_name*}]
[{**-t** | **--pdtemp=***folder_name*}][**--en_archive**] [**--simple_name**]
[{**-s** | **--pdsave_cfg_files** | **--pdrestore_cfg_files**}]
[{**-h** | **--help**}]

Description

Use the **ismu** administrative utility to back up, restore, and migrate InfoPrint Manager objects or an existing configuration from a specific level of InfoPrint Manager to the same level of InfoPrint Manager.

Note

- The **ismu** utility was not intended to perform crossover migrations, such as migrating the AIX or Linux environment to the Windows environment and backwards. However, migrating objects that are commonly supported across platforms does work, but it does not successfully migrate platform-specific objects (such as AIX DSS to Linux or Windows).
- When running on a Windows system with User Account Control (UAC) enabled, right-click the **ismu** command and select "Run as Administrator" or open a Command Prompt (Admin) console and run the **ismu** command from there.
- Only a person with `root` user authority or the InfoPrint Manager user can run this command.

Important

When running **ismu** from the command line on a Linux system, make sure that the shell is using UTF-8 encoding, otherwise special characters are not saved correctly.

Flags

You can use these flags with the **ismu** utility:

-a | -pdarchive | - -pdarchive

Archives objects.

- -en_archive

Uses English archive files to restore objects.

-h | - -help

Displays the help for the **ismu** utility.

-m | - -pdmodify_to

Modifies the archive object file in order to support InfoPrint Manager server name change.

-p | - -pdname

Specifies the InfoPrint Manager server name.

- -pdrestore_cfg_file

Restores the configuration files.

-r | - -pdrestore

Restores objects.

-s | - -pdsave_cfg_file

Saves and archives the configuration files.

- -simple_name

Uses simple names instead of OIDs to archive objects.

-t | - -pdtemp

Specifies the ISMU working directory.

Arguments

Use the argument values to specify object names, paths, or backup and restore options.
You can use these arguments with the **ismu** utility:

```
pdname={all|server_name}
```

The value represents the InfoPrint Manager server name.

all

Archives or restores all **pdservers** that are found on the AIX, Linux, or Windows machine the tool is running on.

server_name

Use this attribute to identify a specific server.

```
pdtemp=folder_name
```

The value represents the System Migration Utility working directory.

folder_name

Use this attribute to identify a specific folder name for the temporary folder. If the directory does not exist, it is automatically created.

```
pdarchive
```

Use this argument to archive the **InfoPrint Manager** server objects.

```
pdrestore
```

Use this argument to restore the InfoPrint Manager server objects that have been archived with the **pdarchive** command.

```
pdmodify_to=server_name
```

- If the target restore system has a different server name than the one used when archive files were created, it is mandatory to use the **ismu** utility with this argument in a separate step before the actual restore.
- This argument requires a specific `-pdname value`, which represents the archived InfoPrint Manager server name.
- By running the **ismu** utility with the `pdmodify_to` argument, specific objects inside the archive file are renamed to the newly specified server name.

```
pdsave_cfg_files
```

Use this argument to save and archive configuration files.

```
pdrestore_cfg_files
```

Use this argument to restore the configuration files archived with the **pdsave_cfg_files** command.

Examples

Archive objects

To archive all the objects from an InfoPrint Manager for AIX or InfoPrint Manager for Linux server and place the resulting archive in a specific directory, enter:

```
ismu --pdname=server1 --pdarchive --pdtemp=/tmp/server1_archive
--pdsave_cfg_files
```

or

```
ismu -p server1 -a -t /tmp/server1_archive -s
```

To archive all the objects from an InfoPrint Manager for Windows server and place the resulting archive in a specific directory, enter:

```
ismu --pdname=server1 --pdarchive --pdtemp="C:\temp\server1_archive"
--pdsave_cfg_files
```

or

```
ismu -p server1 -a -t "C:\temp\server1_archive" -s
```

To archive all the objects from an InfoPrint Manager for AIX or InfoPrint Manager for Linux server and place the resulting archive in a specific directory using simple names instead of OIDs, enter:

```
ismu --pdname=server1 --pdarchive --pdtemp=/tmp/server1_archive --simple_name
--pdsave_cfg_files
```

or

```
ismu -p server1 -a -t /tmp/server1_archive --simple_name -s
```

To archive all the objects from an InfoPrint Manager for Windows server and place the resulting archive in a specific directory using simple names instead of OIDs, enter:

```
ismu --pdname=server1 --pdarchive --pdtemp="C:\temp\server1_archive" --simple_name
--pdsave_cfg_files
```

or

```
ismu -p server1 -a -t "C:\temp\server1_archive" --simple_name -s
```

Restore objects

To restore all the InfoPrint Manager for AIX or InfoPrint Manager for Linux server objects that are found in one specific archive directory, enter:

```
ismu --pdname=server1 --pdrestore --pdtemp=/tmp/server1_archive
--pdrestore_cfg_files
```

or

```
ismu -p server1 -r -t /tmp/server1_archive --pdrestore_cfg_files
```

To restore all the InfoPrint Manager for Windows server objects that are found in one specific archive directory, enter:

```
ismu --pdname=server1 --pdrestore --pdtemp="C:\temp\server1_archive"
--pdrestore_cfg_files
```

or

```
ismu -p server1 -r -t "C:\temp\server1_archive"
--pdrestore_cfg_files
```

To restore all the InfoPrint Manager for AIX or InfoPrint Manager for Linux server objects that are found in one specific archive directory using archives encoded in en_US, enter:

```
ismu --pdname=server1 --pdrestore --pdtemp=/tmp/server1_archive --en_archive
--pdrestore_cfg_files
```

or

```
ismu -p server1 -r -t /tmp/server1_archive --en_archive
--pdrestore_cfg_files
```

To restore all the InfoPrint Manager for Windows server objects that are found in one specific archive directory using archives encoded in en_US, enter:

```
ismu --pdname=server1 --pdrestore --pdtemp="C:\temp\server1_archive" --en_archive
--pdrestore_cfg_files
```

or

```
ismu -p server1 -r -t "C:\temp\server1_archive" --en_archive
--pdrestore_cfg_files
```

Rename objects with new server name

For Aix or Linux, if the target machine has a different server name than the one archive was created, then before restoring the objects, enter:

```
ismu --pdname=server1 --pdmodify_to=server_new_name
--pdtemp=/temp/server1_archive
```

or

```
ismu -p server1 -m server_new_name -t /temp/server1_archive
```

Note

If the target machine contains more than one InfoPrint Manager servers, with different target names than the original ones, this step must be executed for each of them before the actual restore.

For Windows, if the target machine has a different server name than the one archive was created, then before restoring the objects, enter:

```
ismu --pdname=server1 --pdmodify_to=server_new_name
--pdtemp="C:\temp\server1_archive"
```

or

```
ismu -p server1 -m server_new_name -t "C:\temp\server1_archive"
```

Suggested reading

For information about:

- Attributes file, see Attributes file, p. 49
- Headings and style, see Command output: headings and style, p. 48
- Attributes for InfoPrint objects, see InfoPrint Manager object attributes, p. 511.

For introductory information about object attributes and their use with commands, see Introducing object attributes, p. 514, which includes information about non-settable, initially settable, and resettable attributes.

notificationClient

Used to start a notification window to retreive notifications delivered by *message* from the notification server.

pdcrdflt utility: creates default auxiliary sheets, media, and queue in InfoPrint Manager for AIX or InfoPrint Manager for Linux

Syntax

pdcrdflt [**-c**] *ServerName*

Description

Enter the **pdcrdflt** utility to do these server configuration tasks:

- Create the default queue (*serverName* -q)
- Create the default logical destination (*serverName* -ld)
- Create the default auxiliary sheets and media in a server.
- If you specify the **-c** flag, **pcrdflt**
  - Sets the **save-rip-files** server attribute to **true**.
  - Creates the Basic default queue (*ServerName*-default-queue) and sets the **assign-to-printer** queue attribute to **true**
  - Creates logical destinations and associated initial value jobs for InfoPrint Submit.

Note

- Only a person with `root` user authority or the InfoPrint Manager user can run this command.

The default auxiliary sheets that this utility creates are:

- **accounting-log**
- **blank**
- **brief**
- **full**
- **job-ticket**
- **none**
- **64xx**

The default media that this utility creates are:

- **A3**
- **A4**

- **B4**
- **B5**
- **ledger**
- **legal**
- **letter**
- **tabloid**

You only need to run the **pdcrdflt** utility if the **startsrv** utility failed to create all the default objects.

Flag

The **pdcrdflt** utility uses this flag:

-c

Configures the server for a basic installation. If you do not specify this flag, InfoPrint configures the server for a standard installation.

Argument

The argument value identifies the server to which the utility applies.

Valid argument values for the **pdcrdflt** utility are:

ServerName

Specifies the name of the server to configure. You must specify the name.

Examples

- To create the default objects for a server with the name `srv1`, enter:

```
pdcrdflt srv1
```

- To configure the server `charlie` for a basic installation and create the default objects for InfoPrint Submit, enter:

```
pdcrdflt -c charlie
```

pdcrmed utility: creates commonly used media

Syntax

pdcrmed *ServerName*

Description

Enter the **pdcrmed** utility to create the large number of predefined medium objects. Use this utility after starting the server.

The utility creates these predefined medium objects:

A0
A1
A2
A3
A3-colored
A4
A4-colored
A4-transparent
A5
A5-colored
A6
A7
A8
A9
A10
B0
B1
B2
B3
B4
B4-colored
B4-envelope
B5
B5-colored
B5-envelope
B6
B7
B8
B9
B10
C4-envelope
C5-envelope
C6-envelope
a
a3-extended
a4-tab
b
c
d
d-postcard
designated-long-envelope
e
executive
f4a
folio
foolscap
hagaki
index
invoice
jis-b0-white
jis-b1-white
jis-b2-white
jis-b3-white
jis-b4-colored
jis-b4-white
jis-b5-colored
jis-b5-white
jis-b6-white
jis-b7-white
jis-b8-white
jis-b9-white
jis-b10-white
JPOSTD
kiku-4-sai
ledger
legal
legal-tab
letter
letter-tab
manual
monarch-envelope
na-legal-colored
na-letter-colored
na-letter-transparent
na-number-9-envelope
na-number-10-envelope
na-6x9-envelope
na-7x9-envelope
na-9x11-envelope
na-9x12-envelope
na-10x13-envelope
na-10x14-envelope
na-10x15-envelope
newsprint
oficio
postcard
postcard-4.2x5.5
pott
quarto
RA3
RA4
SRA4
sra3
statement
tabloid
universal-paper
universal-envelope
7.75x4-envelope
8Kai
16Kai
8x10
8x10.5
8x13
8.25x13
8.25x14
8.5x10
8.5x12.4
9x11
10x14
11x14
11x15
12x18
12.6x18.5
12.6x19.2
13x18
13x19
13x19.2
14x17
14x18
18x24
24x36
36x48
170x210
182x210
226x310
310x432
340x210

Argument

The argument value identifies the server to which the utility applies.

Valid argument values for the **pdcrmed** utility are:

ServerName

With InfoPrint Manager specifies the name of the server on which to create the medium objects. You must specify the name.

Example

To create the commonly used medium objects on a server with the name `srv1`, enter:

```
pdcrmed srv1
```

Note

- Only a person with `root` user authority or the InfoPrint Manager user can run this command.

pdinitports utility: initializes ports in InfoPrint Manager for AIX or InfoPrint Manager for Linux

Syntax

pdinitports [**-n** *NumberOfPorts* | *MinimumPortNumber MaximumPortNumber*]

pdinitports {**-h** | **-?**}

Description

For InfoPrint Manager for AIX, use the **pdinitports** utility to set up InfoPrint Manager to use a specific range or number of port numbers on this system for interprocess communication. By initializing a specific range of port numbers, you can avoid using port numbers that are used by or reserved for other programs.

Note

1. See the **/etc/services** file for reserved port numbers. Because InfoPrint does not use the port numbers in **/etc/services**, you do not have to run this utility if all reserved port numbers are listed there.
2. Avoid conflicting with any of the port numbers that AIX clients use to send requests to the InfoPrint server; and avoid conflicting with any of the port numbers used by the InfoPrint communications daemons. For example, a port number that clients use to send requests to the InfoPrint server is 6874 by default. If you do not modify this value, when you use the **pdinitports** utility to specify a range of port numbers for interprocess communication, the range must exclude 6874.
3. Because InfoPrint automatically initializes port numbers when it is started, you should not normally have to run this utility.
4. Before using this utility, you must shut down all the servers on this system.

Flags

The **pdinitports** utility uses these flags:

-n *NumberOfPorts*

Specifies that InfoPrint is to find the first available block of *num-ports* port numbers and use them. If you do not specify either this flag or a range of port numbers, **pdinitports** finds and uses the first available block of 10 port numbers.

-h

Displays help for the **pdinitports** utility.

-?

Displays help for the **pdinitports** utility.

Arguments

Valid argument values for the **pdinitports** utility are:

MinimumPortNumber

The minimum port number that the InfoPrint will use on this system.

MaximumPortNumber

The maximum port number that the InfoPrint will use on this system.

If you do not specify either a range of port numbers or the **-n** flag, **pdinitports** finds and uses the first available block of 10 port numbers.

Examples

- To initialize InfoPrint to use the first available range of 12 ports, enter:

```
pdinitports -n 12
```

- To initialize InfoPrint to use ports 6001 through 6010, enter:

```
pdinitports 6001 6010
```

pdlicmgm utility: starts the License Key Management Application from the command line

Syntax

```
The flags accepted by the license management application are:
For AIX and Linux
pdlicmgm [-f]
[-v -pn feature_name -pv feature_version]
[-d -pn feature_name -pv feature_version]
[-i license_path]
{[-eid entitlement_id -pn product_name -pv product_version]
[[-cn customer_name] [-cc customer_company] [-ce customer_email]]}
[-l locale]
[-p]
[-h]

For Windows
pdlicmgm.cmd [-f]
```

[-v -pn feature_name -pv feature_version]
[-d -pn feature_name -pv feature_version]
[-i license_path]
{[-eid entitlement_id -pn product_name -pv product_version]
[[-cn customer_name] [-cc customer_company] [-ce customer_email]]}
[-l locale]
[-p]
[-h]

2

Description

You can access the License Keys Management Application (LKMA) from the command line, specifying the license key file path from the command line with a flag to show the system fingerprint.

Note

- To receive a product license, you need to send the Entitlement ID and the system fingerprint of the machine where that product or feature runs. The Entitlement ID is only used to identify what you purchased.
- The system locale is used when the **[-l]** flag is not present.
- When running from the command line, license management application returns:
  - 0 for success
  - 1 for error

Flags

The **pdlicmgm** uses these flags:

[-f]

Returns the system fingerprint.

[-i]

Installs the licenses from the license_path, adding them to the existing license.key file.

If a license is added on top of an already installed license of the same type, the application deletes the previously installed license and installs the new license. This allows renewed maintenance licenses to be installed without manually deleting previously installed licenses. Always make sure you install a valid license for you product.

[-pn], *[-pv]*, *[-eid]*, *[-cn, -cc, -ce]*

Activates a product online based on product_name, product_version, and customer entitlement_id and need to be passed together; the customer_name, customer_company, and customer_email are optional parameters.

[-l]

Specifies which locale to use; if not present, the system locale will be used.

[-d]

Deletes the feature specified by *pn* (name) and *pv* (version) parameters.

[-p]

Displays the installed features.

[-v]

Returns

- **0x12** if the feature specified by *pn* (name) and *pv* (version) parameters is installed
- **0** if the feature specified by *pn* (name) and *pv* (version) parameters is not installed

[-h]

Displays the help information.

Example

To return the system fingerprint, enter:

```
pdlicmgm -f
```

pdmigpp utility: migrates existing AIX printers to InfoPrint Manager for AIX

Syntax

pdmigpp *AIXPrintQueue ServerName DestinationName QueueName*

Description

Enter the **pdmigpp** utility to migrate an existing AIX print queue to an actual destination in InfoPrint.

You can migrate printer devices currently configured for the AIX print system, for PSF for AIX, and for AIX remote queues that send jobs to another AIX processor or to any remote host connected to the network with TCP/IP.

This utility automatically selects the appropriate DSS, which the **device-support-system** actual destination attribute reflects. If the AIX print queue is a remote queue, InfoPrint selects the BSD DSS. For PSF physical printers, the utility selects the appropriate attachment type, reflected by the **attachment-type** actual destination attribute. The corresponding InfoPrint actual destination attributes, if they exist, reflect any values for the existing printer device.

After this utility has run successfully, an InfoPrint actual destination that is equivalent to the AIX print queue exists in the specified server.

To run this utility make sure that:

- You are logged onto the AIX processor that the AIX print queue is in.
- The InfoPrint server whose name you specify is up and running.
- If you run InfoPrint Manager as non-root, make sure you allow the write permission to the device file of the existing AIX print queue for non-root user. The device file name of the existing AIX print queue appears in the **/etc/qconfig** file and it's usually located in `/dev/` or `/var/spool/lpd/stat/`.

Arguments

The argument value identifies the existing AIX virtual printer that the utility migrates to InfoPrint as an actual destination in the specified server and its associated queue.

Valid argument values for the **pdmigpp** utility are:

AIXPrintQueue

The name of an existing AIX print queue that the utility migrates to InfoPrint.

ServerName

Specifies the name of the server that will contain the actual destination the utility creates.

DestinationName

The name of the InfoPrint actual destination that the utility creates.

QueueName

The name of the InfoPrint queue that will provide jobs to the created actual destination.

Example

To migrate the PSF for AIX print queue `lpd8` to actual destination `PhyPtr3` on server `Server2` with an associated queue of `queue1`, enter:

```
pdmigpp lpd8 Server2 PhyPtr3 queue1
```

pdmincfg utility: sets up a minimum InfoPrint Manager configuration in InfoPrint Manager for AIX or InfoPrint Manager for Linux

Syntax

pdmincfg [**-s**] [*ServerName*]

Description

Enter the **pdmincfg** utility to create a minimum InfoPrint Manager configuration.

This minimum configuration consists of one server, one logical destination, one queue, and one actual destination. You can use this minimum configuration to verify that InfoPrint Manager is properly installed and is operational. The **pdmincfg** utility creates a minimal configuration appropriate for a small InfoPrint Manager installation.

Flag

The **pdmincfg** utility uses this flag:

-s

Causes **pdmincfg** to start the specified server. If you do not specify this flag, but do specify the *ServerName*, InfoPrint Manager does not start the server. If you do not request InfoPrint Manager to start the server, InfoPrint Manager assumes it is already up and running.

Argument

The argument value identifies the specific object to which the utility applies.

Valid argument values for the **pdmincfg** utility are:

ServerName

Specifies the name of the server that runs in the minimum configuration. *ServerName* defaults to the host name.

Examples

To set up a minimum configuration on a system with the server name of `serv1`, follow these steps:

1. Enter:

```
pdmincfg -s serv1
```

   InfoPrint displays:

```
Your server print database will be stored in /var/pd/serv1.
Press enter to continue or press CTRL-C to cancel the request.
```

   Note

   Your **PDBASE** environment variable setting determines the directories where InfoPrint Manager stores your server print database.

2. Press Enter and InfoPrint Manager displays:

   Note

   If the server does not exist, InfoPrint Manager prompts you after message 5010-467. Type **y** and press Enter to create the server.

```
5010-467 Starting server serv1.
5010-406 Creating default objects. Please wait.
5010-405 Successfully started server serv1.
5010-470 Creating logical destination serv1-lp.
5010-471 Creating queue serv1-q.
5010-472 Enabling logical destination serv1-lp.

Enter 1 or 2 for the type of actual destination to be created:

1 = Test actual destination that does not actually print to a
printer device
2 = Actual destination that uses your attributes file
```

3. You now have a choice of responses:

   - To create a test actual destination to verify that InfoPrint is properly installed, enter **1**.
   - To create an actual destination that represents a real printer device, follow these steps:

     1) Enter **2**.

        InfoPrint Manager displays:

```
Enter the name of your destination attributes file:
```

     2) Enter the name of a file containing attributes that describe the destination you want to create. For example:

```
/usr/fred/attfiles/pp_tcpip.X
```

        This example shows the full pathname of the file. If `/usr/fred/attfiles` is defined in your **PDPATH** environment variable, you can specify just the file name.

        The file `pp_tcpip.X` contains information like this:

```
# TCP/IP-attached actual destination
destination-realization           =actual
```

```
attachment-type                  =tcpip
destination-model                =InfoPrint4000
destination-tcpip-internet-address=martha.infoprint.com
destination-tcpip-port-number    =5001
```

4. InfoPrint Manager displays:

```
5010-476 Creating actual destination serv1-pp.
5010-477 Enabling actual destination serv1-pp.
5010-462 Your minimum configuration is now active:
         Logical Destination: serv1-lp
              |
              V
         Queue: serv1-q
              |
              V
         Actual Destination: serv1-pp
```

5. To print a file named `test` on the actual destination you just created, enter:

```
pdpr -p serv1-lp test
```

pdmsg utility: displays information about a message in InfoPrint Manager for AIX or InfoPrint Manager for Linux

Syntax

pdmsg [**-d**] [**-t**] *MessageNumber*

Description

The **pdmsg** utility displays the text and description of an InfoPrint message at the command line. The **pdmsg** utility extracts the text and description from the appropriate message catalogs. If you do not specify the **-d** or **-t** flag with the utility, InfoPrint displays both the text and the message description.

Flags

The **pdmsg** utility uses these flags:

-d

Displays only the description of a message, which consists of a 7-digit message number, an explanation of the message, the system action, and the response.

-t

Displays only the text of a message, which consists of a 7-digit message number along with the actual words of the message itself. Underlined blanks in the text identify variable fields in the message text (also called message inserts). When InfoPrint actually issues messages, InfoPrint replaces the blanks with the appropriate variable information.

MessageNumber

The number of the InfoPrint message you want displayed. Valid message numbers range from 0420-001 through 0425-999 and 5010-001 through 5010-999; however, not every number in these ranges has an associated message.

Examples

- To view the text and description for InfoPrint message 5010-096, enter:

```
pdmsg 5010-096
```

InfoPrint displays:

```
5010-096 The value _____ is not supported for attribute _____.
5010-096
EXPLANATION: The server or destination does not support this value.
SYSTEM ACTION: InfoPrint could not process the request.
RESPONSE: Enter the command again and specify a value that is supported
by the server and destination, or specify a destination that supports
(by association) the value.
```

- To view only the text for InfoPrint message 5010-096, enter:

```
pdmsg -t 5010-096
```

InfoPrint displays:

```
5010-096 The value _____ is not valid not supported for attribute _____.
```

- To view only the description for InfoPrint message 5010-096, enter:

```
pdmsg -d 5010-096
```

InfoPrint displays:

```
5010-096
EXPLANATION: The server or destination does not support this value.
SYSTEM ACTION: InfoPrint could not process the request.
RESPONSE: Enter the command again and specify a value that is supported
by the server and destination, or specify a destination that supports
(by association) the value.
```

pdwsinitports utility: initialize or change the ports used by the InfoPrint Manager Web Server

Syntax

pdwsinitports [*BasePortNumber*]
pdwsinitports {**-d**}
pdwsinitports {**-h** | **?**}

Description

Important

If the UAC is enabled you need to use the “Run as Administrator” option when running the command. To do this, right click on the command prompt and select "Run as Administrator" from the list.

Use the **pdwsinitports** utility to initialize or change the ports used by the InfoPrint Manager Web Server. This utility either finds a range of ports on this system or you can specify a range of port number on his system for use by the Web server. By specifying a range of port numbers, you can avoid using port numbers that are used by or reserved for other programs. This utility can also be used to display the current port settings.

The **pdwsinitports** utility does not modify the state of the InfoPrint Manager Web Server. If the web server is stopped before you run the command, it remains stopped. If the web server is running, it continues to run after the command completes. Because InfoPrint Manager automatically initialized port numbers when it is installed, you should not have to run this utility normally.

The **pdwsinitports** utility initializes the ports used by InfoPrint Manager Web Server by reserving port numbers in the services file. On AIX or Linux systems, see the `/etc/services` file for the reserved port numbers. On Windows systems, see the `%SystemRoot%\system32\drivers\etc\services` for reserved port numbers. The **pdwsinitports** utility will not use port numbers that are used by or reserved for other programs. If InfoPrint Manager cannot reserve port numbers, it will not start the InfoPrint Manager Web Server.
On system upgrades, the ports used by InfoPrint Manager might get removed from the services file. Use the **pdwsinitports** utility to re-initialize the InfoPrint Manager Web Server ports.

Flags

You can use these flags with the **pdwsinitports** utility:

-d

Displays the current port setting for the InfoPrint Manager Web Serve and indicates if the port is current active for any process.

-h | -?

Displays help for the **pdwsinitports** utility.

Argument

The valid argument value for the **pdwsinitports** utility is:

BasePortNumber

Specifies the base for assigning ports, and it is normally a number that is a multiple of 1000. These ports are assigned:

- HTTP Transport: *BasePortNumber*+ 80
- HTTPS Transport: *BasePortNumber*+ 443

The default value is 14000.

When no *BasePortNumber* is specified on AIX or Linux, the **pdwsinitports** utility starts at 14000 and determines if any of the desired ports are in use by checking `etc/services`. If any of the desired ports are in use, the **pdwsinitports** utility increments the range by 1000 and continues searching for a base that has the desired ports available. If the **pdwsinitports** utility reaches 64000 and no base range is available, an error is generated.

Examples

- To set the InfoPrint Manager Web Server to use ports in the 7000 area, enter:

```
pdwsinitports 7000
```

- To set the InfoPrint Manager Web Server to find a set of ports to use, enter:

```
pdwsinitports
```

- To display the current port settings and determine whether any are currently active, enter:

```
pdwsinitports -d
```

`/etc/services`

The InfoPrint Manager ports use these names in `/etc/services` with the **getservent** system APIs:

Description	Service Name
HTTP port	iprws_http
HTTPS port	iprws_https

rc.iprsap utility: start SAP daemons on InfoPrint Manager for AIX or InfoPrint Manager for Linux

Syntax

rc.iprsap

Description

Use this utility to start the InfoPrint Manager SAP callback daemons for each SAP system defined to use InfoPrint Manager as an OMS (Output Management System). **/etc/inittab** invokes the **rc.iprsap** utility to automatically restart the InfoPrint Manager SAP daemons listed in this file during reboot if you activate it through SMIT as follows:

- InfoPrint Printing System
  - Utilities
    - SAP Daemons

Note

For specific information about a menu choice, press the **F1** key for help.

As the administrator, you can edit the **/etc/rc.iprsap** file using a text editor, such as vi. Edit this file to include a `startcbd` line for each SAP System setup to receive callback notifications.

See startcbd utility: starts the SAP callback daemon, p. 279 for more information.

rc.pd utility: restarts servers in InfoPrint Manager for AIX or InfoPrint Manager for Linux

Syntax

rc.pd

Description

/etc/inittab on AIX (or a program called from **/etc/inittab**) invokes the **rc.pd** utility to automatically restart the InfoPrint servers listed in **/etc/rc.pd.servers** during a reboot. On Linux, **systemd** and **systemctl** invoke the **rc.pd** utility to automatically start or restart the InfoPrint servers listed in **/etc/rc.pd.servers**. As the administrator, you can edit the **rc.pd.servers** file using a text editor, such as **vi**. Edit this file to include a **startsrv** line for each server you want to start automatically.

setup utility: starts the InfoPrint Manager Installer for AIX

Syntax

setup -c [**-e**] [**-R**] [**-s** *FileSystem*]

setup [**-e**] [**-L** *locale*] **-n** *ServerName* **-p** *PortNumber* [**-P** *DestinationName*] [**-R**] [**-s** *FileSystem*]

setup [**-e**] [**-R**] [**-s** *Filesystem*] [**-S**]

setup [**-ud**]

setup [**-uc**]

setup [**-e**] [**-R**] [**-s** *Filesystem*] [**-S**] [**-v**]

setup [**-e**] [**-R**] [**-s** *Filesystem*] [**-S**] [**-V**]

Description

Issue the **setup** utility to start the InfoPrint Manager Installer. The InfoPrint Manager Installer installs InfoPrint Manager for AIX, including an InfoPrint Manager server and an InfoPrint Manager AIX client, or the InfoPrint Manager AIX client alone.

The AIX client allows users to enter InfoPrint Manager commands on the command line for transmission to the InfoPrint Manager server, which can be on another AIX system. The AIX client has no graphical user interface.

Note

You can install the InfoPrint Manager server or InfoPrint Manager AIX client in any of these languages:

- English
- French
- German
- Italian
- Japanese
- Spanish

If the InfoPrint Manager AIX client and server do not use the same language, the InfoPrint Manager server must run in English.

Flags

The **setup** utility uses these flags:

-c

Invokes the InfoPrint Manager Installer to install only the InfoPrint Manager AIX client.

Note

The **-L**, **-n**, **-p**, and **-P** flags are not valid with this flag. The InfoPrint Manager Installer will prompt you to specify the locale, server name, port number, and optional default logical destination.

-e

Echos the Installer log updates to **stdout** as they occur.

-L *locale*

Specifies the locale of the AIX client. The default is **en_US** (U.S. English).

Note

This flag is not valid with the **-c** flag.

-n *ServerName*

Specifies the name of the InfoPrint Manager server.

Note

This flag is not valid with the **-c** flag.

-p *PortNumber*

Specifies the port number that the remote InfoPrint Manager server is using for communications.

Note

This flag is not valid with the **-c** flag.

-P *DestinationName*

Specifies the default logical destination to which the InfoPrint Manager AIX client submits jobs.

Note

This flag is not valid with the **-c** flag.

-R

Replaces any currently installed version of the InfoPrint Manager Installer on your AIX system with the Installer code from the InfoPrint Manager DVD-ROMs.

-s *FileSystem*

Specifies the file system where the installable software images can be accessed. For example, you could specify the file system that you defined for installing InfoPrint Manager, or the drive where you mounted the InfoPrint Manager server DVD-ROM. The default mount point for all installations that use the Installer is `/cdrom` for AIX.

Note

The **/cdrom** file system can be predefined.

-S

Saves the .wlog files from any prior installation.

-h

Displays help for the **setup** utility.

-ud

Uninstalls InfoPrint Manager and keeps all objects.

-uc

Uninstalls InfoPrint Manager and deletes all objects.

-v

Installs InfoPrint Manager on the HACMP Failover server. This prevents an attempt to mount the **/var** file system and does not start the InfoPrint Manager server.

-V

Sets up HACMP primary server and insures that all the appropriate file systems are available.

Example

To install InfoPrint Manager from the file system `/cdrom`, follow these steps:

1. Log onto AIX as **root**.
2. If available, insert the latest InfoPrint Manager server Service DVD-ROM into the drive. Otherwise, insert the gold InfoPrint Manager for AIX Server 1 DVD-ROM into the drive.
3. If this is the first time you are running the InfoPrint Manager Installer on this system, create the **/cdrom** file system. Enter:

```
smit cdrfs
```

4. Click **Add a DVDROM File System**.
5. Complete the **Add a DVDROM File System** panel.
    1) In the **DEVICE Name** field, enter the identifier of your DVD-ROM drive. If you do not know the identifier, click **List** in the AIXwindows version of SMIT, or press **PF4** in the ASCII version of SMIT, to see a list of DVD-ROM drives. Select one.
    2) In the **MOUNT POINT** field, enter **/cdrom**.
    3) Click **OK** (AIXwindows version) or press **Enter** (ASCII version).
    4) Press **F10** to exit from SMIT.
6. To mount the DVD-ROM, enter this command on the AIX command line:

```
mount /cdrom
```

7. To read the **/cdrom/readme.txt** or **readme.txt** file, enter:

```
dtpad /cdrom/readme.txt
```

8. Enter:

```
/cdrom/setup
```

startppo utility: starts the InfoPrint SMIT operator's interface in InfoPrint Manager for AIX

Syntax

startppo [**-t** | **-g** *width*×*depth*+*XOffset*+*YOffset*]

startppo {**-h** | **-?**}

Description

Enter the **startppo** utility to start the InfoPrint SMIT operator's interface.

Flags

The **startppo** utility uses these flags:

-t

Starts the ASCII (**tty**) version of the InfoPrint SMIT operator's interface. The ASCII version of the InfoPrint SMIT operator's interface has no graphics and is controlled with the keyboard.

If you do not specify the **t** flag, **startppo** starts the AIXWindows version of the InfoPrint SMIT operator's interface. The AIXWindows version displays a graphic of a running man to indicate task progress and can be controlled either with the mouse or with the keyboard.

-g *width*/**ph>*depth*+*XOffset*+*YOffset***

Overrides the default size and position of the window for the AIXWindows version of the InfoPrint SMIT operator's interface.

-h

Displays help for the **startppo** utility.

?

Displays help for the **startppo** utility.

Examples

- To start the ASCII version of the InfoPrint SMIT operator's interface, enter:

```
startppo -t
```

- To start the AIXWindows version of the InfoPrint SMIT operator's interface in an 800 by 500 window, enter:

```
startppo -g 800×500+100+100
```

start_server utility: starts a server for a Basic InfoPrint Manager Installation in InfoPrint Manager for AIX or InfoPrint Manager for Linux

Syntax

start_server [**-l**] *locale* [**-p**] *port* [*ServerName*]

start_server -?

Description

Enter the **start_server** utility to create or restart a server configured for a basic InfoPrint Manager installation. A server:

- Manages the validation, routing, and scheduling of jobs
- Manages the printing or transmission process
- Contains logical destinations, queues, and actual destinations

Three possible conditions can exist when you issue this utility:

- If the server name you specify with the utility (or the default server name) does not exist, InfoPrint Manager creates the server on the processor from which you enter the utility and then starts the new server.
- If the server name does exist but is not currently running, InfoPrint Manager displays status information and issues a message when it has successfully restarted the server.
- If the server name does exist and it is currently running, InfoPrint Manager displays a message that shows the server is already operational.

Note

Use **start_server** instead of **startsrv** when both these conditions are true:

- You want to configure the server for a basic InfoPrint Manager installation. **start_server** always configures a new server for a basic installation, while **startsrv** defaults to a standard installation.
- You do not want to be prompted for confirmation if the server does not already exist. **start_server** never prompts, while **startsrv** prompts by default.

Flags

The **start_server** utility uses these flags:

-l *locale*

Lets you specify the locale for InfoPrint Manager messages in a specific language. If you do not specify this flag, the default is your current locale.

-p *port*

Lets you specify the port number when starting a server in a locale other than the default locale. The port number you assign must not conflict with port numbers in use by other processes. The file **/etc/services** lists the port numbers reserved by other processes.

If you do not specify this flag, the port defaults to the value of the **PD_SOCKET** environment variable, if any, then to 6874.

Note

When selecting your own port number, always increment the choice by two because the InfoPrint Manager server uses two numbers: the one you specify and the next one, for example, 6874 and 6875.

-?

Displays help for the **start_server** utility.

Argument

The argument value identifies the specific object to which the utility applies.

The valid argument value for the **start_server** utility is:

ServerName

Assigns a name to a new server or specifies the name of the server to restart. *ServerName* defaults to the host name.

Examples

- To create a server with the same name as the host and configure it for a basic installation, enter:

```
start_server
```

- To restart `serv1`, enter:

```
start_server serv1
```

Note

Only a person with `root` user authority or the InfoPrint Manager user can run this command.

startsrv utility: starts a server in InfoPrint Manager for AIX or InfoPrint Manager for Linux

Syntax

startsrv [**-c**] [**-F**] [**-l**] *locale* [**-p**] *port* [*ServerName*] **startsrv -?**

Description

Issue the **startsrv** utility to create or restart a server. A server:

- Manages the validation, routing, and scheduling of jobs
- Manages the printing or transmission process
- Contains logical destinations, queues, and actual destinations

These conditions can exist when you issue this utility:

- If the server name you specify with the utility (or the default server name), does not exist, and if you do not specify the **-F** flag, InfoPrint displays a confirmation message asking to create a new server. If your response is yes, InfoPrint creates the server on the AIX processor from which you enter the utility and then starts the new server.
- If the server name does not exist, and if you specify the **-F** flag, InfoPrint creates the server on the AIX processor from which you enter the utility without asking for confirmation and then starts the new server.
- If the server name does exist but is not currently running, InfoPrint displays status information and issues a message when it has successfully restarted the server.
- If the server name does exist and it is currently running, InfoPrint displays a message that shows the server is already operational.

Note

Use **startsrv** instead of **start_server** when either of these conditions is true:

- You want to configure the server for a standard InfoPrint installation. **startsrv** configures a new server for a standard installation by default, while **start_server** always configures a new server for a basic installation.
- You want to be prompted for confirmation if the server does not already exist. **startsrv** prompts by default, while **start_server** never prompts.

Flags

The **startsrv** utility uses these flags:

-c

Configures a new server for a basic InfoPrint installation. If you do not specify this flag, InfoPrint configures the server for a standard installation. This flag has no effect on an existing server.

-F

Forces creation of the server if it does not already exist. InfoPrint does not display confirmation prompts (if any).

If you do not specify this flag and if the server does not already exist, InfoPrint prompts you to confirm whether to create the server.

-l *locale*

Lets you specify the locale for InfoPrint messages in a specific language. If you do not specify this flag, the default is your current locale. Possible values: en_US, fr_FR, de_DE, it_IT, es_ES or ja_JP.

Note

- In case the **-l** parameter is missing, InfoPrint checks the LC_ALL and LC_MESSAGES environment variables to decide the language when the server starts.

-p *port*

Lets you specify the port number when starting a server in a locale other than the default locale. The port number you assign must not conflict with port numbers in use by other processes. The file **/etc/services** lists the port numbers reserved by other processes.

If you do not specify this flag, the port defaults to the value of the **PD_SOCKET** environment variable, if any, then to 6874.

Note

When selecting your own port number, always increment the choice by two because the InfoPrint server uses two numbers: the one you specify and the next one, for example, 6874 and 6875.

-?

Displays help for the **startsrv** utility.

Argument

The argument value identifies the specific object to which the utility applies.

The valid argument value for the **startsrv** utility is:

ServerName

Assigns a name to a new server or specifies the name of the server to restart. *ServerName* defaults to the host name.

Examples

- To create a server with the name `serv1` and configure it for a standard installation, enter:

```
startsrv -F serv1
```

- To create a server with the same name as the host and configure it for a basic installation, enter:

```
startsrv -c -F
```

- To restart `serv1`, enter:

```
startsrv serv1
```

Note

Only a person with `root` user authority or the InfoPrint Manager user can run this command.

stop_server utility: shuts down a server in InfoPrint Manager for AIX or InfoPrint Manager for Linux

Syntax

stop_server [**-F**] [*ServerName*]

stop_server -?

Description

Enter the **stop_server** utility to shut down a server.

Flags

The **stop_server** utility uses these flags:

-F

Forces the server to shut down as soon as possible. If you do not specify this flag, the server shuts down when all currently printing jobs have finished printing.

-?

Displays help for the **stop_server** utility.

Argument

The argument value identifies the specific object to which the utility applies.

The valid argument value for the **stop_server** utility is:

ServerName

Specifies the name of the server to shut down. *ServerName* defaults to the host name.

Examples

- To shut down a server with the same name as the host as soon as possible, enter:

```
stop_server -F
```

- To shut down `serv1` after all currently printing jobs have finished printing, enter:

```
stop_server serv1
```

- To shut down the server `DeServ`, which is running in the locale `De_DE`, enter:

```
export LC_ALL=De_DE
stop_server DeServ
export LC_ALL=
```

Daemon utilities for InfoPrint Manager for AIX or InfoPrint Manager for Linux

This section describes these InfoPrint Manager daemon utilities:

- agspdld utility: starts the agspdld daemon, p. 249
- apped utility: starts the apped daemon, p. 253
- mvsprsd utility: starts the MVS download receiver daemon, p. 267
- pcl2afpd utility: starts the pcl2afpd daemon, p. 272
- ps2afpd utility: starts the ps2afpd daemon, p. 275
- startcbd utility: starts the SAP callback daemon, p. 279
- stopcbd utility: stops the SAP callback daemon, p. 280
- startlpd utility: starts the InfoPrint Manager LPD daemon, p. 281
- stoplpd utility: stops the InfoPrint Manager LPD daemon, p. 281
- startippgw utility: start an IPP gateway on InfoPrint Manager for AIX or InfoPrint Manager for Linux, p. 281
- stopippgw utility: stop an IPP gateway on InfoPrint Manager for AIX or InfoPrint Manager for Linux, p. 283
- startnotd utility: starts the notifyd daemon, p. 284

- stopnotd utility: stops the notifyd daemon, p. 284
- startvpd utility: starts the InfoPrint Manager VPD daemon, p. 285
- stopvpd utility: stops the InfoPrint Manager VPD daemon, p. 285

agspdld utility: starts the agspdld daemon

Syntax

agspdld [**-C** *ConfigurationFile*]

Description

Use the **agspdld** utility to start the **agspdl** daemon. The **agspdl** daemon manages the AGSPDL processor portion of the InfoPrint PDF and PostScript transform programs. You must start the **agspdl** daemon somewhere on the network before you can use the AGSPDL processor with the **ps2afp** or **pdf2afp** command to transform PDF and PostScript data streams for printing on IPDS printers.

The **startsrv** or **start_server** utility automatically starts the **agspdl** daemon if it is installed and not running.

If the **agspdl** daemon stops running, you can restart it by issuing the following command:

```
agspdld -C /usr/lpp/psf/ps2afp/agspdld.cfg
```

InfoPrint Manager uses the **agspdl** daemon configuration file to determine the default parameters of the **agspdl** daemon. The **/usr/lpp/psf/ps2afp/agspdld.cfg** file is installed with InfoPrint Manager, and InfoPrint Manager uses it as the default configuration file. You can, however, copy the configuration file, use an editor to edit the copy of the file, and rename it so that you can customize the **agspdl** daemon for your applications. After you make the modifications, you specify the new configuration file with the **-C** flag of the **ps2afp** transform command when you transform PDF and PostScript files.

AGSPDL supports only job level changes to the configuration files. Other changes must be accompanied by a daemon restart to come into effect.

Flag

The **agspdl** daemon utility uses the following flag:

-C *ConfigurationFile*

Specifies the configuration file InfoPrint Manager uses with the transform. The value is:

ConfigurationFile

A valid configuration file name. If you do not specify a file, InfoPrint Manager uses the file **/usr/lpp/psf/ps2afp/agspdld.cfg**.

Configuration file keywords and values

The **agspdl** transform daemon configuration file can contain the following keywords:

port={8254 | *PortNumber*}DEFAULT=8254

Specifies which TCP/IP port to use.

Values:

8254

This is the default port number.

work_directory={/var/psf/agspdl | *PathName*}

Specifies the path to the directory where the transform daemon puts its work files. The transform daemon must have read, write, and execute permissions to this directory. The transform daemon is owned by the **root** user, but runs as **daemon**, and is in the **printq** group.

Note

Only one **agspdld** can use the **work_directory** at a time. It cannot be shared.

Values:

/var/psf/agspdl

This is the default work directory.

PathName

This is a directory path.

log_file={/*var*/*psf*/*agspdl*/agspdl.log | *PathName*}

Specifies the file in which the transform daemon logs errors and messages when it converts a data stream from PDF or PostScript to an AFP data stream.

Values:

/*var*/*psf*/*agspdl*/agspdl.log

This is the default log file.

PathName

This is the full path name of a log file.

log_size={1024 | *Size*}DEFAULT=1024

Specifies in kilobytes how large the log file can get before it is renamed <log_file>.bak and a new empty log file is used.

Values:

1024

This is the default value.

ps_font_directory= {/var/psf/agspdl/Resource | *PathName*}

Specifies the paths for the directories where the resource files for the AGSPDL print engine transforms are located.

Values:

/var/psf/agspdl/Resource

This is the default directory.

PathName

This is the directory path.

ps_output_type={ IO1_G4 | *Value*} DEFAULT=IO1_G4

Specifies the type of AFP image to generate.

Values:

IO1_G4

This is the default value.

ps_width={ 8.5i | *Value*} DEFAULT=8.5i

Specifies the width of generated image.

Values:

8.5i

This is the default value.

ps_length={11i | *Value*} DEFAULT=11i

Specifies the length of generated image.

Values:

11i

This is the default value.

ps_resolution={300 | *Value*} DEFAULT=300

Specifies the resolution of target printer.

Values:

300

This is the default value.

agspdl_is ={1 | *Value*} DEFAULT=1

Specifies the interchange set version.

Values:

1

This is the default value.

agspdl_max_memory ={2097151 | *Value*} DEFAULT=2097151

Specifies the maximum amount of memory used by the interpreter.

Values:

2097151

This is the default value.

agspdl_compress_type ={lzw | *jpeg* | *jpeg-sub*} DEFAULT=lzw

Enables LZW or JPEG compression.

Values:

lzw

This value is used for LZW compression and unsubsampled files. This is the default value.

jpeg

This value is used for JPEG compression and unsubsampled files.

jpeg-sub

This value is used for JPEG compression and subsampled files.

agspdl_page_size_control ={*ArtBox* | *BleedBox* | *CropBox* | *TrimBox*}

Used with the pdf2afp transform processing engines to aid the positioning of content on the requested media in accordance with the intention of the PDF file creator.

Values:

ArtBox

Specifies the ArtBox for the PDF file.

BleedBox

Specifies the BleedBox for the PDF file.

CropBox

Specifies the CropBox for the PDF file.

TrimBox

Specifies the TrimBox for the PDF file.

Examples

- To restart the **agspdl** daemon with the default configuration file, enter:

```
agspdld -C /usr/lpp/psf/ps2afp/agspdld.cfg
```

Note

1. If you have not set the **PATH** environment variable to include **/usr/lpp/psf/bin**, you must enter the path name with the **agspdld** daemon.
2. Anyone can start the **agspdl** daemon, but only a person with **root** user authority can stop it.

- To restart the **agspdl** daemon with the configuration file `myfile.cfg`, which resides in the directory `/usr/lpp/psf/ps2afp`, enter:

```
agspdld -C /usr/lpp/psf/ps2afp/myfile.cfg
```

Files

/usr/lpp/psf/bin/agspdld

Artifex GhostPDL transforms daemon

/usr/lpp/psf/bin/ps2afp

PostScript transform executable

/usr/lpp/psf/bin/pdf2afp

PDF transform executable (linked to **/usr/lpp/psf/bin/ps2afp**)

/usr/lpp/psf/ps2afp/agspdld.cfg

agspdl daemon configuration file

/usr/lpp/psf/ps2afp/ps2afp.cfg

ps2afp command configuration file

apped utility: starts the apped daemon

Syntax

apped [**-C** *ConfigurationFile*]

Description

Use the **apped** utility to start the **apped** daemon. The **apped** daemon manages the APPE processor portion of the InfoPrint PDF transform programs. You must start the **apped** daemon somewhere on the network before you can use the **ps2afp** or **pdf2afp** transform command to transform PDF data streams for printing with InfoPrint on IPDS and InfoPrint 4100 printers.

The **startsrv** or **start_server** utility automatically starts the **apped** daemon if it is installed and not running.

If the **apped** daemon stops running, you can restart it by issuing the following command:

```
apped -C /usr/lpp/psf/ps2afp/apped.cfg
```

InfoPrint Manager uses the **apped** daemon configuration file to determine the default parameters of the **apped** daemon. The **/usr/lpp/psf/ps2afp/apped.cfg** file is installed with InfoPrint Manager, and InfoPrint Manager uses it as the default configuration file. You can, however, copy the configuration file, use an editor to edit the copy of the file, and rename it so that you can customize the **apped** daemon for your applications. After you make the modifications, you specify the new configuration file with the **-C** flag of the **ps2afp** transform command when you transform PDF files.

APPE supports only job level changes to the configuration files. Other changes must be accompanied by a daemon restart to come into effect.

Flag

The **apped** daemon utility uses the following flag:

-C *ConfigurationFile*

Specifies the configuration file InfoPrint uses with the transform. The value is:

ConfigurationFile

A valid configuration file name. If you do not specify a file, InfoPrint uses the file **/usr/lpp/psf/ps2afp/apped.cfg**.

Configuration file keywords and values

The **apped.cfg** file contains the same keywords as the **ps2afp.cfg** file except that the transform daemon configuration file does not have the **server** keyword. The **apped.cfg** contains several additional keywords.

For the keywords common to both configuration files, see The agspdld, apped, ps2afp, and ps2afpd configuration files, p. 256.

The apped transform daemon configuration file can also contain the following keywords:

appe_work_directory={/var/psf/appe | *PathName*}

Specifies the path to the directory where the transform daemon puts its work files. The transform daemon must have read, write, and execute permissions to this directory. The transform daemon is owned by the **root** user, but runs as **daemon**, and is in the **printq** group.

Note

Only one **apped** can use the **appe_work_directory** at a time. It cannot be shared.

Values:

/var/psf/appe

The default work directory

PathName

A directory path

log_file={*/var/psf/appe/*apped.log | *PathName*}

Specifies the file in which the transform daemon logs errors and messages when it converts a data stream from PDF to an AFP data stream.

Valid keyword values are:

***/var/psf/appe/*apped.log**

This is the default log file.

PathName

This is the full path name of a log file.

log_size={100 | *Size*}DEFAULT=100

Specifies in kilobytes how large the log file can get before it is renamed <log_file>.bak and a new empty log file is used.

Default value

100

transform_trace_file={*/var/psf/appe/*appeTraceFile.log| *PathName*} DEFAULT=*/var/psf/appe/*appeTraceFile.log**

Specifies the file where to write APPE transform trace information.

Valid keyword values are:

***/var/psf/appe/*appeTraceFile.log**

This is the default trace file.

PathName

This is the full path name of a trace file.

transform_trace_size={200 | *Size*} DEFAULT=200

Specifies in kilobytes how large the trace file can get before it is renamed <transform_trace_file>.bak and a new empty tracefile is used.

Default value

200

transform_trace_level={*MDFL@-1* | *TraceLevel*} DEFAULT=MDFL@-1

Specifies the active trace group for the APPE transform.

Valid keyword values are:

MMST@-1

Outputs most trace statements.

MINT@-1

Outputs intermediate trace statements.

MDFL@-1

Outputs default trace statements.

appe_fonts_path=[PathName]

Specifies the paths for the directories where the extra fonts for Adobe PDF Print Engine transforms are located.

Note

To make sure that the application reads separate paths correctly, enter the ";\" separator and new line between two entries. It is not necessary to enter the ";\" separator after the last line.

Default Value

None

appe_font_map_files={*/usr/lpp/psf/appe/fontmaps/*FontMapSample.cfg | *PathName*} DEFAULT=*/usr/lpp/psf/appe/fontmaps/***FontMapSample.cfg**

Specifies the path and file name Adobe PDF Print Engine uses for the font mapping file. This file correlates font names with their file locations.

Valid keyword values are:

***usr/lpp/psf/appe/fontmaps/*FontMapSample.cfg**

This is the default font mapping file.

PathName

This is the full path name to the font mapping file.

Examples

- To restart the **apped** daemon with the default configuration file, enter:

```
apped -C /usr/lpp/psf/ps2afp/apped.cfg
```

Note

1. If you have not set the **PATH** environment variable to include **/usr/lpp/psf/bin**, you must enter the path name with the **apped** daemon.
2. Anyone can start the **apped** daemon, but only a person with **root** user authority can stop it.

- To restart the **apped** daemon with the configuration file `myfile.cfg`, which resides in the directory `/usr/lpp/psf/ps2afp`, enter:

```
apped -C /usr/lpp/psf/ps2afp/myfile.cfg
```

- You can only run one instance of **apped** daemon at a time.

Files

/usr/lpp/psf/bin/apped

Adobe PDF Print Engine transforms daemon

/usr/lpp/psf/bin/ps2afp

PostScript transform executable

/usr/lpp/psf/bin/pdf2afp

PDF transform executable (linked to **/usr/lpp/psf/bin/ps2afp**)

/usr/lpp/psf/ps2afp/apped.cfg

apped daemon configuration file

/usr/lpp/psf/ps2afp/ps2afp.cfg

ps2afp command configuration file

The agspdld, apped, ps2afp, and ps2afpd configuration files

Instead of typing flags on the command line with the **ps2afp** or **pdf2afp** command, you can use the **-C** flag to specify a configuration file that contains the flags. In this way, you can simply specify a configuration file name, rather than typing many flags. You might find it convenient to use a configuration file if you repeatedly use the same flags with the **ps2afp** or **pdf2afp** command, or if you are using different PostScript or PDF processing values than the defaults defined by your system support group.

When your system support group installed the **ps2afp** transform and its alias, **pdf2afp**, a default **ps2afp** command configuration file, **ps2afp.cfg**, was installed in this directory:

With AIX or Linux

/usr/lpp/psf/ps2afp

With Windows

***install_path*\ps2afp**

To create your own files, copy the **ps2afp.cfg** file and then use a system editor to modify the options in this ASCII file to suit your needs.

These figures show an example of a configuration file.

Sample agspdld Configuration File

The default **agspdld** daemon configuration file **agspdld.cfg** was installed in this directory: **/usr/lpp/psf/ps2afp**

The **agspdld** daemon configuration file contains most of the keywords as the **ps2afp** daemon. The **agspdld** daemon configuration file also contains some keywords that control the operation of the **agspdld** daemon. Values in the command configuration file override values in the daemon configuration file.

```
# agspdld configuration file

###############################################################################
# KEYWORD                                                             PURPOSE
###############################################################################

port = 8254               #                    which TCP/IP port to use

work_directory = /var/psf/agspdl
                          #            directory to put work files into
log_file = /var/psf/agspdl/agspdl.log
                          #                  where to write log messages
log_size = 1024           #                       maximum log size in KB

ps_font_directory = /var/psf/agspdl/Resource
                          #                       list of resource files

ps_output_type = IO1_G4   #               type of AFP image to generate
ps_width = 8.5i           #                    width of generated image
ps_length = 11i           #                   length of generated image
ps_resolution = 300       #                 resolution of target printer
agspdl_is = 1             #                   the is afp compliance flag

agspdl_max_memory = 2097151
                          #                       max interpreter memory

#agspdl_compress_type = lzw
                          #                                 lzw compression
                          #               other options: jpeg, jpeg-sub

#agspdl_page_size_control
                          #                    page size control options
                          #          ArtBox, BleedBox, CropBox, TrimBox
```

Sample apped Configuration File

The default **apped** daemon configuration file **apped.cfg** was installed in this directory:

With AIX or Linux

/usr/lpp/psf/ps2afp

With Windows

***install_path*\ps2afp**

The **apped** daemon configuration file contains most of the keywords as the **ps2afp** daemon. The **apped** daemon configuration file also contains some keywords that control the operation of the **apped** daemon. Values in the command configuration file override values in the daemon configuration file.

Sample **apped** daemon configuration file for AIX and Linux:

```
 apped configuration file

##############################################################################
# KEYWORD                                                            PURPOSE
##############################################################################

port = 8250                     #              which TCP/IP port to use

appe_work_directory = /var/psf/appe
                                # directory to put APPE work files into

log_file = /var/psf/appe/apped.log
                                #    where to write daemon log messages
log_size = 100                  #                 maximum log size in KB

#transform_trace_file = /var/psf/appe/appeTraceFile.log
                                #  where to write APPE transform traces
                                #        comment out to disable tracing

#transform_trace_size = 200     #               maximum trace size in KB
                                #  use 0 to disable trace size checking

#transform_trace_level = MDFL@-1
                #                                      APPE traces level
                # MMST@-1                  output most trace statements
                # MINT@-1          output intermediate level of tracing
                # MDFL@-1               output default trace statements

#appe_fonts_path =
                #list of directories where extra APPE fonts are located

appe_font_map_files = /usr/lpp/psf/appe/fontmaps/FontMapSample.cfg

appe_width = 8.5i               #              width of generated image
appe_length = 11i               #             length of generated image
appe_x_offset = 0i              #                left and right margins
appe_y_offset = 0i              #                top and bottom margins
appe_resolution = 300           #          resolution of target printer
appe_output_type = IO1_G4       #         type of AFP image to generate
#appe_is = 1                    #            the is afp compliance flag
#appe_compress_type = jpeg-sub
                # JPEG subsampled compression. Other options: jpeg, lzw
#appe_pagetype = DOCUMENT
                # type of afp structured field for each individual page
```

Sample **apped** daemon configuration file for Windows:

```
# apped configuration file

##############################################################################
# KEYWORD                                                            PURPOSE
##############################################################################

port = 8250                     #              which TCP/IP port to use
```

```
appe_work_directory = <AFP Support Path>\appe
                                # directory to put APPE work files into

log_file = <AFP Support Path>\appe\apped.log
                                #    where to write daemon log messages
log_size = 100                  #                  maximum log size in KB

#transform_trace_file = <AFP Support Path>\appe\appeTraceFile.log
                                #  where to write APPE transform traces
                                #        comment out to disable tracing

#transform_trace_size = 200    #               maximum trace size in KB
                                #  use 0 to disable trace size checking

#transform_trace_level = MDFL@-1
                #                                       APPE traces level
                # MMST@-1                  output most trace statements
                # MINT@-1          output intermediate level of tracing
                # MDFL@-1               output default trace statements

#appe_fonts_path =
                #list of directories where extra APPE fonts are located

appe_font_map_files = <Install Path>\appe\fontmaps\FontMapSample.cfg

appe_width = 8.5i               #               width of generated image
appe_length = 11i               #              length of generated image
appe_x_offset = 0i              #                 left and right margins
appe_y_offset = 0i              #                 top and bottom margins
appe_resolution = 300           #           resolution of target printer
appe_output_type = IO1_G4       #          type of AFP image to generate
#appe_is = 1                    #             the is afp compliance flag
#appe_compress_type = jpeg-sub
                # JPEG subsampled compression. Other options: jpeg, lzw
#appe_pagetype = DOCUMENT
                # type of afp structured field for each individual page
```

Sample ps2afp Configuration File

```
# ps2afp configuration file

###############################################################################
#                 CPSI, APPE and AGSPDL GENERAL SETTINGS
# KEYWORD             EQUIVALENT ps2afp FLAG                      PURPOSE
###############################################################################

port = 8251               # -P                 which TCP/IP port to use
appe_port = 8250          # -P         which TCP/IP port to use for appe
agspdl_port = 8254        # -P       which TCP/IP port to use for agspdl
server = localhost        # -S              which server to connect with

ps_max_memory = 96000K    # -M            maximum amount of memory that
                          #         PostScript uses; the 'K' is ignored

ps_job_timeout = 9999     # -j                maximum number of minutes
                          #                   to process PostScript job
ps_server_timeout = 360   # -s                maximum number of minutes
                          #                   server waits between jobs
ps_document_processor = agspdl  # -psproc            which ps document
```

```
                                #                          processor to use
pdf_document_processor = agspdl # -pdfproc          which pdf document
                                #                          processor to use

###############################################################################
#                    CPSI SPECIFIC SETTINGS
# KEYWORD              EQUIVALENT ps2afp FLAG                      PURPOSE
###############################################################################

ps_width = 8.5i          # -w                 width of generated image
ps_length = 11i          # -l                length of generated image
ps_x_offset = 0i         # -x                   left and right margins
ps_y_offset = 0i         # -y                   top and bottom margins
ps_resolution = 300      # -r              resolution of target printer
ps_output_type = IO1_G4  # -a             type of AFP image to generate
ps_imgsmall = 0.5i       #                   default value for imgsmall
ps_linesmall = 0.5i      #                  default value for linesmall
ps_txtsmall = 0.5i       #                   default value for txtsmall
#ps_is = 1                #                   the is afp compliance flag
#ps_compress_type = jpeg-sub
                         # -cmp             JPEG subsampled compression
                         #                     other options: jpeg, lzw

###############################################################################
#                    APPE SPECIFIC SETTINGS
# KEYWORD              EQUIVALENT ps2afp FLAG                      PURPOSE
###############################################################################

appe_width = 8.5i          # -w                width of generated image
appe_length = 11i          # -l               length of generated image
appe_x_offset = 0i         # -x                  left and right margins
appe_y_offset = 0i         # -y                  top and bottom margins
appe_resolution = 300      # -r            resolution of target printer
appe_output_type = IO1_G4  # -a           type of AFP image to generate
#appe_is = 1                #                  the is afp compliance flag
#appe_compress_type = jpeg-sub
                           # -cmp          JPEG subsampled compression
                           #                  other options: jpeg, lzw
#appe_pagetype = DOCUMENT
                           #               type of afp structured field
                           #                   for each individual page



###############################################################################
#                    AGSPDL SPECIFIC SETTINGS
# KEYWORD              EQUIVALENT ps2afp FLAG                      PURPOSE
###############################################################################
agspdl_output_type = IO1_G4  # -a        type of AFP image to generate
agspdl_resolution = 300      # -r         resolution of target printer
agspdl_width = 8.5i          # -w             width of generated image
agspdl_length = 11i          # -l            length of generated image
agspdl_is     = 1            #               the is afp compliance flag
#agspdl_compress_type = lzw
                             # -cmp        JPEG subsampled compression
                             #           other options: jpeg, jpeg-sub
#agspdl_page_size_control
                             # -psc           page size control options
                             #      ArtBox, BleedBox, CropBox, TrimBox

###############################################################################
```

```
# ENABLING THE PLEX COMMAND AND MAPPING BINS TO TRAYS
# NOTE: Uncomment only one of the options below.

##############################################################################

# ENABLING THE FINISHING FLAG ONLY
# If you want your users to be able to allow finishing operations,
# such as staple operations or punch operations, uncomment the
# following line.

# device_controls = finishing

##############################################################################

# ENABLING THE PLEX COMMAND ONLY
# If you want your users to be able to choose between single-sided and
# double-sided (duplexed) output, uncomment the following line.

# device_controls = plex

##############################################################################

# ENABLING BOTH PLEX AND FINISHING
# If you want your users to be able to both choose between single-
# sided and double-sided (duplexed) output AND allow finishing
# operations, such as staple operations or punch operations,
# uncomment the following line.

# device_controls = plex,finishing

##############################################################################

# ENABLING THE PLEX COMMAND AND MAPPING BINS TO TRAYS
# If you want your users to be able to both choose between single-
# sided and double-sided (duplexed) output AND specify which paper
# tray to use, uncomment the line below and fill in the correct values:

# Replace the Xs with the number of the AFP tray (between 1 and 255).
# Replace the Zs with the appropriate values.
# Replace size with one of the supported paper sizes \
(LETTER, LEGAL, A3, A4, B4, B5, LEDGER)

# device_controls = plex,inputX=(size,type=ZZZ,weight=ZZZ,color=ZZZ), \
inputX=(size,type=ZZZ,weight=ZZZ,color=ZZZ)

##############################################################################

# ENABLING THE PLEX COMMAND AND MAPPING BINS TO TRAYS
# If you want your users to be able to both choose between single-
# sided and double-sided (duplexed) output, AND allow finishing
# operations, AND specify which paper tray to use, uncomment the line
# below and fill in the correct values:

# Replace the Xs with the number of the AFP tray (between 1 and 255).
# Replace the Zs with the appropriate values.
# Replace size with one of the supported paper sizes \
(LETTER, LEGAL, A3, A4, B4, B5, LEDGER)

# device_controls = plex,finishing,inputX=(size,type=ZZZ,weight=ZZZ,\
color=ZZZ), inputX=(size,type=ZZZ,weight=ZZZ,color=ZZZ)
```

Sample ps2afpd Configuration File

The default **ps2afpd** daemon configuration file **ps2afpd.cfg** was installed in this directory:

With AIX or Linux

/usr/lpp/psf/ps2afp

With Windows

***install_path*/ps2afp**

The **ps2afpd** daemon configuration file contains most of the keywords as the **ps2afp** daemon. Values in the command configuration file override values in the daemon configuration file.

This is an example of the configuration file.

```
# ps2afpd configuration file

##############################################################################
# KEYWORD                                                          PURPOSE
##############################################################################

port = 8251              #                    which TCP/IP port to use

work_directory = <AFP Support Path>\ps2afp
                         #            directory to put work files into
log_file = <AFP Support Path>\ps2afp\ps2afpd.log
                         #                 where to write log messages
log_size = 100           #                      maximum log size in KB

ps_program = <Install Path>\cpsibin\ps2afpi.exe
                         #      name of PostScript interpreter program
ps_init_file = <Install Path>\ps\ps2afp.ps
                         #              name of PostScript interpreter
                         #                          initialization file
ps_files_path = <Install Path>\ps;\
        <Install Path>\config;\
        <Install Path>\reslib
                         #            path to search for jobInit files

ps_max_memory = 96000K   #               maximum amount of memory that
                         #         PostScript uses; the 'K' is ignored

ps_job_timeout = 9999    #                   maximum number of minutes
                         #                   to process PostScript job
ps_server_timeout = 360  #                   maximum number of minutes
                         #                   server waits between jobs

ps_font_map_files = <Install Path>\ps\fonts.map
                         #                 list of font mapping files

ps_width = 8.5i          #                    width of generated image
ps_length = 11i          #                   length of generated image
ps_x_offset = 0i         #                      left and right margins
ps_y_offset = 0i         #                      top and bottom margins
ps_resolution = 300      #                resolution of target printer
ps_output_type = IO1_G4  #               type of AFP image to generate
#following three parameters will apply only if threshsmall specified
ps_imgsmall = 0.5i       #                  default value for imgsmall
ps_linesmall = 0.5i      #                 default value for linesmall
ps_txtsmall = 0.5i       #                  default value for txtsmall
#ps_is = 1                #                    the is afp compliance flag
```

```
ps_compress_type = jpeg-sub  # JPEG subsampled compression. \
Other options: jpeg, lzw

##############################################################################

# ENABLING THE PLEX COMMAND AND MAPPING BINS TO TRAYS
# NOTE: Uncomment only one of the options below.

##############################################################################

# ENABLING THE FINISHING FLAG ONLY
# If you want your users to be able to allow finishing operations,
# such as staple operations or punch operations, uncomment the
# following line.

# device_controls = finishing

##############################################################################

# ENABLING THE PLEX COMMAND ONLY
# If you want your users to be able to choose between single-sided and
# double-sided (duplexed) output, uncomment the following line.

# device_controls = plex

##############################################################################

# ENABLING BOTH PLEX AND FINISHING
# If you want your users to be able to both choose between single-
# sided and double-sided (duplexed) output AND allow finishing
# operations, such as staple operations or punch operations,
# uncomment the following line.

# device_controls = plex,finishing

##############################################################################

# ENABLING THE PLEX COMMAND AND MAPPING BINS TO TRAYS
# If you want your users to be able to both choose between single-
# sided and double-sided (duplexed) output AND specify which paper
# tray to use, uncomment the line below and fill in the correct values:

# Replace the Xs with the number of the AFP tray (between 1 and 255).
# Replace the Zs with the appropriate values.
# Replace size with one of the supported paper sizes \
(LETTER, LEGAL, A3, A4, B4, B5, LEDGER)

# device_controls = plex,inputX=(size,type=ZZZ,weight=ZZZ,color=ZZZ), \
inputX=(size,type=ZZZ,weight=ZZZ,color=ZZZ)

##############################################################################

# ENABLING THE PLEX COMMAND AND MAPPING BINS TO TRAYS
# If you want your users to be able to both choose between single-
# sided and double-sided (duplexed) output, AND allow finishing
# operations, AND specify which paper tray to use, uncomment the line
# below and fill in the correct values:

# Replace the Xs with the number of the AFP tray (between 1 and 255).
# Replace the Zs with the appropriate values.
# Replace size with one of the supported paper sizes \
(LETTER, LEGAL, A3, A4, B4, B5, LEDGER)
```

```
# device_controls = plex,finishing,inputX=(size,type=ZZZ,weight=ZZZ,\
color=ZZZ), inputX=(size,type=ZZZ,weight=ZZZ,color=ZZZ)
```

The next table shows the **ps2afp** flags and their equivalent configuration file keywords. To override the values in the default configuration file, **ps2afp.cfg**, you can take one of these actions:

- Specify flags with the **ps2afp** or **pdf2afp** command at transform time.
- Specify a configuration file with **ps2afp -C** at transform time.
- Specify **ps2afp** flags with **-o** flags on an AIX print command, or with equivalent attributes with the **-x** flag or in an attributes file on the **pdpr** command, to transform a file and print it at the same time.

PostScript and PDF printing and processing options

ps2afp or pdf2afp Flag	*Keyword in ps2afp and ps2afpd Configuration Files*
Note The valid values for configuration file keywords are the same as for the corresponding **ps2afp** or **pdf2afp** command flag. For keywords used only in the ps2afpd daemon configuration file, which have no corresponding command flag, see ps2afpd utility: starts the ps2afpd daemon, p. 275.	

`-a OutputType`	`agspdl_output_type = value`
	(agspdl)
	`appe_output_type = value`
	(appe)
	`ps_output_type = value`
	(cpsi)

`-C ConfigurationFile`	None
`-c`	None (cpsi only)

`-cmp`	`ps_compress_type = value`
	`agspdl_compress_type = value`
	`appe_compress_type = value`

`-device`	`device_control =plex,input n = ( size,type = x , color = y , weight = z , insert )input n = ( size , type = x , color = y , weight = z , insert ) input n = ( )` (appe and cpsi)

`-F FontMapFile ,`	`ps_font_map_file = PathName`
	(cpsi only)
	`appe_font_map_file = PathName`
	(appe only)

`-g PageRange`	None (appe and cpsi)
`InputFile`	None

`-is`	`ps_is = value`
	`agspdl_is = value`
	`appe_is = value`

ps2afp or pdf2afp Flag	***Keyword in ps2afp and ps2afpd Configuration Files***	
	(agspdl, appe, and cpsi)	
-imgsmall sizeu nnnn.nnnu	ps_imgsmall = nnnn.nnn (cpsi only)	
-j nnnn	ps_job_timeout = nnnn (cpsi only)	
-l nnnn.nnnu	ps_length = nnnn.nnnu agspdl_length = nnnn.nnnu appe_length = nnnn.nnnu (agspdl, appe, and cpsi)	
-linesmall sizeu nnnn.nnnu	ps_linesmall = nnnn.nnnu (cpsi only)	
-M nnnnn	ps_max_memory = nnnnn (cpsi only)	
-o OutputFile	None	
-P nnnnn	port = PortNumber (agspdl, appe, and cpsi)	
-p PageRange	None (agspdl, appe, and cpsi)	
-pagetype	appe_pagetype = value (appe only)	
-pdfproc	pdf_document_processor = value	
-psproc	ps_document_processor = value	
-pragma ps_x_origin=nnnn.nnnu	pragma=ps_x_origin = nnnn.nnnu (appe and cpsi)	
-pragma ps_y_origin=nnnn.nnnu	pragma=ps_y_origin = nnnn.nnnu (appe and cpsi)	
-pragma OutputFaceUp={PS | enable | disable}	None (appe and cpsi)	
-psc	agspdl_page_size_control = value (agspdl only)	
-q	None	
-r nnn	ps_resolution = nnn agspdl_resolution = nnn appe_resolution = nnn (agspdl, appe, and cpsi)	
	Keyword in ps2afp Configuration File	***Keyword in ps2afpd Configuration Files***
-S ServerName	server = ServerName	None
-s nnnn	ps_server_timeout = nnnn (cpsi only)	

ps2afp or pdf2afp Flag	***Keyword in ps2afp and ps2afpd Configuration Files***	
-threshsmall {sc_ell | sc_euc}	None (cpsi only)	
-txtsmall sizeu nnnn.nnnu	ps_txtsmall = nnnn.nnnu (cpsi only)	
-w nnnn.nnnu	ps_width = nnnn.nnnu agspdl_width = nnnn.nnnu appe_width = nnnn.nnnu (agspdl, appe, and cpsi)	
-x nnnn.nnnu	ps_x_offset = nnnn.nnnu appe_x_offset = nnnn.nnnu (appe and cpsi)	
-y nnnn.nnnu -y *nnnn.nnnu*	ps_y_offset = nnnn.nnnu appe_y_offset = nnnn.nnnu (appe and cpsi)	
	Keyword in ps2afp Configuration File	***Keyword in ps2afpd, agspdld, and apped Configuration Files***
None	None	log_file = PathName
None	None	log_size = Size
None	None	transform_trace_file = Pathname transform_trace_size = Size transform_trace_level = TraceLevel (appe only)
None	None	mail_command = PathName (cpsi only)
None	None	notify = UserID (cpsi only)
None	None	ps_font_directory = PathName (agspdl only)
None	None	ps_init_file = PathName (cpsi only)
None	None	ps_program = PathName (cpsi only)
None	None	ps_support_program = PathName (cpsi only)
None	None	work_directory = PathName (agspdl and cpsi)

ps2afp or pdf2afp Flag	*Keyword in ps2afp and ps2afpd Configuration Files*	
None	None	`appe_fonts_path` = `PathName` (appe only)
None	None	`appe_work_directory` = `PathName` (appe only)
None	None	`agspdl_max_memory` = `Size` (agspdl only)

mvsprsd utility: starts the MVS download receiver daemon

Syntax

mvsprsd **-p***PortNumber* **-d** *FileSystem* **[-d** *FileSystem* **...] [n -1]**
[-x *ShellScript***] [-X** *Additional exit parameters***] [-q** *destination***] [-k] [-B]**
[-H *HostCodePage***] [-L** *LocalCodePage***][-t] [-w] [-e]**

Description

Use the **mvsprsd** utility to start the MVS Download Receiver daemon. This daemon receives the data that Download for z/OS sends from the Job Entry Subsystem (JES) spool on an MVS system.

You can specify that the **mvsprsd** daemon starts whenever the system starts by including the **mvsprsd** command in one of the files that are executed when the AIX or Linux operating system is initialized. The two types of files that are read during AIX or Linux initialization are **/etc/rc** files and the **/etc/inittab** files.

If the **mvsprsd** daemon stops running for some reason, you can restart it by issuing this command:

```
/usr/lpp/psf/bin/mvsprsd -p PortNumber -d FileSystem -x ShellScript
   -q destination -k
```

If your job does not print on InfoPrint Manager, you might be able to restart the shell script process with the downloaded file and downloaded print-options string. If you specify the **-k** flag on the print command, you can use this command to restart the shell script with its required parameter list:

```
/usr/lpp/pd/bin/mvsprpsm.sh FileName.PRD "$(cat string.JCL)"
destination
```

where *FileName*.**PRD** represents the file successfully downloaded to InfoPrint Manager as **MVS**_*system_name.jobname.dataset_name.forms_name.yyyyddd.hhmmsst***ABCD.PRD**; and where *string*.**JCL** represents the MVS print options string that is saved to a file named in this format: **MVS**_*system_name.jobname.dataset_name.forms_name.yyyyddd.hhmmsst***ABCD.JCL**.

Note

- The string **/usr/lpp/pd/bin/mvsprpsm.sh** refers to the shell script that is provided with this command. Check to see that your installation has not modified this shell script or added another shell script before specifying this value.
- Only a person with `root` user authority or the InfoPrint Manager user can run this command.

Flags

The **mvsprsd** daemon utility uses these flags:

-p *PortNumber*

Specifies the socket port number for the daemon in the valid range (5001-64000). Do not use 8251 and 8253, which are used by InfoPrint Manager for the PCL and PostScript data transforms. The port number must be the same as the port number specified in the routing-control data set used by Download for z/OS.

-d *FileSystem*

Specifies a file system where InfoPrint Manager stores the received file until the shell script you specify in the **-x** flag processes and deletes the file. The **mvsprsd** daemon must have write permission for the file system.

You must specify at least one file system. You can specify up to ten file systems. If you specify more than one file system, the file system having the most available space is used. To specify more than one file system, specify the entire flag again:

```
-d FileSystem1 -d FileSystem2 ...
```

-n 1

If you are working with multiple data set support, you must specify **-n 1** when you start the **mvsprsd** daemon on AIX or Linux. The **-n 1** option restricts the **mvsprsd** daemon to receive one data set at a time.

If you did not previously specify **-n 1** and you received multiple files concurrently, you might wish to start more than one instance of the **mvsprsd** daemon (using different port numbers) and configure new Download for z/OS printers on MVS to communicate with them.

For more information about the limitations of multiple data set support with Download for z/OS, see the chapter entitled "Printing data sets from an MVS system through MVS Download" in the *RICOH InfoPrint Manager for Linux: Procedures* or *RICOH InfoPrint Manager for AIX: Procedures*.

Note

If you enable multiple data set support and you need to configure multiple Download for z/OS FSAs, you must have one **mvsprsd** daemon/receiver for each Download FSA that is submitting jobs to the InfoPrint Manager server. If you do not do this and two Download for z/OS FSA systems send jobs at the same time, the job data sets can become intermingled and errors or incorrect output can result.

-x *ShellScript*

Specifies the complete path name and file name for the shell script that the daemon executes to process the files sent by Download for z/OS. You can specify the file name of the shell script without the path name and it will default to the **/usr/lpp/pd/bin** path.

The daemon forks a child process to execute the shell script after each successfully received file. If you do not specify the path name of a shell script, the received files are not printed and remain on the file system.

InfoPrint Manager provides a shell script, **mvsprpsm.sh**, which submits a file to the **pdpr** command for printing and deletes the file if the file prints successfully. This shell script is installed in the **/usr/lpp/pd/bin** directory.

-X *Additional exit parameters*

- If you are using custom exits, consult with the person responsible for the custom exits to determine what to enter here.
- With InfoPrint Manager for AIX version 4.2, there are scripts that support additional exit parameters. These parameters are not supported on previous versions of the InfoPrint Manager script. They are not supported when custom scripts are used. The options are specified on the **–X** parameter of **mvsprsd** and have this syntax:

  failed_job=discard | print

  This parameter only has an effect when the AFP Download Plus is used. The parameter values have this meaning:

  discard

  If AFP Download Plus detected an error in any file in the job, discard the entire job. This is the same behavior as Download for z/OS multiple data set. This behavior is desirable to print outsource companies. This is the default if this keyword is not specified.

  print

  If AFP Download Plus detected an error in any file in the job, print the job including the error message provided by AFP Download Plus. The error messages provided by AFP Download Plus are printed where the file would normally be printed in the job. This is similar behavior to PSF for z/OS. This behavior is desirable for in-house print shops. AFP Download Plus provides a generic message, not the error messages that identify the cause of the failure.

  retry_count=n

  This parameter identifies the number of times the **pdpr** should be retried. The default value is 0. A value of 0 indicates the **pdpr** should not be retried. This parameter can have values from 0 to 32767.

  retry_interval=n

  This parameter identifies the time interval in seconds between **pdpr** retries. The default value is 60. A value of 0 indicates the **pdpr** should be retried immediately. This parameter can have values from 0 to 32767.

  Note

  1. These options are only available if the provided script that is part of InfoPrint Manager version 4.2 is used. If an older InfoPrint Manager provided script is used they are ignored. If a custom script is used, these options should not be used.
  2. Using these options in combination with **–n** or **–w** might make the receiver inaccessible for longer periods of time to the host. You might need to modify the z/OS retry interval or count to compensate.

-q *destination*

Specifies the name of the logical destination to which the shell script can submit the file. If you specify a logical destination, you should also specify the name of a shell script on the **-x** flag that the program uses to submit files to the logical destination.

If you specify this shell script on the **-x** flag, you must specify the **-q** flag or **mvsprsd** displays its command syntax and exits.

If you do not specify a logical destination name, the received files are not printed and remain on the file system.

-k

Specifies that the MVS print-options string is kept on the file system and can be used later for error recovery. If a file is transferred from MVS to AIX or Linux successfully, but does not print because of a problem, it is recommended that you specify this option so that the job can be resubmitted for printing from the operating system.

-B

Specifies that a limited EBCDIC to ASCII conversion should be performed on received MVS parameters. Upper and lowercase alphabetic, numerics, and a limited set of special characters are converted. All other characters are changed to an underscore character.

-H *HostCodePage*

Specifies the Host code page used when the JCL was submitted.

When you specify the **-H** flag, and the conversion from EBCDIC to ASCII fails, the receiver uses the default conversion table (inter-operable Latin-1 characters).

-t

Specifies tracing. The trace file is named `trace.log.`*`port`* and is created in the working directory. Only one previous trace file is maintained, and it is called `trace.log.BAK.`*`port`*. The trace file is moved to the backup trace file when the file exceeds 10 MB in size at a document boundary.

If the provided shell script is used with the **-x** flag, the files passed to the script and the intermediate files generated by the script will not be deleted when the script completes processing. You must delete these files manually.

-L *LocalCodePage*

Specifies the Local code page where the MVS Download receiver is running.

When you specify the **-L** flag, you must also specify the **-H** flag.

When you specify the **-H** and **-L** flags, and the conversion from EBCDIC to ASCII fails, the receiver uses the default conversion table (inter-operable Latin-1 characters).

Note

When you specify the **-B** and **-H** flags, and optionally, the **-L** flag, together, and the code page conversion fails, the NLS characters in the JCL parameter values are converted to an underscore character (_) so that an incorrect character is not inserted into the DBCS einvironment.

-w

Specifies the script return code should be monitored. A zero return code from the script causes the daemon to indicate success to the mainframe. A non-zero return code from the script causes the daemon to indicate failure to the mainframe.

When **–w** is specified and the script reports an error on a file in an multiple data set job, the mainframe might retry the file. The script must be prepared to get the same file again. The script can either process it again or fail it.

In addition, any data written to **stderr** by the script might be provided to the mainframe with the failure indicator.

Note

1. The **-w** option also implies the **–n 1** option.
2. Use of the **-w** option degrades overall throughput of the receiver since the receiver maintains the connection with the mainframe until the script completes. Degradation depends on the length of time the script runs, whether the **–n 1** option is currently being used and whether multiple FSAs send files to the daemon. Little or no degradation will be seen for customers who have a single FSA that sends jobs to the daemon and currently use the **–n 1** option. The most degradation will be seen for customers who have multiple FSAs sending jobs to the daemon and do not currently use the **–n 1** option.
3. For Download for z/OS and existing AFP Download Plus customers without the AFP Download Plus APAR OA15317, TCP/IP inactivity time-outs can occur between the mainframe and the daemon. Customers should make sure that their inactivity time-out settings are larger than the time it takes their script to run. Retry settings in the script can also increase the necessary time. For AFP Download Plus customers with the AFP Download Plus APAR OA15317, the TCP/IP inactivity time-out needs to be set above 90 seconds.
4. When both **-w** and **–e** are specified, messages generated by the script might be also provided to AFP Download Plus if requested by AFP Download Plus.

-e

Specifies internal errors or script errors be reported to AFP Download Plus for assistance in problem determination. By default, this function is turned off. The **–e** option on **mvsprsd** must be specified to report internal errors. In addition, the **-w** option must be specified to report script/exit messages.

Examples

1. To start an MVS Download Receiver daemon that stores files received from the JES spool on the `/files1` or `/files2` file system and executes the **mvsprpsm.sh** shell script, which submits the files to the `serv2-lp` logical destination, enter:

```
mvsprsd -p 5400 -d /files1 -d /files2 -x mvsprpsm.sh -q serv2-lp
```

2. To have the same MVS Download daemon keep the MVS print-options string file(s), enter:

```
mvsprsd -p 5400 -d/files1 -d/files2 -qserv2-lp -k
```

3. To have the error messages printed, enter:

```
mvsprsd -p 6001 -q local -d /mvsd -x /usr/lpp/pd/mvsprpsm.sh
-X"failed_job=print"
```

4. To set the number of times that **pdpr** should be retried as four and the time interval between **pdpr** retries as 30 seconds, enter:

```
mvsprsd -p 6001 -q local -d /mvsd -x /usr/lpp/pd/mvsprpsm.sh
-X"retry_count=4 retry_interval=30"
```

Note

Anyone can start the **mvsprsd** daemon, but only someone with **root** authority can stop it.

Suggested reading

- *Print Services Facilities for z/OS: AFP Download Plus,* S550-0433
- *Print Services Facilities for Z/OS: Download for z/OS,* S550-0429

- rc.iprsap utility: start SAP daemons on InfoPrint Manager for AIX or InfoPrint Manager for Linux, p. 239
- rc.pd utility: restarts servers in InfoPrint Manager for AIX or InfoPrint Manager for Linux, p. 239

pcl2afpd utility: starts the pcl2afpd daemon

Syntax

pcl2afpd [**-C** *ConfigurationFile*]

Description

Use the **pcl2afpd** utility to start the **pcl2afpd** daemon. The **pcl2afpd** daemon manages the PCL interpreter portion of the InfoPrint PCL transform program. You must start the **pcl2afpd** daemon somewhere on the network before you can use the **pcl2afp** transform command to transform PCL data streams for printing or transmission with InfoPrint.

The **startsrv** or **start_server** utility automatically starts the **pcl2afpd** daemon if it is installed and not running.

If the **pcl2afpd** daemon stops running, you can restart it by issuing this command:

```
/usr/lpp/psf/bin/pcl2afpd
```

InfoPrint uses the **pcl2afpd** daemon configuration file to determine the default parameters of the **pcl2afpd** daemon. The **/usr/lpp/psf/pcl2afp/pcl2afpd.cfg** file is installed with InfoPrint, and InfoPrint uses it as the default configuration file. You can, however, copy the configuration file, use an editor to edit the copy of the file, and rename it so that you can customize the **pcl2afpd** daemon for your applications. After you make the modifications, you specify the new configuration file with the **-C** flag of the **pcl2afpd** daemon utility.

Note

If you create your own configuration file, you must specify it with the **-C** flag of the **pcl2afp** transform command when you transform PCL files.

Flag

The **pcl2afpd** daemon utility uses the following flag:

-C *ConfigurationFile*

Specifies the configuration file InfoPrint uses with the transform. The value is:

ConfigurationFile

A valid PCL configuration file name. If you do not specify a file, InfoPrint uses the file **/usr/lpp/psf/pcl2afp/pcl2afpd.cfg**.

Configuration file keywords and values

The **pcl2afpd.cfg** file contains the same keywords as the **pcl2afp.cfg** file except that the transform daemon configuration file does not have the **server** keyword. The **pcl2afpd.cfg** contains several additional keywords.

For the keywords common to both configuration files, see The pcl2afp and pcl2afpd configuration files, p. 408.

The PCL transform daemon configuration file can also contain these keywords:

device_controls=[plex,][input*n*=(pcl_bin=*m*)][input*n*=...)]

Specifies whether to recognize the plex command in the PCL data stream, and optionally, how to associate the AFP input tray (**input*n*,** where *n* is between 1 and 255) with the pcl bin (**pcl_bin=*m*,** where *m* is between 0 and 59). When you do not specify **input*n*=(pcl_bin=*m*)** with **plex**, InfoPrint recognizes the plex command with no tray mappings.If you do not specify **plex** and tray mapping is not supplied, InfoPrint uses the settings in the default formdef (which is duplex).

Note

You can specify **input*n*=(pcl_bin=*m*)** up to twenty times.

If the `device_controls` attribute is specified in the **pcl2afpd.cfg** file, an internal formdef is embedded in the **pcl2afp** output the transform generates and the **plex** command from the input file (simplex, duplex, or tumble) is recognized. The appropriate IMM (Invoked Medium Map) is used so the output of simplex, duplex, or tumble is specified in the input file.

log_file={*WorkDirectory***/pcl2afpd.log | *PathName*} DEFAULT=***WorkDirectory***/pcl2afpd.log**

Specifies the file in which the transform daemon logs errors and messages when it converts a data stream from PCL to an AFP data stream.

Valid keyword values are:

*WorkDirectory***/pcl2afpd.log**

This is the default log file, where *WorkDirectory* is the value of the **work_directory** keyword. The default work directory is **/var/psf/pcl2afp**.

PathName

The full path name of a log file

log_size={100 | *Size*} DEFAULT=100

Specifies in kilobytes how large the log file can get before it is renamed <log_file>.bak and a new empty log file is used.

mail_command={/usr/bin/mail | *PathName*} DEFAULT=/usr/bin/mail

Specifies the executable file that the **pcl2afp** command uses to send transform status notifications.

Valid keyword values are:

/usr/bin/mail

The AIX or Linux **mail** command

PathName

The full path name of a communication program

notify={root | *UserID*} DEFAULT=root

Identifies the user to receive notification about problems found during transformation of the PCL file into an AFP data stream file. If a particular user runs most of the PCL transform jobs, you might want to send notifications to that person using this keyword.

Valid keyword values are:

root

The user at the server console

UserID

An AIX or Linux user ID

pcl_program={/usr/lpp/psf/bin/pcl6 | *PathName***} DEFAULT=/usr/lpp/psf/bin/pcl6**

Specifies which PCL-to-AFP transform program (the PCL interpreter) to run. Generally, you will not change this value.

Valid keyword values are:

/usr/lpp/psf/bin/pcl6

The default PCL interpreter

PathName

The full path name of a PCL interpreter file

work_directory={/var/psf/pcl2afp | *PathName***} DEFAULT=/var/psf/pcl2afp**

Specifies the path to the directory where the transform daemon puts its work files. The transform daemon must have read, write, and execute permissions to this directory. The transform daemon is owned by the **root** user, but runs as **daemon**, and is in the **printq** group.

Values are:

/var/psf/pcl2afp

The default work directory

PathName

A directory path

Examples

- To restart the **pcl2afpd** daemon with the default configuration file, enter:

```
pcl2afpd
```

Note

1. If you have not set the **PATH** environment variable to include **/usr/lpp/psf/bin**, you must enter the path name with the **pcl2afpd** daemon.
2. Anyone can start the **pcl2afpd** daemon, but only a person with **root** user authority can stop it.

- To restart the **pcl2afpd** daemon with the configuration file `myfile.cfg`, which is installed in the directory `/usr/lpp/psf/pcl2afp`, enter:

```
pcl2afpd -C /usr/lpp/psf/pcl2afp/myfile.cfg
```

Files

/usr/lpp/psf/bin/pcl2afpd

Transform daemon

/usr/lpp/psf/pcl2afp/pcl2afpd.cfg

pcl2afpd daemon configuration file

/usr/lpp/psf/bin/pcl6

PCL interpreter program

ps2afpd utility: starts the ps2afpd daemon

Syntax

ps2afpd [**-C** *ConfigurationFile*]

Description

Use the **ps2afpd** utility to start the **ps2afpd** daemon. The **ps2afpd** daemon manages the interpreter portion of the InfoPrint PostScript and PDF transform programs. You must start the **ps2afpd** daemon somewhere on the network before you can use the **ps2afp** or **pdf2afp** transform command to transform PostScript or PDF data streams for printing with InfoPrint on IPDS printers.

The **startsrv** or **start_server** utility automatically starts the **ps2afpd** daemon if it is installed and not running.

If the **ps2afpd** daemon stops running, you can restart it by issuing the following command:

```
ps2afpd -C /usr/lpp/psf/ps2afp/ps2afpd.cfg
```

InfoPrint Manager uses the **ps2afpd** daemon configuration file to determine the default parameters of the **ps2afpd** daemon. The **/usr/lpp/psf/ps2afp/ps2afpd.cfg** file is installed with InfoPrint Manager, and InfoPrint Manager uses it as the default configuration file. You can, however, copy the configuration file, use an editor to edit the copy of the file, and rename it so that you can customize the **ps2afpd** daemon for your applications. After you make the modifications, you specify the new configuration file with the **-C** flag of the **ps2afpd** daemon utility.

Note

If you create your own configuration file, you must specify it with the **-C** flag of the **ps2afp** transform command when you transform PostScript or PDF files.

Flag

The **ps2afpd** daemon utility uses the following flag:

-C *ConfigurationFile*

Specifies the configuration file InfoPrint uses with the transform. The value is:

ConfigurationFile

A valid PostScript configuration file name. If you do not specify a file, InfoPrint uses the file **/usr/lpp/psf/ps2afp/ps2afpd.cfg**.

Configuration file keywords and values

The **ps2afpd.cfg** file contains the same keywords as the **ps2afp.cfg** file except that the transform daemon configuration file does not have the **server** keyword. The **ps2afpd.cfg** contains several additional keywords.

For the keywords common to both configuration files, see The agspdld, apped, ps2afp, and ps2afpd configuration files, p. 256.

The PostScript transform daemon configuration file can also contain the following keywords:

device_controls=[plex,][input*w*=(*size*[,type=*x*,color=*y*,weight=*z*)][input*n*=...)]

Specifies whether to recognize the plex command, and optionally, how to associate the AFP input tray (**input*w***) with the contents of the output bin. When you specify **input*w***, you must specify **size**, where **size** is a text string like letter, legal, a3, a4, b4, b5, ledger, or a dimension like 8.5ix11i. Dimensions can be specified as inches (i), millimeters (m), or points (p). The other three input descriptors (**type**, **color**, and **weight**) are optional, but when you specify them, you must separate them with a comma and no spaces.

When you do not specify **input*w*=*size*...** with **plex**, InfoPrint Manager recognizes plex mappings with no additional information for the tray contents.

Note

You can specify [**input*w***=(***size*** ...)] as many times as you need to.

log_file={*WorkDirectory***/ps2afpd.log | *PathName*}**

Specifies the file in which the transform daemon logs errors and messages when it converts a data stream from PostScript or PDF to an AFP data stream.

Valid keyword values are:

*WorkDirectory***/ps2afpd.log**

This is the default log file, where *WorkDirectory* is the value of the **work_directory** keyword. The default work directory is **/var/psf/ps2afp**.

PathName

The full path name of a log file

log_size={100 | *Size*} DEFAULT=100

Specifies in kilobytes how large the log file can get before it is renamed <log_file>.bak and a new empty log file is used.

mail_command={/usr/bin/mail | *PathName*}

Specifies the executable file that the **ps2afpd** command uses to send transform status notifications.

Valid keyword values are:

/usr/bin/mail

The AIX or Linux **mail** command

PathName

The full path name of a communication program

notify={root | *UserID*}

Identifies the user to receive notification about problems encountered during transformation of the PostScript or PDF file into an AFP data stream file. If a particular user runs most of the PostScript and PDF transform jobs, you might want to send notifications to that person using this keyword.

Valid keyword values are:

root

The user at the server console

UserID

An AIX or Linux user ID

ps_program={/usr/lpp/psf/bin/ps2afpi | *PathName*}

Specifies which Postscript-or-PDF-to-AFP transform program (the PostScript interpreter) to run. Generally, you will not change this value. If you do change it, you must change the value of the **ps_init_file** keyword to specify an initialization file at the same level.

Valid keyword values are:

/usr/lpp/psf/bin/ps2afpi

The PostScript Level 3 transform

PathName

The full path name of a PostScript interpreter file

ps_init_file={/usr/lpp/psf/ps2afp/ps2afp.ps | *PathName*}

Specifies the PostScript initialization program to use with the PostScript interpreter. This file specifies the types of messages that the PostScript interpreter reports. Generally, you will not change this value. If you do change it, you must change the value of the **ps_program** keyword to specify a PostScript interpreter at the same level.

Valid keyword values are:

/usr/lpp/psf/ps2afp/ps2afp.ps

The PostScript Level 3 initialization file

PathName

The full path name of an initialization file

work_directory={/var/psf/ps2afp | *PathName*}

Specifies the path to the directory where the transform daemon puts its work files. The transform daemon must have read, write, and execute permissions to this directory. The transform daemon is owned by the **root** user, but runs as **daemon**, and is in the **printq** group.

Note

Only one **ps2afpd** can use the **work_directory** at a time. It cannot be shared.

Values are:

/var/psf/ps2afp

The default work directory

PathName

A directory path

ps_font_map_files={/*usr*/*lpp*/*psf*/*ps*//psfonts.map | *PathName*}

Specifies the path and file name **ps2afp** uses for the font mapping file. This file correlates font names with their file locations.

Valid keyword values are:

/usr/lpp/psf/ps/psfonts.map

The default font mapping file

PathName

The full path name to the font mapping file

Examples

- To restart the **ps2afpd** daemon with the default configuration file, enter:

```
ps2afpd -C /usr/lpp/psf/ps2afp/ps2afpd.cfg
```

Note

1. If you have not set the **PATH** environment variable to include **/usr/lpp/psf/bin**, you must enter the path name with the **ps2afpd** daemon.
2. Anyone can start the **ps2afpd** daemon, but only a person with **root** user authority can stop it.

- To restart the **ps2afpd** daemon with the configuration file `myfile.cfg`, which resides in the directory `/usr/lpp/psf/ps2afp`, enter:

```
ps2afpd -C /usr/lpp/psf/ps2afp/myfile.cfg
```

Files

/usr/lpp/psf/bin/ps2afpd

PostScript daemon

/usr/lpp/psf/bin/ps2afp

PostScript transform executable

/usr/lpp/psf/bin/pdf2afp

PDF transform executable (linked to **/usr/lpp/psf/bin/ps2afp**)

/usr/lpp/psf/ps2afp/ps2afpd.cfg

ps2afpd daemon configuration file

/usr/lpp/psf/ps2afp/ps2afp.cfg

ps2afp command configuration file

/usr/lpp/psf/bin/ps2afpi

PostScript level 3 interpreter program

/usr/lpp/psf/bin/ps2afpi.vm

PostScript interpreter program initial virtual memory

/usr/lpp/psf/ps2afp/ps2afp.ps

PostScript initialization file

/usr/lpp/psf/ps2afp/ps2afpe.ps

PostScript initialization file for extended error reporting

/usr/lpp/psf/ps2afp/psfonts.map

Default PostScript font mapping file

/var/psf/psfonts

User-defined PostScript fonts file

startcbd utility: starts the SAP callback daemon

Syntax

```
startcbd SystemName HostName InstanceID User Client Password Language [31h]
```

Description

Use the **startcbd** utility to start a **sapcbd** daemon. The **sapcbd** or SAP Callback daemon logs onto an SAP system and delivers notifications from InfoPrint Manager servers to the SAP system. You should start only one **sapcbd** for each SAP system for which you have configured InfoPrint Manager as an Output Management System (OMS). All SAP instances sharing the same database form one SAP system.

See rc.iprsap utility: start SAP daemons on InfoPrint Manager for AIX or InfoPrint Manager for Linux, p. 239 for information about having SAP Callback daemons start on system reboot.

Each **sapcbd** daemon has a monitor that will restart if it stops for some reason. To stop it, to move it to another machine for example, use the stopcbd utility: stops the SAP callback daemon, p. 280.

Arguments

The **startcbd** utility uses these arguments:

SystemName

Specifies the three character SAP system name.

HostName

Specifies the name of the host where you want the SAP Callback daemon to log onto the SAP system.

InstanceID

Specifies the SAP Instance ID you want the SAP Callback daemon to log onto.

User

Specifies the userid defined for the SAP Callback daemon to log on with. This needs to be a userid of CPIC type with XOMI permissions.

Client

Specifies the SAP client for the SAP Callback daemon to log onto.

Password

Specifies the password for the SAP Callback daemon to log on with.

Language

Specifies the language for the SAP Callback daemon to log on with.

31h

An extra argument to specify that the SAP Callback daemon is for a 3.1h or 3.1i system.

Examples

- To start the **startcbd** daemon to support SAP Release 4 System TST after you have:
  - Configured InfoPrint Manager as an OMS in TST
  - Created a CPIC user for the **sapcbd** daemon
  - Identified which instance and client you want the **startcbd** to log onto

  Then you would enter:

```
startcbd TST ibmbtt15 15 ibm 030 ipmpass EN
```

- To start the **startcbd** daemon to support SAP Release 3.1 System TST after you have:
  - Configured InfoPrint Manager as an OMS in TST
  - Created a CPIC user for the **sapcbd** daemon
  - Identified which instance and client you want the **startcbd** to log onto

  Then you would enter:

```
startcbd TST ibmbtt15 15 ibm 030 ipmpass EN 31h
```

stopcbd utility: stops the SAP callback daemon

Syntax

```
stopcbd SAPSystemName
```

Description

Use the **stopcbd** utility to stop the **sapcbd** daemon or SAP Callback daemon for an SAP system and stop its monitor.

Argument

The **stopcbd** utility uses this argument:

SAPSystemName

Specifies the three character ID of the SAP system that the **sapcbd** daemon is supporting. This is the specific **sapcbd** daemon to stop.

Example

To stop or shut down the **sapcbd** daemon for SAP System PRD, enter:

```
stopcbd PRD
```

startlpd utility: starts the InfoPrint Manager LPD daemon

Syntax

```
startlpd
```

Description

Use the **startlpd** utility to start the InfoPrint Manager LPD gateway daemon. The LPD gateway daemon will start on port 515, so make sure that the port is available by closing or disabling any other LPD daemon such as CUPS LPD. If port 515 is not available, the InfoPrint Manager LPD daemon will not start.

Note

Only available on the Linux platform.

stoplpd utility: stops the InfoPrint Manager LPD daemon

Syntax

```
stoplpd
```

Description

Use the **stoplpd** utility to stop the InfoPrint Manager LPD gateway daemon.

Note

Only available on the Linux platform.

startippgw utility: start an IPP gateway on InfoPrint Manager for AIX or InfoPrint Manager for Linux

Syntax

startippgw -p <*ListenPort*> **-t** <*NumberofThreads*> **-h** <*IPMHost*> **-s** < *IPMsocket*>
startippgw -c <*ReceiverName*>

Description

Use the **startippgw** utility to start an IPP gateway daemon.

If you start an IPP gateway daemon on a different port than the default port, make sure that the IPP client you are using allows the port to be configured. This is necessary because most IPP clients use Port 631 by default. In other words, you must use an IPP client that lets you configure the port if you plan to start an IPP gateway daemon on a different port than 631. When using a different port than 631, you must update `/etc/services` with the unique port number.

Arguments

The **startippgw** utility uses these arguments:

-p *ListenPort*

Specifies the port where the IPP gateway listens. The default is port 631.

If you start an IPP gateway on a port other than 631, InfoPrint Manager does not update `/etc/services`. Therefore, you need to update `/etc/services` manually when you start an IPP gateway on a port other than 631.

-t *NumberofThreads*

Specifies the number of threads in the connection thread pool. The default is 20. There is no limit on the number of threads.

-h *IPMhost*

Identifies the host of the InfoPrint Manager server to send the jobs to. When not specified, the InfoPrint Manager server follows the Configuration logic, to define the host and socket.

-s *IPMsocket*

Identifies the port of the InfoPrint Manager server to send the jobs to. When not specified, the InfoPrint Manager server follows the Configuration logic, to define the host and socket.

-c *ReceiverName*

Uses the receiver name to generate the configuration full path and file name in order to start the receiver. If there is no configuration file in `/var/pd/ippgw/receiver_name`, the receiver does not start.

Note

The **-c** parameter can only be used for an IPP gateway receiver created through the InfoPrint Manager Web Management Interface (WMI).

Configuration logic

InfoPrint Manager determines which server host and server port to use based on these sequence:

1. Server host and server port specified with the **startippgw** utility or the SMIT interface.
2. Server host and server port specified with the PDHOST and PD_SOCKET environment variables.
3. Uses the defaults for PDHOST=localhost and PD_SOCKET=6874.

Note

This configuration logic enables multiple IPP gateways to run on a single machine communicating with one or more InfoPrint Manager servers.

Examples

To start the **startippgw** daemon with a default port of 631 and a default of 20 threads in the connection thread pool, enter:

```
startippgw
```

To start the **startippgw** daemon with a default port of 631 and 35 threads in the connection thread pool, enter:

```
startippgw -t 35
```

To start the **startippgw** daemon with a listen port of 815 and a default of 20 threads in the connection thread pool, enter:

```
startippgw -p 815
```

To start the **startippgw** daemon with a server host of `myhost` and a port or socket of 7963, enter:

```
startippgw -h myhost -s 7963
```

To start the **startippgw** daemon with the ippgw1 configuration, enter:

```
startippgw -c ippgw1
```

Note

Only a person with `root` user authority or the InfoPrint Manager user can run this command.

stopippgw utility: stop an IPP gateway on InfoPrint Manager for AIX or InfoPrint Manager for Linux

Syntax

stopippgw -c <*name*>
stopippgw -p <*port*>
stopippgw -a

Description

Use the **stopippgw** utility to stop IPP gateway daemons.

Argument

The **stopippgw** utility uses these arguments:

-c *name*

Specifies the IPP gateway receiver to stop.

-p *port*

Specifies the port where the IPP gateway listens.

-a

Specifies that all IPP gateway receivers will be stopped.

Note

The **-c** parameter can only be used for an IPP gateway receiver created through the InfoPrint Manager Web Management Interface (WMI).

Examples

To stop the **stopippgw** daemon with a 12345 port, enter:

```
stopippgw -p 12345
```

To stop the **stopippgw** daemon started with the ippgw1 configuration, enter:

```
stopippgw -c ippgw1
```

To stop the **stopippgw** daemons started with any configuration, enter:

```
stopippgw -a
```

startnotd utility: starts the notifyd daemon

Syntax

startnotd

Description

Use the **startnotd** utility to start the **notifyd** daemon. The **notifyd** daemon receives and stores notification messages for all users requesting notification by delivery-method message. Only one notification daemon needs to be running for each InfoPrint Manager cell or domain; one notification daemon receives notifications from and services all InfoPrint Manager servers sharing a name space.

With InfoPrint Manager for AIX or InfoPrint Manager for Linux, you can specify that the **notifyd** daemon starts whenever the system starts or is rebooted by using the InfoPrint Manager SMIT panels on AIX or InfoPrint Manager Management Interface on Linux.

The **notifyd** daemon has a monitor that restarts it if it ever stops running. If you want to stop it, to move it to another machine for example, use the stopnotd utility: stops the notifyd daemon, p. 284.

stopnotd utility: stops the notifyd daemon

Syntax

stopnotd

Description

Use the **stopnotd** utility to stop the **notifyd** daemon and its monitor.

To start **notifyd**, see startnotd utility: starts the notifyd daemon, p. 284.

startvpd utility: starts the InfoPrint Manager VPD daemon

Syntax

```
startvpd
```

Description

Use the **startvpd** utility to start the InfoPrint Manager VPD gateway daemon. The VPD gateway daemon will start on port 9100. If port 9100 is not available, the InfoPrint Manager VPD daemon will not start.

stopvpd utility: stops the InfoPrint Manager VPD daemon

Syntax

```
stopvpd
```

Description

Use the **stopvpd** utility to stop the InfoPrint Manager VPD gateway daemon.

InfoPrint Manager transform commands

This section describes these InfoPrint Manager transform commands:

Transform Name	AIX	Linux	Windows
afp2pdf transform: transforms AFP data to PDF, p. 286	AIX	Linux	Windows
db2afp command: transforms DBCS data to AFP, p. 314	AIX	Linux	Windows
d2afp command: transforms ditroff data to AFP in InfoPrint Manager for AIX or InfoPrint Manager for Linux, p. 319	AIX	Linux	N/A
gif2afp command: transforms GIF data to AFP, p. 322	AIX	Linux	Windows
img2afp command: transforms image data to AFP, p. 338	AIX	Linux	Windows
jpeg2afp command: transforms JPEG data to AFP, p. 343	AIX	Linux	Windows
line2afp command: transforms traditional line data and ASCII data to AFP, p. 360	AIX	Linux	Windows
pcl2afp command: transforms PCL data to AFP, p. 390	AIX	Linux	Windows

pdf2afp and ps2afp commands: transform PDF or PostScript data to AFP, p. 419	AIX	Linux	Windows
sap2afp command: transforms SAP OTF or ABAP data to AFP, p. 459	AIX	Linux	Windows
tiff2afp command: transforms TIFF data to AFP, p. 481	AIX	Linux	Windows
xml2afp transform: transforms XML data to AFP, p. 500	AIX	Linux	Windows
xml2pdf transform: transforms XML data to PDF, p. 507	AIX	Linux	Windows

Note

InfoPrint Manager invokes the appropriate transform automatically whenever you print a DBCS ASCII, DBCS EUC, ditroff, GIF, JPEG, line data, PCL, PDF, PostScript, SAP, TIFF, or XML job on a PSF physical printer. You can pass options to these transforms using the **other-transform-options** document attribute on the InfoPrint Manager **pdpr** command or the **-o** flag of the print commands (**enq**, **lp**, and **qprt**) or the InfoPrint Manager **lprafp** command. However, InfoPrint Manager does not automatically invoke the **img2afp** or **xml2pdf** transforms.

For more information, see Attributes for documents and default documents, p. 784, pdpr command: submits jobs, p. 124, lprafp command: submits remote jobs in InfoPrint Manager for AIX or InfoPrint Manager for Linux, p. 63, or The -o flag for AIX print commands and the InfoPrint Manager lprafp command, p. 170.

Transform AFP data to PDF

This section describes the **AFP to PDF** transform and includes its syntax, options, and values.

afp2pdf transform: transforms AFP data to PDF

Introducing the afp2pdf transform

The **afp2pdf** transform converts Mixed Object Document Content Architecture (MO:DCA-P) documents, also called AFP documents, to Adobe Portable Document Format (PDF) documents to be viewed, archived, e-mailed, or printed.

The **afp2pdf** transform can be invoked from the command line. You can also configure the InfoPrint Manager transform subsystem to invoke the **afp2pdf** transform.

The **afp2pdf** transform includes this support:

TrueType font support

You can convert an AFP document with TrueType fonts, and the TrueType fonts are embedded in the resulting PDF document.

You can also map your TrueType fonts to create a much smaller PDF file. By adding your TrueType Fonts to the `ttdef.fnt` file with settings for the familyname, style, weight appropriately, the **afp2pdf** transform maps the TrueType fonts.

You can map your DBCS TrueType fonts to Type0 fonts.

TrueType fonts are either embedded as internal resources, or they can be referenced as external resources and mapped. In either case, the font may be defined through the coded font name or with a character set/code page pair.

Outline FOCA support

The **afp2pdf** transform now supports Outline Font Object Content Architecture (FOCA). The addition of FOCA support improves character placement for AFP raster fonts and provides 100% font fidelity for AFP outline fonts.

Outline fonts are either embedded as internal resources, or they can be referenced as external resources and mapped. In either case, the font may be defined through the coded font name or with a character set/code page pair.

AFP FOCA Fonts support:

- SBCS Outline

- SBCS Raster

- DBCS Outline

- DBCS Raster, composed from several SBCS Raster fonts and defined by coded font files that contain several character sets- coded page pairs

Outline IOCA support

The **afp2pdf** transform now supports Outline Image Object Content Architecture (FOCA) for the following output image types:

- FS10
- FS40
- FS42
- FS45

Outline GOCA support

The **afp2pdf** transform now supports Outline Graphics Object Content Architecture (FOCA).

CMR support

The **afp2pdf** transform now supports Color management resources (CMR).

JFIF and GIF support

JFIF or GIF images defined in an AFP document are displayed in the PDF file.

Inline Medium Map

The **afp2pdf** transform now processes the correct medium map for Inline Medium Maps.

Bar code support

These bar codes are supported by the **afp2pdf** transform:

- AIM USS-39

- AIM USS-128
- AIM USS-Codabar
- AIM USS-I 2/5
- Australia Post Four State
- Codabar 2 of 7
- Code 39
- Code 93
- Code 128
- Container Barcode
- Data Matrix
- Data Matrix Structured Append
- Dutch KIX
- EAN Five-Digit Supplemental
- EAN Two-Digit Supplemental
- EAN/JAN-8
- EAN/JAN-13
- GS1 DataBar
- GS1-128
- Industrial 2 of 5
- Intelligent Mail Barcode
- ITF-14
- Japan Postal Bar Code
- Macro PDF 417
- Matrix 2 of 5
- MaxiCode (2D bar code)
- MSI
- PDF417 (2D bar code)
- Planet
- Postnet
- QR Code (2D bar code)
- RM4SCC
- Royal Mail RED TAG
- UCC EAN 128 (modifiers x'03' and x'04')
- UPC Five-Digit Supplemental
- UPC Two-Digit Supplemental
- UPC/CGPC-A

- UPC/CGPC-E
- USPS four-state

Metadata support

The afp2pdf transform supports Metadata information as defined in MODCA 9 and MOCA Specification First Edition (July 2014).

Limitations of the afp2pdf transform

Limitations associated with the **afp2pdf** transform include:

Text fidelity

The **afp2pdf** transform uses font substitutions to convert MO:DCA-P and PTOCA, which means that text fidelity will most likely **not** match if displayed views of PDF are compared with printed views of IPDS on paper. Outline fonts in the MO:DCA-P are converted to Type1 fonts. However, when fonts are provided for the transform, the **afp2pdf** transform can produce text fidelity.

Image quality

The transformed image data might not match if a user compares the printed output on paper with the PDF data viewed on a display. Several factors that contribute to the differences are:

- **Color differences** between displayed image and printed output. For example, a monitor used with Microsoft Windows typically uses RGB color while a printer typically uses another color model like CMYK or halftoned black and white.
- **Resolution differences** between displayed image and printed output. For example, a monitor typically uses 72 or 96 dpi while a printer uses much greater resolution like 240, 300, 600, and so forth.
- **Anomalies** if resolution changes occur. The algorithms used to convert images from AFP to PDF use a brute force algorithm to eliminate pixels that sometimes create horizontal or vertical lines in the image strips.

Text support

Since the **afp2pdf** transform converts all AFP fonts to a single PDF encoding, not all glyphs can be represented properly. However, if the fonts used to display the text are not mapped fonts, the **afp2pdf** transform can create custom encoding in the PDF file, and it can display glyphs from different languages.

Enhanced n-up is not supported

The **afp2pdf** transform does not support enhanced n-up. The transform acknowledges each logical page as a physical page.

CMR (Color Management Resource) is not supported

When CMR is used, it is ignored.

Medium Copy Count limit

Medium Copy Count is limited to 1.

Compressed Metadata

The EXI (Efficient XML Interchange) compression is not supported for metadata objects.

Syntax

-pragma {aligntext={0 | 90 | 180 | 270} | fdef = *form definition*}

-v

afpfile

Parameters

This section lists the parameters for the **afp2pdf** transform:

-o *outputfile*

Specifies the output path and file name of the output PDF file. By default, the output PDF file is placed in the same directory as the input file, and it has the same file name as the input file with the extension changed from `afp` to `pdf`. For example, when the PDF is generated from an AFP file named `afpdoc.afp`, an output file named `afpdoc.pdf` is created.

Note

If AFP is not used as the extension, a `pdf` extension is still added to the output PDF file.

-pragma aligntext [0|90|180|270] | fdef *formdefinition* **|resource_path=resource path**

Use **aligntext** to specify the rotation value to use when transforming the file. Valid values are **0**, **90**, **180**, or **270** (clockwise). Some AFP files might have already been formatted with a rotated orientation. If this occurs, text is aligned with the vertical axis of the paper rather than the horizontal axis. To correct this, you must use this parameter to align the text as desired.

Use **resource_path** to specify the path to the resources. This can be a single path or a list of paths separated by semi-colon (;).

Note

When you specify **aligntext**, you must specify the = sign. For example, `aligntext=90`.

Use **fdef** to specify the fully qualified file name of the form definition (FORMDEF) resource to be used when transforming the AFP file. For example,

```
afp2pdf -pragma fdef=c:\mydirectory\myformdef.fde afpfile.afp
```

If an inline form definition is associated with the AFP document, then both the **fdef** from the configuration file and the command line are ignored. If **fdef** is not included in the configuration file or specified on the command line, the F1A10110 default form definition is used.

When you use **-pragma**, you can specify only one of the **-pragma** options: **aligntext**, **fdef**, or **resource_path**. To specify more then one option, use a **-pragma** entry for each option specified.

-C *Configuration File*

Specifies the path and file name of the configuration file used with the transform. You can use the default configuration file supplied with the **afp2pdf** transform, or you can copy the default configuration file and modify it as appropriate. The configuration file contains option-value pairs. If you specify multiple **-C** options on the command line, the configuration files are processed in the order that you specify them and the results are additive.

Note

If no **-C** parameter is specified, the default configuration file is used. The default **afp2pdf** configuration file is located in:

For AIX or Linux

/usr/lpp/psf/afp2pdf/afp2pdf.cfg

For Windows

***install_path*\afp2pdf\afp2pdf.cfg**

-P 6986 | *port* **DEFAULT=6986**

Specifies the port number **afp2pdf** uses to make a connection with the Transform Manager (set by the **-S** flag). If you specify the **-P** flag, you must also specify the **-S** flag. And conversely, if you specify the **-S** flag, you must also specify the **-P** flag.

6986

The default port number if InfoPrint Manager is connected to Transform Manager.

port

The port number you specify if InfoPrint Manager is connected to Transform Manager

-S *SeverName*

Specifies the name of the system on which the Transform Manager is running. The value is:

ServerName

Any valid workstation name on which the Transform Manager is installed and running. The name is defined in **/etc/hosts** file or by a name server, and can be a nickname like **molly**, or a dotted decimal address like **9.99.9.23**.

Note

If you specify the **-P** flag, you must also specify the **-S** flag. And conversely, if you specify the **-S** flag, you must also specify the **-P** flag.

-v

Specifies verbose information will be generated to `stderr`.

afpfile

Specifies the AFP input file to be transformed. This parameter is required.

The afp2pdf transform configuration file

Parameters to control settings for the **afp2pdf** transform are specified in a configuration file. By default, the name of this file is `afp2pdf.cfg`. **For AIX or Linux**, the file is located in `/usr/lpp/psf/afp2pdf`. **For Windows**, the file is located in *`install_path`*`\afp2pdf`.

The syntax of the configuration file is exactly the same as the command line syntax with these additional rules:

1. Blank lines are ignored.

2. The information after a pound sign (#) is considered a comment and is ignored. The pound sign can occur anywhere on a line.
3. To include a pound sign in parameter data, it must be escaped; that is, it must be preceded by a backwards slash.
4. White space before and after parameter data is removed.
5. Parameter data on successive lines is concatenated with a single space between them.
6. Parameters can span lines as long as they follow rules 1 through 5.

Note

- Options specified on the command line override options in the configuration file.

The parameters for the **afp2pdf** transform options are:

AFM_PATH=<*path*>

This parameter specifies the path location of the Adobe Font Metrics (AFM) files that the transform uses. An AFM stores font metric data for a Type 1 PostScript font. It contains the master design of a specific font, which defines the way each character of the font looks. If a path is not specified, the default path is:

For AIX or Linux

`/usr/lpp/psf/afp2pdf/font/AFM`

For Windows

`install_path``\afp2pdf\font\AFM`

There is no command line flag associated with the **AFM_PATH** parameter.

CNV_PATH=<*path*>

This parameter specifies the path location of the CNV files that the ICU library uses to convert text from one code page to Unicode and vice versa. If a path is not specified, the default path is:

For AIX or Linux

`/usr/lpp/psf/afp2pdf/cnv`

For Windows

`install_path``\afp2pdf\cnv`

There is no command line flag associated with the **CNV_PATH** parameter.

DEFAULT_CPID=<*intValue*>

This parameter specifies a default Code Page Identifier (CPID) to be used when transforming AFP or SCS files.

If a **DEFAULT_CPID** is not specified when transforming AFP files, a default value based on the `cpdef` file will be used.

If a **DEFAULT_CPID** is not specified when transforming SCS files, CPID 500 will be used as the default.

There is no command line flag associated with the **DEFAULT_CPID** parameter.

DEFAULT_FGID=<*intValue*>

This parameter specifies a default Font Global Identifier (FGID) to be used when transforming AFP or SCS files.

If a **DEFAULT_FGID** is not specified when transforming AFP files, a default value based on the `csdef` file will be used.

If a **DEFAULT_FGID** is not specified when transforming SCS files, FGID 11 (Courier) will be used as the default.

There is no command line flag associated with the **DEFAULT_FGID** parameter.

DISABLE_MEMSREAM=(TRUE|FALSE)

When this parameter is set to **TRUE**, it specifies that during the transformation, the content of the PDF document will be written in temporary files created on disk, no matter the size of the AFP document. This parameter is useful if the output PDF document is too large to be kept in memory until the transformation is completed. By default, the PDF document content is kept in memory for an AFP document smaller than 10 MB; otherwise, temporary files are used.

There is no command line flag associated with the **DISABLE_MEMSTREAM** parameter.

ENABLE_AUTO_FONT_IMAGE=(TRUE|FALSE)

When this parameter is set to **TRUE**, it specifies that the output PDF document will contain an image for each character that was written with a raster font in the AFP document. By default, the raster fonts will be replaced with another font, and all characters will be written as text in the PDF document. However, some of the characters might look different from their raster form.

There is no command line flag associated with the **ENABLE_AUTO_FONT_IMAGE** parameter.

FOCA_FONT_PATH=<*path*>

This parameter specifies the path where the AFP FOCA fonts are installed. The default path is:

For AIX

`/usr/lpp/psf/fontlib`

For Linux

`install_path``/afp2pdf/reslib`

For Windows

`install_path``\afp2pdf\reslib`

There is no command line flag associated with the **FOCA_FONT_PATH** parameter.

FONT_PATH=<*path*>

This parameter specifies the path location of the font files that the transform uses when writing the PDF document. If a path is not specified, the default path is:

For AIX or Linux

`/usr/lpp/psf/afp2pdf/font`

For Windows

`install_path``\afp2pdf\font`

There is no command line flag associated with the **FONT_PATH** parameter.

MAX_OBJECTS=<*number*>

This parameter specifies the maximum objects that can be listed in the PDF cross-reference table (XREF). If the AFP file contains more objects than this, the additional ones are ignored. This setting is provided for use with the **MAX_PAGES** setting. For example, if **MAX_PAGES** is set to a number greater than 1000, the value assigned to **MAX_OBJECTS** might need to be set to a number greater than 50000.

By default, **MAX_OBJECTS** and **MAX_PAGES** are commented out, which does not limit the number of objects or pages.

There is no command line flag associated with the **MAX_OBJECTS** parameter.

MAX_PAGES=<*number*>

This parameter specifies the maximum pages to be converted. You can use this parameter to limit the number of pages generated by the transform. For example, if the number of pages in an AFP document is not known and you want to limit disk space usage, you might want to set a limit on the number of pages generated by the transform. Limiting the number of pages can also improve transform performance.

By default, **MAX_PAGES** and **MAX_OBJECTS** are commented out, which does not limit the number of pages or objects.

There is no command line flag associated with the **MAX_PAGES** parameter.

OUTPUTFILE=<*path+filename*>

This parameter specifies the *path* and *filename* of the output PDF file. By default, the output PDF file is placed in the same directory as the input file, and it has the same file name as the input file with the extension changed from `.afp` to `.pdf`. For example, when the PDF is generated from an AFP file named `afpdoc.afp`, an output file named `afpdoc.pdf` is created.

Note

- If AFP is not used as the extension, a `.pdf` extension is still added to the output PDF file.

OVERLAYEXT=<*ListOfExtenstions*>PAGESEGEXT=<*ListOfExtenstions*>FORMDEFEXT=<*ListOfExtenstions*>JFIFext=<*ListOfExtenstions*>GIFEXT=<*ListOfExtenstions*>TIFFEXT=<*ListOfExtenstions*>

These parameters specify the accepted extension for a resource type. The possible extension are separated by a comma (,). For each extension, a * (asterisk) will be replaced with the name of the searched resource. Therefore, specifying an * (asterisk) means no extension.

When searching by name in the **RESOURCE_DATA_PATH**, the transform first tries the name with no extension. If it does not succeed, it tries with every extension from the list until the resource is found.

By default, the extension list is an * (asterisk).

There is no command line flag associated with these parameters.

PDF_FONT_MAP_FILE = <*path*>

This parameter specifies the path location of the `fontmap.lst` file that maps the Type 1 Fonts. When specified, it means that the user wants to embed Type 1 Fonts into the PDF document. If a path is not specified, the default path is:

For AIX or Linux

```
/usr/lpp/psf/afp2pdf/font/fontmap.lst
```

For Windows

install_path\afp2pdf\font\fontmap.lst

There is no command line flag associated with the **PDF_FONT_MAP_FILE** parameter.

PFMPFB_DIRECTORY=<*path*>

This parameter specifies the path location of the Adobe Type 1 outline font files that the transform uses when embedding fonts inside of the PDF document. When simple font substitution is not acceptable in the PDF output, it is possible to embed a custom Type 1 font inside the PDF for better results. If a path is not specified, the default path is:

For AIX or Linux

/usr/lpp/psf/afp2pdf/font/type1

For Windows

install_path\afp2pdf\font\type1

Note

- Placing Type 1 font files in this directory does not mean that they are automatically placed inside of the PDF file. For a font to be embedded, it must be mapped using the transform font definition files. See Embedding Type 1 Fonts, p. 299 for more information.

There is no command line flag associated with the **PFMPFB_DIRECTORY** parameter.

PRAGMA_FDEF= <*filename*>

This parameter specifies the file name of the form definition (FORMDEF) resource to be used when transforming the AFP file. If an inline form definition is associated with the AFP document, then both the **FDEF** from the configuration file and the command line are ignored. If **FDEF** is not included in the configuration file or specified on the command line, the F1A10110 default form definition is used.

PRAGMA_ALIGNTEXT=<*angle*>

This parameter specifies the rotation value to use when transforming the file. Valid values are **0**, **90**, **180**, or **270** (clockwise). Some AFP files might have already been formatted with a rotated orientation. If this occurs, text is aligned with the vertical axis of the paper rather than the horizontal axis. To correct this, you must use this parameter to align the text as desired.

RESOURCE_DATA_PATH =<*path*>

This parameter specifies the path location of the resource library. For all the external resources used by the AFP document (formdef, overlay, page segment, jfif, gif, IOCA image), the transform looks for them in this specified path. If a path is not specified, the default path is:

For AIX or Linux

/usr/lpp/psf/afp2pdf/reslib;/usr/lpp/psf/reslib

For Windows

install_path\afp2pdf\reslib

There is no command line flag associated with the **RESOURCE_DATA_PATH** parameter.

TT_FONT_PATH=<*path*>

This parameter specifies the location of the TrueType font or the TrueType Collection used. If a path is not specified, the default path is:

For AIX or Linux

`/usr/lpp/psf/afp2pdf/font/truetype`

For Windows

`install_path``\afp2pdf\font\truetype`

USE_AFP_METADATA=<YES|YES_PAGE|YES_DOCUMENT|NO>

This parameter specifies if the metadata is added to the PDF file and if it is on page level or on document level. When the parameter is set to **YES** and **YES_PAGE**, the same metadata is placed on every page. When the parameter is set to **YES_DOCUMENT**, the metadata is placed only once for the entire document. The default value is **YES**.

VERBOSE

This parameter specifies verbose information will be generated to `stderr`.

Using the afp2pdf tracing and logging facility

Parameters to control settings for the tracing and logging facility of **afp2pdf** transform are specified in a configuration file. By default, the name of the file is `tracer.cfg`. The tracing facility can provide a large amount of information about how the transform performed the operations and also how the code was run.

The new tracing/logging facility uses a hierarchical model with nine levels of details:

OFF

All traces are not logged.

SEVERE

Only severe errors are logged.

WARNING

The severe errors and warnings are logged.

CONFIG

All above and also the configuration information are logged.

INFO

All above and general information messages are logged.

FINE

All above and fine debugging messages are logged.

FINER

All above and finer debugging messages are logged.

FINEST

All above and finest debugging messages are logged.

ALL

All messages are logged.

By default, all traces are off and no messages are logged in the trace file. To start the tracer/logger, follow these steps:

1. The `tracer.cfg` file is located in the same directory as the `afp2pdf.exe`, and it looks like this:

```
; BEGIN OF TRACER.CFG FILE
;
; This file is used for configuring the tracer.
;
; ALL KEYS AND VALUES FROM THIS FILE ARE CASE SENSITIVE!!!
;
; Key name:          TRACE-LEVEL
; Possible values:   OFF,SEVERE,WARNING,CONFIG,INFO,FINE,FINER,FINEST,ALL
; Default value:     OFF
; Description:       Set the level of details that are recorded by the
;tracer. The order of the values is also the level
;of visibility. For example: if the tracer is set
;to level CONFIG, all levels prior to this level
;are recorded (SEVERE, WARNING and CONFIG).
;                   OFF is to shutdown the trace completely
;                   ALL is the most detailed level of tracing
TRACE-LEVEL          = INFO

; Key name:          TRACE-PATH
; Possible values:   A valid location on the disk. If empty then the
;trace will use the current working directory.
; Default value:
; Description:       Specifies where the log files are going to be
;created.
TRACE-PATH           =

; Key name:          TRACE-FILENAME
; Possible values:   A filename that contains the %d or %u inside
;of it.
; Default value:     trace%d.log
; Description:       This is used as template for creating the trace
;filename. The %d or %u is used to specify the
;current number of the trace.
TRACE-FILENAME       = trace%d.log

; Key name:          MAX-BACKUP-TRACE
; Possible values:   A positive number
; Default value:     3
; Description:       This field specifies how many backups of the
;trace should be kept on the disk before
;start deleting them.
MAX-BACKUP-TRACE     = 3


; Key name:          TRACE-MAX-SIZE
; Possible values:   A positive number for the size of the trace
;file in bytes.
; Default value:     5242880 ~ 5Mb
; Description:       This field specifies how big the trace file
;should be before wrapping the file.
TRACE-MAX-SIZE       = 5242880

; Key name:          OUTPUT-TO-STDERR
```

```
; Possible values:  YES,NO
; Default value:    NO
; Description:      This field tells if the trace messages should
be sent to standard error or not. This parameter
can be combined with OUTPUT-TO-STDOUT and
OUTPUT-TO-FILE for writing to multiple locations.
OUTPUT-TO-STDERR    = NO

; Key name:         OUTPUT-TO-STDOUT
; Possible values:  YES,NO
; Default value:    NO
; Description:      This field tells if the trace messages should be
sent to standard output or
;                   not
OUTPUT-TO-STDOUT    = NO

; Key name:         OUTPUT-TO-FILE
; Possible values:  YES,NO
; Default value:    YES
; Description:      This field tells if the trace messages should be
sent to the trace file or not
OUTPUT-TO-FILE      = NO

; END OF TRACER.CFG FILE
```

Note

All keys and values in `tracer.cfg` are case-sensitive.

2. Copy the sample `tracer.cfg` file into the `var/afp2pdf` for AIX or Linux or the *`install_path`*`\var\afp2pdf` for Windows directory.
3. Configure the parameter **OUTPUT-TO-FILE** to **YES**. And specify the location where the trace files should be created by configuring the parameter **TRACE-PATH** to `var/afp2pdf` for AIX or Linux or the *`install_path`*`\var\afp2pdf` for Windows.
4. On the next launch of the executable, the application will write the traces to the path configured in step 3.

Using AFP resources

The **afp2pdf** transform uses these AFP resources:

- Page segments
- Overlays
- Form definitions

The **afp2pdf** transform does not process AFP font files. If the program encounters resources of this type, they are ignored. To display text, the transform uses an existing set of predefined fonts. Font definition files that map the standard AFP fonts to Acrobat fonts for PDF are provided. If your AFP document uses AFP fonts that you have customized or created, you must map these fonts. For information about mapping AFP fonts, see Mapping AFP fonts, p. 300.

The page segment, overlay, and form definition resources can be passed to the transform from these locations:

Inline resource group

The AFP resources needed by the AFP data file are combined into a logical resource library for the document. This resource group is contained in the AFP file along with the AFP document.

Resource directories

The **afp2pdf** transform provides a resource directory for external resources. On AIX or Linux, the directory is `/usr/lpp/psf/afp2pdf/reslib`, and on Windows, the directory is *`install_path`*`\afp2pdf\reslib`.

If InfoPrint Manager is installed, the **afp2pdf** transform also uses the InfoPrint Manager directory. If InfoPrint Manager for AIX or InfoPrint Manager for Linux is installed, the **afp2pdf** client uses the **/usr/lpp/psf/reslib** resource directory. If InfoPrint Manager for Windows is installed, the **afp2pdf** client uses the *`install_path`*`\reslib` resource directory.

For external resources, copy the resources:

For AIX or Linux:

`/usr/lpp/psf/afp2pdf/reslib`

For Windows:

`install_path``\afp2pdf\reslib`

Note

- The InfoPrint Manager resource directories are not used by the **afp2pdf** client when **afp2pdf** communicates with the Transform Feature. These resource directories are used when **afp2pdf** runs natively on InfoPrint Manager for AIX, InfoPrint Manager for Linux, or InfoPrint Manager for Windows.

Embedding Type 1 Fonts

When a custom AFP font is used in an AFP document, it might be necessary to generate an equivalent Type 1 outline font. You can configure the transform program to embed this Type 1 outline font in the output PDF file for proper display.

The Type 1 font must be in binary (PFB/PFM) format. If a font is in ASCII (AFM/PFA) format, you must convert it before it can be used with the transform. Type 1 fonts typically consist of a printer font binary (PFB) file and a printer font metrics (PFM) file. The PFB file contains the mathematical descriptions (in the PostScript language) for each character. The PFM file contains the font metrics needed for the characters.

For example, assume a Type 1 font is made up of the files `CustFont.pfb` and `CustFont.pfm`. The file extensions of `.pfb` and `.pfm` files must be lowercase for the transform to correctly identify these files. The font file name, `CustFont` must be the same for both the `.pfb` and `.pfm` files.

For the transform to use these files, you must specify:

- Where the files are located.
- When the files should be substituted for a specific AFP font.

File location

All Type 1 font files that can be used for embedding fonts into the PDF file must be placed into a single directory. This directory is then specified with the **PfmPfb_Directory** parameter in the transform options file.

See The afp2pdf transform configuration file, p. 291 for more information.

Mapping the AFP font to the embedded Type 1 font

Usually, the embedded Type 1 font name is specified in the `alias.fnt` font mapping configuration file.

Under the **FONT** section, a font name and font metric file name are specified for the font:

```
[FONT]
font=font_name,font_metic_name
```

Where:

FONT

Defines the name by which this font is known and is referred to by the other font configuration files of the transform. For example, **Custom1**.

font_name

Specifies the name of the font, such as **CustFont**. This name is case-sensitive and must match the file name of the PFB/PFM files.

font_metric-name

Specifies the file name for the font metric information. If it is set to **NULL**, it indicates that extra font metric information is not used.

In this example, if the AFP font is mapped to **Custom1**, the Type 1 font, **CustFont**, is embedded inside the output PDF file and the appropriate text uses this font for the display:

```
[FONT}
Custom1=CustFont,NULL
```

Mapping AFP fonts

The **afp2pdf** transform needs to map the AFP fonts your document was created with to fonts that can be used in PDF documents.

For the **afp2pdf** transform to map the best matching fonts to display your AFP document, the transform needs to know certain characteristics about the fonts that were used to create your document. Mapping AFP fonts is done with the font definition files installed as part of the **afp2pdf** transform. These files are loaded into the **FONT** subdirectory under `/opt/infoprint/itm/xforms/afp2pdf/` for AIX and Linux and under *`TF_install_path`*`\itm\xforms\afp2pdf\` for Windows. `FONT` subdirectory with an `AFM` subdirectory and a `Type1` subdirectory. You can edit them using any text editor. The shipped version of the font definition files maps the IBM Core Interchange (Latin only), compatibility, coordinated, and Data1 fonts for you. If your document uses an AFP font that is not listed in the font definition files, you need to add it. If you have generated modified font definition files for viewing AFP files for the AFP Workbench or for the AFP plug-in, some of the same files can be reused for the **afp2pdf** transform. The `icoded.fnt`, `coded.fnt`, `csdef.fnt`, `cpdef.fnt`, and `icudt38l_ibm-` *`CPGID`*`_*.cnv`, where CPID is the code page identification number, files can be copied and used for the transform. Do not try to reuse the `ALIAS.fnt` file.

When you need to map fonts

If you are using fonts that are not defined for the **afp2pdf** transform, if you have modified the IBM AFP fonts, or if you have created your own AFP fonts, you need to define those fonts in the font definition files:

- If you created a new coded font or renamed one, you need to define the coded font in the Coded Font File (`icoded.fnt` or `coded.fnt`).
- If you created a new character set, you must define it in the Character Set Definition File (`csdef.fnt`).
- If you created a new code page, you must define it in the Code Page Definition File (`cpdef.fnt`).
- If you have created a new code page or modified a code page by moving characters, you need to create a new Code Page Map File (`icudt38l_ibm-CPGID_*.cnv`).

Note

- If you have only modified an existing IBM font component, such as by deleting code points in the IBM code page, you might not need to do any of the these definitions.

The afp2pdf transform files supplied for mapping fonts

The next table lists the **afp2pdf** transform font support files and the subdirectories in which they are installed.

afp2pdf font support files

File	File Name	Subdirectory	Description
Coded Font File	`icoded.fnt` `coded.fnt`	FONT	Specifies which AFP code page and AFP font character set make up the coded font.
Character Set Definition File	`csdef.fnt`	FONT	Defines AFP character set attributes, such as point size. It also maps the font character set to the font global identifier.
Code Page Definition File	`cpdef.fnt`	FONT	Maps each AFP code page to a browser character set and indicates which Code Page Map File to use for the **afp2pdf** transform.
Code Page Map File	`icudt34l_ibm-CPGID_*.cnv`	CNV	The .CNV files for ICU UCONV are used for character conversion.
Alias File	`alias.fnt`	FONT	Maps the font type families to an

File	File Name	Subdirectory	Description
			associated font metric file; also maps the font family type to be used during the transform.
Font Metric Information File	*fontname*.AFM	FONT then AFM	Contains the font metric information, which is the dimension of each of the characters.

Note

- coded.fnt is optional and is meant to contain coded fonts you have created.
- *Character set* is similar to the AFP term code page.

Coded Font File

The IBM Coded Font File maps AFP coded fonts to their AFP character sets and AFP code pages. Use these two Coded Font Files with the **afp2pdf** transform:

icoded.fnt

This file contains definitions for approximately 2500 IBM-supplied coded fonts.

coded.fnt

You can create this optional file to define a list of any coded fonts you have created and place it in the FONT subdirectory.

If a coded.fnt file exists in the FONT subdirectory, it is searched first for the coded fonts used in an AFP file. Here is an example of the contents of the coded.fnt file:

```
X?A155N2 = C?A155N1, T1DCDCFS
X?AE10 = C?SOAe10, T1SOAE10
X?GT10 = C?DOGT10, T1DOBASE
X?ST15 = C?DOST15, T1DOBASE
X?A0770C - C?A07700, T1GI0361
XOTO550C = COTO5500, T1DCDCFS
```

Important

- A question mark (?) can only be used as the wildcard character for the second character in the coded font name and the character set name. With this rule, all the character rotations of the coded fonts can be handled with one entry or searching.

Note

- A sequential search is performed for the coded font, and the first match is used, including the wildcard character.

After the coded font name, the character set name must be listed first, followed by the code page name.

The character set and code page must be separated by a comma.

Character Set Definition File

The Character Set Definition File (`csdef.fnt`) specifies the character set attributes and font global identifier of the font. It is split into two sections: one for the character sets (CHARSET) and one for the global identifier (FGID).

CHARSET Section

This example shows an example of the CHARSET section in the `csdef.fnt` file:

```
[CHARSET]
;charset = fgid, height, width, strikeover, underline
C?H200A0=2304,110,73,0,0
C?H200D0=2304,140,93,0,0
C?N200B0=2308,120,80,0,0
C?4200B0=416,120,144,0,0
C?D0GT15=230,80,96,0,0
C?A155A0=33207,110,73,0,0
C?A155A0=33227,110,73,0,0
C?T055D0=4407, 140,93,0,0
C?T17500=4555,100,67,0.0
C?T17560=4555,60,40,0,0
DEFAULT=2308,80,0
```

The CHARSET section lists each AFP font character set and its corresponding attributes. The next table describes the attributes and values for CHARSET.

CHARSET section

Attribute	Values	Shipped Default	Description
fgid	IBM-defined font global identifer (FGID) or your own FGID in one of these ranges: 3840 to 4096 65260 to 65534	2308	A unique value that identifies the type family, typeface, and sometimes the point size of the character set.
height	1 to 990	80	The vertical size of the character set (minimal baseline-to-baseline value) expressed in tenths of a point. For example, a 9-point font would have a height of 90.
width	0 to 99 (currently ignored)	0	The average horizontal size of the characters in 1440th of an inch. Currently, 0 is always used because Windows determines an appropriate font width based on the font height.

Attribute	Values	Shipped Default	Description
strikeover	1 = YES 2 = NO	0	A font whose characters all have a line, parallel to the character baseline, placed over the middle of the character.
underline	1 = YES 2 = NO	0	A font whose characters all have a line, parallel to the character baseline, placed under the character.

FGID Section

The next figure shows an example of the FGID section in the `csdef.fnt` file.

FGID section in csdef.fnt file

```
[FGID]
;fgid = familyname, style, weight, italic
230=Gothic, MODERN,MED,0
416=Courier,MODERN,MED,0
2304=Helvetica,SWISS,MED,0
2308=TimesNewRoman,ROMAN,MED,0
```

The FGID section lists each font global identifier and its corresponding attributes. The next figure describes the attributes and values for FGID.

FGID section

Attribute	Values	Shipped Default	Description
familyname	Any browser font	Times New Roman	An outline font name or an AFP type family name.
style	SWISS ROMAN SCRIPT MODERN DISPLAY	ROMAN	
weight	LIGHT, MED, BOLD	MED	The degree of boldness of a typeface caused by different thicknesses of the strokes that form a graphic character.
italic	1 = YES 2 = NO	0	A font whose characters slant to the right.

Note

1. *familyname* is the same as *type family* in AFP fonts and *typeface name* in Windows.
2. SWISS is a proportionally spaced, sans serif font.
3. ROMAN is a proportionally spaced, serif font.
4. SCRIPT is a fixed-pitch font designed to look like handwriting.
5. MODERN is a fixed-pitch, sans serif or serif font.
6. DISPLAY is a decorative font.

Rules:

1. Attributes must be separated by a comma.
2. In the CHARSET section of the file, only **fgid** and **height** are required.
3. In the FGID section of the file, only **familyname** and **style** are required.
4. A question mark (?) can only be used as the wildcard character for the second character in the character set name. With this rule, all the character rotations of the coded fonts can be handled with one entry while searching.

   Note

   - A sequential search is performed for the character set, and the first match is used, including the wildcard character.
5. The CHARSET section must come before the FGIC section in the file.
6. You can set a default character set. The default character set that is defined in the file must be the last entry in the CHARSET section.
7. If you add your own AFP font character set to the CHARSET section, you must assign it a font global identifier. If the new character set has the same familyname, style, weight, and italic attributes as an existing character set, you can use the same font global identifier; otherwise, you must add a unique font global identifier to the FGID section.

Note

- *familyname* is the same as *type family* in AFP fonts and *typeface name* in Windows.
- SWISS is a proportionally spaced, sans serif font.
- ROMAN is a proportionally spaced, serif font.
- SCRIPT is a fixed-pitch font designed to look like handwriting.
- MODERN is a fixed-pitch, sans serif or serif font.
- DISPLAY is a decorative font.

Code Page Definition File

The Code Page Definition File maps the IBM AFP code page name to its code page global identifier (CPGID) and to a browser character set.

The section header CODEPG is followed by a list of AFP code pages and their attributes. The first attribute in each line is the AFP code page global identifier that maps to a Code Page Map File (see Code Page

Map File, p. 306 for more information about mapping code pages). The second attribute is the browser character set that you decide is the best match for your AFP code page. The last line gives the default attribute values to be used when a default is required. The next figure shows an example of the contents of the `cpdef.fnt` file.

Example of cpdef.fnt

```
[CODEPG]
;codepage = cpgid,wincp
T1DCDCFS=1003,ANSI
T1DEBASE=2058,ANSI
T1DOBASE=2063,ANSI
T1DOGP12=2085,ANSI
T1GIO395=2079,ANSI
T1GPI363=2066,SYMBOL
T1V10037=37,ANSI
T1V10273=273,ANSI
T1000290=290,ANSI
T1000310=310,ANSI
T1000423=423,ANSI
T1000905=905,ANSI
DEFAULT=361,ANSI
```

The next table describes the attributes and values for `CODEPG`.

CODEPG section

Attribute	Values	Shipped Default	Description
cpgid	Pre-defined CPGID or your own defined CPGID in the range 65280 to 65534	361	Code page global identifier
wincp	ANSI or SYMBOL	ANSI	Windows character set

Rules:

1. Attributes must be separated by a comma.
2. Only the first attribute, **cpgid**, is required.
3. You can set a default code page. The default code page that is set in the file must be the last entry in the file.
4. If you create your own code page, you must assign it a unique code page identifier. Leading zeros are not valid. (You can use an IBM code page global identifier, but only if the character-to-hexadecimal code mapping is the same for your code page.)

Code Page Map File

To add a new code page to the ICU UCONV, you need to obtain or create a source mapping data file, which has a file extension of `.ucm`, corresponding to the desired code page.

A large archive of converter data is maintained by the International Components for Unicode (ICU) website. You can compile the source-mapping data files (`.ucm` files) into binary converter files (`.cnv` files) by using the ICU tool **makeconv** and entering this command:

```
LIBPATH=/usr/lpp/psf/lib64/xforms:/usr/lpp/psf/afp2pdf/cnv
makeconv -p ICUDATA file.ucm
```

Where the *directory* is the output directory and *file*.ucm represents the .ucm source file.

Note

- The source code of **makeconv** can be found on the ICU website.

When the **afp2pdf** transform is installed, a CNV folder is created under the **afp2pdf** transform destination folder. The CNV folder is used as storage for the binary converter .cnv files. When the corresponding .cnv file is added to the CNV folder, the code page is available to the transform.

Alias File

The Alias File (alias.fnt lists the font metric file name and the font family name aliases in the FONT section. Font family name aliases let you change all of the requested instances of a font family name (as defined in the Character Set Definition File) to another font family name.

The next figure shows how the alias.fnt file is used with the **afp2pdf** transform to change all requests for the Sonoran Serif font to requests for the Times New Roman font.

Note

- Font family name remapping, especially to TrueType fonts, can cause misalignment of text characters because the display font is not the same as the font used to create the AFP document. Remapping of one font family name to a different font family name with very different characteristics (such as STYLE) might mean a matching font cannot be found. You receive an error message if either font substitute cannot be found.

Example of how the alias.fnt file is used

```
[FONT]
; ***** Requested font = Type 1 font, TrueType font *****
Book=TNR,Times New Roman
CourierOverstrike=Cou,Courier New
SonoranSerif=TNR,Times New Roman
SonoranSansSerif=TNR,Arial
Text=Cou,Courier New
```

The next figure shows how the alias.fnt file is used with the **afp2pdf** transform to change all requests for the SonoranSerif font to requests for the Times font (which is one of the base fonts available in the Adobe Acrobat Viewer).

Using the alias.fnt file with afp2pdf transform

```
[FONT]
; ***** Requested font = font name,Font metric/AFM filename (or 'NULL' for
not used) *****
SonoranSerif=Times, NULL
```

Rules:

1. If multiple mappings are listed in the file for the same family name, only the first match is used.
2. The Alias File is processed sequentially and is not chained (for example, if "Century Schoolbook" is set equal to "Times", and "Times" is set equal to "Times New Roman", "Century Schoolbook" is not set to "Times New Roman").

3. Blanks in family names are treated as characters (for example, "New Century Schlbk" is not the same font as "NewCenturySchlbk").

Mapping your fonts to the afp2pdf transform

After determining which font files you need to modify, use these steps to map your fonts:

1. Gather the information needed to define the fonts in the font definition files.
2. Make backup copies of any of these font definition files you plan to modify:

   ```
   csdef.fnt
   cpdef.fnt
   icoded.fnt
   alias.fnt
   ```

3. Substitute any non-matching characters in the Code Page Map File.

   See Code Page Map File, p. 306 for information about Code Page Map Files.

4. Edit the `cpdef.fnt` file and add your code page name, code page identifier, and the best matching browser character set name for the fonts you are using.
5. If you have created a new character set, edit the `csdef.fnt` file and add your character set name in the CHARSET section. Specify the correct attributes for your font in the `csdef.fnt`. Add the appropriate information in the FIGID section of the file if you are naming a new font global identifier.
6. If you have created a coded font, create or edit the `coded.fnt` file and add your coded font.

Mapping fonts with non-Latin encodings

When you use external fonts that contain glyphs that are not part of the Latin encoding, use this procedure to embed them in the PDF file.

1. Embed the font as described in Embedding Type 1 Fonts, p. 299
2. When mapping the codepage in the `cpdef.fnt` file, specify the encoding to use:
   - ARABIC
   - GREEK
   - HEBREW
   - LAO
   - LATIN4
   - ORCA
   - ORCB
   - THAI
   - VIETNAMESE
3. Make sure a `.cnv` file is available for the specified code page.

Using TrueType fonts

The **afp2pdf** transform supports the use of TrueType fonts.

Embedding TrueType fonts

With the afp2pdf Transform PRPQ Version 1.6, you can convert an AFP document that contains TrueType fonts.

The TrueType fonts are embedded into the resulting PDF document.

By using embedded fonts, the size of the PDF file increases.

Mapping TrueType fonts

If the AFP document you are converting to PDF contains TrueType fonts, you can create a smaller PDF document by adding the TrueType fonts to the `ttdef.fnt` file.

When you add the TrueType fonts to the `ttdef.fnt` file, you need to include details about the fonts, such as *`familyname`*, *`style`*, or *`weight`*.

Listing TrueType fonts in the `ttdef.fnt` file is especially useful when you have DBCS TrueType fonts that are over 25 megabytes each. The **afp2pdf** transform allows you to map the DBCS TrueType fonts to Type0 fonts. By adding the DBCS TrueType Font to the `ttdef.fnt` file and setting the *`familyname`* to `JpnSys1` or `JpnSys2`, the **afp2pdf** transform maps the DBCS TrueType font to either `KozGoPro-Medium` or `KozMinPro-Regular`.

The **afp2pdf** transform uses this search order for TrueType fonts:

1. The `ttdef.fnt` file is searched for the code page and character set pair.
2. The **afp2pdf** transform searches the TrueType font in the specified `TT_FONT_PATH`.
3. If the client is unable to locate the TrueType font, a message is be issued, the **afp2pdf** transform uses the default font listed with the `DEFAULT` = option in the `ttdef.fnt` file.

Using the configuration file for TrueType fonts

The **afp2pdf** transform uses a configuration file called `ttdef.fnt` to support TrueType fonts.

The `ttdef.fnt` file is similar to the `csdef.fnt` file. You use the `ttdef.fnt` file to map each TrueType font to a known Type 1 or Type 0 font.

The syntax of the `ttdef.fnt` file uses the same rules that are defined by the `csdef.fnt`, where comments are defined as ';'. The `Full Font Name` is extracted from the x'02' triplet (FQNType is x'DE') of the Map Data Resource (MDR). The `Full Font Name` is used to search the `ttdef.fnt` and the resource name when issuing the `open_input handler` command.

The encoding of the `ttdef.fnt` should be UTF-8 to make sure all font names can be rendered within the file. The `familyname` must convert to ANSI without any characters lost if aliasing for font name is used.

For example:

```
ttdef.fnt
[TRUETYPE]
```

```
;full font name = familyname,style,weight,italic
Times New Roman=TimesNewRoman,ROMAN,MED,1
MS Gothic=JpnSys,SWISS,MED,0
MS Mincho=JpnSys2,ROMAN,MED,0
...
DEFAULT=TimesNewRoman,ROMAN,MED,1
```


The `ttdef.fnt` file is located in these directories:

On AIX or Linux:

`/usr/lpp/psf/afp2pdf/font`

On Windows:

`install_path``\afp2pdf\font`

Using Outline fonts

The **afp2pdf** transform supports Outline Font Object Content Architecture (FOCA). The addition of FOCA support improves character placement for AFP raster fonts and provides 100% font fidelity for AFP outline fonts.

Outline fonts can be embedded as internal resources, or they can be referenced as external resources and mapped. In either case, the font may be defined through the coded font name or with a character set/code page pair.

The **afp2pdf** transform parses and extracts the outline font character set information it needs when outputting the text and saves the information in these files:

PFM file

Contains general information about the outline font obtained from the character set. This file can be external, saved on the hard drive, or kept in memory.

PFB file

Contains the data about the outline font. It must be extracted and kept on the hard drive or in memory.

For both cases (embedded or external Outline font) the PFM and PFB files are embedded within the PDF document, and the text is written in the PDF file using the embedded PFM and PFB information.

The **afp2pdf** transformer creates a temporary `.cnv` file to be used by ICU for the conversion of text from Unicode to the specified codepage and for the conversion of text from the code page to Unicode.

Using non-Latin code pages with Outline fonts

The **afp2pdf** transform supports non-Latin codepages for AFP Outline fonts.

These non-Latin code pages are supported:

259

290

420
423
424
833
836
838
870
875
880
892
893
904
1025
1026
1027
1097
1112
1122
1130
1132
1153
1154
1155
1156
1157
1158
1160
1164

When an AFP document contains text written in one of the supported non-Latin code pages, the **afp2pdf** transform uses a corresponding AFP Outline Font. Each code page has a corresponding AFP Outline font. The location of the AFP Outline fonts is specified in the configuration file using the `Foca_Font_Path` option. To display the text written with the non-Latin code-pages within the PDF, the **afp2pdf** transform extracts the PFB file from the AFP Outline Fonts and creates a PFM file. The resulting files are embedded within the PDF stream. When a non-Latin code page does not find the corresponding AFP Outline Font, the **afp2pdf** transform converts the text to a default code-page. This default code page is set in the `cpdef.fnt` file. The default code page is one of the base-14 Standard PDF fonts.

To accommodate the non-Latin code pages, these options have been added to the `afp2pdf.cfg` file. The configuration file (`afp2pdf.cfg`) has these new options:

For AIX or Linux

`Foca_Font_Path = /usr/lpp/psf/fontlib` specifies the path for the AFP Outline fonts.

For Windows

`Foca_Font_Path = \install_path\fontlib` specified the path for the AFP Outline fonts.

2

Note

- If the configuration file does not contain the `Foca_Font_Path` entry, the **afp2pdf** transform searches within `/usr/lpp/psf/fontlib` for AIX or Linux, and `\install_path\fontlib` for Windows.

Mapping outline fonts

If the AFP document you are converting to PDF contains Outline fonts, you can create a smaller PDF document by adding the Outline fonts to the `afp2pdf.cfg` file.

You use the `Foca_Font_Path` option in the `afp2pdf.cfg` file to specify the path and name of the coded font. The name can be an actual coded font name or a character set/code page pair that identifies the font.

The **afp2pdf** transform uses this search order for Outline fonts:

1. The font directory specified with the `Foca_Font_Path` value in the `afp2pdf.cfg` is searched.
2. When an Outline font is not found in the `Foca_Font_Path` value in the `afp2pdf.cfg`, the **afp2pdf** transform uses a default font. The default font is a Type1 font, one of the PDF Base 14 Fonts, or one of the virtual DBCS (Type0) fonts. You specify the default font in the `csdef.fnt` file.

Using raster fonts

The **afp2pdf** transform supports the use of raster fonts. Raster fonts contain a set of bitmaps that represent the character shapes for a certain font.

When you use raster fonts to create a PDF file, the **afp2pdf** transform uses the information received from the FOCA structure fields (character glyphs and widths) to create an Adobe PDF Type3 font. This Adobe PDF Type3 font contains an Encoding dictionary. The text written with this Type3 font is searchable.

Raster fonts can be embedded as internal resources, or they can be referenced as external resources and mapped. In either case, the font may be defined through the coded font name or with a character set/code page pair.

The **afp2pdf** transform parses and extracts the raster font character set information it needs when outputting the text and saves the information in these files:

PFM file

Contains general information about the raster font obtained from the character set. This file can be external, saved on the hard drive, or kept in memory.

PFB file

Contains the data about the raster font. It must be extracted and kept on the hard drive or in memory.

For both cases (embedded or external raster fonts), the PFM and PFB files are embedded within the PDF document, and the text is written in the PDF file using the embedded PFM and PFB information.

The **afp2pdf** transformer creates a temporary `.cnv` file to be used by ICU for the conversion of text from Unicode to the specified codepage and for the conversion of text from the code page to Unicode.

Embedding raster fonts

All raster fonts are transformed to AdobeType3 fonts and embedded within the PDF document.

Using Type3 fonts for raster fonts reduces the size of the PDF file and makes the PDF searchable.

Mapping raster fonts

If the AFP document you are converting to PDF contains raster fonts, you can create a smaller PDF document by accessing the raster fonts outside of the AFP document.

The **afp2pdf** transform uses this search order for raster fonts:

1. The `icoded.fnt` file is searched for the code page and character set pair.
2. The font directory specified with the `Foca_Font_Path` value in the `afp2pdf.cfg` is searched.
3. When a raster font is not found in the `icoded.fnt` file or the `Foca_Font_Path` value in the `afp2pdf.cfg`, the **afp2pdf** transform uses a default font. The default font is a Type1 font, one of the PDF Base 14 Fonts, or one of the virtual DBCS (Type0) fonts. You specify the default font in the `csdef.fnt` file.

Examples

The following examples can be run on a machine with Transform Feature and InfoPrint Manager installed.

1. Use the **-o** flag to specify the output file name:

```
afp2pdf -o sample.pdf example.afp
```

   In this example, the **-o** flag indicates that the output will be generated in the current directory using the output file name `sample.pdf`.

2. To specify a custom form definition, use the **-pragma fdef** flag:

```
afp2pdf -pragma fdef="C:\myfdef\reslib\myformdef.fde" -o sample.pdf
  example.afp
```

   In this example, the **-pragma fdef** flag is assigned the full path to a form definition file named `myformdef.fde`, which will be used to process the `example.afp` input file.

3. To specify the rotation value used to control text alignment with page orientation, use the **-pragma aligntext** flag:

```
afp2pdf -pragma aligntext=180 example.afp
```

   This example aligns the text with a paper orientation that is rotated 180 degrees in an `example.pdf` output file.

4. Use the **-C** flag to specify the path and name of a configuration file:

```
afp2pdf -C mycustom.cfg -o sample.pdf example.afp
```

The `mycustom.cfg` configuration file used to transform the `example.afp` input file to the `sample.pdf` output file.

db2afp command: transforms DBCS data to AFP

Syntax

db2afp [**-o** *-OutputFile*] [**-l** {**ja** | **ch** | **ko**}] [**-e**] [*InputFile*]

Description

Use the **db2afp** command to transform either a DBCS ASCII or an EUC file to an AFP data stream file so that you can print the file on an InfoPrint printer.

The **db2afp** command can transform input files that use these code pages:

- Japanese PC (code page number 943)
- Japanese EUC
- Traditional Chinese PC (code page number 950)
- Traditional Chinese EUC
- Korean EUC

You can run **db2afp** manually to transform a DBCS ASCII or EUC file to an AFP data stream file without printing it immediately.

The PSF DSS automatically runs the **db2afp** command whenever:

- InfoPrint identifies the format of a document in a print job as DBCS ASCII or EUC.
- You specify **document-format=dbcs-ascii** with the **-x** flag or in an attributes file on the **pdpr** command.

  Note

  For EUC format, specify **document-format=dbcs-ascii** and an EUC code page as the value of the **default-character-mapping** attribute.
- You submit a DBCS ASCII or EUC print job and request **-odatatype=dbcsascii** with one of the AIX print commands (**enq**, **lp**, and **qprt**) or with the **lprafp** command
- You select an attributes file that shows **dbcs-ascii** in the `Type of Data in the Print File` field, using the InfoPrint SMIT panels.

If you do not specify an input file, the **db2afp** command defaults to standard input. If no output file is specified, the **db2afp** command defaults to standard output.

For more information about the **db2afp** transform, see "Working with Transforms" in the *InfoPrint Manager: Procedures* manual that is appropriate for your operating system.

Automatic invocation

The PSF DSS automatically invokes the **db2afp** transform command whenever you submit a dbcs-ascii file for printing. You can pass options to **db2afp** using the **other-transform-options** attribute on the **pdpr** command or the **-o** flag of the AIX print commands or the **lprafp** command. You can also pass options to **db2afp** through theInfoPrint Submit Express client of InfoPrint Manager. Parameters that are not supported, such as **-l ja**, can be passed in InfoPrint Submit Express by clicking **Advanced** and entering them in the **Transform options** field.

Limitations

The **db2afp** command generates an AFP data stream file with double-byte character set (DBCS) font references. These DBCS fonts (for Japanese, Traditional Chinese, and Korean) are not part of InfoPrint and are sold separately.

Flags and values

You can specify these flags and values

- With the **db2afp** command
- With the **enq -o**, **lp -o**, **qprt -o**, or **lprafp** commands
- With the **pdpr** command, using the **other-transform-options** attribute or equivalent attributes on the command line or in an attributes file

-o *OutputFile*

Specifies the name of the AFP data stream output file generated by the transform. If you do not specify the **-o** flag, InfoPrint writes the result to standard output.

You cannot use **-o** *OutputFile* on the command line with the **enq**, **lp**, **qprt**, or **lprafp** commands. You can only use **-o** *OutputFile* with the **db2afp** command, or with the **other-transform-options** attribute on the **pdpr** command.

This flag is equivalent to the **transform-output-file-name** document attribute on the **pdpr** command.

-l {japanese | chinese |korean}

Specifies the language to be used for the transform. The values are:

ja or japanese

The input file is in Japanese.

ch or chinese

The input file is in Traditional Chinese for AIX or Linux (code page 950).

c2

The input file is in Traditional Chinese for Windows (code page 950).

ko or korean

The input file is in Korean.

Note

If you specify **-l ko**, you must also specify the **-e** flag. The **db2afp** command supports only Korean EUC, not Korean DBCS ASCII.

If you do not specify **-l** or **-e** on the command line, the **db2afp** command uses the value that has previously been set and exported with the **PSFDBLANG** environment variable. The **PSFDBLANG** environment variable can be set to one of these values:

j

Japanese (code page 943)

je

Japanese EUC

c

Traditional Chinese (code page 950)

t

Traditional Chinese (code page 950)

ce

Traditional Chinese EUC

ke

Korean EUC

With InfoPrint Manager for AIX or InfoPrint Manager for Linux, if you are unsure about the value to use with the **PSFDBLANG** environment variable, enter this command:

```
echo $LANG
```

The command displays one of these output values:

Ja_JP

Japanese DBCS ASCII

ja_JP

Japanese EUC

zh_TW

Traditional Chinese EUC

ko_KR

Korean EUC

With InfoPrint Manager for Windows, if you are unsure about the value to use with the **PSFDBLANG** environment variable, enter this command at a Windows command prompt:

```
chcp
```

The command displays this information:

```
Active code page: nnn
```

where *nnn* is the code page number 943 or 950.

Note

1. A Traditional Chinese DBCS ASCII locale does not exist.

   If you specify either **-l** or **-e** on the command line, the **db2afp** command ignores the value set in the **PSFDBLANG** environment variable. If the **PSFDBLANG** value has not been set and you do not specify **-l** (and **-e** for EUC files), the transform will not work.
2. The value set in the **PSFDBLANG** environment variable is used when you submit a DBCS ASCII or EUC print job with the AIX print commands (**enq**, **lp**, or **qprt**), with the **pdpr** or **lprafp** command, or in the SMIT `Submit an InfoPrint Job` panel.
3. This flag and the **-e** flag, used together, are equivalent to the **default-character-mapping** document attribute on the **pdpr** command.

-e

Tells the **db2afp** command to use the EUC code page when converting the input file to an AFP data stream. If the input file is in the Korean language, you should always use **-e**. If the input file is in Traditional Chinese or Japanese, you should use **-e** if your input data is in EUC format.

This flag and the **-l** flag, used together, are equivalent to the **default-character-mapping** document attribute on the **pdpr** command.

InputFile

Specifies the DBCS ASCII or EUC file that will be transformed to AFP. If you do not specify an input file, the **db2afp** command uses standard input.

Examples

This section contains examples for the **db2afp** transform:

- To transform the Japanese DBCS ASCII file `dbfile` into an AFP data stream file called `dbfile.afp`, enter:

```
db2afp -o dbfile.afp -l ja dbfile
```

The file is transformed, but not printed.

Note

You could also use this command to do a similar task, except that the output is sent to the printer:

```
pdpr -p servC-lp -x "default-character-mapping=ibm-943" dbfile
```

- To transform the Korean EUC file `korefile` to an AFP data stream file called `korefile.afp`, enter:

```
db2afp -o korefile.afp -l ko -e korefile
```

The file is transformed, but not printed.

Note

You could also use this command to transform the file, then print it:

```
pdpr -p servC-lp -x "default-character-mapping=ibm-euckr" korefile
```

- With InfoPrint Manager for AIX or InfoPrint Manager for Linux, to transform a Traditional Chinese DBCS ASCII file named `memo.tc` into an AFP file and print it on an InfoPrint printer named `servC-lp`, enter:

```
pdpr -X chinese.X -p servC-lp memo.tc
```

In this example, the attributes file named `chinese.X` contains these settings:

```
document-format=dbcs-ascii
default-character-mapping=ibm-950
```

With InfoPrint Manager for AIX or InfoPrint Manager for Linux, to set the `db2afp` command to default to Korean EUC, enter these lines in the **.profile** file (Bourne shell or Korn shell) or the **.cshrc** file (C shell) in your home directory:

```
export PSFDBLANG=ke
```

The **db2afp** command now uses Korean EUC as long as the **PSFDBLANG** environment variable is set and exported, and **-I** or **-e** are not specified on the command line. So, to transform the Korean EUC file `korefile` into an AFP data stream file called `korefile.afp`, you now can enter:

```
db2afp -o korefile.afp korefile
```

Similarly, you could now use this command to transform the Korean EUC file, then print it:

```
enq -PservC-lp -o datatype=dbcsascii korefile
```

Files

For InfoPrint Manager for AIX or InfoPrint Manager for Linux, use these locations:

/usr/lpp/psf/bin/db2afp

Transform program

/usr/lpp/psf/db2afp/afpdfont.rc

AFP font mapping file used by the **db2afp** command

/usr/lpp/psf/bin/libicudata24.so

Code page translation file (which contains mappings from the input code page to the output code page)

For InfoPrint Manager for Windows, use these locations:

install_path\bin\db2afp.exe

Transform program

install_path\bin\afpdfont.rc

AFP font mapping file used by the **db2afp** command

install_path\bin\icudt24l.dll

Code page translation file (which contains mappings from the input code page to the output code page)

d2afp command: transforms ditroff data to AFP in InfoPrint Manager for AIX or InfoPrint Manager for Linux

Syntax

d2afp [**-o** *OutputFile*] [*InputFile*]

Description

The **d2afp** command transforms a ditroff data stream file preformatted for an AFP device into an AFP data stream file so that you can print the file on an InfoPrint printer.

The process to transform troff files into AFP data stream files has two steps:

1. The troff file is first formatted by specifying the **troff -Tafp** command. This formatting step produces a device-independent troff (ditroff) file.

   Note

   1) Use the **-Tafp** flag and value; otherwise, you cannot transform the ditroff file with the **d2afp** command. If you do not want to specify the **-Tafp** flag and value each time you use the **troff** command, you can set the **TYPESETTER** environment variable to **afp.** To do this, enter this command at the command-line prompt or add this line to your **.profile** file (Bourne shell or Korn shell) or the **.cshrc** file (C shell) in your home directory:

```
export TYPESETTER=afp
```

   2) Although you cannot use the **d2afp** command to transform ditroff files formatted with **troff -Tpsc** or **troff -Thplj**, you can print them. Use the **psc** or **hplj** command to convert the file to PostScript or PCL format. Then use **ps2afp** or **pcl2afp** to transform it.
2. The ditroff file is then transformed into an AFP data stream file with the **d2afp** command.

The PSF DSS automatically runs the **d2afp** command whenever:

- InfoPrint identifies the format of a document in a print job as ditroff.
- You specify **document-format=ditroff** with the **-x** flag or in an attributes file submitted with the **pdpr** command.
- You submit a ditroff print job and include the **-odatatype=ditroff** flag and keyword-value pair with one of the AIX print commands (**enq**, **lp**, and **qprt**) or with the **lprafp** command.
- You select an attributes file that has **ditroff** in the `Type of Data in Print File` field when using the InfoPrint SMIT panels to submit a print job.

Automatic invocation

The PSF DSS automatically invokes the **d2afp** transform command whenever you submit a ditroff file for printing. You can pass options to **d2afp** using the **other-transform-options** attribute on the **pdpr** command or the **-o** flag of the AIX print commands or the **lprafp** command. You can also pass options to **d2afp** through theInfoPrint Submit Express client of InfoPrint Manager. Parameters that are not

supported, such as **-o myoutfile**, can be passed in InfoPrint Submit Express by clicking **Advanced** and entering them in the **Transform options** field.

Limitations

The **d2afp** command limits the number of fonts that a ditroff file can load, change, or map. This shows the maximum number of fonts for specific conditions:

40

Loaded at one time

200

ditroff fonts mapped to AFP fonts

253

Point size or font changes on one page

If your troff file has graphics, you might use a different method to print ditroff files. If your PPDS or PCL printer does not support the PCL5, PCL5C, or PCL6 data streams, use this procedure to print troff files containing graphics:

1. Convert the troff file to ditroff format using the **troff -Thplj** command.
2. Convert the ditroff file to PCL format using the **hplj** command.
3. Submit the PCL file to print. InfoPrint automatically invokes the **pcl2afp** command to convert the PCL file to AFP format.

Flags and values

You can specify the *InputFile* and the -o *OutputFile* values in any order.

InputFile

Specifies the name of the input file to transform. This input file must be a ditroff file; that is, a troff file formatted for an AFP printer device using the **troff -Tafp** command.

If you do not specify an input file, the command uses standard input. The value for the input file is any valid file name.

-o *OutputFile*

Specifies the name of the AFP data stream output file generated by the transform. If you do not specify the **-o** flag, the output generated goes to standard output. The value for the output file is any valid file name.

Examples

This section contains examples of the **d2afp** transform:

- To transform the ditroff file `myfile` into an AFP data stream file called `myfile.afp`, enter:

```
d2afp myfile -o myfile.afp
```

- To create an AFP data stream output file from the troff file `doc.trf` and print the output file using the InfoPrint logical printer `servC-lp`, enter:

```
troff -Tafp doc.trf | d2afp | pdpr -p servC-lp
```

  In this example, the `troff` command searches the `/usr/lib/font/devafp` directory for the troff font and printer description files. The **d2afp** command also uses files in this directory.

  In the preceding example, the **d2afp** transform runs on the local system whether the printer, `servC-lp` is a local or remote printer.

  Note

  You could also use this command to perform the same function:

```
troff -Tafp doc.trf | pdpr -p servC-lp -odatatype=ditroff
```

  In this case, if the printer, `servC-lp`, is local, the **d2afp** transform runs on the local system; however, if the printer is remote, the **d2afp** transform runs on the remote system.

- To print the ditroff file `report` on an InfoPrint printer named `servD-lp`, enter:

```
pdpr -X ditroff.X report
```

  In this example, the attributes file named `ditroff.X` contains these settings:

```
document-format=ditroff
printer-name-requested=servD-lp
```

Files

This section lists the files used with the **d2afp** transform:

/usr/lpp/psf/bin/d2afp

Transform program

/usr/lib/font/devafp/devafp.fontmap

AFP font mapping file used by the **d2afp** command to map troff fonts to AFP code pages and AFP character sets

/usr/lib/font/devafp/*.d2afp

Binary versions of the troff font and description files used by the **d2afp** command

/usr/lpp/psf/fontlib

AFP font resource directory, which includes AFP character sets and AFP code pages for ditroff

/usr/lib/font/devafp/README.d2afp

File that has useful information about AFP characters for troff and ditroff files

Other files associated with the **troff** command are described in *AIX for Commands Reference*.

gif2afp command: transforms GIF data to AFP

Syntax

gif2afp [**-a** *ImageType*] [**-alg** *ProcessingAlgorithms*]
[**-C** *ConfigurationFile*]
[**-clean** *cleanup*] [**-cmp** *compression*]
[**-cmrpath** *searchPath*[,*searchPath*...]
[**-cmrpath** *searchPath*[,*searchPath*]...]]
[**-crop** *CropFactors*] [**-devmodel** *model*] [**-devtype** *type*]
[**-fit** {**trim** | **scale**}]
[**-gcorr** *GrayscaleMappingTable*] [**-lut** *LookUpTableFile*]
[**-icmr** *colorResourceName*[,*colorResourceName*...]
[**-icmr** *colorResourceName*, [*colorResourceName*]...]]
[**-ink** {**black** | **white**}] [**-inv**]
[**-inline** {*yes* | *no*}]
[**-intent** {*relative* | *perceptual* | *saturation* | *absolute*}]
[**-is** 1|3] [**-j** *ScanOffsetFileName*] [**-l** *ImageLength*]
[**-M** *MemoryBound*] [**-ms** *space*] [**-msf** *SpaceFraction*]
[**-o** *OutputFile*] [**-ocmr** *colorResourceName*]
[**-otag** {*none* | *normal* | *passthru*}]
[**-outbits** *NumberOfOutputBits*]
[**-outcolor** *OutputColorModel*] [**-p** *PageRange*]
[**-pagetype** *PageType*] [**-paper** *PaperSize*]
[**-r** *resolution*] [**-respath** *ResourceSearchPath*]
[**-rot** *rotation*] [**-scale** *ImageSize*]
[**-sniff** | **-nosniff**] [**-term** | **-noterm**]
[**-thresh** *HalftoneFile*] [**-v** | **-nov**] [**-w** *ImageWidth*]
[**-x** *LeftMargin*] [**-y** *TopMargin*] [**-z**]
[[*file* | *directory* | **-f** *FileList* | **@***FileList*]**...**]

Description

The **gif2afp** command transforms a GIF (Graphical Interchange Format) data stream into an AFP (MO:DCA-P) or PostScript Level 2 data stream file.

The transform can process GIF images, including bi-level, gray scale and color images. The output can be bi-level (IM1 or IOCA FS10), 4-bit or 8-bit grayscale, or 24-bit YCbCr color (IOCA FS11). The transform automatically uses halftoning to convert the grayscale and color images to bi-level.

For more information about the **gif2afp** transform, see "Working with Transforms" in the *InfoPrint Manager: Procedures* manual that is appropriate for your operating system.

Automatic invocation

The PSF DSS automatically invokes the **gif2afp** transform command whenever you submit a GIF file for printing. You can pass options to **gif2afp** using the **other-transform-options** attribute on the **pdpr**

command or the **-o** flag of the AIX print commands or the **lprafp** command. You can also pass options to **gif2afp** through theInfoPrint Submit Express client of InfoPrint Manager. Parameters that are not supported, such as **-alg**, can be passed in InfoPrint Submit Express client by clicking **Advanced** and entering them in the **Transform options** field.

Input and output

gif2afp can process either standard input, or multiple files specified on the command line. If no input file is specified, **stdin** is assumed. Only a single GIF file should be submitted using **stdin**. If multiple GIF files are concatenated using standard input, all except the first one are ignored.

If an input file is specified on the command line, it can be either a GIF file, a directory, or a file list (**-f** and **@** prefixes). Multiple input file specifications are allowed. The transform processes each file in the order in which it was specified on the command line. If the **-z** option is specified, a list of file names to be processed is also submitted using standard input. The files on the list are processed as if the list were given using the **-f** option on the same place on the command line as **-z**.

If the file name points to a directory, **gif2afp** processes every file in that directory. The files are processed in the order they would be shown using the **ls -a** command. Directory search is not recursive, that is, subdirectories are not searched.

If the file name is preceded by the **-f** option or the at sign (**@**), **gif2afp** assumes that the file contains the list of GIF files to be processed. Each of the files in the list is processed in the order it was listed.

If a GIF file has the extension **.gif** or **.GIF**, this extension need not be given explicitly. **gif2afp** first tries to open the file as specified, and if unsuccessful, tries to append the extensions **.gif** and **.GIF** in turn.

For example, suppose that:

- The directory `tFiles` contains the files `file1.gif`, `file2.gif`, `file3.gif`, and `file4.gif` and nothing else.
- The file `flist` in the current directory contains the two file names `tFiles/file2.gif` and `tFiles/file3.gif`. The names listed in the file list can have their extensions omitted.
- The file `flist2` contains the file name `tFiles/file4`. Again, the names listed in the file list can have their extensions omitted.

To process files `file1.gif`, `file2.gif`, `file3.gif`, and `file4.gif`, any of these invocations of **gif2afp** would work:

```
gif2afp tFiles/file1.gif tFiles/file2.gif tFiles/file3.gif
   tFiles/file4.gif
gif2afp tFiles/file1 tFiles/file2 tFiles/file3 tFiles/file4
gif2afp tFiles/file*.gif
gif2afp tFiles
gif2afp tFiles/file1 -fflist tFiles/file4
gif2afp tFiles/file1 -f flist tFiles/file4
gif2afp tFiles/file1 -f flist -f flist2
gif2afp tFiles/file1 @flist @flist2
```

Note

With InfoPrint Manager for Windows, you can enter separators in path names as backward slashes or forward slashes.

The file list files allow the display text to be added for each file. A display text is any text starting with the pound character (**#**) and extending to the end of the line. The display text should follow the file name, and can extend over several lines, up to 2048 characters long. The initial **#** character on each line is discarded. If a display text is present for a file name, that text is displayed in the status and error messages instead of the file name. This is useful if the **gif2afp** is invoked using temporary files whose names are meaningless to the user. Any display text before the first file name is treated as comment and discarded. Display text is allowed also if you use the **-z** option to submit the file list using standard input.

GIF files can contain multiple images. The **gif2afp** transform can process and output all the images in the file, subject to the values given in the **-p** option.

The output file name can be either specified explicitly using the **-o** option, or derived from the input file name. If multiple input files have been specified, the default output file is standard output. If a single input file is given and the output file is not specified explicitly, the transform strips the **.gif** or **.gif** extension from the input file name (if one is present), and appends the **.afp** extension for AFP output, or the **.ps** extension for PostScript output, to get the output file name.

To disable automatic output file name generation and force the default output stream to be the standard output in all cases, set the environment variable **GIF2AFP_o** to **-** or **stdout**, or alternatively, put the line **o=-** or **o=stdout** into the configuration file and invoke that configuration file using the **-C** option or the **GIF2AFP_C** environment variable.

For example, all these commands:

```
gif2afp myfile
gif2afp myfile.gif
gif2afp myfile -o myfile.afp
```

have `myfile.afp` as the output file. There is no requirement for the explicitly specified input and output files to have **.gif** and **.afp** extensions. To process GIF file `foo.bar` into an AFP file `foo.bar2`, invoke the transform using:

```
gif2afp foo.bar -o foo.bar2
```

The output data stream is MODCA-P IS/1, MODCAP-P IS/2, or PostScript Level 2. IS/1 images are bi-level and are encoded as IOCA Function Set 10 or IM1. IM1 images are uncompressed. IOCA FS10 output images can be either uncompressed, or compressed using one of the four available compression algorithms (see the **-cmp** option). The default is ITU-T T.6 Group 4 compression. IM1 images are always uncompressed. IS/2 images can be either bi-level, 4-bit or 8-bit grayscale, or 24 bit YCbCr color. Multibit images are encoded as IOCA Function Set 11.

PostScript Level 2 images can be uncompressed or ITU-T T.6 Group 4 bi-level, uncompressed 8-bit grayscale or uncompressed 24-bit RGB color. By default, the transform leaves scaling and halftoning to the printer (that is, color GIF images are output as 24-bit RGB color images).

Errors and error recovery

gif2afp divides errors into fatal and non-fatal. The fatal error categories are:

- Errors in the user-specified parameters, either in the environment variables, the configuration file, or the command line arguments. These errors include unrecognized options, incorrect values for parameters, or inability to open the configuration file or the output file.
- Out of memory errors. The requested memory is larger than the memory specified using the **-M** option or the dynamic memory allocation has failed.

- Disk space errors. The transform guards against trying to write to a full file system. See the **-ms** and **-msf** options for setting the minimum free disk space requirements. If the file system is full, the transform deletes the partial output file before terminating.
- Internal errors.

In the case of a fatal error, the last output page might not be complete.

Errors found in the GIF files are non-fatal and **gif2afp** tries to recover from them. These errors include not being able to open an input file, an input file not being a GIF file, or an input file containing features that cannot be processed. If the transform fails to open 15 or more input files, it assumes an error in the parameter list (for example, **-f** was used with a file that does not contain a file list) and terminates.

If an error is found in a file, the transform tries to recover with the next image in the file. If such recovery is not possible, **gif2afp** tries to recover with the next input file. In both cases, a warning message is issued. Errors and warnings are output to standard error.

For example, let a directory `tFiles` contain files `file1.gif`, `file1.txt`, `file2.gif` and `file3.gif`, where `file1.txt` is an ASCII file. Invoking the transform like this:

```
gif2afp tFiles
```

processes the bi-level images in all three GIF files correctly. A warning is issued that `file1.txt` is not a GIF file.

Non-fatal errors can be made fatal by using the option **-term**, or the corresponding environment variable or configuration file entry. If **-term** is set, the transform terminates in error if it encounters an error in the GIF data stream.

Data transformations

If the input image is gray scale or color, and the output image type is bi-level (IOCA FS10 or IM1), the transform internally scales the image to the desired size, then uses a halftoning algorithm (ordered dither, the default, or Floyd-Steinberg) to convert it to bi-level. In converting the image to bi-level, the characteristics of the output device such as dot shape and dot gain must be taken into consideration. The **-gcorr** option can be used to specify a different mapping of gray levels.

For very light or very dark images, the halftoning algorithms can be automatically recalibrated to preserve details that would be lost using the default calibration. See the **-alg** option for more information.

To maintain the image quality, scaling must be done before halftoning. The halftoning algorithm is very computation-intensive. Unless the images are small, **gif2afp** cannot process the color images fast enough to feed even a slow printer.

The size and position of the output image depend on several factors:

- The size specified to the transform
- The form map specified at print time
- The forms and options loaded in the printer

If the image is too large to fit on the page, it is trimmed to size by default. Use the **-fit scale** option to tell the printer to scale the image to the paper size. If the paper size is not specified explicitly using the **-paper** option, the paper size defaults to US letter size (8.5 by 11 inches). If the image is larger than

this, the paper dimensions are increased as necessary. If the paper size is specified explicitly, it is not increased if the image does not fit on paper. The options **-l** and **-w** have the same effect as **-paper**.

The size of the actual image (as opposed to the paper size) is controlled by the **-scale** option. You can either specify a value of **orig** for the **-scale** option or give an actual size. If you specify **orig**, the output image is the same size as the input image. If you specify **-scale** with an actual size, the output image is scaled to the desired size. You can also specify a percentage for enlargement or reduction.

Even if you specify **-scale orig**, the image can still have to be scaled if the input file specifies non-square pixels. By default, the transform leaves scaling to the printer. The exceptions are:

- Images that are being halftoned, which are always scaled in the transform,
- Images that have different resolutions in X and Y directions (non-square pixels)

Note

Because GIF files do not specify resolutions, the image is assumed to have the resolution of the output device.

You can use the **-alg** option to instruct the transform to do internal image scaling. Options **-alg**, **-clean**, and **-ink** select and configure various scaling algorithms.

GIF images are compressed using the LZW algorithm. Because LZW compression is not part of any current IOCA function set, **gif2afp** always reads and decompresses the image.

Parameters

gif2afp behavior is governed by many parameters. The parameters are set by this hierarchy (least significant first):

- Internal defaults
- Environment variables
- Configuration file
- Command-line arguments

Command line arguments

Remember these points about the command line arguments for the **gif2afp** transform:

- Options and input file names can appear on the command line in any order.
- When you run **gif2afp** as a standalone transform, the blank between option and value is optional (for example, both `-inkblack` and `-ink black` are valid).
- When you use the **-o** flag of the **enq**, **lp**, **qprt**, or **lprafp** commands to pass options to **gif2afp**, no blank is permitted between option and value is optional (for example, `-o-inkblack` is valid, but `-o -ink black` is not).
- When you use the **other-transform-options** attribute on the **pdpr** command to pass options to **gif2afp**, any string containing a blank must be surrounded by single quotes (for example, both `other-transform-options=-inkblack` and `other-transform-options='-ink black'` are valid).
- All values except file names are case-insensitive.
- If an option is specified multiple times, the last specification remains in force.

- If multiple configuration file names are given, they are processed in order.

Configuration file

The configuration file has entries of the form *option=value*, where each pair must be in on a separate line. Options and other syntax are the same as for the command line arguments and the option names are the same. Input files and configuration files cannot be specified in the configuration file (that is, nested configuration files are not supported). In the case of options without values (for example, **-inv**), the equals sign must be present.

Some command line options cannot be used in the configuration file or as environment variables. Options available only on the command line are noted as such in their descriptions.

If you do not specify a configuration file on the command line with the **-C** option, the transform checks for the existence of the default configuration file, **/usr/lpp/psf/gif2afp/gif2afp.cfg** with InfoPrint Manager for AIX or InfoPrint Manager for Linux and ***install_path*\gif2afp\gif2afp.cfg** with InfoPrint Manager for Windows. If this file exists, the transform uses it as the configuration file.

Here is an example of a valid configuration file:

```
scale = letter
r= 300
o = -
inv=
alg=afp
```

Note

The spaces around the equals sign (**=**) are optional. In this example, the option-value pair **o = -** means that the default output file is the standard output. Output file name computation has been disabled.

Environment variables

Environment variables have the form **GIF2AFP_***option*, where *option* is the same as on the command line and the configuration file.

Some command line options cannot be used in the configuration file or as environment variables. Options available only on the command line are noted as such in their descriptions.

For example, to achieve the same effect as the configuration file in the last example, these statements have to be executed in the calling shell:

```
export GIF2AFP_scale=letter
export GIF2AFP_r=300
export GIF2AFP_o=-
export GIF2AFP_inv=" "
export GIF2AFP_alg=afp
```

There must be some value set for each desired option. For options that do not take a value, specify a blank surrounded by double quotes, for example:

```
export GIF2AFP_inv=" "    correct
export GIF2AFP_inv=       has no effect
```

Resource search path

For resource files, such as scan offset files and gray scale correction files, the transform searches the current directory by default. You can use the **-respath** option to specify a list of directories to be searched for such files. This resource path does not apply to the configuration file.

Limitations

This section lists the limitations for the **gif2afp** transform:

- Timing data from GIF animation sequences is ignored.
- Animation sequences are processed as unrelated images.
- The **-crop** flag is supported only when the output image type is IOCA FS 10.

Acknowledgments

This software is partially based on the Independent JPEG Group's JPEG compression and decompression code.

Options and values

This sections lists the options and values for the **gif2afp** transform:

@*FileList*

Specifies a name of a file that contains a list of files to be processed by the transform. If the **@** option is present, the output file defaults to standard output, even if the list of files contains only a single entry. Multiple **@** options are allowed. Also see the **-f** and **-z** options. The **@** is not preceded by the dash, and is implemented to maintain compatibility with the **ps2afp** transform.

-a {ioca | ioca10 | ioca11 | im1 | PS.2}

-a {IO1_G4 | IM1 | IO1 | IO1_MMR | PSEG_IO1_G4 | PSEG_IM1 | PSEG_IO1 | PSEG_IO1_MMR | OVLY_IO1_G4 | OVLY_IM1 | OVLY_IO1 | OVLY_IO1_MMR}

Choice of the output image type. The first syntax selects between the IOCA FS 10 (**ioca**, **ioca10**), IOCA FS11 (**ioca11**), IM1, and PostScript Level 2 (**PS.2**) output. IOCA FS10 and IM1 yield bi-level images, while IOCA FS11 results in 4-bit or 8-bit gray or 24-bit color output (see option **-outbits**). The output compression algorithm is set using the option **-cmp**. To set the page type (page, overlay, page segment or object), use the **-pagetype** option.

The second syntax is to maintain compatibility with the **ps2afp** transform, and sets the image type (**IO1** for IOCA FS10 or **IM1** for IM1 output), compression (**G4** for Group 4 or **MMR** for Group 3), and page type (**PSEG** for page segment or **OVLY** for overlay). If **PSEG** or **OVLY** is not specified, the output is a printable page. If no compression algorithm is specified, the output is not compressed. The second syntax cannot be used for IOCA FS11 output.

Some older printers do not support IOCA images. In such cases, the IM1 output type should be chosen. IM1 images are uncompressed and thus use more space. The processing might also take

longer since the IM1 image cannot be scaled by the printer and so internal scaling algorithms must be used. See option **-alg**.

The default is **ioca** for IOCA FS10 output compressed using the Group 4 algorithm.

This option is similar to the **image-out-format** document attribute on the **pdpr** command.

-alg {afp | alg1 | alg2 | alg3}

-alg {htod1 | htfs}

-alg htcal1

Choice of the scaling and halftoning algorithms. You can specify multiple choices, separated by commas, for one **-alg** option. The effect is the same as specifying multiple **-alg** options. For example, `-alg htfs,htcal` is equivalent to `-alg htfs -alg htcal`.

The scaling algorithms are:

- If **afp** is chosen, the scaling is done using the default algorithm in the printer. This makes the transform much faster. If the image must be reduced, however, this algorithm might drop some information from the image, such as thin lines.
- **alg1** activates the internal scaling algorithm to scale the image explicitly to the specified size. This algorithm is guaranteed not to discard any ink. "White space" in the image, however, might be lost (that is, features close to one another might merge). This algorithm makes the transform run longer, and might occasionally make for a "dirty" image, since the occasional "noise pixels" in the scanned images tend to be amplified.
- **alg2** activates the more flexible version of **alg1**. If this algorithm is selected, option **-clean** can be used to specify the amount of ink "cleanup" to be performed. Option **-clean 0.0** makes the algorithm **alg2** perform like **alg1** (albeit more slowly). Increasing the value specified in **-clean** discards more and more ink, until **-clean 1.0** results in a blank page.
- **alg3** activates a scaling algorithm that works by deleting or duplicating rows and columns in the image. This is a fast general-purpose algorithm.

For bi-level images, the default is **afp** if the output image type is IOCA and **alg3** if the output image type is IM1. For color images with bi-level output, the scaling is always done before the halftoning algorithm. If a grayscale or color output is chosen (**-a ioca11**), this option is ignored and the algorithm is set to **afp**.

The halftoning algorithms are:

- **htod1** uses an ordered dither with a screen derived from the value of the **-thresh** option. The default is an 85 line per inch screen.
- **htfs** uses the Floyd-Steinberg algorithm.
- **htcal1** recalibrates the halftoning algorithm for each image. **htcal1** forces the transform to read the whole image into memory and requires an additional pass through the image. It should be used only for very light or very dark images.

The default is **htod1**. Each halftoning algorithm uses a different internal default calibration curve. If the automatic calibration is turned on, a still different set of calibration curves are used.

See options **-clean**, **-gcorr**, **-ink**, **-paper**, **-scale**, **-thresh**, **-l**, **-w**, **-x**, and **-y**.

-C *ConfigurationFileName*

The name of a configuration file containing option-value pairs. If multiple **-C** options are given on the command line, they are processed in order. Specifying the configuration file on the command line overrides any specification done using the **GIF2AFP_C** environment variable.

The default configuration file is **/usr/lpp/psf/gif2afp/gif2afp.cfg** with InfoPrint Manager for AIX InfoPrint Manager for Linux.

-clean {0.5 | *x.xxx*}

The internal scaling algorithm **alg2** allows for variable thresholding. The scaled pixel is declared painted if the fraction of its area greater than the threshold is painted in the original image. The value *x.xxx* is a real number between zero and 1 inclusive and gives this threshold.

If the option **-clean 0.0** is issued, **alg2** behaves like **alg1** and turns on a pixel as long as any part of the pixel has been painted in the original image. **-clean 1.0** results in a blank image because the output pixels are never painted.

Setting **-clean 0.95** and **0.9999999** turns on the pixels that had essentially all the area painted in the original picture. Depending on the data, most of the image will probably be preserved. Increasing **-clean** by a small amount to **1.0** erases the image. If the scaling algorithm is not **alg2**, this option is ignored. The default is **-clean 0.5**.

-cmp {none | mh | mmr | g3 | g4 | jpeg}

Choice of the output image compression algorithm:

none

Uncompressed output

mh

ITU-T T.4 G3 Modified Huffman

mmr

IBM Modified Modified Read

g3

ITU-T T.4 G3 Modified Read

g4

ITU-T T.6 G4

jpeg

JPEG non-differential Huffman coding with baseline DCT. The output image data should be compressed to reduce the file sizes and increase the printing speed.

The default compression is ITU-T T.6 Group 4 for bi-level images and no compression for grayscale or color images. Some printers might not support Group 4 compression algorithm and require using the **-cmp** option to select a different one. The JPEG algorithm can compress only 8-bit grayscale and 24-bit color images. 4-bit grayscale images cannot be compressed.

-cmrpath *searchPath*[,*searchPath*...] [**-cmrpath** *searchPath*[,*searchPath*]...]

Specifies the search order for locating color resources. This search order is a series of directory paths that color resources are located in. If you specify two or more **-cmrpath** flags, InfoPrint will concatenate these search orders.

-crop *t,b,l,r***[i | m | p | d]**

Image cropping. *t,b,l,r* specify how much should be cropped from the image top, bottom, left edge, and right edge. The numbers are floating point and can be either positive or negative. Negative numbers indicate that a blank space should be inserted. The units are inches, millimeters, points, and dots (pels), with the default being dots. The cropping is specified in the context of the output page, to that "top" means the top of the output page and so on, regardless of the **-rot** option. To crop, the transform will enlarge the image by the amount to be cropped, then crop the specified amount by manipulating the actual bitmap. The resulting image has the size as specified by the explicit (or implicit) **-scale** option. See also option **-j**.

If **-fit trim** is specified, the right and the bottom edge of the image are not cropped. Instead, the image grows as necessary. Because **-fit trim** causes the output data stream to contain the "position and trim" specification, the printer discards any extra image.

-devmodel *model*

Specify the device model of the actual device.

-devtype *type*

Specify the device type of the actual device.

-f *FileList*

Specifies the name of a file that contains a list of files to be processed by the transform. If the **-f** option is present, the output file defaults to standard output, even if the list of files contains only a single entry. Multiple **-f** options are allowed. See also options **@** and **-z**.

-fit {trim | scale}

Determines whether the printer behavior will be position-and-trim or scale-to-fit if the image is too large to fit on the paper. The default is **trim**.

This option is equivalent to the **image-fit** document attribute on the **pdpr** command.

-gcorr *FileName*

Specifies a file with grayscale mapping table for halftoning of the grayscale and color images to bi-level for output. The mapping table must be provided to compensate for the printing characteristics of the particular output device and paper type, such as dot gain. This file must contain either:

- 256 real numbers, one for each level of gray in the 8-bit grayscale image
- The PostScript **settransfer** operator

The algorithm converts every image to 8-bit grayscale before applying the halftoning algorithm. The default internal mapping table has been optimized for the 600-pel InfoPrint 4000 laser printer. You shouldn't change this unless you know what you are doing. See also options **-alg** and **-thresh**. PostScript code submitted using the **-thresh** option can have the same effect as **-gcorr**.

-icmr *colorResourceName***[,***colorResourceName***...] [-icmr** *colorResourceName***[,***colorResourceName***]...]**

Specifies one or more input or audit color resources. The color resources can be either ICC Profiles or Color Management Resources (CMRs). If you specify two or more **-icmr** flags on a transform command line, InfoPrint will concatenate the resources together. If two or more resources that are specified by the **-icmr** flags are for the same color space, InfoPrint will use the last specified resource.

-ink {black | white}

This option is used only with scaling algorithm **alg1** or **alg2**. The GIF images can be either black on white or white on black. The internal scaling algorithm must know which, because "ink" is preserved at the expense of "non-ink" The default value, "black", indicates that the image is black on white.

If you use the option **-inv** to print the reversed image, the inversion is done as the data is read by the transform, before any processing is done. The black or white must thus be specified in the terms of the printed image, not in the terms of the input GIF image.

-inline {*yes* **|** *no***}**

Specifies whether the output Color Management Resource (CMR) will be placed inline with the data stream. If you specify two or more **-inline** flags on a transform command line, InfoPrint will use the last specified value.

-intent {*relative* **|** *perceptual* **|** *saturation* **|** *absolute***}**

Specifies the rendering intent. You can also use the **-pragma** option to specify the rendering intent by setting:

```
-pragma colorRendering=relative
```

If you specify two or more **-intent** flags on a transform command line, InfoPrint will use the last specified value.

-inv

Reverses the image. Areas that are black in the original image become white and vice versa. The reversed image can be either black on white or white on black, depending on the original image.

-is {1 | 3}

Specifies the interchange set version.

Values are:

1

If you specify **1**, the output is IS/1 compliant. This is the default value.

3

If you specify **3**, the output is IS/3 compliant.

Note

1. Any other value different than **1** or **3** is signaled as error.
2. If you specify **3** as a value for the **-is** flag, make sure that the output type selected is one of the following: ioca, ioca10, ioca42, ioca45, FS10, FS42, FS45, IO1, IO1_G4, IO1_MMR, PSEG_IO1_G4, PSEG_IO1, PSEG_IO1_MMR, OVLY_IO1_G4, OVLY_IO1, and OVLY_IO1_MMR. Only these output types are compatible with the IS/3 flag.

-j *ScanOffsetFileName*

Sometimes input images must be shifted to get the desired positioning on the page. The scan offset file contains the directions for shifting. The file has the format of

```
[attribute]
values
⋮
values
[attribute]
values
```

```
⋮
values
```

Currently, the recognized attributes are **[Units]** (values **millimeters**, **mm**, **inches**, **in**, **points**, **dots**, **pels**) **[Page_Offset_Type]** (values **crop** or **grow**) and **[Page_Offsets]**. The values for page offsets are in the format *FileName*,**H***horiz*,**V***vert* Each entry refers to a file. The file names must be specified (or at least the leading comma must), but are currently ignored and the offset factors are applied to each file in turn. The same factors are applied to each image in the file. The *horiz* and *vert* values are the amount that the image is to be shifted, in the horizontal and vertical direction. The positive directions are down and right (that is, the origin is in the left upper corner of the page). The default units are millimeters. Like the values for the **-crop** option, the shifts are specified in the output space context.

Extra spaces and blank lines are allowed. Unrecognized attributes and their values are ignored. See the sample file **shift.sample**.

If the image is moved left or up, part of the bitmap is removed. If the image is moved down or right, removal is governed by the value of the **[Page_Offset_Type]** attribute. If **crop** is chosen, the transform removes the requisite amount from the right and bottom edges of the bitmap. If **grow** is chosen, the transform does not remove any space. The bitmap grows and the trimming, if any, is left to the printer. If the **-fit trim** option (the default) is specified, **[Page_Offset_Type]** defaults to **grow**. For **-fit scale**, **[Page_Offset_Type]** defaults to **crop**.

-l {11i | *yyy.yy*[d | m | i | p]}

Specifies the paper length. The optional units are (d)ots (pels), (m)illimeters, (i)nches, or (p)oints. The default unit is dots. If the unit is dots, decimals (if any) are ignored. The default paper length is 11 inches. See options **-w** to set the paper width or **-paper** to set both dimensions at the same time.

-lut *LookUpTableFile*

Specifies the *FileName* for the color conversion lookup table file. The *FileName* you specify can be a fully qualified filename.

Fast and accurate conversion between color spaces can be implemented as a multidimensional lookup with an interpolation algorithm for missing nodes. The file specified with the **-lut** option must contain a valid lookup table for the conversion between the input and output color spaces. The lookup tables currently come in either ASCII (.lut) or binary formats (.lutbin).

-M {0 | nnn}

Limits the amount of memory available to **gif2afp**. *nnn* is the maximum amount of memory in kilobytes. A value of **0** means there is no memory limit. *nnn* can be set from **0** to the maximum value that AIX or Linux allows. The default is **0**.

-ms {10 | *nnn*}

Requires that at least *nnn* kilobytes of disk space be available on the file system that contains the output file. This limit is enforced every time data is written to the output file. If the output is standard output, this option is ignored. The default is **10**. See option **-msf**.

-msf {0.1 | *x.xxx*}

The number *x.xxx* is a real number between 0 and 1. It denotes the minimum space that must be left unused on the file system containing the output file. The space is given as a fraction of the total space in the file system. This limit is enforced every time data is written to the output file. If the output is standard output, this option is ignored. The default is **0.1**. See option **-ms**.

-nosniff

See [**-sniff** | **-nosniff**].

-noterm

See [**-term** | **-noterm**].

-nov

See [**-v** | **-nov**].

-o *FileName*

Optional output file name. Specify **-** for standard output.

-ocmr *colorResourceName*

Specifies an output color resource. The color resource can be either an ICC Profile or a Color Management Resource (CMR). If you specify two or more **-ocmr** flags on a transform command line, InfoPrint will use the last specified value.

-otag {*none* **|** *normal* **|** *passthru***}**

Specifies how the output AFP will be tagged with color information. The allowed values are:

none

There will be no tagging in the output AFP.

normal

InfoPrint will use the specified **-ocmr** value to tag the output AFP as an input (audit) Color Management Resource (CMR).

passthru

InfoPrint will use the specified **-ocmr** value to tag the output AFP as both an input (audit) CMR and an output (instruction) CMR.

If you specify two or more **-otag** flags on a transform command line, InfoPrint will use the last specified value.

-outbits *NumberOfOutputBits*

Sets the number of bits per pel in output. This value must be **1**, **4**, **8**, or **24**. If the output image type is IOCA FS10 or IM1, the number of output bits is set to **1** and this option is ignored. For IOCA FS11 output, the default is **24**. This number represents the maximum number of bits used per pel. Thus, even if the number of bits is set to **24**, a 4-bit grayscale image is still displayed in 4-bit format.

-outcolor {cmyk | rgb | ycbcr | ycrcb}

Sets the output color model to CMYK, RGB, YCbCr, or YCrCb if the image type is IOCA FS11 and the number of output bits is 24. Otherwise, this option is ignored. The default is **ycbcr**.

-P 6986

Specifies the port number **gif2afp** uses to make a connection with the Transform Manager (set by the **-S** flag) When the **-S** flag is not specified or the **-S** flag specifies **none**, the **-P** flag is ignored.

6986

The port number if InfoPrint Manager is connected to Transform Manager.

Note

To find out which ports are already being used on your system (although they might or might not be active), look in the `/etc/services` file.

-p {even | odd | *nn* **|** *nn-mm* **|** *nn-***}**

Specifies that the output should only contain the specified pages. If no **-p** option is given, all the pages are output. Multiple **-p** options can be specified. Their effect is cumulative. Regardless of the order in which the pages are specified, they are always printed in ascending order. The recognized values are:

even

Print all even pages

odd

Print all odd pages

nn

Print page *nn*

nn-mm

Print pages *nn* to *mm*, inclusive.

nn-

Print all pages starting with page *nn*

Pages are numbered starting with 1.

-pagetype {page | overlay | ovly | pseg | object}

Sets the output page type to be page, overlay, page segment or object. The same page type is set for every page in the output. Thus, unless you use option **-p** to select a single page, multiple overlays, page segments or overlays are stored in the output file. The default is **page**. See option **-a**.

-paper {a5 | a4 | a3 | letter | folio | legal | ledger | *xxx.xx,yyy.yy***[d | m | i | p]}**

Specifies the output paper size. The supported values are:

a3

A3 format (297 by 420 mm or 11.69 by 16.54 inches)

a4

A4 format (210 by 297 mm or 8.27 by 11.69 inches)

a5

A5 format (148 by 210 mm or 5.83 by 8.27 inches)

letter

8.5 by 11 inches (216 by 279 mm)

folio

8.5 by 13.0 inches (216 by 330 mm)

legal

8.5 by 14.0 inches (216 by 356 mm)

ledger

11.0 by 17.0 inches (279 by 432 mm)

*xx.xx,yy.yy***[d | m | i | p]**

Horizontal and vertical page dimensions. The optional units are (d)ots (pels), (m)illimeters, (i)nches, or (p)oints.

The default paper size is letter. If **-paper** is not used, the paper size is increased, if necessary, to contain the output image.

See options **-l**, **-w**, and **-scale**.

-r {300 | *nnn***}**

The output device resolution, specified in dots per inch. The default is **300**.

This option is equivalent to the **default-printer-resolution** document attribute on the **pdpr** command.

-respath *directory***[:***directory***...]**

Sets the search path for resource files, such as the scan offset files and grayscale calibration curve files. If a resource file name is specified as a relative name (does not start with a **/**), the transform searches every directory in the path, in the order specified in the path, until it finds the file (or fails). See options **-j** and **-gcorr** for scan offsets and grayscale calibration curve. The default is the current directory.

-rot {0 | 90 | 180 | 270[p | i]}

The image is rotated in the clockwise direction by the amount specified. The default is zero, that is, no rotation.

If **p** is specified, the transform sets the output data stream in such a way that the printer performs the actual image rotation. If **i** is specified, the transform rotates the output bitmap. When **i** is chosen, the transform takes much longer to run and uses much more memory. If no letter is specified, the default or any previous value (such as the value specified in the configuration file) remains in force. The default is **p**.

-S *ServerName* **| none**

Specifies the name of the system on which the Transform Manager is running. The value is:

ServerName

Any valid workstation name on which the Transform Manager is installed and running. The name is defined in the **/etc/hosts** file or by a name server, and can be a nickname like **molly**, or a dotted decimal address like **9.99.9.23**.

none

Processes the **gif2afp** transform locally.

Note

When the **-S** flag is not specified or the **-S** flag specifies **none**, the **-P** flag is ignored.

-scale {orig | a5 | a4 | a3 | letter | folio | legal | ledger | *xxx.xx,yyy.yy***[d | m | i |p] |** *xxx***%}**

Specifies the output image size. The image is scaled to this size and centered in the area defined by the paper size and margin options. The supported values are:

orig

Preserve the input image size, regardless of the printable paper area.

a3

A3 format (297 by 420 mm or 11.69 by 16.54 inches)

a4

A4 format (210 by 297 mm or 8.27 by 11.69 inches)

a5

A5 format (148 by 210 mm or 5.83 by 8.27 inches)

letter

8.5 by 11 inches (216 by 279 mm)

folio

8.5 by 13.0 inches (216 by 330 mm)

legal

8.5 by 14.0 inches (216 by 356 mm)

ledger

11.0 by 17.0 inches (279 by 432 mm)

*xx.xx,yy.yy***[d | m | i | p]**

Horizontal and vertical image dimensions. The optional units are (d)ots (pels), (m)illimeters, (i)nches, or (p)oints.

*xxx***%**

Magnification relative to the original image size. Numbers below 100% mean reduction, while Numbers above 100% mean enlargement. For example, **-scale 200%** causes the output image to be twice as long and twice as wide as the input image.

The default image size is **orig**.

[-sniff | -nosniff]

Turns automatic conversion to black on white for bi-level images on (**-sniff**) or off (**-nosniff**). The automatic conversion algorithm counts the number of 0 and 1 bits in the image. If there are fewer zeros, it assumes the printed features are represented by zeros (white on black), and inverts the image to be black on white. The detection and conversion are done after the conversion specified by the Photometric Interpretation tag is applied (if any).

This option is ignored if the image is not bi-level. The default is **-nosniff**.

[-term | -noterm]

Disables (**-term**) or enables (**-noterm**) error recovery.

- When error recovery is disabled, on encountering an error in a GIF file, the transform terminates with an error message and a nonzero return code.

- When error recovery is enabled, the errors in GIF files are treated as non-fatal. The transform tries to recover with the next image in the file, or with the next file. The return code is zero.

The default is **-noterm**.

-thresh *FileName*

Specifies a file that contains a PostScript Type 1 or Type 3 halftone dictionary. Alternatively, the PostScript code can specify the **setscreen** operator instead of a Type 1 dictionary. You can use the halftone cell in the dictionary to overwrite the default ordered dither clustered dot halftone cell. If the PostScript code contains a transfer function, either in the halftone dictionary or specified by the **settransfer** operator, the current grayscale correction curve is overwritten as if **-gcorr** were used.

[-v | -nov]

Turns verbose mode on (**-v**) or off (**-nov**).

- When verbose mode is on, the transform prints a message as it opens each resource file, then echoes the command line, then prints a message for each file name as it is processed.
- When verbose mode is off, the transform prints only error messages.

The default is **-nov**.

-w {8.5i | *yyy.yy*[d | m | i | p]}

Specifies the paper width. The optional units are (d)ots (pels), (m)illimeters, (i)nches, or (p)oints. The default unit is dots. The default page width is 8.5 inches. See options **-l** to set the paper length or **-paper** to set both dimensions at the same time.

-x {0 | *nnn.nn*[d| m | i | p]}

Specifies the left margin. The optional units are (d)ots (pels), (m)illimeters, (i)nches, or (p)oints. The default unit is dots. The default is zero (no margin).

-y {0 | *nnn.nn*[d| m | i | p]}

Specifies the top margin. The optional units are (d)ots (pels), (m)illimeters, (i)nches, or (p)oints. The default unit is dots. The default is zero (no margin).

-z

Signifies that a list of files to be processed is submitted from standard input. See also options **-f** and **@**.

img2afp command: transforms image data to AFP

Syntax

img2afp
[**-a** *ImageType*]
[**-C** *ConfigurationFile*]
[**-e** {1|2}[,cycle[,switch]]]
[**-errtrace**]
[**-gcorr** *filename*[,*filename*]]
[**-lut** *LookupTable*]

[**-maxobj** [ct],[lw],[bw]]
[**-no5a**]
[**-nomerge**]
[**-o** *OutputFile*]
[**-pagetype** *PageType*]
[**-r** *output resolution*]
[**-respath** {*directory*[**:***directory*]**…**[**:***directory*]}]
[**-rot** *rotation*]
[**-thresh** *FileName*]
[**-v**]
[**-wrkdir** *Work Directory Name*]
[**infile**[**infile**] **…**]

Description

The **img2afp** command conditions an FS45 image file for printing on a high-speed color printer or transforms the FS45 image into an FS10 image with halftones for printing on a bi-level black and white printer. The **img2afp** command can only be invoked from the command line.

Note

img2afp only processes images containing pure IOCA data or IOCA data overlaid by bi-level-compatible OCAs accurately.

By default for FS45 output, **img2afp** merges the images and tiles in the input data stream so that the output has the specified number of objects on each scanline and contains three types of images: contone, linework, and bi-level. Even though the images in the input data might be merged, the datatypes remain the same, that is, linework remains linework. **img2afp** produces output that is suitable for high-speed color printing, so the transform applies any indicated image-processing operations, such as scaling, cropping, or rotating, to the input data. **img2afp** rasterizes any image resources and merges them in the output.

img2afp can also output bi-level FS10 output by converting the FS45 object to grayscale halftones using the lookup table and merging them into a single image.

img2afp uses an ordered dither algorithm, where the screen (threshold array) can be specified on the command line. To support multi-engine printers, separate grayscale calibrations can be specified for the front and back sides of the output, and the **-e** option can be used to determine which pages are front and which pages are back.

For more information about the **img2afp** transform, see "Working with Transforms" in the *RICOH InfoPrint Manager: Procedures* manual that is appropriate for your operating system.

Options and configuration

The **img2afp** behavior is controlled by the internal defaults, configuration files, and command line options in the order of increasing priority. The internal defaults are loaded first. The command line is then parsed for the **-C** options, indicating configuration file names. The configuration files are processed in turn. Finally, the remaining command line options are processed. If an option is specified multiple times, later specifications override earlier specifications. The **-rot** option is an exception to this rule; it is cumulative.

The configuration file syntax is attribute **=** value. A '#' indicates a comment to the end of the line. The attribute names are the same as the command line options, so "**-option value**" becomes "**option = value**" in the configuration file. For options that do not take values, "**yes**" must be used in the configuration file. The case of the option is significant, but the case of the value is not, unless the value is a filename. An example of a configuration file follows:

```
#sample configuration file
v = yes # equivalent to -v
a = fs10 # bilevel output
```


All options except **-C** can appear in a configuration file. Spaces between the option and value on the command line and around the equal sign are optional, so "**-afs10**", "**-a fs10**", "**-a=fs10**", and "**a = fs10**" are all valid.

Input and output

By default, **img2afp** reads data from the standard input and writes it to the standard output.

The output file name can be specified explicitly with the **-o** option. Input file names can also be specified on the command line.

By default, output is a printable document. Overlay, object, or page segment output can also be selected with the **-pagetype** option.

The MO:DCA structured fields are separated by the 0x5A separator in the output file unless the **-no5a** option is used.

Processing Logic

The input data stream can contain two different classes of object: resources and imagable objects, such as printable pages and overlays. By default, the resources are merged into printable pages. If the **-nomerge** option is specified, the resources are processed in place, as if they were imagable objects and left as resources. Resource invocation calls are then left unchanged.

By default every imagable object is left as the same type as in the input. For example, an input file containing a single overlay would be output as an overlay. The **-pagetype** option can be used to force conversion of each imagable object to the specified type, such as page, overlay, or page segment.

The **img2afp** transform does not have the ability to rasterize non-IOCA data. If an input imagable object contains a mixture of IOCA and non-IOCA data, the transform just passes the non-IOCA data through. In the output, the image is put on the bottom and the other OCA data is put on top. If the input data stream intermixes the OCAs (for example, part of the text is obscured by an image), the output page displays incorrectly. If FS10 (bi-level) output is chosen and the non-IOCA data contains color, the resulting output might fail on a black and white printer.

Limitations

This section lists the limitations for the **img2afp** transform:

- The **img2afp** transform is intended to process the color output of the **ps2afp** transform, the **pdf2afp** transform, and the raster image transforms. Data streams that use features not generated

by these transforms, such as different resolutions or scale to fit, might result in errors from the **img2afp** transform.

- One bit for each spot CMYK images, such as FS42, is not supported on input.
- Only inline resources can be merged by the **img2afp** transform. External resources are allowed, but these are just passed through as if they are non-image data.
- If the input data stream contains non-IOCA data, it might process incorrectly (see Processing Logic, p. 340 for more information).

Options and values

This section describes the options and values for the **img2afp** transform:

-a { fs10|fs45| ioca10|ioca45}

Choice of the output image type. For bi-level output, the input images are converted to grayscale, halftoned (see **-gcorr**, **-lut**, and **-thresh** for more information), and merged into a single image. For FS45 output, the objects of like type are merged depending on the **-maxobj** command. To set the page type (that is page, overlay, page segment, or object), the **-pagetype** option can be used.

The default is FS45.

-C *ConfigurationFileName*

The name of a configuration file containing option-value pairs. If multiple **-C** options are given on the command line, they are processed in order..

If this option is not specified, the default configuration file **/usr/lpp/psf/img2afp/img2afp.cfg** for InfoPrint Manager for AIX or InfoPrint Manager for Linux.

-e{1|2}[,cycle[,switch]]

Engine calibration switch. If two calibration files have been specified with the **-gcorr** option, the **-e** option defines the algorithm for deciding which engine is used for which image. The first entry denotes the engine that is used to print the first image. The optional **cycle** entry specifies how many consecutive pages to print and the same engine and defaults to **1**. The optional **switch** entry specifies the number of the page where the engine assignment switches and which prints on a different engine than it would otherwise (this feature is used for printing booklets). For example, `-e 1,1` would cause the images to be halftones for engines `1 2 1 2 1 2 1 2 1 2`; `áe 1,1,3` would result in `1 2 2 1 2 1 2`; and `áe 1,4` would result in `1 1 1 1 2 2 2 2 1 1 1 1`.

If the **-gcorr** option specifies only a single grayscale calibration curve, this option is ignored. If the **áe** option is missing, all images are halftoned using the first calibration curve specified with **ágcorr**, even if **-gcorr** specifies multiple curves.

-errtrace

Causes the transform to output a full error trace in addition to the regular error message. This trace should be communicated to IBM support personnel to assist them in diagnosing the problem.

-gcorr *GrayscaleMappingTable*[,*GrayscaleMappingTable*]

Specifies files with grayscale mapping tables for halftoning of the grayscale and color images to bi-level for output. The mapping table must be provided to compensate for the printing characteristics of the particular output device and paper type, such as dot gain. This file must contain PostScript code specifying a transfer option, including the **settransfer** command can also be specified.

The algorithm converts every CMYK image to 8-bit grayscale before applying the halftoning algorithm.

If two files have been specified, **img2afp** uses each file to represent a engine calibration in a two-engine printer. In that case, the **-e** option is used to define the rules for switching between the calibration curves. See the **-lut** and **-thresh** options for more information.

Halftoning is very device-specific. Omitting the **-gcorr** option produces output that is probably unacceptable in quality. The calibration curves specified with **-gcorr** impact only the bi-level output. Therefore, this option is only meaningful for FS10 output.

-lut *LookupTable file***[,rgb|lab|cmyk]**

Specifies the filename for the color conversion lookup table file. You can use this file to specify the conversion between the CMYK color found in the FS45 data and the K-only data that is needed to halftone the output. If this option is not specified, **img2afp** uses an internal 9x9x9x9 LUT. This option is only meaningful for FS10 output.

-maxobj [ct],[lw],[bw]

Governs the maximum number of output objects per scanline for continuous tone (**ct**), linework (**lw**), and bi-level (**bw**). The output is guaranteed to have no more than the number of objects specified, but can have fewer, depending on the input data. The numbers given must be greater than zero. If any value is omitted, the current value used by the transform remains unchanged. This option applies only to FS45 output. For FS10 output, a single object is built. The default is **2,2,2**.

-no5a

By default, **img2afp** separates output MO:DCA records with the `0x5A` byte separator. This option changes the behavior, so no separators are inserted.

Note

The output separator presence is unrelated to the presence of the separator in the input file.

-nomerge

By default, **img2afp** merges any inline image resources into the output pages. This option prevents merging, so the resources will remain separate.

-o *OutputFile*

Optional output file name. Specify **"-"** for standard output. The default is standard output.

-pagetype {page|overlayovly|pseg|object|pass}

Specifies the output page type as page, overlay, page segment, or object. When the input contains multiple pages, the overlays, page segments, or objects are stored in the output file. Pages are always enclosed in a document that begins with a BDT and ends with an EDT. Use **pass** to signify that the input objects should remain unchanged. The default is **pass**.

-r *output resolution*

Specifies the output data stream resolution. The default is 600.

-respath *directory***[:***directory***...]**

Specifies the search path for resource files, such as the threshold grayscale calibration curve files. If a resource file name is specified as a relative name (does not start with a **/**), the transform searches every directory in the path, in the order specified in the path, until it finds the file (or fails). See

options **-lut**, **-thresh**, and **-gcorr** for lookup table, halftone threshold array, and grayscale calibration curve. The default is the current directory.

-rot {0|90|180|270}[i|p|v][, {e|o}]

Specifies the output rotation. The specification has three parts: amount to rotate, who performs the rotation, and what does the rotation apply to. The output can be rotated in increments of 90 degrees. The rotation can be performed in the transform (**i**) or in the printer (**p**). There is also virtual rotation, where the page is rotated internally by the specified amount, while the printer rotation is set to the negative of the amount. This in effect pre-rotates the image if the printer does not print in the portrait mode. Examples are 1-up printing on the continuous forms printers and landscape cutsheet printers. The **i** and **p** persist in the sense that a following rotation specification will retain internal/printer context unless it contains another **i/p/v** specification. The **v** applies only to the current specification. The final part of the option specifies whether the rotation applies to even pages or odd pages. If this specification is missing, the rotation applies to all pages. Rotation specifications are cumulative. The default is **0p** (no rotation, printer, applies to all pages).

-thresh *FileName*

Specifies a file that contains a PostScript Type 3 halftone dictionary. You can use the halftone cell in the dictionary to overwrite the default ordered dither clustered dot halftone cell. Halftoning is very device-specific. Omitting this option produces output that is likely to be of unacceptable quality. The output quality can also be affected adversely if the right calibration curve (specified with **-gcorr**) is not used. This option is only meaningful for FS10 output.

-v

Turns verbose mode on (**-v**). **img2afp** echoes each file name as it is being processed as well as echoing the command line. Verbose is off by default.

-wrkdir *WorkDirectoryName*

This option specifies which directory to use for work files. If this option is absent or the directory cannot be opened, the transform first tries to use **/var/psf/img2afp** as the working directory, and if **/var/psf/img2afp** is absent, the transform uses **/tmp**.

With AIX or Linux, the work files are never visible to you because the work files are immediately unlinked after creation. Thus, the work file is always deleted when **img2afp** finishes execution, even if **img2afp** is killed or otherwise terminates in error.

***-infile*[*infile*...]**

Specifies one or more optional input files. If no input files are specified, **img2afp** expects input on the standard input.

jpeg2afp command: transforms JPEG data to AFP

Syntax

jpeg2afp [**-a** *ImageType*] [**-alg** *ProcessingAlgorithms*]
[**-C** *ConfigurationFile*]
[**-cmp** *compression*] [**-cmrpath** *searchPath*[,*searchPath*...]
[**-cmrpath** *searchPath*[,*searchPath*]...]]

[**-crop** *CropFactors*] [**-devmodel** *model*] [**-devtype** *type*]
[**-fit** {**trim** | **scale**}] [**-force**]
[**-gcorr** *GrayscaleMappingTable*]
[**-icmr** *colorResourceName*[,*colorResourceName*...]
[**-icmr** *colorResourceName*[,*colorResourceName*]...]]
[**-inline** {*yes* | *no*}]
[**-intent** {*relative* | *perceptual* | *saturation* | *absolute*}]
[**-is** 1|3] [**-j** *ScanOffsetFileName*] [**-l** *ImageLength*] [**-lut** *LookupTable*]
[**-M** *MemoryBound*] [**-ms** *space*] [**-msf** *SpaceFraction*]
[**-o** *OutputFile*] [**-ocmr** *colorResourceName*]
[**-otag** {*none* | *normal* | *passthru*}]
[**-outbits** *NumberOfOutputBits*]
[**-outcolor** *OutputColorModel*] [**-p** *PageRange*]
[**-P 6986**
[**-pagetype** *PageType*] [**-paper** *PaperSize*]
[**-r** *resolution*] [**-respath** *ResourceSearchPath*]
[**-rot** *rotation*]
[**-S** [***Servername*** **| none]**
[**-scale** *ImageSize*]
[**-term** | **-noterm**]
[**-thresh** *FileName*] [**-v** | **-nov**]
[**-w** *ImageWidth*] [**-wrkdir** *WorkDirectory*]
[**-x** *LeftMargin*] [**-y** *TopMargin*] [**-z**]
[[*file* | *directory* | **-f** *FileList* | **@***FileList*]**...**]

Description

The **jpeg2afp** command transforms a JPEG (Joint Photographic Experts Group) data stream into an AFP (MO:DCA-P) or PostScript Level 2 data stream file.

The transform can process images compressed using baseline lossy JPEG compression. Only 8 bits per channel and Huffman coding are supported. The output can be bi-level (IM1 or IOCA FS10), 4-bit or 8-bit gray scale, or 24-bit YCbCr color (IOCA FS11), bi-level or 4-bit banded CMYK image at 1-bit per band (IOCA FS42), or a superset of FS42 that also contains 32–bit banded CMYK images, compressed with either JPEG or LZW algorithms (IOCA FS45). The transform automatically uses halftoning to convert the gray scale and color images to bi-level.

For more information about the **jpeg2afp** transform, see "Working with Transforms" in the *InfoPrint Manager: Procedures* manual that is appropriate for your operating system.

Automatic invocation

The PSF DSS automatically invokes the **jpeg2afp** transform command whenever you submit a JPEG file for printing. You can pass options to **jpeg2afp** using the **other-transform-options** attribute on the **pdpr** command or the **-o** flag of the AIX print commands or the **lprafp** command. You can also pass options to **jpeg2afp** through theInfoPrint Submit Express client of InfoPrint Manager. Parameters that are not supported, such as **-alg**, can be passed in InfoPrint Submit Express by clicking **Advanced** and entering them in the **Transform options** field.

Input and output

jpeg2afp can process either standard input or multiple files specified on the command line. If no input file is specified, **stdin** is assumed. Standard input is cached to a file (see the **-wrkdir** option) and then processed. Only a single JPEG file should be submitted using **stdin**. If multiple JPEG files are concatenated using standard input, all except the first one are ignored.

If an input file is specified on the command line, it can be either a JPEG file, a directory, or a file list (**-f** and **@** prefixes). Multiple input file specifications are allowed. The transform processes each file in the order in which it was specified on the command line. If the **-z** option is specified, a list of file names to be processed is also submitted using standard input. The files on the list are processed as if the list were given with the **-f** option on the same place on the command line as **-z**.

If the file name points to a directory, **jpeg2afp** processes every file in that directory. The files are processed in the order they would be shown using the **ls -a** command. Directory search is not recursive, that is, the subdirectories are not searched.

If the file name is preceded by the **-f** option or the at sign (**@**), **jpeg2afp** assumes that the file contains the list of JPEG files to be processed. Each of the files in the list is processed in the order it was listed.

If a JPEG file has the extension **.jpg**, **.jpeg**, **.JPG**, or **.JPEG**, this extension need not be given explicitly. **jpeg2afp** first tries to open the file as specified, and if unsuccessful, tries to append the extensions **.jpg . jpeg**, **.JPG**, and **.JPEG** in turn.

For example, suppose that:

- The directory `tFiles` contains the files `file1.jpg`, `file2.jpg`, `file3.jpg`, and `file4.jpg` and nothing else.
- The file `flist` in the current directory contains the two file names `tFiles/file2.jpg` and `tFiles/file3.jpg`. The names listed in the file list can have their extensions omitted.
- The file `flist2` contains the file name `tFiles/file4`. Again, the names listed in the file list can have their extensions omitted.

To process files `file1.jpg`, `file2.jpg`, `file3.jpg`, and `file4.jpg`, any of these invocations of **jpeg2afp** would work:

```
jpeg2afp tFiles/file1.jpg tFiles/file2.jpg tFiles/file3.jpg
 tFiles/file4.jpg
jpeg2afp tFiles/file1 tFiles/file2 tFiles/file3 tFiles/file4
jpeg2afp tFiles/file*.jpg
jpeg2afp tFiles
jpeg2afp tFiles/file1 -fflist tFiles/file4
jpeg2afp tFiles/file1 -f flist tFiles/file4
jpeg2afp tFiles/file1 -f flist -f flist2
jpeg2afp tFiles/file1 @flist @flist2
```

Note

With InfoPrint Manager for Windows, you can enter separators in path names as backward slashes or forward slashes.

The file list files allow the display text to be added for each file. A display text is any text starting with the pound character (**#**) and extending to the end of the line. The display text should follow the file name and can extend over several lines, up to 2048 characters long. The initial **#** character on each line is discarded. If a display text is present for a file name, that text is displayed in the status and error

messages instead of the file name. This is useful if **jpeg2afp** is invoked using temporary files whose names are meaningless to the user. Any display text before the first file name is treated as comment and discarded. Display text is allowed also if you use the **-z** option to submit the file list using standard input.

The output file name can be either specified explicitly with the **-o** option or derived from the input file name. If multiple input files have been specified, the default output file is standard output. If a single input file is given and the output file is not specified explicitly, the transform strips the **.jpg** or **.jpeg** extension from the input file name (if one is present) and appends the **.afp** extension for AFP output or the **.ps** extension for PostScript output, to get the output file name.

To disable automatic output file name generation and force the default output stream to be the standard output in all cases, set the environment variable **JPEG2AFP_o** to **-** or **stdout**, or alternatively, put the line **o=-** or **o=stdout** into the configuration file and invoke that configuration file using the **-C** option or the **JPEG2AFP_C** environment variable.

For example, all these commands:

```
jpeg2afp myfile
jpeg2afp myfile.jpg
jpeg2afp myfile -o myfile.afp
```

have `myfile.afp` as the output file. There is no requirement for the explicitly specified input and output files to have **.jpg** and **.afp** extensions. To process JPEG file `foo.bar` into an AFP file `foo.bar2`, invoke the transform using:

```
jpeg2afp foo.bar -o foo.bar2
```

The output data stream is MODCA-P or PostScript Level 2. MODCA-P data can be encoded as IM1 or IOCA Function Sets (FS) 10, 11, 42, or 45. IM1 images are bi-level and uncompressed. Function Set 42 is tiled, while Function Sets 10 and 11 are not. All IOCA function sets can contain bi-level image data. In addition, Function Set 11 can also contain 4- and 8-bit grayscale, as well as 24 bit (8 bits per plane) YCbCr color. In addition to bi-level images, Function Set 42 can also contain 4-bit (1 bit per plane) CMYK data. Function Set 45 is a superset of FS42 and supports 32-bit (8 bits per plane) CMYK images, as well as transparency masks and different relative resolutions.

While FS45 and FS42 can contain image divided into a number of tiles, the transform currently outputs the image in a single tile. The IOCA output image data can be either uncompressed or compressed using one of several algorithms (see the **-cmp** option). The default compression algorithm for bi-level image data is ITU-TSS T.6 Group 4, while the compression algorithm for grayscale and YCbCr defaults to no compression. CMYK images in FS42 are carried in the planar (banded) format, and each band is compressed separately as a bi-level image.

The default compression for FS45 output is JPEG, which is downsampled by a factor of two. Use **-cmp lzw** to obtain LZW-uncompressed, unsubsampled output.

Note

LZW compression should be used only for linework images and not for continuous tone images.

PostScript Level 2 images can be uncompressed or ITU-T T.6 Group 4 bi-level, uncompressed 8-bit grayscale or uncompressed 24-bit RGB color. By default, the transform leaves scaling and halftoning to the printer (that is, color JPEG images are output as 24-bit RGB color images).

Errors and error recovery

jpeg2afp divides errors into fatal and non-fatal. The fatal error categories are:

- Errors in the user-specified parameters, either in the environment variables, the configuration file, or the command line arguments. These errors include unrecognized options, incorrect values for parameters, or inability to open the configuration file or the output file.
- Out of memory errors. The requested memory is larger than the memory specified using the **-M** option or the dynamic memory allocation has failed.
- Disk space errors. The transform guards against trying to write to a full file system. See the **-ms** and **-msf** options for setting the minimum free disk space requirements. If the file system is full, the transform deletes the partial output file before terminating.
- Internal errors.

In the case of a fatal error, the last output page might not be complete.

Errors found in the JPEG files are non-fatal and **jpeg2afp** tries to recover from them. These errors include not being able to open an input file, an input file not being a JPEG file, or an input file containing features that cannot be processed. If the transform fails to open 15 or more input files, it assumes an error in the parameter list (for example, **-f** was used with a file that does not contain a file list) and terminates.

If an error is found in a file, the transform tries to recover with the next input file. A warning message is issued. Errors and warnings are output to standard error.

For example, let a directory `tFiles` contain files `file1.jpg`, `file1.txt`, `file2.jpg` and `file3.jpg`, where `file1.txt` is an ASCII file. Invoking the transform with:

```
jpeg2afp tFiles
```

processes the bi-level images in all three JPEG files correctly. A warning is issued that `file1.txt` is not a JPEG file.

Non-fatal errors can be made fatal by using the option **-term**, or the corresponding environment variable or configuration file entry. If **-term** is set, the transform terminates in error if it encounters an error in the JPEG data stream.

Data transformations

If the input image is gray scale or color, and the output image type is bi-level (for example, IOCA FS10, or IM1), the transform internally scales the image to the desired size, then uses a halftoning algorithm (ordered dither, the default, or Floyd-Steinberg) to convert it to bi-level. In converting the image to bi-level, the characteristics of the output device, such as dot shape and dot gain, must be taken into consideration. The halftone screen and the calibration are extremely printer dependant. while the transform does contain an internal default (85 LPI screen at 45 degrees), an appropriate screen shipped with the InfoPrint Manager should be used and the halftone should be calibrated properly for best quality.

Some printers, such as the InfoPrint 4000, have two engines, one for each side of the sheet. Each engine commonly has a different calibration. Options **-thresh**, **-gcorr**, and **-e** provide the mechanism to specify halftone screen, gray scale correction curves, and rules for switching calibration based on the engine used to print a particular page. For very light or very dark images, the halftoning algorithms can be automatically recalibrated to preserve detail that would be lost using the default calibration. See option **-alg**.

To maintain the image quality, scaling must be done before halftoning. The halftoning algorithm is very compute-intensive. Unless the images are small, **jpeg2afp** might not be able to process the color images fast enough to feed even a slow printer.

To achieve good image quality for the CMYK output, the input image colors must be converted to CMYK, bearing in mind the characteristics of the particular halftones used to generate the output image. The color conversion is done using a multidimensional lookup table, which is specified with the **-lut** option. If the transform cannot determine the appropriate lookup table or the lookup table is missing, a simple conversion of RBG to CMY is performed using the 255- algorithm. This conversion does not use black and generally leads to poor color quality.

The size and the position of the output image on the page depends on several factors. In addition to the size specified to the transform, the result depends on the form map specified at print time and also on the form and options loaded in the printer. If the image is too large to fit on the page, it is trimmed to size by default. Use the **-fit** option to instruct the printer to scale the image to paper size. If the paper size has not been specified explicitly with the **–paper** option, the paper defaults to US letter (8.5 by 11 inches). If the image is larger than this, the paper dimensions are increased as necessary. If the paper size has been specified explicitly, it is not increased if the image will not fit on paper. Options **-l** and **-w** have the same effect as **-paper**.

The size of the actual image, as opposed to the paper size, is controlled by the **-scale** option. The **-scale** option can either specify **"orig"**, or give an actual size. If **orig** has been specified, the output image has the same size as the input image. If **-scale** with an actual size has been specified, the output image is scaled to the desired size. A percentage enlargement/reduction can also be specified.

Even if **-scale orig** has been specified, the image might still need to be scaled if the input resolution is different from the output resolution. By default, the transform leaves scaling to the printer. The exceptions are images that are being halftoned, which are always scaled in the transform, and images that have different resolutions on the X and Y directions. The **-alg** option can be used to instruct the transform to do internal image scaling. Options **-alg**, **-clean**, and **-ink** select and configure various scaling algorithms used by the transform.

Note

Because JPEG files do not specify resolutions, the image is assumed to have the resolution of the output device.

If possible, **jpeg2afp** just rewraps the JPEG raster data in MODCA-P headers. This does not change the compression algorithm used in the data, even though it might be different than the output compression algorithm specified on the command line. The data is rewapped only if no changes are to be made in the image and if the compression algorithm is supported by the IOCA standard. Besides the uncompressed data, the bi-level compression algorithms supported both by JPEG and IOCA are ITU-TSS T.4 Group 3 and T.6 Group 4 algorithms.

For 8-bit grayscale and 24-bit color images, both TIFF and IOCA FS11 support JPEG compression algorithms. However, TIFF and JPEG standards have different subsampling defaults than IOCA FS11. Thus, most 24-bit color images are not suitable for rewrapping, even if they use a JPEG compression algorithm and a color model supported by IOCA FS11. Also, JPEG is a lossy compression algorithm. Decompressing a JPEG image and then recompressing it again for output might result in reduced image quality. For that reason, the default is to use no compression for the gray or color output.

Be aware that not all the printers support all the recognized IOCA compression standards. To make sure that the transform decompresses the data and recompresses it using the specified algorithm, use the **-force** option. If the output image is IM1, the image is always decompressed and scaled in the transform.

The JPEG images are often divided into many segments for efficient memory handling. Some printers will terminate the printing in error if the page is too complex. For that reason, **jpeg2afp** decompresses, repartitions, and compresses the data if it determines there are too many segments in the picture.

Parameters

jpeg2afp behavior is governed by many parameters. The parameters are set by this hierarchy (least significant first):

- Internal defaults
- Environment variables
- Configuration file
- Command-line arguments

Command line arguments

- Options and input file names can appear on the command line in any order.
- When you run **jpeg2afp** as a standalone transform, the blank between option and value is optional (for example, both `-fittrim` and `-fit trim` are valid).
- When you use the **-o** flag of the **enq**, **lp**, **qprt**, or **lprafp** commands to pass options to **jpeg2afp**, no blank is permitted between option and value (for example, `-o-fittrim` is valid, but `-o -fit trim` is not).
- When you use the **other-transform-options** attribute on the **pdpr** command to pass options to **jpeg2afp**, any string containing a blank must be surrounded by single quotes (for example, both `other-transform-options=-fittrim` and `other-transform-options='-fit trim'` are valid).
- All values except file names are case-insensitive.
- If an option is specified multiple times, the last specification remains in force.
- If multiple configuration file names are given, they are processed in order.

Configuration file

The configuration file has entries of the form *option=value*, where each pair must be on a separate line. Options and other syntax are the same as for the command line arguments and the option names are the same. Input files and configuration files cannot be specified in the configuration file (that is, nested configuration files are not supported). In the case of options without values (for example, **-v**), the equals sign must be present.

Some command line options cannot be used in the configuration file or as environment variables. Options available only on the command line are noted as such in their descriptions.

If you do not specify a configuration file on the command line with the **-C** option, the transform checks for the existence of the default configuration file, **/usr/lpp/psf/jpeg2afp/jpeg2afp.cfg** with InfoPrint Manager for AIX or InfoPrint Manager for Linux and ***install_path*\jpeg2afp\jpeg2afp.cfg** with InfoPrint Manager for Windows. If this file exists, the transform uses it as the configuration file.

Here is an example of a valid configuration file:

```
scale = letter
r= 300
```

```
o = -
v=
```

Note

The spaces around the equals sign (**=**) are optional. In this example, the option-value pair **o = -** means that the default output file is the standard output. Output file name computation has been disabled.

Environment variables

Environment variables have the form **JPEG2AFP_***option*, where *option* is the same as on the command line and the configuration file.

Some command line options cannot be used in the configuration file or as environment variables. Options available only on the command line are noted as such in their descriptions.

For example, to achieve the same effect as the configuration file in the last example, these statements have to be executed in the calling shell:

```
export JPEG2AFP_scale=letter
export JPEG2AFP_r=300
export JPEG2AFP_o=-
export JPEG2AFP_v=" "
```

There must be some value set for each desired option. For options that do not take a value, specify a blank surrounded by double quotes, for example:

```
export JPEG2AFP_v=" "    correct
export JPEG2AFP_v=       has no effect
```

Resource search path

For resource files, such as scan offset files and gray scale correction files, the transform searches the current directory by default. You can use the **-respath** option to specify a list of directories to be searched for such files. This resource path does not apply to the configuration file.

Limitations

This sections lists the limitations for the **jpeg2afp** transform:

- Only Huffman coding with baseline DCT JPEG algorithm is supported.
- At most 8-bit grayscale and 24-bit color are supported.
- The **-crop** flag is supported only when the output image type is IOCA FS 10.

Acknowledgments

This software is based in part on the work of the Independent JPEG Group.

Options and values

This sections describes the options and values for the **jpeg2afp** transform:

@*FileList*

Specifies a name of a file that contains a list of files to be processed by the transform. If the **@** option is present, the output file defaults to standard output, even if the list of files contains only a single entry. Multiple **@** options are allowed. Also see the **-f** and **-z** options. The **@** is not preceded by the dash, and is implemented to maintain compatibility with the **ps2afp** transform.

-a {ioca | ioca10 | ioca11 | im1 | PS.2 | ioca42 | ioca45}

-a {IO1_G4 | IM1 | IO1 | IO1_MMR | PSEG_IO1_G4 | PSEG_IM1 | PSEG_IO1 | PSEG_IO1_MMR | OVLY_IO1_G4 | OVLY_IM1 | OVLY_IO1 | OVLY_IO1_MMR | FS45 | FS42 | FS10 | FS11}

Choice of the output image type. The first syntax selects between the IOCA FS 10 (**ioca**, **ioca10**), IOCA FS11 (**ioca11**), IM1, PostScript Level 2 (**PS.2**), IOCA FS42 (**ioca42**), and IOCA FS45 (**ioca45**) output. IOCA FS10 and IM1 yield bi-level images, while IOCA FS11 results in 4-bit or 8-bit gray or 24-bit color output (see option **-outbits**). IOCA FS42 can contain either bi-level or 4-bit banded CMYK image at 1-bit per band. IOCA FS45 is a superset of FS42 that also contains 32-bit banded CMYK images, compressed with either JPEG or LZW algorithms. The output compression algorithm is set with the **-cmp** option. To set the page type (page, overlay, page segment, or object), use the **-pagetype** option. FS45 produces IOCA FS45 output.

The second syntax is to maintain compatibility with the **ps2afp** transform, and sets the image type (**IO1** for IOCA FS10 or **IM1** for IM1 output), compression (**G4** for Group 4 or **MMR** for Group 3), and page type (**PSEG** for page segment or **OVLY** for overlay). If **PSEG** or **OVLY** is not specified, the output is a printable page. If no compression algorithm is specified, the output is not compressed. The second syntax cannot be used for IOCA FS11 output.

Some older printers do not support IOCA images. In such cases, the IM1 output type should be chosen. IM1 images are uncompressed, and thus, use more space. The processing might also take longer since the IM1 image cannot be scaled by the printer, so internal scaling algorithms must be used. See option **-alg**.

The default is **ioca** for IOCA FS10 output compressed using the Group 4 algorithm.

This option is similar to the **image-out-format** document attribute on the **pdpr** command.

-alg afp

-alg {htod1 | htfs}

-alg htcal1

Choice of the scaling and halftoning algorithms. You can specify multiple choices, separated by commas, for one **-alg** option. The effect is the same as specifying multiple **-alg** options. For example, `-alg htfs,htcal` is equivalent to `-alg htfs -alg htcal`.

The scaling algorithm is:

If **afp** is chosen, the scaling is done using the default algorithm in the printer. This makes the transform much faster. If the image must be reduced, however, this algorithm might drop some information from the image, such as thin lines.

For color images with bi-level output, the scaling is always done before the halftoning algorithm. If a grayscale or color output is chosen (**-a ioca11**), this option is ignored and the algorithm is set to **afp**.

The halftoning algorithms are:

- **htod1** uses an ordered dither with a screen derived from the value of the **-thresh** option. The default is an 85 line per inch screen.
- **htfs** uses the Floyd-Steinberg algorithm.
- **htcal1** recalibrates the halftoning algorithm for each image. **htcal1** forces the transform to read the whole image into memory and requires an additional pass through the image. It should be used only for very light or very dark images.

The default is **htod1**. Each halftoning algorithm uses a different internal default calibration curve. If the automatic calibration is turned on, a still different set of calibration curves are used.

See options **-gcorr**, **-paper**, **-scale**, **-thresh**, **-l**, **-w**, **-x**, and **-y**.

-C *ConfigurationFileName*

The name of a configuration file containing option-value pairs. If multiple **-C** options are given on the command line, they are processed in order. Specifying the configuration file on the command line overrides any specification done using the **JPEG2AFP_C** environment variable.

The default configuration file is **/usr/lpp/psf/jpeg2afp/jpeg2afp.cfg** with InfoPrint Manager for AIX or InfoPrint Manager for Linux and ***install_path*\jpeg2afp\jpeg2afp.cfg** with InfoPrint Manager for Windows.

-cmp {none | mh | mmr | g3 | g4 | jpeg | lzw}

Choice of the output image compression algorithm:

none

Uncompressed output

mh

ITU-T T.4 G3 Modified Huffman

mmr

IBM Modified Modified Read

g3

ITU-T T.4 G3 Modified Read

g4

ITU-T T.6 G4

jpeg

JPEG non-differential Huffman coding with baseline DCT. The output image data should be compressed to reduce the file sizes and increase the printing speed.

lzw

If **lzw** is specified, linework of 600 dpi is produced, instead lossy JPEG at 300 dpi. **lzw** only applies to FS45.

The default compression is ITU-T T.6 Group 4 for bi-level images and no compression for grayscale or color images. Some printers might not support Group 4 compression algorithm and require using the **-cmp** option to select a different one. The JPEG algorithm can compress only 8-bit grayscale and 24-bit color images. 4-bit grayscale images cannot be compressed.

-cmrpath *searchPath*[**,***searchPath*...] [**-cmrpath** *searchPath*[**,***searchPath*]...]

Specifies the search order for locating color resources. This search order is a series of directory paths that color resources are located in. If you specify two or more **-cmrpath** flags, InfoPrint will concatenate these search orders.

-crop *t,b,l,r*[**i | m | p | d**]

Image cropping. *t,b,l,r* specify how much should be cropped from the image top, bottom, left edge, and right edge. The numbers are floating point and can be either positive or negative. Negative numbers indicate that a blank space should be inserted. The units are inches, millimeters, points, and dots (pels), with the default being dots. The cropping is specified in the context of the output page, to that "top" means the top of the output page and so on, regardless of the **-rot** option. To crop, the transform will enlarge the image by the amount to be cropped, then crop the specified amount by manipulating the actual bitmap. The resulting image has the size as specified by the explicit (or implicit) **-scale** option. See also option **-j**.

If **-fit trim** is specified, the right and the bottom edge of the image are not cropped. Instead, the image grows as necessary. Because **-fit trim** causes the output data stream to contain the "position and trim" specification, the printer discards any extra image.

-devmodel *model*

Specify the device model of the actual device.

-devtype *type*

Specify the device type of the actual device.

-f *FileList*

Specifies the name of a file that contains a list of files to be processed by the transform. If the **-f** option is present, the output file defaults to standard output, even if the list of files contains only a single entry. Multiple **-f** options are allowed. See also options **@** and **-z**.

-fit {trim | scale}

Determines whether the printer behavior will be position-and-trim or scale-to-fit if the image is too large to fit on the paper. The default is **trim**.

This option is equivalent to the **image-fit** document attribute on the **pdpr** command.

-force

If present, this option forces **jpeg2afp** to decompress and recompress the image, regardless of other factors.

-gcorr *FileName*

Specifies a file with grayscale mapping table for halftoning of the grayscale and color images to bi-level for output. The mapping table must be provided to compensate for the printing characteristics of the particular output device and paper type, such as dot gain. This file must contain either:

- 256 real numbers, one for each level of gray in the 8-bit grayscale image
- The PostScript **settransfer** operator

The algorithm converts every image to 8-bit grayscale before applying the halftoning algorithm. The default internal mapping table has been optimized for the 600-pel InfoPrint 4000 laser printer. You shouldn't change this unless you know what you are doing. See also options **-alg** and **-thresh**. PostScript code submitted with the **-thresh** option can have the same effect as **-gcorr**.

-icmr *colorResourceName*[**,***colorResourceName*...] [**-icmr** *colorResourceName*[**,***colorResourceName*]...]

Specifies one or more input or audit color resources. The color resources can be either ICC Profiles or Color Management Resources (CMRs). If you specify two or more **-icmr** flags on a transform command line, InfoPrint will concatenate the resources together. If two or more resources that are specified by the **-icmr** flags are for the same color space, InfoPrint will use the last specified resource.

-inline {*yes* **|** *no***}**

Specifies whether the output Color Management Resource (CMR) will be placed inline with the data stream. If you specify two or more **-inline** flags on a transform command line, InfoPrint will use the last specified value.

-intent {*relative* **|** *perceptual* **|** *saturation* **|** *absolute***}**

Specifies the rendering intent. You can also use the **-pragma** option to specify the rendering intent by setting:

```
-pragma colorRendering=relative
```

If you specify two or more **-intent** flags on a transform command line, InfoPrint will use the last specified value.

-is {1 | 3}

Specifies the interchange set version.

Values are:

1

If you specify **1**, the output is IS/1 compliant. This is the default value.

3

If you specify **3**, the output is IS/3 compliant.

Note

1. Any other value different than **1** or **3** is signaled as error.
2. If you specify **3** as a value for the **-is** flag, make sure that the output type selected is one of the following: ioca, ioca10, ioca42, ioca45, FS10, FS42, FS45, IO1, IO1_G4, IO1_MMR, PSEG_IO1_G4, PSEG_IO1, PSEG_IO1_MMR, OVLY_IO1_G4, OVLY_IO1, and OVLY_IO1_MMR. Only these output types are compatible with the IS/3 flag.

-j *ScanOffsetFileName*

Sometimes input images must be shifted to get the desired positioning on the page. The scan offset file contains the directions for shifting. The file has the format of

```
[attribute]
values
⋮
values
[attribute]
values
⋮
values
```

Currently, the recognized attributes are **[Units]** (values **millimeters**, **mm**, **inches**, **in**, **points**, **dots**, **pels**) **[Page_Offset_Type]** (values **crop** or **grow**) and **[Page_Offsets]**. The values for page

offsets are in the format *FileName*,**H***horiz*,**V***vert* Each entry refers to a file. The file names must be specified (or at least the leading comma must), but are currently ignored and the offset factors are applied to each file in turn. The *horiz* and *vert* values are the amount that the image is to be shifted, in the horizontal and vertical direction. The positive directions are down and right (that is, the origin is in the left upper corner of the page). The default units are millimeters. Like the values for the **-crop** option, the shifts are specified in the output space context.

Extra spaces and blank lines are allowed. Unrecognized attributes and their values are ignored. See the sample file **shift.sample**.

If the image is moved left or up, part of the bitmap is removed. If the image is moved down or right, removal is governed by the value of the **[Page_Offset_Type]** attribute. If **crop** is chosen, the transform removes the requisite amount from the right and bottom edges of the bitmap. If **grow** is chosen, the transform does not remove any space. The bitmap grows and the trimming, if any, is left to the printer. If the **-fit trim** option (the default) is specified, **[Page_Offset_Type]** defaults to **grow**. For **-fit scale**, **[Page_Offset_Type]** defaults to **crop**.

-l {11i | *yyy.yy*[d | m | i | p]}

Specifies the paper length. The optional units are (d)ots (pels), (m)illimeters, (i)nches, or (p)oints. The default unit is dots. If the unit is dots, decimals (if any) are ignored. The default paper length is 11 inches. See options **-w** to set the paper width or **-paper** to set both dimensions at the same time.

-lut *LookupTable file*[,rgb|lab|cmyk]

Specifies the filename for the color conversion lookup table file. Fast and accurate conversion between color spaces can be implemented as a multidimensional lookup with an interpolation algorithm for missing nodes. The file specified with the **-lut** option must contain a valid lookup table for the conversion between the input and output color spaces. The lookup tables currently come in either ASCII (.lut) or binary formats (.lutbin).

If the optional colorspace tag is not provided, the table is assumed to match the input image. If there is a serious mismatch between the table and the image (for example, the table is RGB to CMYK and the input image is CMYK), the **-lut** is ignored for the image. Otherwise, it is used to convert the colors and any mismatch (for example, using a **lab** table for **rgb** data) results in corrupted output.

If the colorspace tag is provided, the transform uses the lookup table only for the relevant colorspace image. Multiple **lut** tables can be specified if you are unsure of the input colorspace. If the **lut** files are binary, parsing extra files does not impose much of a performance penalty.

Example:

```
-lut 3170-005.rgb.cmyk.perceptual.lutbin,rgb
```

Where `3170-005` is the model-type; `rgb.cmyk` is for RGB images; and `perceptual` is the **color-rendering-intent** value. With InfoPrint Manager for AIX or InfoPrint Manager for Linux, filenames are listed in `/usr/lpp/psf/config`; and with InfoPrint Manager for Windows, filenames are listed in *`install-path`*`\config`.

-M {0 | nnn}

Limits the amount of memory available to **jpeg2afp**. *nnn* is the maximum amount of memory in kilobytes. A value of **0** means there is no memory limit. *nnn* can be set from **0** to the maximum value that AIX or Linux allows. The default is **0**.

-ms {10 | *nnn***}**

Requires that at least *nnn* kilobytes of disk space be available on the file system that contains the output file. This limit is enforced every time data is written to the output file. If the output is standard output, this option is ignored. The default is **10**. See option **-msf**.

-msf {0.1 | *x.xxx*}

The number *x.xxx* is a real number between 0 and 1. It denotes the minimum space that must be left unused on the file system containing the output file. The space is given as a fraction of the total space in the file system. This limit is enforced every time data is written to the output file. If the output is standard output, this option is ignored. The default is **0.1**. See option **-ms**.

-noterm

See [**-term** | **-noterm**].

-nov

See [**-v** | **-nov**].

-o *FileName*

Optional output file name. Specify **-** for standard output.

-ocmr *colorResourceName*

Specifies an output color resource. The color resource can be either an ICC Profile or a Color Management Resource (CMR). If you specify two or more **-ocmr** flags on a transform command line, InfoPrint will use the last specified value.

-otag {*none* **|** *normal* **|** *passthru***}**

Specifies how the output AFP will be tagged with color information. The allowed values are:

none

There will be no tagging in the output AFP.

normal

InfoPrint will use the specified **-ocmr** value to tag the output AFP as an input (audit) Color Management Resource (CMR).

passthru

InfoPrint will use the specified **-ocmr** value to tag the output AFP as both an input (audit) CMR and an output (instruction) CMR.

If you specify two or more **-otag** flags on a transform command line, InfoPrint will use the last specified value.

-outbits *NumberOfOutputBits*

Sets the number of bits per pel in output. This value must be **1**, **4**, **8**, or **24**. If the output image type is IOCA FS10 or IM1, the number of output bits is set to **1** and this option is ignored. For IOCA FS11 output, the default is **24**. This number represents the maximum number of bits used per pel. Thus, even if the number of bits is set to **24**, a 4-bit grayscale image is still displayed in 4-bit format.

-outcolor {cmyk | rgb | ycbcr | ycrcb}

Sets the output color model to CMYK, RGB, YCbCr, or YCrCb if the image type is IOCA FS11 and the number of output bits is 24. Otherwise, this option is ignored. The default is **ycbcr**.

-P 6986

Specifies the port number **jpeg2afp** uses to make a connection with the Transform Manager (set by the **-S** flag). When the **-S** flag is not specified or the **-S** flag specifies **none**, the **-P** flag is ignored.

6986

The port number if InfoPrint Manager is connected to Transform Manager.

Note

To find out which ports are already being used on your system (although they might or might not be active), look in the **/etc/services** file.

-p {even | odd | *nn* **|** *nn-mm* **|** *nn-***}**

Specifies that the output should only contain the specified pages. If no **-p** option is given, all the pages are output. Multiple **-p** options can be specified. Their effect is cumulative. Regardless of the order in which the pages are specified, they are always printed in ascending order. The recognized values are:

even

Print all even pages

odd

Print all odd pages

nn

Print page *nn*

nn-mm

Print pages *nn* to *mm*, inclusive.

nn-

Print all pages starting with page *nn*

Pages are numbered starting with 1.

-pagetype {page | overlay | ovly | pseg | object}

Sets the output page type to be page, overlay, page segment or object. The same page type is set for every page in the output. Thus, unless option **-p** is used to select a single page, multiple overlays, page segments or overlays are stored in the output file. The default is **page**. See option **-a**.

-paper {a5 | a4 | a3 | letter | folio | legal | ledger | *xxx.xx,yyy.yy***[d | m | i | p]}**

Specifies the output paper size. The supported values are:

a3

A3 format (297 by 420 mm or 11.69 by 16.54 inches)

a4

A4 format (210 by 297 mm or 8.27 by 11.69 inches)

a5

A5 format (148 by 210 mm or 5.83 by 8.27 inches)

letter

8.5 by 11 inches (216 by 279 mm)

folio

8.5 by 13.0 inches (216 by 330 mm)

legal

8.5 by 14.0 inches (216 by 356 mm)

ledger

11.0 by 17.0 inches (279 by 432 mm)

*xx.xx,yy.yy***[d | m | i | p]**

Horizontal and vertical page dimensions. The optional units are (d)ots (pels), (m)illimeters, (i)nches, or (p)oints.

The default paper size is letter. If **-paper** is not used, the paper size is increased, if necessary, to contain the output image.

See options **-l**, **-w**, and **-scale**.

-r {300 | 600 | *nnn***}**

The output device resolution, specified in dots per inch. The default is **600**.

This option is equivalent to the **default-printer-resolution** document attribute on the **pdpr** command.

-respath *directory***[:***directory***...]**

Sets the search path for resource files, such as the scan offset files and grayscale calibration curve files. If a resource file name is specified as a relative name (does not start with a **/**), the transform searches every directory in the path, in the order specified in the path, until it finds the file (or fails). See options **-j** and **-gcorr** for scan offsets and grayscale calibration curve. The default is the current directory.

-rot {0 | 90 | 180 | 270[p | i]}

The image is rotated in the clockwise direction by the amount specified. The default is zero, that is, no rotation.

If **p** is specified, the transform sets the output data stream in such a way that the printer performs the actual image rotation. If **i** is specified, the transform rotates the output bitmap. When **i** is chosen, the transform takes much longer to run and uses much more memory. If no letter is specified, the default or any previous value (such as the value specified in the configuration file) remains in force. The default is **p**.

-S *ServerName* **| none**

Specifies the name of the system on which the Transform Manager is running. The value is:

ServerName

Any valid workstation name on which the Transform Manager is installed and running. The name is defined in the **/etc/hosts** file or by a name server, and can be a nickname like **molly**, or a dotted decimal address like **9.99.9.23**.

none

Processes the **jpeg2afp** transform locally.

Note

When the **-S** flag is not specified or the **-S** flag specifies **none**, the **-P** flag is ignored.

-scale {orig | a5 | a4 | a3 | letter | folio | legal | ledger | *xxx.xx,yyy.yy*[**d | m | i |p] |** *xxx*%**}**

Specifies the output image size. The image is scaled to this size and centered in the area defined by the paper size and margin options. The supported values are:

orig

Preserve the input image size, regardless of the printable paper area.

a3

A3 format (297 by 420 mm or 11.69 by 16.54 inches)

a4

A4 format (210 by 297 mm or 8.27 by 11.69 inches)

a5

A5 format (148 by 210 mm or 5.83 by 8.27 inches)

letter

8.5 by 11 inches (216 by 279 mm)

folio

8.5 by 13.0 inches (216 by 330 mm)

legal

8.5 by 14.0 inches (216 by 356 mm)

ledger

11.0 by 17.0 inches (279 by 432 mm)

xx.xx,yy.yy[**d | m | i | p**]

Horizontal and vertical image dimensions. The optional units are (d)ots (pels), (m)illimeters, (i)nches, or (p)oints.

xxx%

Magnification relative to the original image size. Numbers below 100% mean reduction, while Numbers above 100% mean enlargement. For example, **-scale 200%** causes the output image to be twice as long and twice as wide as the input image.

The default image size is **orig**.

[-term | -noterm]

Disables (**-term**) or enables (**-noterm**) error recovery.

- When error recovery is disabled, on encountering an error in a JPEG file, the transform terminates with an error message and a nonzero return code.
- When error recovery is enabled, the errors in JPEG files are treated as non-fatal. The transform tries to recover with the next file. The return code is zero.

The default is **-noterm**.

-thresh *FileName*

Specifies a file that contains a PostScript Type 1 or Type 3 halftone dictionary. Alternatively, the PostScript code can specify the **setscreen** operator instead of a Type 1 dictionary. The halftone cell in the dictionary is used to overwrite the default ordered dither clustered dot halftone cell. If the PostScript code contains a transfer function, either in the halftone dictionary or specified by the **settransfer** operator, the current grayscale correction curve is overwritten as if **-gcorr** were used.

[-v | -nov]

Turns verbose mode on (**-v**) or off (**-nov**).

- When verbose mode is on, the transform prints a message as it opens each resource file, then echoes the command line, then prints a message for each file name as it is processed.
- When verbose mode is off, the transform prints only error messages.

The default is **-nov**.

-w {8.5i | *yyy.yy*[d | m | i | p]}

Specifies the paper width. The optional units are (d)ots (pels), (m)illimeters, (i)nches, or (p)oints. The default unit is dots. The default page width is 8.5 inches. See options **-l** to set the paper length or **-paper** to set both dimensions at the same time.

-wrkdir *WorkDirectoryName*

Input to **jpeg2afp** from **stdin** must be cached on disk before it can be processed. This option specifies which directory to use for the caching of the standard input. If this option is absent or the directory cannot be opened, the transform first tries to use **/var/psf/jpeg2afp** as the working directory and, if **/var/psf/jpeg2afp** is absent, uses **/tmp**.

The **stdin** cache file is never visible to you because it is immediately unlinked after creation. Thus, the cache file is always deleted when **jpeg2afp** finishes execution, even if **jpeg2afp** is killed or otherwise terminates in error.

-x {0 | *nnn.nn*[d| m | i | p]}

Specifies the left margin. The optional units are (d)ots (pels), (m)illimeters, (i)nches, or (p)oints. The default unit is dots. The default is zero (no margin).

-y {0 | *nnn.nn*[d| m | i | p]}

Specifies the top margin. The optional units are (d)ots (pels), (m)illimeters, (i)nches, or (p)oints. The default unit is dots. The default is zero (no margin).

-z

Signifies that a list of files to be processed is submitted from standard input. See also options **-f** and **@**.

line2afp command: transforms traditional line data and ASCII data to AFP

Syntax

line2afp [**cc=***value*] [**cctype=***value*]

[**chars=***FontName[, ...]*] [**fdeflib=***PathList*] [**fileformat=***value*]
[**fontlib=***PathList*] [**fontpath=***PathList*] **formdef=***FormDefinitionName*
[**imageout=***value*] [**inpccsid=***nnnn*}
[**inpexit=***ProgramName*] [**inputdd=***FileName*]
[**msgdd=***FileName*] [**outccsid=***nnnn*}
[**outexit=***ProgramName*] [**outputdd=***FileName*]
[**ovlylib=***PathList*] **pagedef=***PageDefinitionName*
[**parmdd=***FileName*] [**pdeflib=***PathList*]
[**prmode=***value*] [**pseglib=***PathList*] [**resexit=***ProgramName*]
[**reslib=***PathList*] [**RESTYPE=***value*]
[**trc=***value*] [**userlib=***PathList*] [**userpath=***PathList*]

Note

1. Only some of the AFP Conversion and Indexing Facility (ACIF) flags and values are described in this section. For more information, see *AFP Conversion and Indexing Facility: User's Guide*, S550-0436.
2. The Windows paths shown for **line2afp** assumes that InfoPrint Manager was installed into the default directory.

With InfoPrint Manager for AIX or InfoPrint Manager for Linux, if you need guidance in passing the **line2afp** command option syntax through the shell, see the documentation for the shell you are using in your online documentation.

The next table shows the **line2afp** command options that specify resource names or resource directories, and the corresponding AIX print command options and InfoPrint attributes:

line2afp resource options and corresponding options and Attributes

line2afp *option*	AIX -o *flag option*	*Document attribute*
chars	-ochars	chars
fdeflib	-orespath	resource-context-form-definition
fileformat	-ofileformat	new-line-option-data-encoding
fontlib	-osrchfontlib	resource-context-font
formdef	-oformdef	form-definition
ovlylib	-orespath	resource-context-overlay
pagedef	-opagedef	page-definition
pdeflib	-opdeflib	resource-context-page-definition
pseglib	-orespath	resource-context-page-segment
reslib	-orespath	resource-context
userlib	-ouserlib	resource-context-user

For these options, you should specify the same value with the **line2afp** command as you specify to InfoPrint when you submit the print job or predefine for the physical printer where the job prints. In this way, the search paths and resources used at transform time are identical to the search paths and resources used at print time.

In addition to the usual command notational conventions, the **line2afp** command follows these additional rules. These rules apply to options you type at the command line. See also the **parmdd** option for the syntax of options contained in the **line2afp** option file.

- When the **line2afp** command processes any unrecognized or unsupported option, **line2afp** issues a message, ignores the option, and continues processing any remaining options. The **line2afp** command then stops processing.
- With InfoPrint Manager for AIX or InfoPrint Manager for Linux, though the options themselves are not case-sensitive, associated values, such as file names, attribute names, and directory names *are* case-sensitive. For example,

```
formdef=F1MINE
```

  is *not* the same as

```
formdef=f1mine
```

  Be sure to specify these values in the case in which they exist in the file system (for external resources) or in the print file (for inline resources).

- If the same option is specified more than one time, the **line2afp** command uses the last value specified. For example, if you specify:

```
pagedef=P1MINE
pagedef=P1YOURS
```

  the **line2afp** command uses page definition **P1YOURS** only.

Description

The **line2afp** command transforms traditional line data , mixed-mode data, and ASCII files into the AFP (MO:DCA-P) data stream, so that you can print the file on an InfoPrint printer.

When you use the **line2afp** command to convert traditional line data or ASCII data, you must specify a page definition (**pagedef** option). If the page definition names fonts, InfoPrint uses those fonts. If the page definition does not name any fonts, and if you want the file to print with more than one font, the input file must contain table reference characters (TRCs), and you must:

- Specify **trc=yes**.
- Use **chars** to indicate the fonts to be associated with each TRC.

If the page definition does not specify fonts, and you have not specified any TRCs, your job will print, although the output might not be formatted correctly.

If the page definition does not name any fonts, and you want the whole file to print with one font, then you must:

- Specify **trc=no**.
- Use **chars** to indicate the single fonts in which the file should be printed.

If the page definition does not specify fonts, and you have not specified any TRCs, your job will print, although the output might not be formatted correctly.

The **line2afp** command searches for resources in this order:

1. Inline resources.

2. Resource Access Table (RAT) entries in any directory specified by the **userpath** option (TrueType and OpenType fonts, color management resources (CMRs), and data object resources (DORs); see **Note** at the end of this list).
3. File names matching the object name in paths specified by the **userlib** option (AFP resources, except TrueType and OpenType fonts).
4. RAT entries in these system paths:
    1) Paths specified by the **objconlib** option.
    2) Paths specified by the**reslib** option.
5. File names matching the object name in these system paths:
    1) Paths specified by the **objconlib** option.
    2) Paths specified by the **reslib** option.
    3) Paths specified by the **psfpath** environment variable.
    4) With AIX or Linux:/usr/lpp/psf/reslib
    5) With Windows, where *install_path* indicates the path where you installed InfoPrint Manager for Windows:
        1. *install_path***reslib**
        2. *install_path***fontlib**

Note

The paths specified by **userpath** and **fontpath** must be the same paths where the AFP Resource Installer installed CMRs, DORs, and TrueType and OpenType fonts. The AFP Resource Installer (Program Number 5639-EE2) is available from your representative. For more information about TrueType and OpenType fonts, see *Using OpenType Fonts in an AFP System*.

When the **line2afp** command finds more than one resource with the same name in the same directory, it selects the resource to be used depending on the file extension. The next table shows the order in which resources with the same name but different file extensions are used by **line2afp**.

File extensions for resources

Type of Resource	***File Extensions Searched (see note)***
BCOCA (bar code) objects	1. No file extension 2. **OBJ** 3. **OBJECT**
Code pages	1. **ECP** 2. No file extension 3. **FONT3820** 4. **FONT38PP** 5. **CDP** 6. **FONT300**

Type of Resource	***File Extensions Searched (see note)***
Coded fonts	1. No file extension 2. **FONT3820** 3. **FONT38PP** 4. **CFT** 5. **FONT300**
Font character sets, 240-pel resolution	1. No file extension 2. **240** 3. **FONT3820** 4. **FONT38PP** 5. **CFT** 6. **CDP**
Font character sets, 300-pel resolution	1. No file extension 2. **300** 3. **FONT300** 4. **CFT** 5. **CDP**
Outline fonts	1. No file extension 2. **OLN** 3. **FONTOLN** 4. **CFT** 5. **CDP**
TrueType and OpenType fonts, CMRs, and data object resources	Entire file name, including extension; comes from the Resources Access Tables (RATs) creaetd by the AFP Resource Installer. If a CMR or a data object RAT is altered, PSF must be restarted for the changes to take effect.
Form definitions	1. No file extension 2. **FDEF3820** 3. **FDEF38PP** 4. **FDE** 5. **FIL**
GOCA (graphics) objects	1. No file extension 2. **OBJ**

Type of Resource	***File Extensions Searched (see note)***
	3. **OBJECT**
IOCA (IO image) objects	1. No file extension 2. **OBJ** 3. **OBJECT**
MO:DCA Objects	1. No file extension 2. **OBJ** 3. **OBJECT**
Overlays	1. No file extension 2. **OVLY3820** 3. **OVLY38PP** 4. **OVL** 5. **OLY** 6. **OVR**
Page definitions	1. No file extension 2. **PDEF3820** 3. **PDEF38PP** 4. **PDE**
Page segments	1. No file extension 2. **PSEG3820** 3. **PSEG38PP** 4. **PSG** 5. **PSE**
Color mapping table	1. No file extension 2. **SETUP** 3. **SET**
Presentation object container For data object resources not installed in a Resource Access Table (RAT).	1. No file extension 2. **DOR**

Type of Resource	*File Extensions Searched (see note)*
Setup data	1. No file extension 2. **SETUP** 3. **SET** 4. **COMSETUP**

Note

1. All file extensions must be in uppercase.
2. If a file name includes a period (.), the file extension is that part of the file name that follows the period. For example, the file extension of the file name **ARTWORK.PSEG3820** is **PSEG3820**.

The PSF DSS invokes **line2afp** whenever you submit a line-data or unformatted ASCII job. You can specify **document-format=line-data** or **document-format=ascii** on the **pdpr** command, or **-odatatype=line** or **-odatatype=ascii** on an AIX print command or the **lprafp** command, or you can allow InfoPrint to identify the data type.

For more information about the **line2afp** transform, see "Working with Transforms" in the *RICOH InfoPrint Manager: Procedures* guide that is appropriate for your operating system.

Processing resources installed with Resource Access Tables

A RAT maps a resource name specified in the MO:DCA-P data stream to information used to find and process the resource. The resources that are installed with a RAT include:

- TrueType and OpenType fonts
- Color management resources (CMRs)
- Data object resources

In order for **line2afp** to process resources installed with a RAT, you must:

1. Use the InfoPrint AFP Resource Installer or a similar product to install the resources and create RATs in the appropriate resource directories on your system.
2. When invoking **line2afp**, use these parameters on AIX, Linux, or Windows systems to specify the path names where the RATs and resources are installed in:

Parameter	Resource Type
FONTPATH	TrueType and OpenType fonts
OBJCONDDD, RESLIB, and USERLIB	Object containers and CMRs
USERPATH	Any RAT-installed resource

3. Modify your application to include the RAT-installed resources in a page definition, form definition, or Map Data Resource (MDR) structured field.

   See *InfoPrint Page Printer Formatting Aid for Windows: User's Guide*, S550-0801, for more information about including resources.

You can use the RESTYPE parameter with **line2afp** to control what type of resources are included in the resource type.

Automatic invocation

PSF DSS automatically invokes the **line2afp** transform command whenever you submit line data for printing. You can pass options to **line2afp** using the **other-transform-options** attribute on the **pdpr** command or the **-o** flag of the AIX print commands or the **lprafp** command. You can also pass options to **line2afp** through theInfoPrint Submit Express client of InfoPrint Manager. Parameters that are not supported, such as **imageout=asis**, can be passed in InfoPrint Submit Express by clicking **Advanced** and entering them in the **Transform options** field.

Flags and values

You can specify many of these flags and values with the **other-transform-options** attribute on the **pdpr** command or with the **enq -o**, **lp -o**, **qprt -o**, or **lprafp -o** command.

See pdpr command: submits jobs, p. 124 and Attributes for documents and default documents, p. 784 or The -o flag for AIX print commands and the InfoPrint Manager lprafp command, p. 170 for more information.

For a list of the AIX, Linux, or Windows files shipped with the **line2afp** transform, see Files, p. 389.

cc={yes | no} DEFAULT=yes

Specifies whether the input file has carriage-control characters.

Values are:

yes

The file contains carriage-control characters. **yes** is the default.

no

The file does not contain carriage-control characters.

Carriage-control characters, if present, are located in the first byte (column) of each line in a document. They are used to control how the line will be formatted (single space, double space, triple space, and so forth). In addition, other carriage-controls can be used to position the line anywhere on the page. If there are no carriage-controls, single spacing is assumed.

This option and the **cctype** option, used together, are equivalent to the document attribute **carriage-control-type** on the **pdpr** command.

cctype={z | a | m} DEFAULT=z

Specifies the type of carriage-control characters in the input file. The **line2afp** command supports ANSI carriage-control characters in either ASCII or EBCDIC encoding, as well as machine carriage-control characters. The **line2afp** command does not allow a mixture of ANSI and machine carriage-control characters in a file. Values are:

z

The file contains ANSI carriage-control characters that are encoded in ASCII. **z** is the default.

The carriage-control characters are the ASCII hexadecimal values that directly relate to ANSI carriage-controls, which cause the action of the carriage-control character to occur *before* the line is printed. For example, if the carriage-control character is zero (X'30'), which represents double spacing, double spacing will occur *before* the line is printed.

a

The file contains ANSI carriage-control characters that are encoded in EBCDIC.

The use of ANSI carriage-control characters cause the action of the carriage-control character to occur *before* the line of data is printed. For example, if the carriage-control character is a zero (X'F0'), which represents double spacing, the double spacing will occur *before* the line is printed.

m

The file contains machine code carriage-control characters that are encoded in hexadecimal format.

The use of machine code carriage-control characters cause the action of the carriage-control character to occur *after* the line of data is printed. For example, if the carriage-control character is a X'11', which represents double spacing, the line will be printed and the double spacing will occur *after* the line is printed. In addition, machine code carriage-control has a set of carriage-control characters that do the action, but do not print the associated line.

If you specify **cc=yes** but you do not specify **cctype**, the **line2afp** command assumes that the file contains ANSI carriage-control characters encoded in ASCII.

If you are not sure which type of carriage-control characters are in your input file, consult your system support group.

This option and the **cc** option, used together, are equivalent to the document attribute **carriage-control-type** on the **pdpr** command.

chars=*FontName1, FontName2, FontName3, FontName4*

Specifies the file name of from one to four coded fonts to be used in processing the print file. A coded font specifies a character set and code page pair.

Note

chars is ignored when **fontpath** or **userpath** are specified.

The value is:

FontName

The name of the desired coded font. The font name is limited to 4 alphanumeric or national characters, and should not include the 2-character prefix of the coded-font name (**X0** through **XG**). With InfoPrint Manager for AIX or InfoPrint Manager for Linux, the font name is case-sensitive.

With InfoPrint Manager for AIX or InfoPrint Manager for Linux, if you use the ASCII fonts that are supplied with InfoPrint, use the 4-character names. If you use your own coded font that has a file name with more than 6 characters (including the X*n* prefix), do one of these actions:

- Rename the font file to a shorter name. For example,

```
mv X0423002 X04202
```

- Copy the font file to a file that has a shorter name. For example,

```
cp X0423002 X04202
```

- Link the original font file to a shorter name. For example,

```
ln -s X0423002 X04202
```

With InfoPrint Manager for Windows, if you use the ASCII fonts that are supplied with InfoPrint, use the 4-character names. If you use your own coded font that has a file name with more than 6 characters (including the X*n* prefix), do one of these actions:

- Rename the font file to a shorter name. For example,

```
rename X0423002 X04202
```

- Copy the font file to a file that has a shorter name. For example,

```
copy X0423002 X04202
```

When you use the **line2afp** command to convert S/370 line-mode data or unformatted ASCII data, you must specify a page definition (**pagedef** option). If the page definition names some fonts, the **line2afp** command uses those fonts, and ignores the **chars** option. If the page definition does not name any fonts (like the sample page definitions supplied with InfoPrint), and if you want the file to print with more than one font, the input file must contain table reference characters, and you must:

- Specify **trc=yes**.
- Use **chars** to indicate the fonts to be associated with each table reference character (TRC). *Fontname1* is associated with TRC 0, *FontName2* is associated with TRC 1, and so on.

If the page definition does not name any fonts, and you want the whole file to print with only one font, the input file must not contain table reference characters and you must:

- Specify **trc=no**.
- Use **chars** to indicate the single font in which the file should be printed.

Consider these situations when specifying fonts with the **chars** option:

- If your input file is unformatted ASCII, you can do one of these actions:
  - Specify a font that has the appropriate ASCII code points. To specify a font search path, either use the **fontlib** option to specify it explicitly, or set the **PSFPATH** environment variable to search the appropriate directories. See the RICOH Software Information Center at https://help.ricohsoftware.com/swinfocenter for more information about ASCII fonts.
  - Use the **apka2e** or **asciinpe** input record exit programs to convert the ASCII code points in the input file into EBCDIC, and use EBCDIC fonts. To do this, use the **inpexit** option, specifying:

    For AIX or Linux

    `inpexit=/usr/lpp/psf/bin/apka2e`

    For Windows

    `inpexit=c:\Program Files\RICOH\InfoPrint Manager\bin\apka2e` where this path assumes you installed into the default path.

    If the ASCII input file contains form feeds or carriage returns, specify:

    For AIX or Linux

    `inpexit=/usr/lpp/psf/bin/asciinpe`

For Windows

`inpexit=c:\Program Files\RICOH\InfoPrint Manager\bin\asciinpe` where this path assumes you installed into the default path.

- You can specify fonts with the **chars** option only if you want the entire file printed in a single printing direction. The **line2afp** command uses the fonts that have 0-degree character rotation for the specified direction. When a file requires fonts with more than one print direction or character rotation, you must specify the fonts in the page definition.
- You can specify from one to four fonts with the **chars** option. If you specify more than one font with the **chars** option, the input file must contain table reference characters, and you must specify **trc=yes**.
- If you use **chars** to specify fonts, but you also use the **pagedef** option to specify a page definition that names fonts, the **chars** option is ignored. Therefore, if your page definition names fonts, you should not use **chars**.
- If you do not specify a **chars** option, and if no fonts are contained in the page definition you specified, the **line2afp** command uses the default font that is set in the printer's hardware.

This option is equivalent to the document attribute **chars** on the **pdpr** command.

fdeflib=*PathList*

Specifies the directories in which form definitions are stored. The value is:

PathList

Any valid search path. The **line2afp** command searches the paths in the order in which they are specified.

With AIX or Linux, you must use a colon (:) to separate multiple paths.

With Windows, you must use a semi-colon (;) to separate multiple paths.

For traditional line data and for ASCII data that you want to format with a page definition, if you are transforming and printing a file by piping **line2afp**'s output to an AIX print command or the **pdpr** command, you should specify the same form definition search path on both sides of the pipe, unless you are sure that the same form definition will be found by **line2afp** and InfoPrint using each program's default search path.

With InfoPrint Manager for AIX, for traditional line data and for ASCII data that you want to format with a page definition, if you are transforming and printing a file by specifying **-odatatype=line** with an AIX print command, you must specify the form definition search path with **-orespath** instead of **fdeflib**. For example:

```
enq -odatatype=line -oformdef=myfd -opagedef=mypdef
   -orespath=/home/greg/resources -Pprinter myfile
```

This option is equivalent to the document attribute **resource-context-form-definition** on the **pdpr** command.

fileformat={record | record,*n* **| stream | stream,(newline=***characters,[encoding]***)}**

Specifies the format of the input file. If you do not specify **fileformat**, the **line2afp** command uses **stream** as the default.

For information about how to specify the correct file format and how to transfer files to ACIF from AIX, Linux, and Windows, see the appendix entitled "Helpful Hints" in the *AFP Conversion and Indexing Facility: User's Guide*, S544-5285.

The **fileformat** option does not apply to input files that are resources. Resource files are in MO:DCA-P or AFP data stream format, and the **line2afp** command automatically determines that the file is a resource.

Values are:

record

The input file is formatted in S/390 record format, where the first two bytes of each line specify the length of the line. Files with **record** format typically are z/OS or VM files that have a variable record format and are downloaded to AIX, Linux, or Windows using Download for z/OS or are NFS-mounted.

record,*n*

The input file is formatted in such a way that each record (including AFP data stream and MO:DCA-P records) is a fixed length, *n* bytes long. The value of *n* is a number from 1 to 32767. The encapsulated size of the AFP structured field must be less than or equal to the size of *n*. Files with **record,***n* format typically are z/OS or VM files that have a fixed record format and are downloaded to AIX, Linux, or Windows.

stream

The input file has no length information; it is a stream of data separated by one or more newline characters. The AFP portion (if any) of the input file has its length information encapsulated in the structured field. Files with **stream** format typically come from a workstation operating system, such as AIX, Linux, or Windows.

If **newline** is not specified, the **line2afp** command examines the first six bytes of the first line data record of the input file, to determine whether the input file is ASCII or EBCDIC. If **line2afp** determines that the input file is ASCII, **line2afp** looks for ASCII newline characters (X'0A') to delimit the end of a record. If **line2afp** determines that the input file is EBCDIC, **line2afp** looks for EBCDIC newline characters (X'25') to delimit the end of a record. The **line2afp** command does not include newline characters in the MO:DCA-P data stream that **line2afp** produces.

stream is the default.

stream,(newline=*characters[encoding]***)**

Use **newline** to specify the characters and optional encoding used for determining line breaks in the input data. You can use **newline** when **line2afp**'s algorithm cannot determine the correct newline character (if blanks are at the beginning of the file, for example). Or you can use **newline** if you want to specify a newline character that is not the standard default. For example, you could use **newline** as follows:

```
fileformat=stream,(newline=X'0D')
```

If **newline** is not specified, **line2afp** uses the algorithm specified under **fileformat=stream** to determine the end of the record.

characters

Specify one of the keywords **cr**, **lf**, or **crlf** or specify a string of one, two, or four hexadecimal characters.

encoding

Specify encoding as **ASCII**, **EBCDIC**, **UTF16**, or **UTF8**. **encoding** is only valid if a keyword is specified with **characters**.

This table shows the hexidecimal strings used by **line2afp** for the delimiter characters when **encoding** is specified. **line2afp** also checks for a BOM (Byte Order Mark) character and reverses the bytes in the delimiter characters for UTF16 little endian data if the BOM is present.

Note

line2afp only checks for the BOM if a UDTYPE of UTF16 is specified on the **PAGEDEF** command.

Encoding Parameter	Carriage Return (CR)	Line Feed (LF)	CRLF
ASCII	x'0D'	x'0A'	x'0D0A'
EBCDIC	x'0D'	x'25'	x'0D25'
UTF8	x'0D'	x'0A'	x'0D0A'
UTF16 (with big endian data)	x'000D'	x'000A'	x'000D 000A''
UTF16 (with little endian data)	x'0D00'	x'0A00'	x'0D00 0A00''

For example, you could use **newline** as follows:

```
fileformat=stream,(newline=x'0D')
fileformat=stream,(newline=x'01020304')
fileformat=stream,(newline=crlf,utf16)
```

This option is equivalent to the document attribute **new-line-options-data-encoding** on the **pdeng** or **lpr** command.

fontlib=*PathList*

Specifies the directories in which fonts are stored.

The value is:

PathList

Any valid search path. The **line2afp** command searches the paths in the order in which they are specified.

With AIX or Linux, you must use a colon (:) to separate multiple paths.

With Windows, you must use a semi-colon (;) to separate multiple paths.

For traditional line data and for ASCII data that you want to format with a page definition, if you are transforming and printing a file by piping **line2afp**'s output to an AIX print command or the **pdpr** command, you should specify the same font search path on both sides of the pipe, unless you are sure that the same fonts will be found by **line2afp** and InfoPrint using each program's default search path.

With InfoPrint Manager for AIX or InfoPrint Manager for Linux, for traditional line data and for ASCII data that you want to format with a page definition, if you are transforming and printing a file by specifying **-odatatype=line** with an print command, you must specify the font search path (if any) with **-osrchfontlib** instead of **fontlib**, as shown in this example:

```
enq -odatatype=line -osrchfontlib=/home/greg/resources
   -oformdef=myfdef -opagedef=mypdef -Pprinter myfile
```

Note

If the input file is ASCII data that you want to format with a page definition, you can do one of these actions:

- Specify a font that has the appropriate ASCII code points. To specify a font search path, either use the **fontlib** option to specify it explicitly, or set the **PSFPATH** environment variable to search the appropriate directories.
- Use the **apka2e** or **asciinpe** input record exit to convert the ASCII code points in the input file into EBCDIC, and use EBCDIC fonts. To do this, use the **inpexit** option, specifying:

  For AIX or Linux

  `inpexit=/usr/lpp/psf/bin/apka2e`

  For Windows

  `inpexit=c:\Program Files\RICOH\InfoPrint Manager\bin\apka2e` where this path assumes you installed into the default path.

  or

  For AIX or Linux

  `inpexit=/usr/lpp/psf/bin/asciinpe`

  For Windows

  `inpexit=c:\Program Files\RICOH\InfoPrint Manager\bin\asciinpe` where this path assumes you installed into the default path.

This option is equivalent to the document attribute **resource-context-font** on the **pdpr** command.

fontpath=*PathList*

Specifies the system font path library directories in which TrueType and OpenType fonts are stored. TrueType and OpenType fonts are Unicode-enabled AFP fonts that are not defined by the IBM Font Object Content Architecture (FOCA). The value is:

PathList

Any valid search path. You must use a colon (:) in AIX or Linux and a seimicolon (;) in Windows.

```
line2afp inputdd-INFILE outputdd=OUTFILE pagedef=PAGTRUE formdef=F1A10110 \
fontpath=('/u/fonts/truetype:/u/fonts/truetype/local')
```

Note

The backslash (\) tells AIX or Linux to continue reading the command from the next line. In Windows, the backslash is not valid; therefore, the command parameters must be on one continuous line.

The **line2afp** transform searches the paths in the order in which they are specified.

formdef=*FormDefinitionName*

Specifies the file name of the form definition. A form definition defines how a page of data is placed on a form, the number of copies of a page, any modifications to that group of copies, the paper source, and duplexing. The form definition is actually used at print time, not at transform time.

The value is:

FormDefinitionName

Any valid form definition file name. The *FormDefinitionName* can be 1 to 8 alphanumeric or national characters, including the two-character prefix, if there is one. For AIX or Linux, the *FormDefinitionName* is case-sensitive.

Note

If the file name of the form definition includes a file extension, do not use the file extension when specifying the form definition. For example, to use a form definition named **memo.FDEF38PP**, specify **formdef=memo**.

The **line2afp** command requires a form definition to process the input file (even though the form definition actually gets used at print time). If you do not specify **formdef=**, or if you specify **formdef=** without a form definition file name, the **line2afp** command will not work.

For traditional line data and for ASCII data that you want to format with a page definition, if you are transforming and printing a file by piping **line2afp**'s output to an AIX print command or the **pdpr** command, you should specify the same form definition on both sides of the pipe. If you are using the default form definition for the target printer, you do not need to specify a form definition with the AIX print command or **pdpr** command.

The form definition you use can be located:

- In a directory
- Inline in the file (that is, in the file itself)

If the form definition file is in a directory, use the **userlib** option or **fdeflib** option to specify the path to the file. For example:

For AIX or Linux

```
formdef=memo userlib=/usr/afp/resources
```

For Windows

```
formdef=memo userlib=d:\afp\resources
```

or

For AIX or Linux

```
formdef=memo fdeflib=/usr/lib/formdefns
```

For Windows

```
formdef=memo fdeflib=d:\lib\formdefns
```

If the form definition is an inline resource, you must:

- Specify **cc=yes** to indicate that the file contains carriage-control characters.
- Specify **formdef=***FormDefinitionName*, where *FormDefinitionName* is the name of the inline form definition; or specify **formdef=dummy**.

  If you specify **formdef=dummy** but the file does not include an inline form definition, the **line2afp** command looks for the form definition named **dummy**.

  If you use **formdef** to specify an inline form definition that is different than the actual form definition used inline, the **line2afp** command looks for the **formdef** value instead of the inline form definition.

An input file can contain multiple form definitions, but only one form definition can be used for printing. If a file contains more than one inline form definition, and you specify **formdef=***FormDefinitionName*, **line2afp** uses the first inline form definition named *FormDefinitionName*. If a file

contains more than one inline form definition, and you specify **formdef=dummy**, **line2afp** uses the first inline form definition in the input file.

This option is equivalent to the document attribute **form-definition** on the **pdpr** command.

imageout={asis | ioca}

Specifies the format of the image data produced by the **line2afp** command in the output document.

Values are:

asis

The **line2afp** command produces all image data in the same format that it was in the input file.

ioca

The **line2afp** command produces all image data in the Image Object Content Architecture uncompressed format. **ioca** is the default.

This option is similar to the document attribute **image-out-format** on the **pdpr** command.

inpccsid=*nnnn*

Specifies the Coded Character Set ID (CCSID) for the input data that you want to convert. The **inpccsid** parameter can be used by an input exit, such as **apka2e**, to specify the encoding of the input data. The CCSID consists of a numeric character string, such as 1200, that represents any valid CCSID registered by the Character Data Representation Architecture (CDRA). For information about CCSIDs, see the *CDRA Reference and Registry*, SC09-2190.

inpexit=*ProgramName*

Specifies the name or the full path name of the input record exit program. The **line2afp** command calls this program for every record (every line) it reads from the input file (**inputdd**). If you specify the file name without a path, the **line2afp** command searches for the exit program in the paths specified by the **PATH** environment variable. If you do not specify this option, the **line2afp** command will not use an input record exit program.

The value is:

ProgramName

Any valid input record exit program name. With InfoPrint Manager for AIX or InfoPrint Manager for Linux, the exit program name is case-sensitive.

If the input file is unformatted ASCII, but the fonts you are using contain EBCDIC, not ASCII, code points (for example, you specify **chars=GT15**), you can specify:

With AIX or Linux:

/usr/lpp/psf/bin/apka2e

Converts ASCII stream data to EBCDIC stream data, unless you specify **inpccsid** or **outccsid**.

Note

The default conversion is from code page 805 to code page 037. You can override the defaults with the **inpccsid** and **outccsid** parameters.

/usr/lpp/psf/bin/asciinpe

Converts unformatted ASCII data into a record format that contains an American National Standards Institute (ANSI) carriage control character in byte 0 of every record, and then converts the ASCII stream data to EBCDIC stream data, unless you specify **inccsid** or **outccsid**.

/usr/lpp/psf/bin/asciinp

Converts unformatted ASCII data that contains carriage returns and form feeds into a record format that contains an American National Standards Institute (ANSI) carriage control character. This exit encodes the ANSI carriage control character in byte 0 of every record. You might want to specify the **asciinp** exit program supplied with InfoPrint if your unformatted ASCII file contains carriage returns and form feeds.

/usr/lpp/psf/bin/dbblank

Processes EBCDIC double-byte line data downloaded from the z/OS spool by adding an extra blank to the end of the input record if:

1. The last byte in the record is a blank (x'40' in EBCIDIC).
2. The second to the last byte is **not** a blank.
3. The input record is line data; that is, it is not a structured field.

This exit also updates the record length by 1 if the blank is added. The exit has no way of determining if the data is DBCS or not, so this will happen to every input record that ends in a single blank. The exit assumes that the input data is EBCIDIC, and that the output data is also EBCIDIC. In other words, the exit does **not** do any code page translation, but it simply adds an extra blank if needed.

Note

1. This exit is only intended to be used if the spool file consists of double-byte or mixed single- or double-byte data that has blank truncation. Adding a blank to other types of data files could cause formatting errors, depending on how the page definition is coded.
2. This exit only checks for a **single** trailing blank, so if a different number of odd blanks is present in the data, it is up to you to make sure the data is formatted with the correct font.

With Windows:

c:\Program Files\IBM Printitng Systems\bin\apka2e

Converts ASCII stream data to EBCDIC stream data, unless you specify **inpccsid** or **outccsid**. This path assumes you installed into the default directory.

Note

The default conversion is from code page 805 to code page 037. You can override the defaults with the **inpccsid** and **outccsid** parameters.

c:\Program Files\IBM Printitng Systems\bin\asciinpe

Converts unformatted ASCII data into a record format that contains an American National Standards Institute (ANSI) carriage control character in byte 0 of every record, and then converts the ASCII stream data to EBCDIC stream data, unless you specify **inccsid** or **outccsid**. This path assumes you installed into the default directory.

c:\Program Files\IBM Printitng Systems\bin\asciinp

Converts unformatted ASCII data that contains carriage returns and form feeds into a record format that contains an American National Standards Institute (ANSI) carriage control character. This exit encodes the ANSI carriage control character in byte 0 of every record. You

might want to specify the **asciinp** exit program supplied with InfoPrint if your unformatted ASCII file contains carriage returns and form feeds.

c:\Program Files\IBM Printitng Systems\bin\dbblank

Processes EBCDIC double-byte line data downloaded from the z/OS spool by adding an extra blank to the end of the input record if:

1. The last byte in the record is a blank (x'40' in EBCIDIC).
2. The second to the last byte is **not** a blank.
3. The input record is line data; that is, it is not a structured field.

This exit also updates the record length by 1 if the blank is added. The exit has no way of determining if the data is DBCS or not, so this will happen to every input record that ends in a single blank. The exit assumes that the input data is EBCIDIC, and that the output data is also EBCIDIC. In other words, the exit does **not** do any code page translation, but it simply adds an extra blank if needed.

Note

1. This exit is only intended to be used if the spool file consists of double-byte or mixed single- or double-byte data that has blank truncation. Adding a blank to other types of data files could cause formatting errors, depending on how the page definition is coded.
2. This exit only checks for a **single** trailing blank, so if a different number of odd blanks is present in the data, it is up to you to make sure the data is formatted with the correct font.

If your input file uses fonts that have ASCII code points (for example, you specify **chars=H292**, or any of the fonts listed in "IBM AFP Fonts for ASCII Data" in *AFP Conversion and Indexing Facility: User's Guide*) you should *not* use the **apka2e** or **asciinpe** exit programs.

This option is equivalent to the document attribute **input-exit** on the **pdpr** command.

For a list of the AIX, Linux, and Windows files shipped with the **line2afp** transform, see Files, p. 389.

inputdd=*FileName*

Specifies the full path name of the input file that the **line2afp** command will process. If you do not specify **inputdd**, the **line2afp** command uses standard input.

You cannot use **inputdd=***FileName* on the command line with the **enq**, **lp**, **qprt**, or **lprafp.** commands, or with the **other-transform-options** attribute on the **pdpr** command. You can only use **inputdd=***FileName* with the **line2afp** command.

msgdd=*FileName*

Specifies the name or the full path name of the file where the **line2afp** command writes error messages. If you specify the file name without a path, the **line2afp** command puts the error file into your current directory. If you do not specify **msgdd**, the **line2afp** command uses standard error for its message output.

This option is equivalent to the document attribute **transform-message-file-name** on the **pdpr** command.

outccsid=*nnnn*

Specifies the Coded Character Set ID (CCSID) for the output data that you want to have converted. The **outccsid** parameter can be used by an input exit, such as **apka2e**, to specify the encoding of the output data. The CCSID consists of a numeric character string, such as 1200, that represents

any valid CCSID registered by the Character Data Representation Architecture (CDRA). For information about CCSIDs, see the *CDRA Reference and Registry*, SC09-2190.

outexit=*ProgramName*

Specifies the name or the full path name of the output record exit program. The **line2afp** command calls this program for every output record (every line) it writes to the output document file (**outputdd**). If you specify the file name without a path, the **line2afp** command searches for the file name in the paths specified by the PATH environment variable. If you do not specify this option, the **line2afp** command will not use an output record exit program.

The value is:

ProgramName

Any valid output record exit program name. With InfoPrint Manager for AIX or InfoPrint Manager for Linux, the exit program name is case-sensitive.

outputdd=*FileName*

Specifies the name or the full path name of the output document file. If you specify the file name without a path, the **line2afp** command puts the output file into your current directory. If you do not specify **outputdd**, the **line2afp** command writes the output to standard output.

You cannot use **outputdd=***FileName* on the command line with the **enq**, **lp**, or **qprt** commands, or with the **other-transform-options** attribute on the **pdpr** command. You can only use **outputdd=***FileName* with the **line2afp** command.

This option is equivalent to the document attribute **transform-output-file-name** on the **pdpr** command.

ovlylib=*PathList*

The value is:

PathList

Any valid search path. The **line2afp** command searches the paths in the order in which they are specified.

With AIX or Linux, you must use a colon (:) to separate multiple paths.

With Windows, you must use a semi-colon (;) to separate multiple paths.

For traditional line data and for ASCII data that you want to format with a page definition, if you are transforming and printing a file by piping **line2afp**'s output to an AIX print command or the **pdpr** command, you should specify the same overlay search path on both sides of the pipe, unless you are sure that the same overlays will be found by **line2afp** and InfoPrint using each program's default search path.

InfoPrint Manager for AIX or InfoPrint Manager for Linux, for traditional line data and for ASCII data that you want to format with a page definition, if you are transforming and printing a file by specifying **-odatatype=line** with an print command, you must specify the overlay search path with **-orespath** instead of **ovlylib**. For example:

```
enq -odatatype=line -oformdef=myfd -opagedef=mypd
   -orespath=/home/greg/resources -Pprinter myfile
```

This option is equivalent to the document attribute **resource-context-overlay** on the **pdpr** command.

pagedef=*PageDefinitionName*

Specifies the file name of the page definition. A page definition defines the page format that the **line2afp** command uses to compose the input file into pages. The page definition is actually used at transform time, not at print time.

The value is:

PageDefinitionName

Any valid page definition file name. The *PageDefinitionName* can be 1 to 8 alphanumeric or national characters, including the two-character prefix, if there is one. With AIX or Linux, the **pdefname** is case-sensitive.

Note

If the file name of the page definition includes a file extension, do not use the file extension when specifying the page definition. For example, to use a page definition named **memo.PDEF38PP**, specify **pagedef=memo**.

The **line2afp** command requires a page definition to process the input file. If you do not specify **pagedef=**, or if you specify **pagedef=** without a page definition file name, the **line2afp** command will not work.

The page definition you use can be located:

- In a directory
- Inline in the file (that is, in the file itself)

If the page definition file is in a directory, use the **userlib** option or **pdeflib** option to specify the path to the file. For example:

For AIX or Linux

```
pagedef=memo userlib=/usr/afp/resource
```

For Windows

```
pagedef=memo userlib=d:\afp\resource
```

or

For AIX or Linux

```
pagedef=memo pdeflib=/usr/lib/pagedefns
```

For Windows

```
pagedef=memo pdeflib=d:\lib\pagedefns
```

If the page definition is an inline resource, you must:

- Specify **cc=yes** to indicate that the file contains carriage-control characters.
- Specify **pagedef=***PageDefinitionName*, where *PageDefinitionName* is the name of the inline page definition; or specify **pagedef=dummy**.

  If you specify **pagedef=dummy** but the file does not include an inline page definition, the **line2afp** command looks for the page definition named **dummy**.

  If you use **pagedef** to specify an inline page definition that is different than the actual page definition used inline, the **line2afp** command looks for the **pagedef** value instead of the inline page definition.

An input file can contain multiple page definitions, but only one page definition can be used by the **line2afp** command. If a file contains more than one inline page definition, and you specify

pagedef=*PageDefinitionName*, **line2afp** uses the first inline page definition named *PageDefinitionName*. If a file contains more than one inline page definition, and you specify **pagedef=dummy**, the **line2afp** command uses the first inline page definition in the input file.

This option is equivalent to the document attribute **page-definition** on the **pdpr** command.

parmdd=*FileName*

Specifies the name or the full path name of a file that contains the **line2afp** options and their values. If you specify the file name without a path, the **line2afp** command searches for the file name in your current directory.

You might find it convenient to put the **line2afp** options and values into a file, so that you do not have to type all of them on the command line whenever you use **line2afp**.

Values are:

FileName

The name of the file containing **line2afp** command options and values.

Note

1. The beginning delimiter for comments is "/*". For example:

```
formdef=F1TEMP  /* Temporary formdef
formdef=F1PROD  /* Production-level formdef
```

Comments can appear anywhere, but the **line2afp** command ignores all information in the line following the "/*" character string.

2. Each option must be on a separate line. For example:

```
chars=GT10 cctype=a  /* This is NOT allowed.
```

3. If the option file contains the name of the input file (**inputdd=***FileName*), you cannot specify the option file with an AIX print command's **-o** flag or with the **other-transform-options** attribute on the **pdpr** command. For example, these commands are not valid:

```
enq -odatatype=line -oparmdd=myparms
pdpr -x "document-format=line-data
   other-transform-options='parmdd=myparms'"
```

However, these are valid:

```
line2afp parmdd=myparms | enq
line2afp parmdd=myparms | pdpr -d my-printer
```

pdeflib=*PathList*

Specifies the directories in which page definitions are stored.

The value is:

PathList

Any valid search path. The **line2afp** command searches the paths in the order in which they are specified.

With AIX or Linux, you must use a colon (:) to separate multiple paths.

With Windows, you must use a semi-colon (;) to separate multiple paths.

This option is equivalent to the document attribute **resource-context-page-definition** on the **pdpr** command.

prmode={SOSI1 | SOSI2 | SOSI3 | SOSI4 | *aaaaaaaa***}**

Specifies the type of data in the input file and whether the **line2afp** command must do optional processing of that data.

Values are:

SOSI1

Specifies that each shift-out, shift-in code be converted to a blank and a Set Coded Font Local text control.

SOSI2

Specifies that each shift-out, shift-in code be converted to a Set Coded Font Local text control.

SOSI3

Specifies that each shift-out character be converted to a Set Coded font Local text control. Each shift-in character is converted to a Set Control Font Local text control followed by two blanks.

SOSI4

Specifies that each shift-out, shift-in code be skipped and not counted when calculating offsets for the input file. **SOSI4** is used when double-byte character set (DBCS) text is converted from ASCII to EBCDIC. When **SOSI4** is specified, the page definition offsets are correct after conversion; therefore, you do not need to account for SOSI characters when computing FIELD offsets. The processing of shift-out and shift-in codes for **SOSI4** is the same as for **SOSI2**.

aaaaaaaa

Any 8-byte alphanumeric string. This value is supplied to all of the ACIF user exits. (See *AFP Conversion and Indexing Facility: User's Guide*, S550-0436, for information about ACIF user exits.)

For the **SOSI** process modes to work correctly, the first font specified in the **chars** option (or in a font list in a page definition) must be a single-byte font, and the second font must be a double-byte font.

This option is equivalent to the document attribute **shift-out-shift-in** on the **pdpr** command.

pseglib=*PathList*

Specifies the directories in which page segments and BCOCA, GOCA, and IOCA objects are stored.

The value is:

PathList

Any valid search path. The **line2afp** command searches the paths in the order in which they are specified.

With AIX or Linux, you must use a colon (:) to separate multiple paths.

With Windows, you must use a semi-colon (;) to separate multiple paths.

For traditional line data and for ASCII data that you want to format with a page definition, if you are transforming and printing a file by piping **line2afp**'s output to an AIX print command or the **pdpr** command, you should specify the same page segment search path on both sides of the pipe, unless you are sure that the same page segments will be found by **line2afp** and InfoPrint using each program's default search path.

For traditional line data and for ASCII data that you want to format with a page definition, if you are transforming and printing a file by specifying **-odatatype=line** with an AIX print command, you must specify the page segment search path with **-orespath** instead of **pseglib**. For example:

```
enq -odatatype=line -oformdef=myfd -opagedef=mypd
   -orespath=/home/greg/resources -Pprinter myfile
```

This option is equivalent to the document attribute **resource-context-page-segment** on the **pdpr** command.

resexit=*ProgramName*

Specifies the name or the full path name of the resource exit program. This is the program the **line2afp** command calls each time it tries to retrieve a requested resource from a directory. If you specify the file name without a path, the **line2afp** command searches for the file name in the paths specified by the **PATH** environment variable. If you do not specify this option, the **line2afp** command does not use a resource exit program. The exit program name is case-sensitive.

The value is:

ProgramName

Any valid resource exit program name.

This option is equivalent to the document attribute **resource-exit** on the **pdpr** command.

reslib=*PathList*

Specifies the paths for the system resource directories. System resource directories typically contain resources that are shared by many users. The directories can contain any AFP resources (fonts, page segments, overlays, page definitions, or form definitions).

For traditional line data and for ASCII data that you want to format with a page definition, if you are transforming and printing a file by piping **line2afp**'s output to an AIX print command or the **pdpr** command, you should specify the same resource search path on both sides of the pipe, unless you are sure that the same resources will be found by **line2afp** and InfoPrint using each program's default search path.

For traditional line data and for ASCII data that you want to format with a page definition, if you are transforming and printing a file by specifying **-odatatype=line** with an AIX print command, you must specify the search path for AFP resources with **-orespath** instead of **reslib**. For example:

```
enq -odatatype=line -oformdef=myfd -opagedef=mypd
  -orespath=/home/greg/resources -Pprinter myfile
```

The value is:

PathList

Any valid search path. The **line2afp** command searches the paths in the order in which they are specified.

With AIX or Linux, you must use a colon (:) to separate multiple paths.

With Windows, you must use a semi-colon (;) to separate multiple paths.

This option is equivalent to the document attribute **resource-context** on the **pdpr** command.

RESTYPE={NONE | ALL | [FDEF][,PSEG][,OVLY][,FONT][,OBJCON][,BCOCA] [,GOCA][, IOCA][,CMRALL][,CMRGEN][,INLINE][,INLONLY]}

Specifies the type of AFP print resources ACIF should retrieve from the resource directories or libraries for inclusion in the resource file (specified with the **RESOBJDD** parameter).

Values are:

NONE

Specifies that no resource file be created.

ALL

Specifies that all resources required to print or view the output document file (specified with the **OUTPUTDD** parameter) be included in the resource file.

Important

Specifying this value can create extremely large resource files, particularly when color management resources (CMRs) are included.

FDEF

Specifies that the form definition (specified with the **FORMDEF** parameter) used in processing the file be included in the resource file.

PSEG

Specifies that all page segments required to print or view the output document file be included in the resource file.

OVLY

Specifies that all overlays required to print or view the output document file be included in the resource file.

FONT

Specifies that all font character sets and code pages required to print or view the output file be included in the resource file. Also used for TrueType and OpenType fonts and specifies that all base fonts, linked fonts, and font collections required to print the output file be included in the resource file. If **MCF2REF=CF** is specified, ACIF also includes coded fonts in the resource file; otherwise, coded fonts are not included in the resource file.

Note

1. Specifying **RESTYPE=FONT** is not recommended with double-byte raster fonts because of the size and large number of library members needed to process double-byte raster fonts.
2. If **RESTYPE=FONT** is not specified, you might want to specify **MCF2REF=CF**, which can improve ACIF performance by reducing the number of font members ACIF processes.
3. When specifying **RESTYPE=FONT** with TrueType and OpenType fonts, the embed flag must be set "on" to save the font in the resource file. See *Using OpenType Fonts in an AFP System* for more information.
4. ACIF wraps TrueType and OpenType fonts in MO:DCA-P structured fields when it saves them in the resource file.
5. When **EXTENSIONS=RESORDER** is specified with **RESTYPE=FONT**, TrueType and OpenType fonts that were originally inline in the input file are not saved in the resource library.

OBJCON

Specifies that all object container files requested by the input data stream be included in the resource file. These object container files include TrueType and OpenType fonts, color management resources (CMRs), data objects, and the COM setup file specified by the **COMSETUP** parameter.

BCOCA

Specifies that all BCOCA objects included by an IOB structured field required to print or view the output document file be included in the resource file.

GOCA

Specifies that all GOCA objects included by an IOB structured field required to print or view the output document file be included in the resource file.

IOCA

Specifies that all IOCA objects included by an IOB structured field required to print or view the output document file be included in the resource file.

CMRALL

Specifies that all CMRs required to process the output document file be included in the resource file. These CMRs include all CMRs referenced in the data stream, all CMRs referenced through a data object or color management Resource Access Table (RAT), and all generic halftone and tone transfer curve CMRs.

CMRGEN

Specifies that all CMRs referenced in the data stream plus any non-device specific CMRs referenced through a data object or color management RAT be included in the resource file.

INLINE

Specifies that all inline resources contained in the ACIF input file (specified with the **INPUTDD** parameter) are written to the output file as well as to the resource file. Otherwise, if **INLINE** is not specified, inline resources in the input file are only written to the resource file. For example, **RESTYPE=FONT,PSEG,INLINE** causes any inline fonts and page segments to be written to the output file, in addition to writing all inline and library fonts and page segments to the resource file. The inline resources precede the document in the output file.

INLONLY

Specifies that all inline resources contained in the ACIF input file are written to the output file, regardless of resource type. Only inline resources are written to the output file because those are the only resources ACIF looks for. Also, ACIF does not create a resource file, even if the **RESOBJDD** parameter is specified.

Because multiple resource types are contained in the page segment and object container libraries, and ACIF does not enforce a prefix for the eight-character resource name, you should define a naming convention that identifies each type of resource in the library. We recommend these two-character prefixes:

- B1 for BCOCA objects
- E1 for encapsulated PostScript objects
- G1 for GOCA objects
- H1 for microfilm setup objects
- I1 for IOCA objects

- IT for IOCA tile objects
- M1 for color mapping table objects
- PP for PDF single-page objects
- PR for PDF resource objects
- S1 for page segments

ACIF supports the specification of BCOCA, CMRALL, CMRGEN, FDEF, FONT, GOCA, IOCA, INLINE, OBJCON, OVLY, and PSEG in any combination. For example, if you want to specify form definitions, page segments, and overlays as the resource types, you can enter **RESTYPE=FDEF, PSEG,OVLY** or **RESTYPE=OVLY,FDEF,PSEG**.

On the other hand, ALL, INLONLY, and NONE are order dependent and override any individual resource types specified. If more than one is entered, the last one specified is used. For example, if you specify **RESTYPE=FDEF,INLONLY,PSEG,NONE,OVLY,ALL**, all resources are included.

Note

1. **CMRALL** and **CMRGEN** are not supported in VM and VSE.
2. When creating AFP files to view on the AFP Workbench Viewer, do not specify **RESTYPE= FONT** or **RESTYPE=ALL**. The AFP Workbench Viewer uses font definition files for font substitution instead of retrieving fonts from a resource file when displaying documents. Therefore, you do not need to download fonts to the resource file, which is time consuming and increases the number of bytes sent when the file is transferred to the workstation or archived.
3. If you have a resource type that you want saved in a resource file, and it is included in another resource type, you must specify both resource types. For example, if you request that only page segments be saved in a resource file, and the page segments are included in overlays, the page segments are not saved in the resource file because the overlays are not searched. In this case, you need to request that both page segments and overlays be saved.
4. ACIF saves specified inline resources in the resource file, even if they are not needed to print the job. However, if you specify **EXTENSIONS=RESORDER** , ACIF saves only the inline resources actually needed to print the job. You can also use a resource exit to filter out any resources you do not want included in the resource file.

trc={yes | no | yes,fix | yes,strict | yes,discard | yes,ignore}

Specifies whether the input file contains table reference characters (TRCs). Some applications can produce output that uses different fonts on different lines of a file by specifying TRCs at the beginning of each line after the carriage-control character, if one is present.

Values are:

yes

The input file contains table reference characters.

no

The input file does not contain table reference characters. **no** is the default.

fix

ACIF allows zero-length line data records, including single spacing.

When specified, `fix` is also used for the CC parameter.

discard

ACIF discards zero-length line data records.

When specified, `discard` is also used for the CC parameter.

ignore

ACIF allows zero-length line data records, including the selection of font 0. However, ACIF does not correct and does not report missing TRC bytes.

When specified, `ignore` is also used for the CC parameter.

2

Consider these situations when you use TRCs:

- The order in which the fonts are specified in the **chars** option establishes which number is assigned to each associated TRC. For example, the first font specified is assigned 0, the second font 1, and so on.
- If you specify **trc=yes** but TRCs are not contained in the file, the **line2afp** command interprets the first character (or second, if carriage-control characters are used) of each line as the font identifier. Consequently, the font used to process each line of the file might not be the one you expect, and one byte of data will be lost from each line.
- If you specify **trc=no** or you do not specify **trc** at all, but your data contains a TRC as the first character (or second if carriage-control characters are used) of each line, the **line2afp** command interprets the TRC as a text character in the processed output, rather than using it as a font identifier.
- Table reference characters may cause line data records to contain an odd number of bytes with UTF-16 encoding.

This option is equivalent to the document attribute **table-reference-characters** on the **pdpr** command.

userlib=*PathList*

Specifies the names of user directories containing AFP resources for processing the input file. The directories can contain any AFP resources (fonts, page segments, overlays, page definitions, or form definitions).

By convention, these resources are typically used by one user, as opposed to the system resources (specified with the **reslib** option) that are shared by many users. Therefore, you should use the **userlib** option to specify resources that are not retrieved with the **fdeflib**, **fontlib**, **ovlylib**, **pdeflib**, or **pseglib** options.

The value is:

PathList

Any valid search path. The **line2afp** command searches the paths in the order in which they are specified.

With AIX or Linux, you must use a colon (:) to separate multiple paths.

With Windows, you must use a semi-colon (;) to separate multiple paths.

userpath=*PathList*

Specifies the names of user directories containing TrueType and OpenType fonts, color management resources (CMRs), and data object resources (DORs). TrueType and OpenType fonts are Unicode-enabled AFP fonts that are not defined by the IBM Font Object Content Architecture (FOCA).

By convention, these fonts are typically used by one user, as opposed to the system fonts (specified with **fontpath**) that are shared by many users. The value is:

PathList

Any valid search path. You must use a colon (:) in AIX or Linux and a semicolon (;) in Windows. For example:

```
line2afp inputdd=INFILE outputdd=OUTFILE pagedef=PAGTRUE
formdef=F1A10110 \
userpath=('/jdoe/fonts/truetype:/jdoe/fonts/truetype/myfonts/')
```


Note

The backslash (\) tells AIX or Linux to continue reading the command from the next line. In Windows, the backslash is not valid; therefore, the values must be on one continuous line.

The **line2afp** transform searches the paths in the order in which they are specified.

Examples

- To print a "flat" ASCII file called `timesheet` that does not contain carriage controls, on the InfoPrint printer named `servC-lp`, enter:

```
pdpr -p servC-lp -x "document-format=line-data
   form-definition=FDEF1 page-definition=PDEF3 input-exit=apka2e
   carriage-control-type=none" timesheet
```

Because you specified `document-format=line data`, InfoPrint invokes the **line2afp** command. Because you specified `form-definition=FDEF1`, the **line2afp** command uses the `FDEF1` form definition. Because you specified `page-definition=PDEF3`, the **line2afp** command uses the `PDEF3` page definition.

If the `PDEF3` page definition specifies 2-up printing, the `timesheet` file prints 2-up; that is, with two "pages" printed side by side on the same physical page.

- On AIX or Linux, assume that you want to print a traditional line data file called `statements`. Assume that the file contains ANSI carriage-control characters.

  To print this file on the InfoPrint printer named `servA-lp`; use form definition `FDEF6` in your current directory (`/usr/liz/fdefs`) and use page definition `P1USER10`, which might be in the directory `/usr/res/pdefs1` or in the directory `/usr/res/pdefs2`, enter:

```
pdpr -p servA-lp -x "document-format=line-data form-definition=FDEF6
  resource-context=/usr/liz/fdefs page-definition=P1USER10
  resource-context-page-definition=/usr/res/pdefs1:/usr/res/pdefs2
  carriage-control-type=ansi-ebcdic
  new-line-options=counted-4-octet-aligned"
  /usr/370/statements
```

  - Because you specified `document-format=line data`, InfoPrint invokes the **line2afp** command.
  - Because you specified `page-definition=P1USER10`, the **pdpr** command tells the **line2afp** command to use the page definition named `P1USER10`.
  - Because you specified `resource-context-page-definition`, the **pdpr** command tells the **line2afp** command to search the two directories you specified for the page definition.
  - Because you specified `form-definition=FDEF6`, the **pdpr** command tells the **line2afp** command to use the form definition named `FDEF6`.

– Because you specified `carriage-control-type=ansi-ebcdic` and `new-line-options=record`, the **pdpr** command gives **line2afp** information about the data stream format of `statements`.

- Suppose you downloaded a file called `myfile` from a S/370 host to the Windows Windows PC. The file transfer process converted the file's EBCDIC encoding to ASCII; the file still retains table reference characters and carriage controls. The file also retains the line length it had on the host (100 characters long). Also suppose that your current directory is `d:\Host.Files`.

  To print this file on the InfoPrint printer `BServ-lp`; use the coded fonts Courier 12-pitch (**X042B2**) and Times New Roman 14-pitch (**X0N2D2**) for the output; use the form definition called `F1USER10` in your current directory; and use the page definition called `MYP1` (which does not name any fonts) in your current directory, enter:

```
pdpr -X 370files.X myfile
```

  where the attributes file named `370files.X` contains these settings:

```
document-format=line-data
chars=42B2,N2O2
form-definition=F1USER10
resource-context=d:\Host.Files
page-definition=MYP1
resource-context-page-definition=d:\Host.Files
new-line-options=record,100
table-reference-characters=yes
carriage-control-type=ansi-ascii
printer-name-requested=BServ-lp
```

  – Because you specified `document-format=line-data`, InfoPrint invokes the **line2afp** command.

  – The page definition you specified with `page-definition` does not name any fonts, but the input file contained table reference characters that indicate when fonts should be changed. You specified `table-reference-characters=yes` and `chars=42B2,N2D2`, and **pdpr** passes these values to **line2afp**.

    You had to use `resource-context-page-definition` to specify the path to the page definition; **line2afp** does not automatically look in your current directory.

  – Because you specified `chars=42B2,N2D2`, **pdpr** tells **line2afp** to associate font `42B2` with the first table reference character, and font `N2D2` with the second table reference character. Any lines in the input file that begin with table reference character 0 will now print using font `42B2`; lines beginning with table reference character 1 will print using font `N2D2`.

  – Because you specified `form-definition=F1USER10`, **pdpr** tells **line2afp** to use form definition `F1USER10`. You had to use **resource-context** to specify the path to the form definition; **pdpr** and **line2afp** do not automatically look in your current directory.

- Suppose you downloaded a file called `myfile` from a S/370 host to the pSeries. The file transfer process converted the file's EBCDIC encoding to ASCII; the file still retains table reference characters, plus ANSI carriage controls. You want to print this file on the InfoPrint printer `servC-lp`, but you do not have any ASCII fonts; you only have the EBCDIC coded fonts Gothic 10-pitch (**X0GT10**) and Gothic 12-pitch (**X0GT12**).

  To print this file using the form definition called `F1USER10` and the page definition called `MYPDEF2`, which does not name any fonts, enter:

```
pdpr -p servC-lp -x "document-format=line-data
   chars=GT10,GT12 input-exit=apka2e
   form-definition=F1USER10 page-definition=MYPDEF2
```

```
table-reference-characters=yes
carriage-control-type=ansi-ebcdic
resource-context=/usr/mydir" myfile
```

- Because you specified `document-format=line-data`, InfoPrint invokes the **line2afp** command.
- The page definition you specified with **page-definition** does not name any fonts, but the input file contains table reference characters that specify when fonts are to be changed. You specified `table-reference-characters=yes` and `chars=GT10,GT12`, and **pdpr** passes these values to **line2afp**.
- Because you specified `chars=GT10,GT12`, **pdpr** tells **line2afp** to associate font `GT10` with the first table reference character, and font `GT12` with the second table reference character. Any lines in the input file that begin with table reference character 0 will now print using font `GT10`; lines beginning with table reference character 1 will print using font `GT12`.
- Because you specified `input-exit=apka2e`, **pdpr** tells **line2afp** to convert the ASCII input file into EBCDIC so you can use your EBCDIC coded fonts (`GT10` and `GT12`). Your carriage controls are also in EBCDIC now, so you have to specify `carriage-control-type=ansi-ebcdic`. This example assumes you have **/usr/lpp/psf/bin** in your **PATH** environment variable.
- Because you specified `form-definition=F1USER10`, **pdpr** tells **line2afp** to use form definition `F1USER10`. You had to use **resource-context** to specify the path to the form definition; **pdpr** and **line2afp** do not automatically look in your current directory.

Files

For AIX or Linux, these files are shipped:

/usr/lpp/psf/bin/line2afp

Symbolic link to the **acif** command

/usr/lpp/psf/bin/acif

The **acif** command

/usr/lpp/psf/acif/apkinp.c, apkind.c, apkres.c, apkout.c, apka2e.c, asciinp.c asciinpe.c

Source files for **acif** user exits

/usr/lpp/psf/bin/apka2e, apkinp, apkind, apkres, apkout, apka2e, asciinp, asciinpe

User exit executables

/usr/lpp/psf/bin/Makefile

The build rules for the ACIF user exits. To modify or create your own user exits, you need to compile them with the Makefile. You can add more entries if you have more exits.

/usr/lpp/psf/acif/apkexits.h

C language header file for the ACIF user exits

For Windows, these files are shipped:

*install_path***bin\line2afp.exe**

The **acif** executable

install_path\bin\acif.exe

The **acif** command

install_path\exits\acif\apkinp.c, apkind.c, apkres.c, apkout.c, apka2e.c, asciinp.c asciinpe.c

Source files for **acif** user exits

install_path\bin\apka2e.dll, apkinp.dll, apkind.dll, apkres.dll, apkout.dll, apka2e.dll, asciinp.dll, asciinpe.dll

User exit executables

install_path\exits\acif\apkexits.h

C language header file for the ACIF user exits

install_path\exits\acif\apka2e.dsw, apkinp.dsw, apkind.dsw, apkres.dsw, apkout.dsw, apka2e.dsw, asciinp.dsw, asciinpe.dsw

Microsoft Visual C++ 6.0 Workspaces for the user exists

install_path\exits\acif\apka2e.dsp, apkinp.dsp, apkind.dsp, apkres.dsp, apkout.dsp, apka2e.dsp, asciinp.dsp, asciinpe.dsp

Microsoft Visual C++ 6.0 Project files for the user exits. To customize and build your own user exits, you need to install and use Microsoft Visual C++. You can also use other C development environments, such as Borland, but InfoPrint Manager only ships samples for Microsoft Visual C++.

Note

For more information about the **acif** user exits and the user exit executables, see *AFP Conversion and Indexing Facility: User's Guide*, S550-0436.

Messages

For AIX or Linux, message files for the **line2afp** transform can be found in **/usr/lib/nls/msg/***LANG*/**acif.cat**, where *LANG* is the name of a locale, for example, en_US.

pcl2afp command: transforms PCL data to AFP

Syntax

pcl2afp [**-a***OutputType*]
[**-C** *ConfigurationFile*] [**-c**]
[**-j** *nnnn*]
[**-cmp** {jpeg-sub | jpeg | lzw}]
[**-device** "[**plex,**]
[**input***n*=(**pcl_bin=***m*)][**input***n*=(**pcl_bin=***m*)]"...]
[**-is** 1|3][**-l** *nnnn.nnnu*] [**-M** *nnnnn*] [**-o** *OutputFile*] [**-P** *nnnnn*]
[**-p** *PageRange*]
[**-pragma** '**pcl_x_origin=***nnnn.nnnu*']
[**-pragma** '**pcl_y_origin=***nnnn.nnnu*']
[**-q**] [**-r** *nnn*]

[**-S** *ServerName*]
[**-w** *nnnn.nnnu*] [**-x** *nnnn.nnnu*]
[**-y** *nnnn.nnnu*] [*InputFile ...*]
pcl2afp {**-h** | **?**}

Description

The **pcl2afp** command transforms a PCL data stream file into an AFP data stream file.

The PSF DSS runs the **pcl2afp** command automatically whenever:

- InfoPrint Manager identifies the format of a document in a print job as PCL.
- You use the **pdpr** command to specify **document-format=pcl** with the **-x** flag or in an attributes file.
- You specify a data type of **-odatatype=pcl** with an AIX print command (**enq**, **lp**, or **qprt**) or with the **lprafp** command.

If you specify multiple values of the same flag, **pcl2afp** uses the last value specified, except for the **-p** flag. Multiple values of the **-p** flag are accumulated and the pages identified for printing are printed in normal numerical sequence, regardless of the order you specify.

When using the **pcl2afp** command, you can specify an optional input file name. If you do not specify an input file name, **pcl2afp** uses standard input. The output file name is also optional; if you do not specify one, the **pcl2afp** command writes the results to standard output.

Information about the flags you can specify with the **pcl2afp** command:

1. You can pass flags to **pcl2afp** using the **other-transform-options** document attribute on the InfoPrint Manager**pdpr** command or the **-o** flag of the AIX print commands (**enq**, **lp**, and **qprt**) or the InfoPrint Manager **lprafp** command.
2. When you run **pcl2afp** as a standalone transform, flags can appear anywhere on the command line with or without a blank in the flag and value pair.

   When you specify **pcl2afp** transform flags with the **other-transform-options** attribute, any string containing a blank must be surrounded by single quotes.

   Do not use a blank between the flag and the value when you specify **pcl2afp** transform flags with an AIX print command or with the **lprafp** command.
3. When you specify flags with the **pcl2afp** command, **pcl2afp** echoes them back to your display along with the settings for the flags. To suppress the command echoing, enter the **-q** (quiet) flag along with the **pcl2afp** command.
4. The order in which InfoPrint Manager uses PCL options is as follows:

   1) Any options you specify on the command line with the **pcl2afp** command (for example, **-r300**), including values contained in the customized configuration file you specify with the **pcl2afp -C** command. If you specify the same option more than once, InfoPrint Manager uses the last value.
   2) Values contained in the configuration file, **pcl2afp.cfg**, in the current directory, if you invoked **pcl2afp** directly. If you invoked **pcl2afp** indirectly by submitting a print job with a data type of PCL, **pcl2afp** ignores any configuration files in the current directory, and proceeds to step 4.3.
   3) Values contained in the **pcl2afp.cfg** file your home directory.
   4) Values contained in the default **pcl2afp** command configuration file:

      For AIX or Linux

/usr/lpp/psf/pcl2afp/pcl2afp.cfg

For Windows

install_path\pcl2afp\pcl2afp.cfg

5) Values contained in the customized configuration file you specify with the **pcl2afpd -C** command.
6) Values contained in the default **pcl2afpd** daemon configuration file:

For AIX or Linux

/usr/lpp/psf/pcl2afp/pcl2afpd.cfg

For Windows

install_path\pcl2afp\pcl2afpd.cfg

7) Values contained in the **pcl2afpd.cfg** file when **pcl2afpd** was started.
8) The defaults that are built into **pcl2afpd**. These defaults are the same as the defaults for the **pcl2afp** flags.

5. The position of PCL data on the page depends on the interaction of the **-l** and **-w** flags, the **-x** and **-y** flags, and the form definition you use. In general, to position data on the page:
   - Use **-l** and **-w** to set the physical page dimensions.
   - Use a form definition that specifies zero vertical offset and zero horizontal offset (for example, F100S, F100D, or F100T) or specify X and Y offsets of 0 when you submit the print job. For more information, see Transforming PCL image data, p. 404, the 'How to specify exact placement of PCL output using zero vertical and horizontal offset' section.
   - Use **-x** and **-y** to avoid any areas that your printer cannot print.
6. You can specify the **pcl2afp** flags and values with the **pcl2afp** command, with the **pdpr -x "other-transform-options"** command, or with **enq -o**, **lp -o**, **qprt -o**, or **lprafp -o** command. You can also specify equivalent attributes with the **-x** flag or in an attributes file with the **pdpr** command.

The **pcl2afp** transform uses these Embedded Microtype Fonts:

- Albertus Medium
- Albertus Extra Bold
- Antique Olive
- Antique Olive Italic
- Antique Olive Bold
- Arial
- Arial Italic
- Arial Bold
- Arial Bold Italic
- Avant Garde Book
- Avant Garde Book Oblique
- Avant Garde Demi
- Avant Garde Demi Oblique
- Bookman Light
- Bookman Light Italic
- Bookman Demi

- Bookman Demi Italic
- Clarendon Condensed Bold
- Coronet
- Courier
- Courier Italic
- Courier Bold
- Courier Bold Italic
- Courier Bold Oblique
- Courier Oblique
- Garamond Antiqua
- Garamond Kursiv
- Garamond Halbfett
- Garamond Kursiv Halbfett
- Helvetica
- Helvetica Bold
- Helvetica Bold Oblique
- Helvetica Narrow
- Helvetica Narrow Bold
- Helvetica Narrow Bold Oblique
- Helvetica Narrow Oblique
- Helvetica Oblique
- Letter Gothic
- Letter Gothic Italic
- Letter Gothic Bold
- Marigold
- New Century Schlbk Bold
- New Century Schlbk Bold Italic
- New Century Schlbk Italic
- New Century Schlbk Roman
- CG Omega
- CG Omega Italic
- CG Omega Bold
- CG Omega Bold Italic
- Palatino Bold
- Palatino Bold Italic
- Palatino Italic
- Palatino Roman
- Symbol
- CG Times
- CG Times Italic
- CG Times Bold
- CG Times Bold Italic

- Times New Roman
- Times New Roman Italic
- Times New Roman Bold
- Times New Roman Bold Italic
- Times Bold
- Times Bold Italic
- Times Italic
- Times Roman
- Univers Medium
- Univers Medium Italic
- Univers Bold
- Univers Bold Italic
- Univers Condensed Medium
- Univers Condensed Medium Italic
- Univers Condensed Bold
- Univers Condense Bold Italic
- Zapf Chancery Medium Italic
- Zapf Dingbats
- Wingdings

The **pcl2afp** transform also uses the Line Printer embedded Bitmap Font.

Font substitution occurs when a set of capabilities, such as Symbol Set, Spacing, Pitch, and Typeface, are compared to the fonts available to the rip, and the closest match wins. You cannot disable font substitution. If an error occurs during font substitution, the error is not logged. When a custom font in included in the data stream, and the PCL job refers to it, the custom font is used.

For more information about the **pcl2afp** transform, see "Working with Transforms" in the *InfoPrint Manager: Procedures* manual that is appropriate for your operating system.

Automatic invocation

The PSF DSS automatically invokes the **pcl2afp** transform command whenever you submit a PCL file for printing. You can pass options to **pcl2afp** using the **other-transform-options** attribute on the **pdpr** command or the **-o** flag of the AIX print commands or the **lprafp** command. You can also pass options to **pcl2afp** through theInfoPrint Submit Express client of InfoPrint Manager. Parameters that are not supported, such as **-r 600**, can be passed in InfoPrint Submit Express by clicking **Advanced** and entering them in the **Transform options** field.

Limitations

This section lists the limitations for the **pcl2afp** transform:

- The **pcl2afp** transform must be installed, and the **pcl2afpd** daemon must be running.
- PCL data can contain device commands (for example, to begin or end duplexing or to change the input bin). Because the AFP architecture defines those device functions in a form definition resource instead of the print data, the **pcl2afp** transform ignores the device commands in the print data. To

access those device functions (such as duplexing and bin selection), you must specify them in the form definition or attributes file, or on a print command, when you print the job.

- Resolution conversion algorithms might yield degraded appearance when used to reduce the resolution of a data stream. For this reason, **pcl2afp** might degrade the appearance of higher-resolution data streams when used with 240-pel printers. You should verify that print fidelity is satisfactory.
- There are subtle differences between PCL4, PCL5e, or PCL6 when it comes to handling fonts. While many PCL4 files will work with **pcl2afp**, some might not produce the expected output.

Flags and Values

This section describes the flags and values for the **pcl2afp** transform:

-a {IO1_G4 | IM1 | IO1 | IO1_MMR | PSEG_IO1_G4 | PSEG_IM1 | PSEG_IO1 | PSEG_IO1_MMR | OVLY_IO1_G4 | OVLY_IM1 | OVLY_IO1 | OVLY_IO1_MMR | FS45 | FS45.ovly | FS45.pseg}

Determines the type of AFP data stream image to generate for each page in the PCL file.

Values are:

IO1_G4

Compressed Image Object Content Architecture (IOCA) image in Modified TSS (formerly CCITT) T.6 G4 Facsimile Coding Scheme (G4 MMR) format. This is the recommended output type because it takes up less space on the fixed disk, and it prints faster. It is the default specified in the **pcl2afpd** daemon and **pcl2afp** command configuration files.

PPDS, PCL, and TCP/IP-attached IPDS printers can print IOCA images.

IM1

IM1 image. This type of image is not compressed.

IO1

IOCA image. This type of image is not compressed.

IO1_MMR

Compressed IOCA image in Modified Modified Read (MMR) format.

PSEG_IO1_G4 | PSEG_IM1 | PSEG_IO1 | PSEG_IO1_MMR

Page segment of the specified image type.

Note

When generating page segments from multiple-page documents, you might want to use the **-p** flag to select which page is to be made into a page segment; otherwise, multiple page segments will be created, one for each page of PCL.

OVLY_IO1_G4 | OVLY_IM1 | OVLY_IO1 | OVLY_IO1_MMR

Overlay of the specified image type.

Note

When generating overlays from multiple-page documents, you might want to use the **-p** flag to select which page is to be made into an overlay; otherwise, multiple overlays will be created, one for each page of PCL.

FS45

IOCA color format.

FS45.ovly

IOCA color format for overlays.

FS45.pseg

IOCA color format for page segments.

This flag is similar to the **image-out-format** document attribute on the **pdpr** command.

-C *ConfigurationFile*

Specifies the path and file name of the customized configuration file **pcl2afp** uses with the transform. If you specify the **-C** flag with an AIX print command (**enq**, **lp**, or **qprt**), or with the **lprafp** command. specify the fully qualified name of the file, including its path; for example:

For AIX or Linux

/usr/lpp/psf/pcl2afp/myfile.cfg

For Windows

d:\pcl\myfile.cfg

-c

Concatenates multiple input files without putting a Esc-E (end of job) characters between the files. The **pcl2afp** command interprets the input files as a continuous data stream, and processes them as if they were one PCL job. This flag can be useful when processing PCL files with inline resources.

Note

Do not use this flag when you perform the PCL-to-AFP data stream transform by submitting a print job with the **pdpr** command.

InputFile …

Specifies one or more input files to be transformed. If you specify more than one input file name, the **pcl2afp** command concatenates the files and separates them with the Esc-E (end of job) characters. The results of the transform are written to a single output file (if one is specified) or to standard output.

In addition, you can specify PCL inline resource files as input files to the **pcl2afp** command. The file name of the inline resource file must precede the file name of the PCL print file so that **pcl2afp** concatenates the files in the correct order. The **pcl2afp** command concatenates the resources in front of the print file when the **-c** flag is specified.

If you do not specify an input file, **pcl2afp** uses standard input. If the **pcl2afp** command cannot read from standard input, the command issues a message.

-cmp {jpeg-sub | jpeg | lzw}

Enables JPEG or LZW compression.

Values are:

-cmp jpeg-sub

This value is used for JPEG compression and subsampled files.

-cmp jpeg

This value is used for JPEG compression and unsubsampled files.

-cmp lzw

This value is used for LZW compression and unsubsampled files. This is the default value.

Note

- The compression algorithm should be used when the output is IOCA objects and when the color path (FS45) is selected.

-device "[plex,] [input*n*=(pcl_bin=*m*)][input*n*=(pcl_bin=*m*)][input*n*=...]"

Specifies whether to recognize the plex command, and optionally, how to associate the AFP input tray (**input*n***, where *n* is a value between 1 to 255) with the pcl bin (**pcl_bin=*m***, where *m* is a value between 0 to 59). When you do not specify **input*n*=(pcl_bin=*n*)** with **plex**, InfoPrint Manager recognizes the plex command with no tray mappings. If you do not specify **plex** and tray mappings, that is, the **device-controls** attribute is commented out in the **pcl2afpd.cfg** file, InfoPrint Manager uses the settings in the default formdef, which is duplex. In this case, any input file that is processed is printed duplex due to this default formdef from InfoPrint Manager.

Note

You can specify **input*n*=(pcl_bin=*m*)** up to twenty times.

If the `device_controls` attribute is specified in the **pcl2afpd.cfg** file, an internal formdef is embedded in the **pcl2afp** output the transform generates and the **plex** command from the input file (simplex, duplex, or tumble) is recognized. The appropriate IMM (Invoked Medium Map) is used so the output of simplex, duplex, or tumble is specified in the input file.

-is {1 | 3}

Specifies the interchange set version.

Values are:

1

If you specify **1**, the output is IS/1 compliant. This is the default value.

3

If you specify **3**, the output is IS/3 compliant.

Note

1. Any other value different than **1** or **3** is signaled as error.
2. If you specify **3** as a value for the **-is** flag, make sure that the output type selected is one of the following: IO1, IO1_G4, IO1_MMR, PSEG_IO1, PSEG_IO1_G4, PSEG_IO1_MMR, OVLY_IO1, OVLY_IO1_G4, OVLY_IO1_MMR. Only these output types are compatible with the IS/3 flag.

-j {20 | 1 to 9998 | 9999}

Specifies the maximum amount of time, in minutes, to spend processing the job.

Values are:

20

20 minutes, the default

1 to 9998

The timer ranges from 1 to 9998 minutes, in one-minute increments

9999

No time limit

-l *nnnn.nnnu*

Specifies the length of the generated image; *nnnn.nnn* is a number that can optionally contain a decimal point, and *u* is the units in inches (**i**) or millimeters (**m**). If you do not specify a unit (**i** or **m**), **pcl2afp** uses pels as the unit type. You cannot specify fractional values (that is, you cannot use a decimal point) for pels.

Note

If a text margin is already built into the file, try **-l11i** to set the length to 11 inches.

For 240-pel resolution printers, values are:

11i

11 inches, the default

16 to 5280

The length can be from 16 pels to 5280 pels, 0.067i to 22.002i, or 1.701m to 558.852m. For example, these values are all valid:

```
-l 40m
-l 200.5m
-l 13i
-l 4000
```

For 300-pel resolution printers, values are:

11i

11 inches, the default

16 to 6600

The length can be from 16 pels to 6600 pels, 0.053i to 22.001i, or 1.346m to 558.842m. For example, these values are all valid:

```
-l 40m
-l 200.5m
-l 13i
-l 5000
```

For 480-pel resolution printers, values are:

11i

11 inches, the default

16 to 10560

The length can be from 16 pels to 10560 pels, 0.033i to 22.002i, or 0.838m to 558.852m. For example, these values are all valid:

```
-l 40m
-l 200.5m
-l 13i
-l 8000
```

For 600-pel resolution printers, values are:

11i

11 inches, the default

16 to 20400

The length can be from 16 pels to 20400 pels, 0.0267i to 34.001i, or 0.678m to 863m. For example, these values are all valid:

```
-l 40m
-l 200.5m
-l 13i
-l 10000
```

This flag is equivalent to the **image-length** document attribute on the **pdpr** command.

-M {6000 | 2000 to *nnnnn***}**

Determines the maximum amount of memory, in KB, that the transform can use. This flag can be useful if you are processing large PCL jobs that require a lot of memory.

Values are:

6000

6000KB (6MB), the default

2000 to *nnnnn*

The maximum memory ranges from 2000 to *nnnnn* (where *nnnnn* is the maximum upper limit allowed by AIX, Linux, or Windows) up to 64MB.

-o *OutputFile*

Specifies the output path and file into which the transformed PCL files are to be written. If more than one output file is specified, the last specified file name and path is the one used. If no output file is specified, the result is written to standard output.

You cannot use **-o** *OutputFile* on the command line with the **enq**, **lp**, **qprt**, or **lprafp** commands. You can only use **-o** *OutputFile* with the **pcl2afp** command, or with the **other-transform-options** attribute on the **pdpr** command.

This option is equivalent to the **transform-output-file-name** document attribute on the **pdpr** command.

-P {8253 | 924 to *nnnnn***}**

Specifies the TCP/IP port number **pcl2afp** uses to make a connection with the workstation on which the **pcl2afpd** daemon is running (set by the **-S** flag). If your InfoPrint Manager installation uses more than one PCL daemon, use this flag to select the daemon.

This port should not be the same port used by the TCP/IP-attached IPDS printer or by the PostScript transform. On AIX or Linux, to find out which ports are already being used on your system (although they might or might not be active), look in the **/etc/services** file.

Values are:

8253

The default port number.

924 to *nnnnn*

Any valid port number greater than or equal to 924. With AIX or Linux, the maximum value *nnnnn* must be equal to or less than 65535.

Note

You can only access secure ports, 924 to 1023, with **root** user authority.

-p *PageRange*

Specifies that the output should only contain selected pages. When you specify multiple **-p** flags, the **pcl2afp** command accumulates them and prints the identified pages in normal numerical order, regardless of the order you specify. Examples of values include:

-p even

Output even pages.

-p odd

Output odd pages.

-p 1-10

Output pages 1 through 10.

-p 10-

Output pages from page 10 until the end of the job.

-p 1 -p 3 -p 6

Output pages 1, 3, and 6, in that order.

-p1 -p6 -p3

Output pages 1, 3, and 6, in that order.

This flag is equivalent to the **page-select** document attribute on the **pdpr** command.

-pragma 'pcl_x_origin=*nnnn.nnnu***'**

Specifies an X presentation page origin of the generated image; *nnnn.nnnu* is a number that can optionally contain a decimal point, and *u* is the units in inches (i) or millimeters (m). If you do not specify a unit (i or m), **pcl2afp** uses pels as the unit type. You cannot specify fractional values, that is, you cannot use a decimal point, for pels. If this value is unspecified, zerio is presumed.

Allowed Values

You can enter a value from -577.99 to 577.97.

-pragma 'pcl_y_origin=*nnnn.nnnu***'**

Specifies an Y presentation page origin of the generated image; *nnnn.nnnu* is a number that can optionally contain a decimal point, and *u* is the units in inches (i) or millimeters (m). If you do not specify a unit (i or m), **pcl2afp** uses pels as the unit type. You cannot specify fractional values, that is, you cannot use a decimal point, for pels. If this value is unspecified, zerio is presumed.

Allowed Values

You can enter a value from -577.99 to 577.97.

-q

Quiets (suppresses) the echoing of the **pcl2afp** command to the display.

-r {240 | 300 | 360 | 480 | 600 | 720 | 1200}

Specifies the resolution of the output image. Select the resolution based on the printer on which you will be printing the image.

Values are:

240

240 pels-per-inch

300

300 pels-per-inch the default

360

360 pels-per-inch

480

480 pels-per-inch

600

600 pels-per-inch

720

720 pels-per-inch

1200

1200 pels-per-inch

Note

If you specify a resolution that the printer does not support, InfoPrint Manager will print the image under most conditions, but with degraded results. Specify the correct resolution for the printer on which you will print the PCL job.

This flag is equivalent to the **default-printer-resolution** document attribute on the **pdpr** command.

-S *ServerName*

Specifies the name of the AIX or Linux system on which the **pcl2afpd** daemon is running. If you do not specify this flag, the *ServerName* defaults to the effective name of the workstation on which you issued the **pcl2afp** command. The value is:

ServerName

A host name, IPv4 or IPv6 address for any valid AIX or Linux system where the pcl2afpd daemon is running.

-s {20 | 1 to 9998 | 9999}

Specifies the maximum amount of time, in minutes, that the PCL interpreter remains idle between jobs before it goes down. When the PCL interpreter is running, it uses some of the workstation memory. If the PCL interpreter goes down, you do not need to bring it back up; the interpreter automatically starts when you submit another PCL job as long as the **pcl2afpd** daemon is running.

Values are:

20

The default time is 20 minutes.

1 to 9998

The time is the number of minutes specified in one-minute increments.

9999

There is no time limit.

-w *nnnn.nnnu*

Specifies the width of the generated image; *nnnn.nnn* is a number that can optionally contain a decimal point, and *u* is the units in inches (**i**) or millimeters (**m**). If you do not specify a unit (**i** or **m**), **pcl2afp** uses pels as the unit type. You cannot specify fractional values (that is, you cannot use a decimal point) for pels.

Note

If a text margin is already built into the file, try **-w8.5i** to set the width to 8.5 inches.

For 240-pel resolution printers, values are:

8.5i

8.5 inches, the default

16 to 4080

The width can be from 16 pels to 4080 pels, 0.065i to 17.002i, or 1.641m to 431.852m. For example, these values are all valid:

```
-w 40m
-w 200.5m
-w 13i
-w 3300
```

For 300-pel resolution printers, values are:

8.5i

8.5 inches, the default

16 to 5100

The width can be from 16 pels to 5100 pels, 0.052i to 17.001i, or 1.313m to 431.842m. For example, these values are all valid:

```
-w 40m
-w 200.5m
```

```
-w 13i
-w 5000
```

For 480-pel resolution printers, values are:

8.5i

8.5 inches, the default

16 to 8160

The width can be from 16 pels to 8160 pels, 0.065i to 17.002i, or 1.641m to 431.852m. For example, these values are all valid:

```
-w 40m
-w 200.5m
-w 13i
-w 6600
```

For 600-pel resolution printers, values are:

8.5i

8.5 inches, the default

16 to 10200

The width can be from 16 pels to 10200 pels, 0.052i to 17.001i, or 1.313m to 431.842m. For example, these values are all valid:

```
-w 40m
-w 200.5m
-w 13i
-w 10000
```

This flag is equivalent to the **image-width** document attribute on the **pdpr** command.

-x nnnn.nnnu

Specifies an X offset (horizontal offset) of the generated image; *nnnn.nnn* is a number that can optionally contain a decimal point, and *u* is the units in inches (**i**) or millimeters (**m**). If you do not specify a unit (**i** or **m**), **pcl2afp** uses pels as the unit type. You cannot specify fractional values (that is, you cannot use a decimal point) for pels.

An offset value specifies a border or margin around the generated image to avoid the non-printable areas of some printers. An X-offset value specifies the left and right margins of the generated image.

For all printers, values are:

0.167i

0.167 inches, the default

0 to 8.5i

The X offset must be less than half of the width (**-w**) of the generated image. For example, if you specify a width of 13i, the X offset can be no larger than 6.5i.

This flag is equivalent to the **x-image-shift** document attribute on the **pdpr** command.

Note

1. The X offset specified with **-x** must be less than half the width specified with **-w**. If the **-x** value is greater than or equal to the **-w** value, a blank page is printed.
2. The X-offset value specifies margins on *both* the left and right sides of the page. If you have a width of 8.5 inches and specify an X offset of 5 inches, a blank page will also result because the margins on the left and right sides of the paper exceed the width of the paper.
3. PCL processing is slower when you use the **-x** flag, because the **pcl2afpd** daemon must stop and re-start the PCL interpreter. You can improve performance by changing the **pcl_x_offset** value in the **pcl2afpd** daemon configuration file rather than using **-x** on a regular basis.

-y *nnnn.nnnu*

Specifies a Y offset (vertical offset) of the generated image; *nnnn.nnn* is a number that can optionally contain a decimal point, and *u* is the units in inches (**i**) or millimeters (**m**). If you do not specify a unit (**i** or **m**), **pcl2afp** uses pels as the unit type. You cannot specify fractional values (that is, you cannot use a decimal point) for pels.

An offset value specifies a border or margin around the generated image to avoid the non-printable areas of some printers. A Y-offset value specifies the top and bottom margins of the generated image.

For all printers, values are:

0.167i

0.167 inches, the default

0 to 8.5i

The Y offset must be less than half of the length (**-l**) of the generated image. For example, if you specify a length of 14i, the Y offset can be no larger than 7.0i.

This flag is equivalent to the **y-image-shift** document attribute on the **pdpr** command.

Note

1. The Y offset specified with **-y** must be less than the half of the length specified with **-l**. If the **-y** value is greater than or equal to the **-l** value, a blank page is printed.
2. The Y-offset value specifies margins on *both* the top and bottom edges of the page. If you have a length of 11 inches and specify an Y offset of 6 inches, a blank page will also result because the margins on the top and bottom of the paper exceed the length of the paper.
3. PCL processing is slower when you use the **-y** flag, because the **pcl2afpd** daemon must stop and re-start the PCL interpreter. You can improve performance by changing the **pcl_y_offset** value in the **pcl2afpd** daemon configuration file rather than using **-y** on a regular basis.

-h | -?

Displays the **pcl2afp** help file.

Transforming PCL image data

The output of the PCL transform (the **pcl2afp** command) is AFP image data for any type of PCL input, whether it be text or images. The image created by the **pcl2afp** command minimizes white space in an image block by defining the image block size to be exactly the right size to contain all of the black pels of the image. A PCL image might not print if any part of the image lies outside of the valid printable

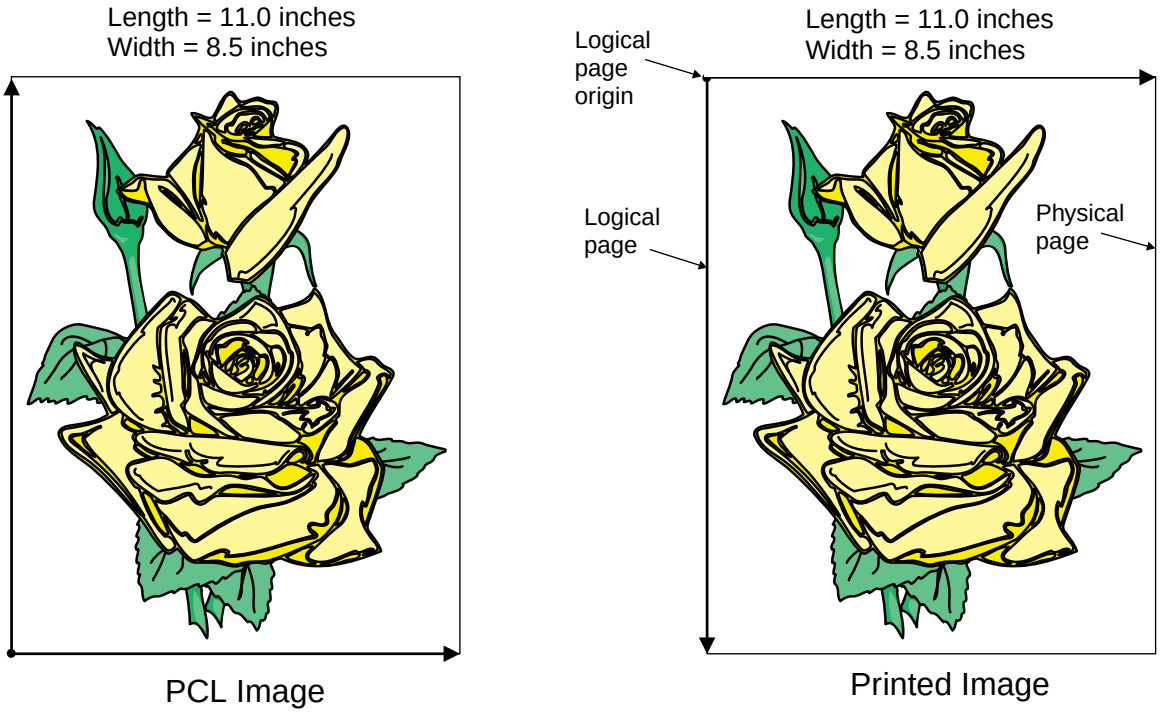
area. In addition, be aware that using form definitions that specify a non-zero logical page origin might move a valid PCL image out of the printable area; thus, the image won't print.

The **pcl2afp** command, the **pcl2afp.cfg** configuration file, and the **pcl2afpd.cfg** configuration file all let you specify the length and the width of PCL images. Before you use the **-l** and **-w** flags of the **pcl2afp** command or modify the **pcl_length** and **pcl_width** options in the configuration file, it's helpful to understand how InfoPrint places PCL images on the page.

The next figure shows an example of a PCL image. This image is 8.5 inches high and 11 inches wide, measured from the lower-left corner of the image.

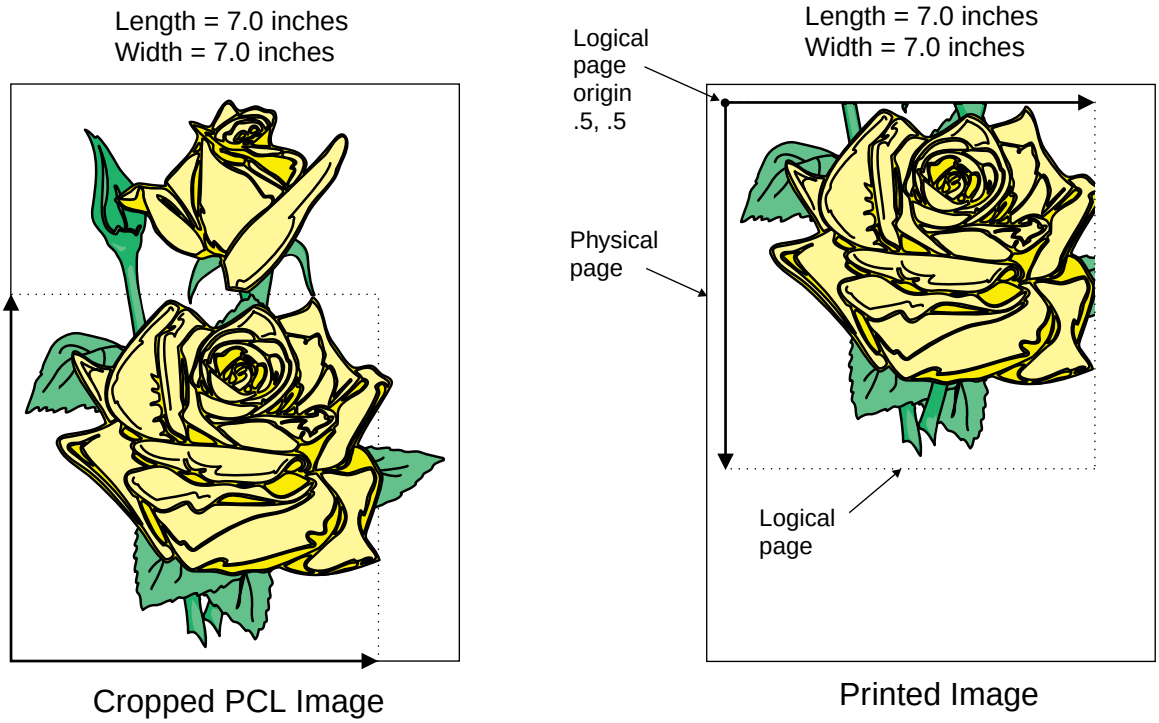
If you want to print the entire image, specify a length of 11i and a width of 8.5i. When InfoPrint prints the image, the upper-left corner of the image is placed at the point on the page called the logical page origin, which is specified in the form definition. The logical page origin is the point on the form where the page of data is positioned, and it is specified as an offset from the top-left corner of the sheet. Therefore, if the form definition has a logical page origin of 0.165 inches from both the left and top sides of the sheet, the top-left corner of the image is placed 0.165 inches down and to the left of the upper left corner of the sheet.

A PCL image



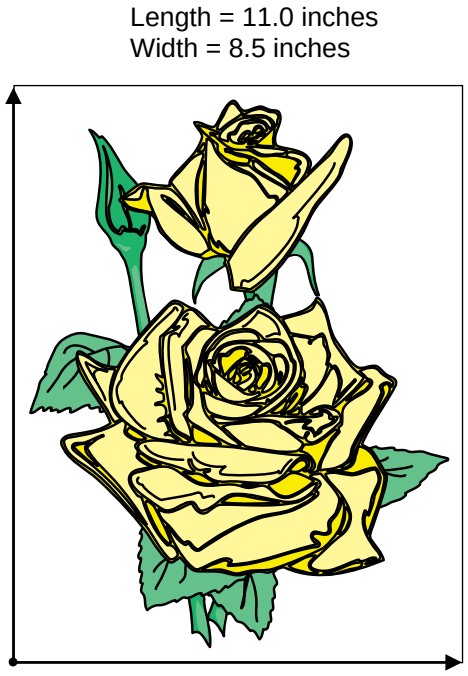
All this gets more complicated if you do not specify the entire image. For example, to crop the image so that you only use the lower left corner, you would specify a width of 7i and a length of 7i with the **pcl2afp** command. The upper left corner of the resulting image is then placed at the logical page origin. See the next figure.

A cropped PCL image

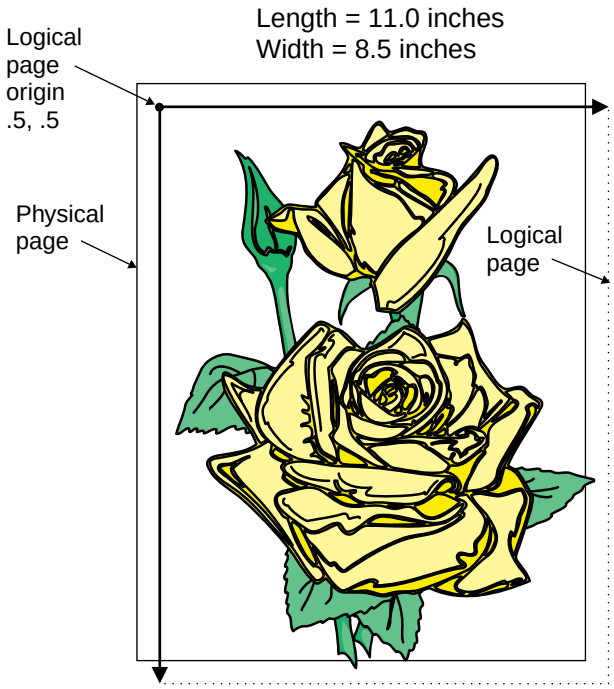


In this final example, specify a PCL image that is 8.5 inches wide and 11 inches high. Again, the upper-left corner of the transformed image is placed at the logical page origin. Unless you specify a form definition with the print job that has a zero logical page origin (for example, **F100S**, **F100D**, or **F100T**), the page will not print because part of the image is outside the valid printable area. See the next figure.

A PCL image offset from the top-left corner



PCL Image



Unprintable Image (outside of Physical page)

Unless you specify a form definition with the print job that has a zero logical page origin (for example, **F100S**, **F100D**, or **F100T**), the page will not print because part of the image is outside the valid printable area. Specifying the correct form definition is extremely important, particularly when you are printing a full-page image.

The default length and width values specified in the PCL configuration files, **pcl2afp.cfg** and **pcl2afpd.cfg** work with the default form definitions that InfoPrint provides for each type of InfoPrint printers.

How to specify exact placement of PCL output using zero vertical and horizontal offset

However, to specify exact placement of your PCL output on the page using a zero vertical and horizontal offset from the top-left corner of the page, do one of these actions:

- Specify one of these form definitions:
  - **F100S**
  - **F100D**
  - **F100T**
- Specify an X- and Y-offset value of **0** to override the values set in the form definition, using one of these methods:
  - The **-oxoffset** and **-oyoffset** flags on the AIX print commands
  - The `X offset` and `Y offset` fields on the AIX SMIT `Submit an InfoPrint Job` panel
  - The **x-image-shift** and **y-image-shift** attributes with the **-x** flag or in an attributes submitted with the **pdpr** command

If you specify a 0 horizontal and vertical offset in the form definition, with an AIX print command, or in an attributes file, the image produced by the **pcl2afp** transform might be printed in the unprintable area of the printer. To avoid printing in the unprintable area, you can specify the **-x** (X offset) and **-y** (Y offset) flags on the **pcl2afp** command. These flags add white space to the top and left side of the image produced by the transform, ensuring that no data will print in the unprintable area. For more information about the unprintable area of your printer, see *Advanced Function Presentation: Printer Information*.

The pcl2afp and pcl2afpd configuration files

Instead of typing flags on the command line with the **pcl2afp** command, you can use the **-C** flag to specify a configuration file that contains the flags. In this way, you can simply specify a configuration file name, rather than typing many flags. You might find it convenient to use a configuration file if you repeatedly use the same flags with the **pcl2afp** command, or if you are using different PCL processing values than the defaults defined by your system support group.

When your system support group installed the **pcl2afp** transform, a default **pcl2afp** command configuration file, **pcl2afp.cfg**, was installed as follows:

For AIX or Linux

/usr/lpp/psf/pcl2afp

For Windows

***install_path*\pcl2afp**

To create your own files, copy the **pcl2afp.cfg** file and then use a system editor to modify the options in this ASCII file to suit your needs.

A default **pcl2afpd** daemon configuration file, **pcl2afpd.cfg**, was also installed as follows:

For AIX or Linux

/usr/lpp/psf/pcl2afp

For Windows

***install_path*\pcl2afp**

The **pcl2afpd** daemon configuration file can contain most of the same keywords as the **pcl2afp** command configuration file, plus some keywords that control the operation of the **pcl2afpd** daemon. Values in the command configuration file override values in the daemon configuration file.

The next figure shows an example of a configuration file.

Sample pcl2afp configuration file

```
# pcl2afp configuration file


# KEYWORD             EQUIVALENT pcl2afp FLAG                    PURPOSE
#############################################################################


port = 8253                 # -P              which TCP/IP port to use
server = localhost          # -S           which server to connect with

pcl_max_memory = 6000K      # -M          maximum amount of memory that
                            #              PCL uses; the 'K' is ignored
```

```
pcl_job_timeout = 20        # -j             maximum number of minutes
                            #                     to process a PCL job

pcl_width = 8.5i            # -w              width of generated image
pcl_length = 11i            # -l             length of generated image
pcl_x_offset = 0i           # -x                left and right margins
pcl_y_offset = 0i           # -y                top and bottom margins
pcl_resolution = 300        # -r          resolution of target printer
pcl_output_type = IO1_G4    # -a         type of AFP image to generate

#pcl_is = 1                 # -is           the is afp compliance flag
#pcl_compress_type = lzw    # -cmp                     lzw compression
                            #             other options: jpeg, jpeg-sub

##############################################################################

# ENABLING THE PLEX COMMAND AND MAPPING BINS TO TRAYS
# NOTE: Uncomment only one of the options below.

##############################################################################

# ENABLING THE PLEX COMMAND ONLY
# If you want your users to be able to choose between single-sided and
# double-sided (duplexed) output, uncomment the following line.

# device_controls = plex

##############################################################################

# ENABLING THE PLEX COMMAND AND MAPPING BINS TO TRAYS
# If you want your users to be able to both choose between single-
# sided and double-sided (duplexed) output AND specify which paper
# tray to use, uncomment the line below and fill in the correct values:

# Replace the Xs with the number of the AFP tray (between 1 and 255).
# Replace the Zs with the PCL bin number (between 1 and 59).

# You can list up to 20 mappings.

# device_controls = plex,inputX=(pcl_bin=Z),inputX=(pcl_bin=Z)
```

The next table shows the **pcl2afp** flags and their equivalent configuration file keywords. To override the values in the default configuration file, **pcl2afp.cfg**, you can do one of the following:

- Specify flags with the **pcl2afp** command at transform time.
- Specify a configuration file with **pcl2afp -C** at transform time.
- Specify **pcl2afp** flags with **-o** flags on an AIX print command, or with equivalent attributes with the **-x** flag or in an attributes file on the **pdpr** command, to transform a file and print it at the same time.

PCL printing and processing options

pcl2afp Flag	*Keyword in pcl2afp Configuration File*	*Keyword in pcl2afpd Configuration File*
Note The valid values for configuration file keywords are the same as for the corresponding **pcl2afp** command flag. For keywords used only in the **pcl2afpd** daemon configuration file, which have no corresponding command flag, see pcl2afpd utility: starts the pcl2afpd daemon, p. 272.		
-a *OutputType*	**pcl_output_type=*value***	**pcl_output_type=*value***
-C *ConfigurationFile*	None	
-c	None	
-cmp	**pcl_compress_type=*value***	
-device	**device_controls=[plex], [input*n*=(pcl_bin=*m*)] [input*n*=(pcl_bin=*m*) [input*n*=...]]**	
InputFile …	None	
-is	**pcl_is=*value***	**pcl_is=*value***
-j *nnnn*	**pcl_job_timeout=*nnnn***	
-l *nnnn.nnnu*	**pcl_length=*nnnn.nnnu***	
-M *nnnnn*	**pcl_max_memory=*nnnnn***	
-o *OutputFile*	None	
-P *nnnnn*	**port=*PortNumber***	
-p *PageRange*	None	
-pragma 'pcl_x_origin=*nnnn.nnnu*'	**pragma = pcl_x_origin=*nnnn.nnnu***	
-pragma 'pcl_y_origin=*nnnn.nnnu*'	**pragma = pcl_y_origin=*nnnn.nnnu***	
-q	None	
-r *nnn*	**pcl_resolution=*nnn***	
-S *ServerName*	**server=*ServerName***	None
-w *nnnn.nnnu*	**pcl_width=*nnnn.nnnu***	
-x *nnnn.nnnu*	**pcl_x_offset=*nnnn.nnnu***	
-y *nnnn.nnnu*	**pcl_y_offset=*nnnn.nnnu***	
None	None	**log_file=***PathName*
None	None	**log_size=***Size*
None	None	**mail_command=***PathName*
None	None	**notify=***UserID*

pcl2afp Flag	*Keyword in pcl2afp Configuration File*	*Keyword in pcl2afpd Configuration File*
None	None	**pcl_program=***PathName*
None	None	**pcl_support_program=** *PathName*
None	None	**work_directory=***PathName*
None	None	**pcl_fonts-path=***PathName*

Simple examples

This section shows some simple examples of using **pcl2afp**. For more detailed examples, see More complex examples, p. 412.

- To submit the sample PCL file `sample.pcl` supplied with InfoPrint Manager for AIX to the logical printer named `Pserv-lp`, enter:

```
enq -Pserv-lp -odatat=pcl /usr/lpp/psf/pcl2afp/sample.pcl
```

- To transform the PCL file `myfile` into an AFP data stream, and then submit it to the InfoPrint logical printer called `Pserv-lp`, enter:

```
pdpr -p Pserv-lp -x "default-printer-resolution=300" myfile
```

or

```
pcl2afp -r300 myfile | pdpr -p Pserv-lp
```

Note

You need to specify a resolution of 300 pels (**default-printer-resolution=300**) because the Pserv-lp printer routes jobs to a 4019 printer device. The 4019 is a 300-pel resolution printer and the default resolution for the **pcl2afp** command is 240 pels.

- To transform the PCL file `myfile` into an AFP data stream, with an image that is 8 inches high and 5 inches wide, and write the result to a file called `myfile.afp`, enter:

```
pcl2afp -l 8i -w 5i -o myfile.afp myfile
```

or

```
pcl2afp -l 8i -w 5i myfile > myfile.afp
```

- To transform the PCL `myfile` file into an AFP data stream in 300-pel resolution, as an IO1_MMR image, and send the result to the printer with the **pdpr** command, enter:

```
pcl2afp -aIO1_MMR -r300 myfile | pdpr -X myafp.X -p lserv-lp
```

or

```
pdpr -X mypcl.X myfile -p Pserv-lp
```

where the attributes file named `myafp.X` contains these settings:

```
document-format=modca-p
printer-name-requested=robin-lp
```

and the attributes file named `mypcl.X` contains these settings:

```
document-format=pcl
```

```
printer-name-requested=robin-lp
image-output-format=io1_mmr
default-printer-resolution=300
```

- Assume that the PCL file `myfile` uses the `BarKode.pcl` font that is a PCL resource on a system named `molly`. Also assume that the **pcl2afpd** daemon is running on `robin`, but you are logged in to the AIX or Linux system named `molly`. To transform `myfile` into an AFP data stream, but not print it:

```
pcl2afp -S robin -c -o myfile.afp BarKode.pcl myfile
```

  The **-c** flag concatenates the two input files, with the file `BarKode.pcl` first, so that the two files are processed together. In this way, `myfile` uses `BarKode.pcl` as an inline resource.

- Because the **pcl2afp** transform does not accept HP-GL/2 directly as input, you can use the **-c** flag to concatenate some sample PCL files that allow the HP-GL/2 file to be processed. To transform the HP-GL/2 file `myfile.gl` into a MO:DCA-P data stream file `myfile.afp`, enter:

  For AIX or Linux

```
pcl2afp -o myfile.afp -c /usr/lpp/psf/pcl2afp/gl_before.pcl
  myfile.gl /usr/lpp/psf/pcl2afp/gl_after.pcl
```

  For Windows

```
pcl2afp -o myfile.afp -c install_path\pcl2afp\gl_before.pcl
  myfile.gl install_path\pcl2afp\gl_after.pcl
```

  The **-c** flag concatenates the three input files, making `myfile.gl` appear as a PCL file that includes HP-GL/2 commands.

- To transform a PCL file into an IS/3 compliant afp output:

```
pcl2afp -is 3 -o output.afp input.pcl
```

- To create an FS45 overlay from a one-page PCL file named `my.pcl` and name the FS45 overlay `my.ovly`, enter:

```
pcl2afp -a fs45.ovly -p1 my.pcl -o my.ovly
```

- To create an FS45 page segment from an existing PCL file named `logo.pcl` and name the FS45 page segment `logofs45.pseg`, enter:

```
pcl2afp -a fs45.pseg logo.pcl -o logofs45.pseg
```

More complex examples

This section shows these examples of transforming and printing PCL files:

- Printing a PCL file, p. 413
- Printing a PCL file with a defined image size, p. 413
- Printing a PCL file at 300-pel resolution, p. 414
- Printing a PCL file with a custom configuration file, p. 415
- Transforming three PCL files at the same time, p. 417
- Transforming an HP-GL/2 file, p. 417

Printing a PCL file

In this example, you will submit a PCL file called `PCLFile1` for printing on an InfoPrint printer called `molly-lp`.

Configuration assumptions: This example assumes these tasks have been performed by your system support group:

- InfoPrint, including the **pcl2afp** transform, has been installed on the workstation on which the **pcl2afp** command is executed.
- The **pcl2afpd** daemon has been started on the workstation on which the **pcl2afp** command is executed.
- A 3825 printer device has been installed and defined to InfoPrint. A logical printer called `molly-lp` routes jobs to the physical printer representing that device.

Using the command line options: To print this example, enter this command on the command line:

```
pdpr -p molly-lp PCLFile1
```

or on AIX

```
enq -P molly-lp PCLFile1
```

Using an attributes file with the pdpr command: To print this example, enter this command on the command line:

```
pdpr -X pclex1.X -p molly-lp PCLFile1
```

where the attributes file named `pclex1.X` contains these settings:

`document-format=pcl`

A data type of PCL.

Printing a PCL file with a defined image size

In this example, you will submit a PCL file called `PCLFile2.pcl` for printing on an InfoPrint printer called `Dserv-lp`. In addition, you will specify the form definition `F100S` and an image size of 9 inches in length and 6 inches in width, measured from the upper-left corner of the image.

Configuration assumptions: This example assumes these tasks have been performed by your system support group:

- InfoPrint, including the **pcl2afp** transform, has been installed on the workstation on which the **pcl2afp** command is executed.
- The **pcl2afpd** daemon has been started on the workstation on which the **pcl2afp** command is executed.
- A PCL printer device has been installed and defined to InfoPrint. A logical printer called `Dserv-lp` routes jobs to the physical printer representing that device.

Using the command line options: To print this example, enter this command on the command line:

```
pdpr -p Dserv-lp -x "form-definition=F100S
   image-length=19i image-width=6i" PCLFile2.pcl
```

or on AIX

```
enq -P Dserv-lp -oformdef=F100S -o-l9i -o-w6i PCLFile2.pcl
```

InfoPrint identifies the input data type as PCL without being told. InfoPrint automatically runs **pcl2afp**, and passes `-l9i` and `-w6i` from the **enq** command to **pcl2afp**.

You can get the same result by piping the output of the **pcl2afp** command to the input of the **enq** command:

```
pcl2afp PCLFile2.pcl -l9i -w 6i | enq -P Dserv-lp -oformdef=F100S
```

Using an attributes file with the pdpr command: To print this example, enter this command on the command line:

```
pdpr -X pclex2.X -p Dserv-lp PCLFile2.pcl
```

where the attributes file named `pclex2.X` contains these settings:

`image-length=9i`

Image length is nine inches

`image-width=6i`

Image width is six inches

`form-definition=F100S`

Use the F100S formdef for printing the job

Printing a PCL file at 300-pel resolution

In this example, you will submit a PCL file called `PCLFile3.pcl` for printing on an InfoPrint printer called `G4019-Serv1`. In addition, you will specify a resolution of 300 pels.

Configuration assumptions: This example assumes these tasks have been performed by your system support group:

- InfoPrint, including the **pcl2afp** transform, has been installed on the workstation on which the **pcl2afp** command is executed.
- The **pcl2afpd** daemon has been started on the workstation on which the **pcl2afp** command is executed.
- The 4019 printer has been installed and defined to AIX or Linux. A logical printer, named `G4019-Serv1`, has been configured to route jobs to the physical printer representing the 4019.

Using the command line options: To print this example, enter this command on the command line:

```
pdpr -o G4019-Serv1 -x "default-printer-resolution=300" PCLFile3.pcl
```

or on AIX

```
enq -P G4019-Serv1 -o-r300 PCLFile3.pcl
```

InfoPrint determines that the input data type is PCL and automatically runs **pcl2afp**, passing `-r 300` from the **enq** command to **pcl2afp**.

You can get the same result by piping the output of the **pcl2afp** command to the input of the **enq** command.

```
pcl2afp PCLFile3.pcl -r 300 | eng -P G4019-Serv1
```

Using an attributes file with the pdpr command: To print this example, enter this command on the command line:

```
pdpr -X pclex3.X PCLFile3.pcl
```

where the attributes file named `pclex3.X` contains these settings:

`document-format=pcl`

A data type of PCL

`default-printer-resolution=300`

Image resolution is 300 pels

`printer-name-requested=G4019-Serv1`

Submit the job to the `G4019-Serv1` logical printer

InfoPrint determines that the input data type is PCL and automatically runs **pcl2afp**, passing `-r300` from the **enq** command to **pcl2afp**.

You can get the same result by piping the output of the **pcl2afp** command to the input of the **enq** command:

```
pcl2afp PCLFile3.pcl -r 300 | enq -P G4019-Serv1
```

Printing a PCL file with a custom configuration file

In this example, you will submit a PCL file called `PCLFile4.pcl` for printing on an InfoPrint printer called `molly-lp`. In addition, you will specify the form definition `F100D`, as well as a customized PCL configuration file called `custom.cfg`, which is located in the directory

For AIX or Linux

`/usr/lpp/psf/pcl2afp`

For Windows

install_path`\pcl2afp`

The output file name is `PCLFile4.afp`.

Configuration assumptions: This example assumes these items have been done by your system support group:

- InfoPrint, including the **pcl2afp** transform, has been installed on the workstation on which the **pcl2afp** command is executed.
- The **pcl2afpd** daemon has been started on the workstation on which the **pcl2afp** command is executed.
- A 3825 printer device has been installed and defined to InfoPrint. A logical printer called `molly-lp` routes jobs to the physical printer representing that device.
- The customized configuration file is `custom.cfg`, located in the **pcl2afp**directory; and you have permission to read this file.

Using the command line options: To print this example, enter this command on the command line:

For AIX or Linux

```
pdpr -p molly-lp -x "form-definition=F100D
   other-transform-options='-o-C/usr/lpp/psf/pcl2afp/custom.cfg'"
   PCLFile4.pcl
```

For AIX

```
enq -P molly-lp -oformdef=F100D
```

```
   -o-C/usr/lpp/psf/pcl2afp/custom.cfg PCLFile4.pcl
```

For Windows

```
install_path\pcl2afp\custom.cfg
```

InfoPrint determines the data type, automatically runs **pcl2afp**, and passes:

For AIX or Linux

```
-C/usr/lpp/psf/pcl2afp/custom.cfg
```


to **pcl2afp** (when you use the **-C** flag with an AIX print command, no spaces are allowed between the **-C** flag and the configuration file name, and the configuration file name must be fully qualified).

For Windows

```
-C install_path\custom.cfg
```

On AIX, you can get the same result by invoking **pcl2afp** first, then using **enq** to process the output of **pcl2afp**:

```
pcl2afp PCLFile4.pcl -o PCLFile4.afp -C /usr/lpp/psf/pcl2afp/custom.cfg
enq -P molly-lp -oformdef=F100D PCLFile4.afp
```

Using an attributes file with the pdpr command: To print this example, enter this command on the command line:

```
pdpr -X pclex4.X PCLFile4.pcl
```

where the attributes file named `pclex4.X` contains these settings:

For AIX or Linux:

```
document-format=pcl
```

A data type of PCL.

```
other-transform-options='-C /usr/lpp/psf/pcl2afp/custom.cfg'
```

Use the `/usr/lpp/psf/pcl2afp/custom.cfg` **pcl2afp** configuration file.

```
form-definition=F100D
```

Use the `F100D` form definition for printing the job.

```
printer-name-requested=molly-lp
```

Submit the job to the `molly-lp` logical printer.

For Windows:

```
document-format=pcl
```

A data type of PCL

```
other-transform-options='-C install_path\pcl2afp\custom.cfg'
```

Use the *install_path***pcl2afp\custom.cfg** configuration file.

```
form-definition=F100D
```

Use the `F100D` form definition for printing the job.

```
printer-name-requested=molly-lp
```

Submit the job to the `molly-lp` logical printer

Transforming three PCL files at the same time

In this example, you will transform three PCL files to create one AFP data stream file. The PCL files are called `PCLFile5.pcl`, `PCLFile6.pcl`, and `PCLFile7.pcl`. You write the output of the transform to the file called `PCLFile0.afp`. Another option you might want to specify is an image type of **IM1**.

Configuration assumptions: This example assumes these tasks have been performed by your system support group:

- InfoPrint, including the **pcl2afp** transform, has been installed on the workstation on which the **pcl2afp** command is executed.
- The **pcl2afpd** daemon has been started on the workstation on which the **pcl2afp** command is executed.

Using the command line options: To transform this example, enter this command on the command line:

```
pcl2afp -aim1 PCLFile5.pcl PCLFile6.pcl PCLFile7.pcl -oPCLFile0.afp
```

Transforming an HP-GL/2 file

Because the **pcl2afp** transform does not accept HP-GL/2 directly as input, you can use the **-c** flag to concatenate some sample PCL files that allow the HP-GL/2 file to be processed. To transform the HP-GL/2 file `myfile.gl` into a MO:DCA-P data stream file `myfile.afp`, enter:

For AIX or Linux

```
pcl2afp -o myfile.afp -c /usr/llp/psf/pcl2afp/gl_before.pcl
   myfile.gl /usr/lpp/psf/pcl2afp/gl_after.pcl
```

For Windows

```
pcl2afp -o myfile.afp -c install_path\pcl2afp/gl_before.pcl
   myfile.gl install_path\pcl2afp\gl_after.pcl
```

The **-c** flag concatenates the three input files, making `myfile.gl` appear as a PCL file that includes HP-GL/2 commands.

Files

For AIX or Linux:

/usr/lpp/psf/pcl2afp/sample.pcl

PCL sample program

/usr/lpp/psf/bin/pcl2afp

Transform program

/usr/lpp/psf/bin/pcl2afpd

PCL daemon

/usr/lpp/psf/bin/pcl6

PCL interpreter program

/usr/lpp/psf/pcl2afp/pcl2afp.cfg

PCL **pcl2afp** command configuration file

/usr/lpp/psf/pcl2afp/pcl2afpd.cfg

PCL **pcl2afpd** daemon configuration file

/usr/lpp/psf/pcl2afp/pclp2____f.fco

PCL fonts file

/usr/lpp/psf/pcl2afp/plug___i.fco

Plugins file

/usr/lpp/psf/pcl2afp/wd_____g.fco

WingDings font file

/var/psf/pcl2afp

Work directory for PCL transform

/usr/lpp/psf/pcl2afp/LPR0Y00C.ONE

Line Printer font file

For Windows:

*install_path***\pcl2afp\sample.pcl**

PCL sample program

*install_path***\bin\pcl2afp.exe**

Transform program

*install_path***\bin\pcl2afpd.exe**

PCL daemon

*install_path***\bin\pcl6.exe**

PCL interpreter program

*install_path***\pcl2afp\pcl2afp.cfg**

PCL **pcl2afp** command configuration file

*install_path***\pcl2afp\pcl2afpd.cfg**

PCL **pcl2afpd** daemon configuration file

*install_path***\pcl2afp\pclp2____f.fco**

PCL fonts file

*install_path***\pcl2afp\plug___i.fco**

Plugins file

*install_path***\pcl2afp\wd_____g.fco**

WingDings font file

*install_path***\var\psf\pcl2afp**

Work directory for PCL transform

*install_path***\pcl2afp\LPR0Y00C.ONE**

Line Printer font file

pdf2afp and ps2afp commands: transform PDF or PostScript data to AFP

Syntax

{**pdf2afp** | **ps2afp**}
[**-a** *OutputType*] [**-cmrpath** [*searchPath*[,*searchPath*]...]]
[**-cmrresource** [*ResourceName*[,*ResourceName*]...]]
[**-C** *ConfigurationFile*] [**-c**]
[**-cmp** {jpeg-sub | jpeg | lzw}]
[**-device**"[plex],[input*n*=(***size***,[**type**=*x*,**color**=*y*,**weight**=*z*][input*n*=(...]"]
[**-devmodel** *model*] [**-devtype** *type*]
[**-F** *FontMapFile*[,*FontMapFile*...]][**-gcorr** *FileName*] [**-g** *PageRange*]
[**-icmr** *colorResourceName*[,*colorResourceName*...]
[**-imgsmall** *nnnn.nnnu*]
[**-inline** {*yes* | *no*}]
[**-intent** {*relative* | *perceptual* | *saturation* | *absolute*}]
[**-is** 1 | 3][**-j** *nnnn*]
[**-l** *nnnn.nnnu*] [**-linesmall** *nnnn.nnnu*]
[**-M** *nnnnnn*] [**-ocmr** *colorResourceName*]
[**-otag** {*none* | *normal* | *passthru*}] [**-o** *OutputFile*]
[**-P** *nnnnn*] [**-p** *PageRange*]
[**-pdfproc** [agspdl | appe | cpsi]] [**-psproc** [agspdl | cpsi]]
[**-psc** {ArtBox | BleedBox | CropBox | TrimBox}]
[**-pagetype** {*IM* | *OBJECT* | *PG* | *PAGE* | *OVERLAY* | *OVLY* | *PSEG* | *DOCUMENT*}]
[**-pragma** **CMYKCUSTOM**={*CMYK* | *DeviceCMYK* | *ICCCMYK* | *RGB* | *DeviceRGB* | *ICCRGB* | *Gray* | *DeviceGray* | *ICCGray* | *ICCBased*},{*Text* | *LineArt* | *Text LineArt* | *All*},
source_color=(c=*n.n*,m=*n.n*,y=*n.n*,k=*n.n*),**replacement_color**=(c=*n.n*,m=*n.n*,y=*n.n*,k=*n.n*)]
[**-pragma** **ERRORONMISSINGFONT**]
[**-pragma** **IMAGECOMPRESSIONTYPE** 0|1|2]
[**-pragma** **ps_x_origin** *nnnn.nnnu*]
[**-pragma** **ps_y_origin** *nnnn.nnnu*]
[**-pragma** **OutputFaceUp** {*PS* | *enable* | *disable*}]
[**-pragma** **REDUCETOFIT**={*yes* | *no*},{1 | 0},{*true* | *false*}]
[**-pragma** **USEDEFAULTFONTFORSUBSTITUTION**]
[**-pragma** **USEFONTEMULATION**]
[**-q**] [**-r** *nnn*]
[**-S** *ServerName*] [**-s** *nnnn*] [**-thresh** *FileName*][**-w** *nnnn.nnnu*]
[**-threshsmall** {*sc_ell* | *sc_euc*}] [**-txtsmall** *nnnn.nnnu*]
[**-x** *nnnn.nnnu*] [**-y** *nnnn.nnnu*] [*InputFile* ...]
pdf2afp | **ps2afp** {**-h** | **?**}

Description

The **ps2afp** command and its alias, the **pdf2afp** command, transform a PostScript or Portable Document Format (PDF) data stream file into an AFP data stream file.

The **ps2afp** and **pdf2afp** commands use one of these processing engines:

- **Adobe PDF Print Engine (APPE)**, which converts PDF only, at a higher quality and speed.
- **Configurable PostScript Interpreter (CPSI)**, which converts both PS and PDF input.
- **Artifex GhostPDL (AGSPDL)**, which converts both PS and PDF input.

You can choose between these three processing engines by using the **-pdfproc** parameter, when transforming PDF input. You can choose between CPSI and AGSPDL by using the **-psproc** parameter, when transforming PS input.

The PSF DSS runs the **ps2afp** command automatically whenever:

- InfoPrint Manager identifies the format of a document in a print job as PostScript or PDF.
- You use the **pdpr** command to specify **document-format=postscript** or **document-format=pdf** with the **-x** flag or in an attributes file.
- You specify a data type of **-odatatype=ps** or **-odatatype=pdf** with an AIX print command (**enq**, **lp**, or **qprt**) or with the **lprafp** command.

If you specify multiple values of the same flag, **ps2afp** uses the last value specified, except for the **-F**, **-g**, and **-p**, flags. **ps2afp** concatenates multiple values of the **-F** flag from left-to-right (first entered to last entered). Multiple values of the **-g** and **-p** flags are accumulated and the pages identified for printing are printed in normal numerical sequence, regardless of the order you specify.

When using the **ps2afp** or **pdf2afp** command, you can specify an optional input file name. If you do not specify an input file name, **ps2afp** reads standard input. The output file name is also optional; if you do not specify one, the **ps2afp** command writes the results to standard output. Output from the **ps2afp** and **pdf2afp** transform contains binary encoded data that is not recognized by standard output devices such as an IBM AIX or Linux terminal session or a Microsoft Windows Command Prompt Window. For these standard output devices if an output file name is not specified, standard output should be redirected. For more information about redirecting output using either the greater than symbol (**>**) or the pipe symbol (**|**), see your operating system help or reference.

You can use the **ps2afp** command to specify both staple and punch finishing options.

For more information about these staple and punch options, see "Stapling and punch options available from the ps2afp transform" in the *RICOH InfoPrint Manager for AIX: Procedures*, *RICOH InfoPrint Manager for Linux: Procedures*, or *RICOH InfoPrint Manager for Windows: Procedures*. You should consider these situations about the flags you can specify with the **ps2afp** or **pdf2afp** command:

1. When you run **ps2afp** or **pdf2afp** as a standalone transform, flags can appear anywhere on the command line with or without a blank in the flag and value pair.

   When you specify **ps2afp** transform flags with the **other-transform-options** attribute, any string containing a blank must be surrounded by single quotes.

   Do not use a blank between the flag and the value when you specify **ps2afp** transform flags with an AIX print command or with the **lprafp** command.
2. When you specify flags with the **ps2afp** or **pdf2afp** command, the command echoes them back to your display along with the settings for the flags. To suppress the command echoing, enter the **-q** (quiet) flag along with the **ps2afp** or **pdf2afp** command.
3. The PostScript or PDF file can contain the commands **letter** and **legal**. If these commands are present in the PostScript or PDF file, you might not get what you expect due to the interaction of the **letter** and **legal** commands with the **-l** and **-w** flags of the **ps2afp** or **pdf2afp** command.
4. The order in which **ps2afp** uses PostScript and PDF options is as follows:

1) The PostScript program commands **letter** and **legal**, if they are present.
2) Any options you specify on the command line with the **ps2afp** or **pdf2afp** command (for example, **-r300**), including values contained in the customized configuration file you specify with the **ps2afp -C** or **pdf2afp** command. If you specify the same option more than once, InfoPrint Manager uses the last value.
3) Values contained in the configuration file, **ps2afp.cfg**, in the current directory, if you invoked **ps2afp** or **pdf2afp** directly. If you invoked **ps2afp** indirectly by requesting **enq -odatatype=ps**, or **enq -odatatype=pdf**, **ps2afp** ignores any configuration files in the current directory, and proceeds to step 4.4.
4) Values contained in the **ps2afp.cfg** file in the user's home directory.
5) Values contained in the default **ps2afp** command configuration file:

   For AIX or Linux

   /usr/lpp/psf/ps2afp/ps2afp.cfg

   For Windows

   ***install_path*\ps2afp\ps2afp.cfg**
6) Values contained in the customized configuration file you specify with the **agspdld -C, ps2afpd -C**, or **apped -C** command.
7) Values contained in the default **apped**, **agspdld**, or **ps2afpd** daemon configuration file:

   For AIX or Linux

   /usr/lpp/psf/ps2afp/ps2afpd.cfg

   /usr/lpp/psf/ps2afp/apped.cfg

   /usr/lpp/psf/ps2afp/agspdld.cfg

   For Windows

   ***install_path*\ps2afp\ps2afpd.cfg**

   ***install_path*\ps2afp\apped.cfg**
8) Values contained in the **apped.cfg**, **agspdld.cfg**, or **ps2afpd.cfg** file when **ps2afpd** was started.
9) The defaults that are built into **apped.cfg**, **agspdld.cfg**, or **ps2afpd**. These defaults are the same as the defaults for the **ps2afp** flags, except that the default output type (**-a** flag) is an IM1 uncompressed image.

5. The position of PostScript or PDF data on the page depends on the interaction of the **-l** and **-w** flags, the **-x** and **-y** flags, and the form definition you use. In general, to position data on the page,
   - Use **-l** and **-w** to set the physical page dimensions.
   - Use a form definition that specifies zero vertical offset and zero horizontal offset (for example, **F100S**, **F100D**, or **F100T**) or specify X and Y offsets of 0 when you submit the print job.
   - Use **-x** and **-y** to avoid any areas that your printer cannot print.
6. You can specify the **ps2afp** flags and values with the **ps2afp** or **pdf2afp** command, or with **enq -o**, **lp -o**, **qprt -o**, or or **lprafp**. You can also specify equivalent attribute values with the **-x** flag or in an attributes file with the **pdpr** command.

Note

- When transforming PDF with color text that uses embedded font subsets to black and white or color AFP output, the CPSI or APPE rip processing can take longer. If you use **savevm=false**, this performance improves. However, we recommend using the current default of **savevm=true** because sometimes, PDF input files with many embedded font subsets might fail to transform. The **savevm** option appears on the **ps2afp/pdf2afp** command line as: **-pragma pdf2psoptions= savevm=true**. This **pragma** can be used on a command line invocation of the transform and can be specified in the transform configuration file, transform daemon configuration file or via the **other-transform-option** transform attribute.

For more information about the **ps2afp** and **pdf2afp** transforms, see "Working with Transforms" in the *RICOH InfoPrint Manager: Procedures* guide that is appropriate for your operating system.

Automatic invocation

The PSF DSS automatically invokes the **ps2afp** or **pdf2afp** transform command whenever you submit a PostScript or PDF file for printing. You can pass options to **ps2afp** or **pdf2afp** using the **other-transform-options** attribute on the **pdpr** command or the **-o** flag of the AIX print commands or the **lprafp** command. You can also pass options to **ps2afp** or **pdf2afp** through the InfoPrint Submit Express client of InfoPrint Manager. Parameters that are not supported, such as **-r 300**, can be passed in InfoPrint Submit Express by clicking **Advanced** and entering them in the **Transform options** field.

Limitations

This section lists the limitations for the **pdf2afp** and **ps2afp** transforms:

- InfoPrint Manager, including the **pdf2afp** and **ps2afp** transforms must be installed, and the **apped**, **ps2afp**, and **agspdld** daemons must be running.
- PostScript data can contain device commands (for example, to begin or end duplexing or to change the input bin). Because the AFP architecture defines those device functions in a form definition resource instead of the print data, the **ps2afp** transform ignores the device commands in the print data. To access those device functions (such as duplexing and bin selection), you must specify them in the form definition or attributes file, or on a print command, when you print the job.
- Resolution conversion algorithms might yield degraded appearance when used to reduce the resolution of a data stream. For this reason, **ps2afp** might degrade the appearance of higher-resolution data streams when used with 240-pel printers. You should verify that print fidelity is satisfactory.
- The **ps2afp** and **pdf2afp** transforms contain no double byte character sets (CIDKeyed fonts) with Type1 fonts or TrueType fonts support on InfoPrint Manager for Windows.
- The **pdf2afp** transform does not support PDF files encrypted with the certificate security protection.
- APPE cannot reload settings from **apped.cfg** other than those on a job level.

Flags and values

This section describes the flags and values for the **pdf2afp** and **ps2afp** transforms:

-a {IO1_G4 | IM1 | IO1 | IO1_MMR | PSEG_IO1_G4 | PSEG_IM1 | PSEG_IO1 | PSEG_IO1_MMR | OVLY_IO1_G4 | OVLY_IM1 | OVLY_IO1 | OVLY_IO1_MMR | FS45 | FS45.ovly | FS45.pseg | IOCA | IOCA10 | IOCA45 | NONE}

Determines the type of AFP data stream image to generate for each page in the PostScript or PDF file.

Values are:

IO1_G4

Compressed Image Object Content Architecture (IOCA) image in Modified TSS (formerly CCITT) T.6 G4 Facsimile Coding Scheme (G4 MMR) format. This is the recommended output type because it takes up less space on the fixed disk, and it prints faster. It is the default specified in the **ps2afpd** daemon and **ps2afp** command configuration files.

PPDS, PCL, and TCP/IP-attached IPDS printers can print IOCA images.

IM1

IM1 image. This type of image is not compressed.

IO1

IOCA image. This type of image is not compressed.

IO1_MMR

Compressed IOCA image in Modified Modified Read (MMR) format.

PSEG_IO1_G4 | PSEG_IM1 | PSEG_IO1 | PSEG_IO1_MMR

Page segment of the specified image type.

Note

When generating page segments from multiple-page documents, you might want to use the **-p** flag to select which page is to be made into a page segment; otherwise, multiple page segments will be created, one for each page of PostScript or PDF.

OVLY_IO1_G4 | OVLY_IM1 | OVLY_IO1 | OVLY_IO1_MMR

Overlay of the specified image type.

Note

When generating overlays from multiple-page documents, you might want to use the **-p** flag to select which page is to be made into an overlay; otherwise, multiple overlays will be created, one for each page of PostScript or PDF.

FS45

IOCA color format.

FS45.ovly

IOCA color format for overlays.

FS45.pseg

IOCA color format for page segments.

IOCA

IOCA image. This value can only be used with Adobe PDF Print Engine.

IOCA10

IOCA FS10 image. This value can only be used with Adobe PDF Print Engine.

IOCA45

IOCA FS45 image. This value can only be used with Adobe PDF Print Engine.

NONE

Produces no output. Completely process input datastream, but does not generate any actual AFP from resulting pages. This value can only be used with Adobe PDF Print Engine.

This flag is similar to the **image-out-format** document attribute on the **pdpr** command.

-cmrpath *searchPath*[,*searchPath*...] [**-cmrpath** *searchPath*[,*searchPath*]...]

Specifies the search order for locating color resources. This search order is a series of directory paths that color resources are located in. If you specify two or more **-cmrpath** flags, InfoPrint Manager will concatenate these search orders.

Note

- This parameter is not supported with Artifex GhostPDL (AGSPDL).

-C *ConfigurationFile*

Specifies the path and file name of the customized configuration file InfoPrint Manager uses with the transform. If you specify the **-C** flag with an AIX print command (**enq**, **lp**, or **qprt**), or with the **lprafp** command, specify the fully qualified name of the file, including its path; for example:

With AIX or Linux

/usr/lpp/psf/ps2afp/myfile.cfg

With Windows

***install_path*\ps2afp\myfile.cfg**

-c

Concatenates multiple input files without putting a Ctrl-D (end of job) character between the files. The **ps2afp** command interprets the input files as a continuous data stream, and processes them as if they were one PostScript or PDF job. This flag can be useful when processing PostScript with inline resources. (See Examples, p. 456). This flag only applies to the **ps2afp** command.

Note

- Do not use this flag when you perform the data stream transform by submitting a print job with the **pdpr** command.
- This parameter is not supported with Adobe PDF Print Engine (APPE) and Artifex GhostPDL (AGSPDL).

-cmp {jpeg-sub | jpeg | lzw| g4 | mmr | none}

Enables JPEG or LZW compression.

Values are:

-cmp jpeg-sub

This value is used for JPEG compression and subsampled files. This is the default value.

-cmp jpeg

This value is used for JPEG compression and unsubsampled files.

-cmp lzw

This value is used for LZW compression and unsubsampled files.

-cmp g4

Compressed Image Object Content Architecture (IOCA). This value can only be used with Adobe PDF Print Engine and Black and White.

-cmp mmr

Compressed IOCA image in Modified Modified Read (MMR). This value can only be used with Adobe PDF Print Engine and Black and White.

-cmp none

No compression. This value can only be used with Adobe PDF Print Engine and Black and White.

Note

- The compression algorithm should be used when the output is IOCA objects and when the color path (FS45) is selected.

In case of transparency masks type objects, this flag is ignored. The transparency masks type objects use the G4 MMR algorithm, which is the default compression type. This default compression is used even if another compression parameter is specified.

-device "[plex], [input*n*=(*size*[,type=*x*,color=*y*,weight=*z*]) input*n*=...]"

Specifies whether to recognize plex mapping, and optionally, how to associate the AFP input tray (**input*n***) with the contents of the output bin. When you specify **input*n***, you must specify ***size***, where ***size*** is a text string like letter, legal, a3, a4, b4, b5, ledger, or a dimension like 8.5ix11i. Dimensions can be specified as inches (i), millimeters (m), or points (p). The other three input descriptors (**type**, **color**, and **weight**) are optional, but when you specify them, you must separate them with a comma and no spaces.

When you do not specify **input*n*=...)** with **plex**, InfoPrint Manager recognizes plex mappings with no additional information for the tray contents.

Note

You can specify [**input*n*=...** as many times as you need to.

If only **input1** is specified, the width (**-w**) and length (**-l**) values must match the size of the media specified for **input1**. For example:

```
ps2afp test.ps -o test.afp -w 210m  -l 297m -device 'plex,
input1=(a4)'
```

If more than one input is specified, the **-w** and **-l** values must match one of the **input*n*** size specifications. For example:

```
ps2afp test.ps -o test.afp -w 8.5i -l 11i -device 'plex,
input1=(letter), input2=(a4)'
```

Note

- This setting is not necessary with PDF input and Adobe PDF Print Engine as the transformer.
- This parameter is not supported with Artifex GhostPDL (AGSPDL).

-devmodel *model*

Specifies the device model of the actual device.

Note

- This parameter is not supported with Artifex GhostPDL (AGSPDL).

-devtype *type*

Specifies the device type of the actual device.

Note

- This parameter is not supported with Artifex GhostPDL (AGSPDL).

-F *FontMapFile*[**,***FontMapFile*...]

Specifies the path and file name **ps2afp** uses for the font mapping file. This file correlates PostScript font names with their file locations. A font mapping file must exist on the system where the **ps2afpd** and **apped** daemons are running (specified by the **-S** flag).

You can include multiple values in the **-F** flag by separating each value with a comma (,). The values will be concatenated. When you specify multiple **-F** flags, **ps2afp** concatenates them from left-to-right (first entered to last entered) in that order.

For CPSI, the **-F** value overrides the **ps_font_map_files** value in the **ps2afp** configuration file and the **ps2afpd** configuration file. If you do not specify **-F**, **ps2afp** uses the font mapping file specified in the **ps2afp** command or **ps2afpd** daemon configuration file. By default, the CPSI **ps2afpd** daemon configuration file specifies the font mapping file as follows:

For AIX or Linux

/usr/lpp/psf/ps/psfonts.map

For Windows

***install_path*\ps\fonts.map**

For APPE, the **-F** value overrides the **appe_font_map_files** value in the **ps2afp** configuration file and the **ps2afpd** configuration file. If you do not specify **-F**, **ps2afp** uses the font mapping file specified in the **ps2afp** command or **apped** daemon configuration file. By default, the APPE **apped** daemon configuration file specifies the font mapping file as follows:

For AIX or Linux

/usr/lpp/psf/appe/fontmaps/FontMapSample.cfg

For Windows

***install_path*\appe\fontmaps\FontMapSample.cfg**

If you specify **-F** without a file name, or if the file does not exist, the **ps2afp** command does not work.

Note

- PostScript or PDF processing is slower when you use the **-F** flag. You can improve performance by changing the value in the daemon configuration file rather than using **-F** on a regular basis.
- Specify the fully qualified name of the file if you specify the **-F** flag with an AIX print command.
- This parameter is not supported with Artifex GhostPDL (AGSPDL).

-gcorr *FileName*

Specifies a file with gray scale mapping table for halftoning of the gray scale and color images to bi-level for output. The mapping table must be provided to compensate for the printing characteristics of the particular output device and paper type, such as dot gain. This file must contain either:

- 256 real numbers, one for each level of gray in the 8-bit gray scale image.
- The PostScript **settransfer** operator.

The algorithm converts every image to 8-bit gray scale before applying the halftoning algorithm. The default internal mapping table has been optimized for the 600-pel InfoPrint 4000 laser printer. You shouldn't change this unless you know what you are doing. See also options **-alg** and **-thresh**. PostScript code submitted using the **-thresh** option can have the same effect as **-gcorr**.

Note

- This parameter is not supported with Artifex GhostPDL (AGSPDL).

-g *PageRange*

Specifies that the output should only contain selected pages. When you specify multiple **-g** flags, the **ps2afp** command transforms only the specified pages in the PostScript or PDF input data stream, then prints the transformed pages in normal numerical order, regardless of the order you specify. Examples of values include:

-g even

Output even pages.

-g odd

Output odd pages.

-g 1-10

Output pages 1 through 10.

-g 10-

Output pages from page 10 until the end of the job.

-g 1 -g 3 -g 6

Output pages 1, 3, and 6, in that order.

-g1 -g6 -g3

Output pages 1, 3, and 6, in that order.

Note

- You should only specify the **-g** flag when the input data conforms to Adobe Document Structuring Conventions (DSC). If you have any doubt about the input data, use the **-p** flag. You cannot specify both the **-g** flag and the **-p** flag.
- This parameter is not supported with Artifex GhostPDL (AGSPDL).

-icmr *colorResourceName*[,*colorResourceName*...] [**-icmr** *colorResourceName*[,*colorResourceName*]...]

2

Specifies one or more input or audit color resources. The color resources can be either ICC Profiles or Color Management Resources (CMRs). If you specify two or more **-icmr** flags on a transform command line, InfoPrint Manager will concatenate the resources together. If two or more resources that are specified by the **-icmr** flags are for the same color space, InfoPrint Manager will use the last specified resource

Note

- This parameter is not supported with Artifex GhostPDL (AGSPDL).

.

-inline {*yes* | *no*}

Specifies whether the output Color Management Resource (CMR) will be placed inline with the data stream. If you specify two or more **-inline** flags on a transform command line, InfoPrint Manager will use the last specified value.

Note

- This parameter is not supported with Artifex GhostPDL (AGSPDL).

InputFile ...

Specifies one or more input files to be transformed. If you specify more than one input file name, the **ps2afp** command concatenates the files and separates them with the Ctrl-D (end of job) character. The results of the transform are written to a single output file (if one is specified) or to standard output.

In addition, you can specify PostScript inline resource files as input files to the **ps2afp** command. The file name of the inline resource file must precede the file name of the PostScript or PDF print file so that **ps2afp** concatenates the files in the correct order.

If you do not specify an input file, **ps2afp** uses standard input. If the **ps2afp** command cannot read from standard input, **ps2afp** issues a message.

When using a StdIN input file with the **ps2afp** or **pdf2afp** transform, you must identify the datatype for the input file as shown in these examples:

```
ps2afp -datatype ps -<tiger.ps> testtigr.afp
```

or

```
pdf2afp -datatype pdf -<lion.pdf> testlion.afp
```

Note

- Adobe PDF Print Engine does not support multiple input files in a single job.
- This parameter is not supported with Artifex GhostPDL (AGSPDL).

-intent {*relative* **|** *perceptual* **|** *saturation* **|** *absolute***}**

Specifies the rendering intent. You can also use the **-pragma** option to specify the rendering intent by setting:

```
-pragma colorRendering=relative
```

If you specify two or more **-intent** flags on a transform command line, InfoPrint Manager will use the last specified value.

Note

- This parameter is not supported with Artifex GhostPDL (AGSPDL).

-j {20 | 1 to 9998 | 9999}

Specifies the maximum amount of time, in minutes, to spend processing the job.

Values are:

20

20 minutes, the default

1 to 9998

The timer ranges from 1 to 9998 minutes, in one-minute increments

9999

No time limit

Note

This parameter is not supported with Adobe PDF Print Engine (APPE) and Artifex GhostPDL (AGSPDL).

-imgsmall sizeu *nnnn.nnnu*

This defines the size limit for images; *nnnn.nnn* is a number that can optionally contain a decimal point, and *u* is the units in inches (**i**) or millimeters (**m**). If you do not specify a unit (**i** or **m**), **ps2afp** uses pels as the unit type. You cannot specify fractional values (that is, you cannot use a decimal point) for pels.

The smaller of the width and height of the intersection of the image area and the current clipping path will be compared against the value given.

For 240-pel resolution printers, values are:

0.5 to 5i

1 inches, the default

120 to 1200

The length can be from 120 pels to 1200 pels, 0.5i to 5i, or 12.7m to 127m.

For 300-pel resolution printers, values are:

0.5 to 5i

1 inches, the default

150 to 1500

The length can be from 150 pels to 1500 pels, 0.5i to 5i, or 12.7m to 127m.

For 480-pel resolution printers, values are:

0.5 to 5i

1 inches, the default

240 to 2400

The length can be from 240 pels to 2400 pels, 0.5i to 5i, or 12.7m to 127m.

For 600-pel resolution printers, values are:

0.5 to 5i

1 inches, the default

300 to 3000

The length can be from 300 pels to 3000 pels, 0.5i to 5i, or 12.7m to 127m.

For 720-pel resolution printers, values are:

0.5 to 5i

1 inches, the default

360 to 3600

The length can be from 360 pels to 3600 pels, 0.5i to 5i, or 12.7m to 127m.

For 1200-pel resolution printers, values are:

0.5 to 5i

1 inches, the default

600 to 6000

The length can be from 600 pels to 6000 pels, 0.5i to 5i, or 12.7m to 127m.

Note

This parameter is not supported with Adobe PDF Print Engine (APPE) and Artifex GhostPDL (AGSPDL).

-is {1 | 3}

Specifies the interchange set version.

Values are:

1

If you specify **1**, the output is IS/1 compliant. This is the default value.

3

If you specify **3**, the output is IS/3 compliant.

Note

1. Any other value different than **1** or **3** is signaled as error.
2. If you specify **3** as a value for the **-is** flag, make sure that the output type selected is one of the following: IO1, IO1_G4, IO1_MMR, PSEG_IO1, PSEG_IO1_G4, PSEG_IO1_MMR, OVLY_IO1, OVLY_IO1_G4, OVLY_IO1_MMR, FS45. Only these output types are compatible with the IS/3 flag.

-l *nnnn.nnnu*

Specifies the length of the generated image; *nnnn.nnn* is a number that can optionally contain a decimal point, and *u* is the units in inches (**i**) or millimeters (**m**). If you do not specify a unit (**i** or **m**), **ps2afp** uses pels as the unit type. You cannot specify fractional values (that is, you cannot use a decimal point) for pels.

Note

If a text margin is already built into the file, try **-l11i** to set the length to 11 inches.

For 240-pel resolution printers, values are:

11i

11 inches, the default

16 to 12720

The length can be from 16 pels to 12720 pels, 0.065i to 53i, or 1.641m to 1346.2m. For example, these values are all valid:

```
-l 40m
-l 200.5m
-l 13i
-l 4000
```

For 300-pel resolution printers, values are:

11i

11 inches, the default

16 to 15900

The length can be from 16 pels to 15900 pels, 0.052i to 53i, or 1.313m to 1346.2m. For example, these values are all valid:

```
-l 40m
-l 200.5m
-l 13i
-l 5000
```

For 480-pel resolution printers, values are:

11i

11 inches, the default

16 to 25440

The length can be from 16 pels to 25440 pels, 0.065i to 53i, or 1.641m to 1346.2m. For example, these values are all valid:

```
-l 40m
```

```
-l 200.5m
-l 13i
-l 8000
```

For 600-pel resolution printers, values are:

11i

11 inches, the default

16 to 31800

The length can be from 16 pels to 31800 pels, 0.052i to 53i, or 1.313m to 1346.2m. For example, these values are all valid:

```
-l 40m
-l 200.5m
-l 13i
-l 10000
```

This flag is equivalent to the **image-length** document attribute on the **pdpr** command.

-linesmall sizeu *nnnn.nnnu*

nnnn.nnn is a number that can optionally contain a decimal point, and *u* is the units in inches (**i**) or millimeters (**m**). If you do not specify a unit (**i** or **m**), **ps2afp** uses pels as the unit type.

For all PostScript variations of the **fill** operator and **shfill**, InfoPrint Manager switches to a single cell halftone when the smaller of the bounding box of the object is "small" and to all variations of **stroke** when the current line width is "small".

For 240-pel resolution printers, values are:

0.5 to 5i

1 inches, the default

120 to 1200

The length can be from 120 pels to 1200 pels, 0.5i to 5i, or 12.7m to 127m.

For 300-pel resolution printers, values are:

0.5 to 5i

1 inches, the default

150 to 1500

The length can be from 150 pels to 1500 pels, 0.5i to 5i, or 12.7m to 127m.

For 480-pel resolution printers, values are:

0.5 to 5i

1 inches, the default

240 to 2400

The length can be from 240 pels to 2400 pels, 0.5i to 5i, or 12.7m to 127m.

For 600-pel resolution printers, values are:

0.5 to 5i

1 inches, the default

300 to 3000

The length can be from 300 pels to 3000 pels, 0.5i to 5i, or 12.7m to 127m.

For 720-pel resolution printers, values are:

0.5 to 5i

1 inches, the default

360 to 3600

The length can be from 360 pels to 3600 pels, 0.5i to 5i, or 12.7m to 127m.

For 1200-pel resolution printers, values are:

0.5 to 5i

1 inches, the default

600 to 6000

The length can be from 600 pels to 6000 pels, 0.5i to 5i, or 12.7m to 127m.

Note

This parameter is not supported with Adobe PDF Print Engine (APPE) and Artifex GhostPDL (AGSPDL).

-M {96000 | 11000 to *nnnnnn***}**

Determines the maximum amount of memory, in KB, that the transform can use. This flag can be useful if you are processing large PostScript or PDF jobs that require a lot of memory.

Values are:

96000

96000KB (96MB)

11000 to *nnnnnn*

The maximum memory ranges from 11000 to *nnnnnn* (where *nnnnnn* is the maximum upper limit allowed by AIX or Linux) up to 999MB. 96000 is the default.

Note

This parameter is not supported with Adobe PDF Print Engine (APPE) and Artifex GhostPDL (AGSPDL).

-ocmr *colorResourceName*

Specifies an output color resource. The color resource can be either an ICC Profile or a Color Management Resource (CMR). If you specify two or more **-ocmr** flags on a transform command line, InfoPrint Manager will use the last specified value.

-otag {*none* **|** *normal* **|** *passthru***}**

Specifies how the output AFP will be tagged with color information. The allowed values are:

none

There will be no tagging in the output AFP.

normal

InfoPrint Manager will use the specified **-ocmr** value to tag the output AFP as an input (audit) Color Management Resource (CMR).

passthru

InfoPrint Manager will use the specified **-ocmr** value to tag the output AFP as both an input (audit) CMR and an output (instruction) CMR.

If you specify two or more **-otag** flags on a transform command line, InfoPrint Manager will use the last specified value.

Note

- This parameter is not supported with Artifex GhostPDL (AGSPDL).

-o *OutputFile*

Specifies the output path and file into which the transformed files are to be written. If more than one output file is specified, the last specified file name and path is the one used. If no output file is specified, the result is written to standard output. Output from the **ps2afp** and **pdf2afp** transform contains binary encoded data that is not recognized by standard output devices such as an IBM AIX or Linux terminal session or a Microsoft Windows Command Prompt Window. For these standard output devices if an output file name is not specified, standard output should be redirected. For more information about redirecting output using either the greater than symbol (**>**) or the pipe symbol (**|**), see your operating system help or reference.

You cannot use **-o** *OutputFile* on the command line with the **enq**, **lp**, **qprt**, or **lprafp** commands. You can only use **-o** *OutputFile* with the **ps2afp** command. You can also specify the **transform-output-file-name** document attribute on the **pdpr** command.

-P {8251 | 924 to *nnnnn***}**

Specifies the TCP/IP port number **ps2afp** uses to make a connection with the workstation on which the **ps2afpd** daemon is running (set by the **-S** flag). If your InfoPrint Manager installation uses more than one PostScript daemon, use this flag to select the daemon.

This port should not be the same port used by the TCP/IP-attached IPDS printer or the PCL transform. To find out which ports are already being used on your system (although they might or might not be active), look in the **/etc/services** file.

Values are:

8251

The default port number.

924 to *nnnnn*

Any valid port number greater than or equal to 924. The maximum value, *nnnnn*, depends on AIX or Linux, but it must be equal to or less than 65535.

Note

You can only access secure ports, 924 to 1023, with **root** user authority.

-p *PageRange*

Specifies that the output should only contain selected pages. When you specify multiple **-p** flags, the **ps2afp** command transforms all the pages in the input, then extracts the specified MO:DCA-P pages and prints them in normal numerical order, regardless of the order you specify.

You cannot specify both the **-g** flag and the **-p** flag.

Examples of values include:

-p even

Output even pages.

-p odd

Output odd pages.

-p 1-10

Output pages 1 through 10.

-p 10-

Output pages from page 10 until the end of the job.

-p 1 -p 3 -p 6

Output pages 1, 3, and 6, in that order.

-p1 -p6 -p3

Output pages 1, 3, and 6, in that order.

-pagetype {IM | OBJECT | PG | PAGE | OVERLAY | OVLY | PSEG | DOCUMENT}

Determines the type of AFP structured fields to generate for each individual page in the PDF file.

Values are:

PAGE

Output pages (no BDT/EDT).

PG

Output pages (no BDT/EDT).

OVLY

Output overlay.

OVERLAY

Output overlay.

OBJECT

Output image object.

IM

Output image object.

PSEG

Output page segment.

DOCUMENT

Output document.

Note

- This parameter is not supported with Artifex GhostPDL (AGSPDL).

-pdfproc [agspdl| appe | cpsi]

Used with the ps2afp and pdf2afp transform processing engines.

Values are:

-pdfproc agspdl

The transform uses the AGSPDL transformer processing engine.

-pdfproc cpsi

The transform uses the CPSI transformer processing engine.

-pdfproc appe

The transform uses the APPE transformer processing engine.

Note

- This parameter can only be used with PDF files.

-psproc [agspdl | cpsi]

Used with the ps2afp transform processing engines.

Values are:

-psproc agspdl

The transform uses the AGSPDL transformer processing engine.

-psproc cpsi

The transform uses the CPSI transformer processing engine.

Note

- This parameter can only be used with PostScript files.

-psc {ArtBox | BleedBox | CropBox | TrimBox}

Used with the pdf2afp transform processing engines to aid the positioning of content on the requested media in accordance with the intention of the PDF file creator.

Values are:

ArtBox

Specifies the ArtBox for the PDF file.

BleedBox

Specifies the BleedBox for the PDF file.

CropBox

Specifies the CropBox for the PDF file.

TrimBox

Specifies the TrimBox for the PDF file.

Note

- This parameter can only be used with PDF files and the AGSPDL transformer processing engine.

-pragma CMYKCUSTOM= {CMYK | DeviceCMYK | ICCCMYK | RGB | DeviceRGB | ICCRGB | Gray | DeviceGray | ICCGray | ICCBased},{Text | LineArt | Text LineArt | All},source_color=(c=*n.n*,m=*n.n*,y=*n.n*,k=*n.n*),replacement_color=(c=*n.n*,m=*n.n*,y=*n.n*,k=*n.n*)

Replaces a color from the Text and Line Art objects in the PDF file.

Values are:

CMYK

The CMYK color space.

DeviceCMYK

A device-dependent CMYK color space.

ICCCMYK

An ICC-based CMYK color space.

RGB

The RGB color space.

DeviceRGB

A device-dependent RGB color space.

ICCRGB

An ICC-based RGB color space.

Gray

The Gray color space.

DeviceGray

A device-dependent Gray color space.

ICCBased

An ICC-based Gray color space.

Text

Text objects.

LineArt

Line art objects.

Text LineArt

Text and line art objects

All

All text and line art objects.

source_color

The source color to be replaced. The *n.n* is a number that contains a decimal point. The allowed values are between 0.0 and 1.0, where 0.0 represents 0% and 1.0 represents 100%.

replacement_color

The color that replaces the source color. The *n.n* is a number that contains a decimal point. The allowed values are between 0.0 and 1.0, where 0.0 represents 0% and 1.0 represents 100%.

Note

- For color type image output, you must use the **-a** flag with FS45 value.
- This pragma can only be used with the APPE transformer processing engine.

-pragma ERRORONMISSINGFONT

To ensure font fidelity, make sure that you embed all required fonts in your PDF print file. If a required font is not embedded, and cannot be located on the system, the print request will fail. This is the default action.

Note

- This pragma can only be used with the APPE transformer processing engine.

-pragma IMAGECOMPRESSIONTYPE= *{0 | 1| 2}*

Enables JPEG or LZW compression.

Values are:

0

This value is used for JPEG compression and subsampled files. This is the default value.

1

This value is used for JPEG compression and unsubsampled files.

2

This value is used for LZW compression and unsubsampled files.

Note

- The compression algorithm should be used when the output is IOCA objects and when the color path (FS45) is selected.

  In case of transparency masks type objects, this flag is ignored. The transparency masks type objects use the G4 MMR algorithm, which is the default compression type. This default compression is used even if another compression parameter is specified.
- This pragma can only be used with the CPSI transformer processing engine.

-pragma ps_x_origin=*nnnn.nnnu*

Specifies an X presentation page origin of the generated image; *nnnn.nnnu* is a number that can optionally contain a decimal point, and *u* is the units in inches (i) or millimeters (m). If you do not specify a unit (i or m), **ps2afp** uses pels as the unit type. You cannot specify fractional values, that is, you cannot use a decimal point, for pels. If this value is unspecified, zero is presumed.

Note

- This pragma can only be used with the CPSI transformer processing engine.

-pragma ps_y_origin=*nnnn.nnnu*

Specifies an Y presentation page origin of the generated image; *nnnn.nnnu* is a number that can optionally contain a decimal point, and *u* is the units in inches (i) or millimeters (m). If you do not specify a unit (i or m), **ps2afp** uses pels as the unit type. You cannot specify fractional values, that is, you cannot use a decimal point, for pels. If this value is unspecified, zero is presumed.

Note

- This pragma can only be used with the CPSI transformer processing engine.

-pragma OutputFaceUp {*PS* **|** *enable* **|** *disable***}**

Enhances the finishing processing support by offering *OutputFaceUp* following option:

PS

Where Output Face Up processing is controlled by PostScript. This is the default value

Enable

In this case the Face Up option is active at all times. This is useful for PostScript files that do not specify any Output Face Up processing, and for PDF files that cannot specify Output Face Up processing.

Disable

Disables the output Face Up processing.

Note

- This pragma can only be used with the CPSI transformer processing engine.

-pragma REDUCETOFIT={*yes* **|** *no***},{***1* **|** *0***},{***true* **|** *false***}**

Changes the default fit policy of APPE from **ClipToMaxPage** to **ReduceToFit** when processing mixed page sizes. With **ReduceToFit**, APPE scales page content down so it fits within the selected input page size.

Note

- This pragma can only be used with the APPE transformer processing engine.

-pragma USEDEFAULTFONTFORSUBSTITUTION

The rip uses the default font (CourierStd) as a substitute font for any missing font in the customer document. This font does not generate a correct document for viewing or printing, but it can be used to generate output (allow Proof level output). This pragma refers to an alternative mechanism. For any specific job, one of them is enabled.

The rules for this pragma are:

- IF "Use Font Emulation" is ENABLED, then "Use Default Font For Substitution" is DISABLED
- IF "Use Default Font For Substitution" is ENABLED, then "Use Font Emulation" is DISABLED

Note

- This pragma can only be used with the APPE transformer processing engine.

-pragma USEFONTEMULATION

The APPE transform attempts to locate and use available fonts to emulate based on font characteristics. It analyzes the unavailable font's style and character set comparing them to elements in the existing transform dictionary to select an appropriate font. This pragma refers to an alternative mechanism.

- Textual fonts use font emulation.
- Emulation can only occur when an appropriate font can be located and substituted successfully.
- For symbolic fonts, APPE renders each symbol as a bullet or blank space.

The rules for this pragma are:

- IF "Use Font Emulation" is ENABLED, then "Use Default Font For Substitution" is DISABLED
- IF "Use Default Font For Substitution" is ENABLED, then "Use Font Emulation" is DISABLED

Note

- This pragma can only be used with the APPE transformer processing engine.

-q

Quiets (suppresses) the echoing of the **ps2afp** command to the display.

-r {240 | 300 | 360 | 480 | 600 | 720 | 1200}

Specifies the resolution of the output image. Select the resolution based on the printer on which you will be printing the image.

Values are:

240

240 pels-per-inch

300

300 pels-per-inch the default

360

360 pels-per-inch

480

480 pels-per-inch

600

600 pels-per-inch

720

720 pels-per-inch

1200

1200 pels-per-inch

This flag is equivalent to the **default-printer-resolution** document attribute on the **pdpr** command.

Note

If you specify a resolution that the printer does not support, InfoPrint Manager will print the image under most conditions, but with degraded results. Specify the correct resolution for the printer on which you will print the job.

-S *ServerName*

Specifies the name of the AIX or Linux system on which the **ps2afpd** daemon is running. If you do not specify this flag, the *ServerName* defaults to the effective name of the workstation on which you issued the **ps2afp** command. The value is:

ServerName

A host name, IPv4 or IPv6 address for any valid AIX or Linux system where the ps2afpd daemon is running.

-s {20 | 1 to 9998 | 9999}

Specifies the maximum amount of time, in minutes, that the PostScript interpreter remains idle between jobs before it goes down. When the PostScript interpreter is running, it uses some of the workstation memory. If the PostScript interpreter goes down, you do not need to bring it back up; the interpreter automatically starts when you submit another PostScript or PDF job as long as the **ps2afpd** daemon is running.

Values are:

20

The default time is 20 minutes.

1 to 9998

The time is the number of minutes specified in one-minute increments.

9999

There is no time limit.

Note

This parameter is not supported with Adobe PDF Print Engine (APPE) and Artifex GhostPDL (AGSPDL).

-thresh *FileName*

Specifies a file that contains a PostScript Type 1 or Type 3 halftone dictionary. Alternatively, the PostScript code can specify the **setscreen** operator instead of a Type 1 dictionary. The halftone cell in the dictionary is used to overwrite the default ordered dither clustered dot halftone cell. If the PostScript code contains a transfer function, either in the halftone dictionary or specified by the **settransfer** operator, the current grayscale correction curve is overwritten as if **-gcorr** were used.

Note

- This parameter is not supported with Artifex GhostPDL (AGSPDL).

-threshsmall {sc_ell | sc_euc }

This defines the extension part of the single cell file name to be constructed. The extension can be either **sc_ell** or **sc_euc**.

This will cause finding a single cell matching the super cell halftone file (specified using the **-thresh** option) by picking up the printer, frequency, and rotation from the latter and constructing a file name for the former using this information.

Values are:

sc_ell

sc_euc

2

Note

This parameter is not supported with Adobe PDF Print Engine (APPE) and Artifex GhostPDL (AGSPDL).

-txtsmall sizeu *nnnn.nnnu*

This defines the size limit for text; *nnnn.nnn* is a number that can optionally contain a decimal point, and *u* is the units in inches (**i**) or millimeters (**m**) or points (**p**). If you do not specify a unit (**i** or **m** or **p**), **ps2afp** uses pels as the unit type. You cannot specify fractional values (that is, you cannot use a decimal point) for pels.

The smaller of the width and height of the point size will be compared against the value given.

For 240-pel resolution printers, values are:

36 to 360 p

72 points, the default

120 to 1200

The length can be from 120 pels to 1200 pels, 0.5i to 5i, or 12.7m to 127m.

For 300-pel resolution printers, values are:

36 to 360 p

72 points, the default

150 to 1500

The length can be from 150 pels to 1500 pels, 0.5i to 5i, or 12.7m to 127m.

For 480-pel resolution printers, values are:

36 to 360 p

72 points, the default

240 to 2400

The length can be from 240 pels to 2400 pels, 0.5i to 5i, or 12.7m to 127m.

For 600-pel resolution printers, values are:

36 to 360 p

72 points, the default

300 to 3000

The length can be from 300 pels to 3000 pels, 0.5i to 5i, or 12.7m to 127m.

For 720-pel resolution printers, values are:

36 to 360 p

72 points, the default

360 to 3600

The length can be from 360 pels to 3600 pels, 0.5i to 5i, or 12.7m to 127m.

For 1200-pel resolution printers, values are:

36 to 360 p

72 points, the default

600 to 6000

The length can be from 600 pels to 6000 pels, 0.5i to 5i, or 12.7m to 127m.

Note

This parameter is not supported with Adobe PDF Print Engine (APPE) and Artifex GhostPDL (AGSPDL).

-w *nnnn.nnnu*

Specifies the width of the generated image; *nnnn.nnn* is a number that can optionally contain a decimal point, and *u* is the units in inches (**i**) or millimeters (**m**). If you do not specify a unit (**i** or **m**), then **ps2afp** uses pels as the unit type. You cannot specify fractional values (that is, you cannot use a decimal point) for pels.

Note

If a text margin is already built into the file, try **-w8.5i** to set the width to 8.5 inches.

For 240-pel resolution printers, values are:

8.5i

8.5 inches, the default

16 to 8160

The width can be from 16 pels to 8160 pels, 0.065i to 34i, or 1.641m to 863.628m. For example, these values are all valid:

```
-w 40m
-w 200.5m
-w 13i
-w 3300
```

For 300-pel resolution printers, values are:

8.5i

8.5 inches, the default

16 to 10200

The width can be from 16 pels to 10200 pels, 0.052i to 34i, or 1.313m to 863.628m. For example, these values are all valid:

```
-w 40m
-w 200.5m
-w 13i
-w 5000
```

For 600-pel resolution printers, values are:

8.5i

8.5 inches, the default

16 to 20400

The width can be from 16 pels to 20400 pels, 0.052i to 34i, or 1.313m to 863.628m. For example, these values are all valid:

```
-w 40m
-w 200.5m
-w 13i
-w 5000
```

This flag is equivalent to the **image-width** document attribute on the **pdpr** command.

-x nnnn.nnnu

Specifies an X offset (horizontal offset) of the generated image; *nnnn.nnn* is a number that can optionally contain a decimal point, and *u* is the units in inches (**i**) or millimeters (**m**). If you do not specify a unit (**i** or **m**), **ps2afp** uses pels as the unit type. You cannot specify fractional values (that is, you cannot use a decimal point) for pels.

An offset value specifies a border or margin around the generated image to avoid the non-printable areas of some printers. An X-offset value specifies the left and right margins of the generated image.

Values are:

0

No border is specified. This is the default.

0 to 17i

The value specified here can be no greater than half of the value specified on the **-w** flag. For example, if you specified -w=12i, this value can be no greater than 6i.

This flag is equivalent to the **x-image-shift** document attribute on the **pdpr** command.

Note

1. The X offset specified with **-x** must be less than the width specified with **-w**. If the **-x** value is greater than or equal to the **-w** value, a blank page is printed.
2. The X-offset value specifies margins on both the left and right sides of the page. If you have a width of 8.5 inches and specify an X offset of 5 inches, a blank page will also result because the margins on the left and right sides of the paper exceed the width of the paper.
3. PostScript or PDF processing is slower when you use the **-x** flag, because the **ps2afpd** daemon must stop and re-start the PostScript interpreter. You can improve performance by changing the **ps_x_offset** value in the **ps2afpd** daemon configuration file rather than using **-x** on a regular basis.

-y nnnn.nnnu

Specifies a Y offset (vertical offset) of the generated image; *nnnn.nnn* is a number that can optionally contain a decimal point, and *u* is the units in inches (**i**) or millimeters (**m**). If you do not specify a unit (**i** or **m**), **ps2afp** uses pels as the unit type. You cannot specify fractional values (that is, you cannot use a decimal point) for pels.

An offset value specifies a border or margin around the generated image to avoid the non-printable areas of some printers. A Y-offset value specifies the top and bottom margins of the generated image.

Values are:

0

No border is specified. This is the default.

0 to 17i

The value specified here can be no greater than half of the value specified on the **-l** flag. For example, if you specified -l=16i, this value can be no greater than 8i.

This flag is equivalent to the **y-image-shift** document attribute on the **pdpr** command.

Note

1. The Y offset specified with **-y** must be less than the length specified with **-l**. If the **-y** value is greater than or equal to the **-l** value, a blank page is printed.
2. The Y offset value specifies margins on *both* the top and bottom edges of the page. If you have a length of 11 inches and specify an Y offset of 6 inches, a blank page will also result because the margins on the top and bottom of the paper exceed the length of the paper.
3. PostScript or PDF processing is slower when you use the **-y** flag, because the **ps2afpd** daemon must stop and re-start the PostScript interpreter. You can improve performance by changing the **ps_y_offset** value in the **ps2afpd** daemon configuration file rather than using **-y** on a regular basis.

-h | -?

Displays the **pdf2afp** or **ps2afp** help file.

The agspdld, apped, ps2afp, and ps2afpd configuration files

Instead of typing flags on the command line with the **ps2afp** or **pdf2afp** command, you can use the **-C** flag to specify a configuration file that contains the flags. In this way, you can simply specify a configuration file name, rather than typing many flags. You might find it convenient to use a configuration file if you repeatedly use the same flags with the **ps2afp** or **pdf2afp** command, or if you are using different PostScript or PDF processing values than the defaults defined by your system support group.

When your system support group installed the **ps2afp** transform and its alias, **pdf2afp**, a default **ps2afp** command configuration file, **ps2afp.cfg**, was installed in this directory:

With AIX or Linux

/usr/lpp/psf/ps2afp

With Windows

***install_path*\ps2afp**

To create your own files, copy the **ps2afp.cfg** file and then use a system editor to modify the options in this ASCII file to suit your needs.

These figures show an example of a configuration file.

Sample agspdld Configuration File

The default **agspdld** daemon configuration file **agspdld.cfg** was installed in this directory: **/usr/lpp/psf/ps2afp**

The **agspdld** daemon configuration file contains most of the keywords as the **ps2afp** daemon. The **agspdld** daemon configuration file also contains some keywords that control the operation of the **agspdld** daemon. Values in the command configuration file override values in the daemon configuration file.


```
# agspdld configuration file

##############################################################################
# KEYWORD                                                            PURPOSE
##############################################################################

port = 8254               #                    which TCP/IP port to use

work_directory = /var/psf/agspdl
                          #            directory to put work files into
log_file = /var/psf/agspdl/agspdl.log
                          #                  where to write log messages
log_size = 1024           #                       maximum log size in KB

ps_font_directory = /var/psf/agspdl/Resource
                          #                       list of resource files

ps_output_type = IO1_G4   #               type of AFP image to generate
ps_width = 8.5i           #                    width of generated image
ps_length = 11i           #                   length of generated image
ps_resolution = 300       #                 resolution of target printer
agspdl_is = 1             #                   the is afp compliance flag

agspdl_max_memory = 2097151
                          #                       max interpreter memory

#agspdl_compress_type = lzw
                          #                                lzw compression
                          #               other options: jpeg, jpeg-sub

#agspdl_page_size_control
                          #                  page size control options
                          #          ArtBox, BleedBox, CropBox, TrimBox
```

Sample apped Configuration File

The default **apped** daemon configuration file **apped.cfg** was installed in this directory:

With AIX or Linux

/usr/lpp/psf/ps2afp

With Windows

***install_path*\ps2afp**

The **apped** daemon configuration file contains most of the keywords as the **ps2afp** daemon. The **apped** daemon configuration file also contains some keywords that control the operation of the **apped** daemon. Values in the command configuration file override values in the daemon configuration file.

Sample **apped** daemon configuration file for AIX and Linux:

```
 apped configuration file

##############################################################################
# KEYWORD                                                           PURPOSE
##############################################################################

port = 8250                     #              which TCP/IP port to use

appe_work_directory = /var/psf/appe
                                # directory to put APPE work files into

log_file = /var/psf/appe/apped.log
                                #    where to write daemon log messages
log_size = 100                  #                 maximum log size in KB

#transform_trace_file = /var/psf/appe/appeTraceFile.log
                                #  where to write APPE transform traces
                                #        comment out to disable tracing

#transform_trace_size = 200    #               maximum trace size in KB
                                #  use 0 to disable trace size checking

#transform_trace_level = MDFL@-1
               #                                      APPE traces level
               # MMST@-1                   output most trace statements
               # MINT@-1           output intermediate level of tracing
               # MDFL@-1                output default trace statements

#appe_fonts_path =
               #list of directories where extra APPE fonts are located

appe_font_map_files = /usr/lpp/psf/appe/fontmaps/FontMapSample.cfg

appe_width = 8.5i               #              width of generated image
appe_length = 11i               #             length of generated image
appe_x_offset = 0i              #                left and right margins
appe_y_offset = 0i              #                top and bottom margins
appe_resolution = 300           #          resolution of target printer
appe_output_type = IO1_G4       #         type of AFP image to generate
#appe_is = 1                    #            the is afp compliance flag
#appe_compress_type = jpeg-sub
               # JPEG subsampled compression. Other options: jpeg, lzw
#appe_pagetype = DOCUMENT
               # type of afp structured field for each individual page
```

Sample **apped** daemon configuration file for Windows:

```
# apped configuration file

##############################################################################
# KEYWORD                                                           PURPOSE
##############################################################################

port = 8250                     #              which TCP/IP port to use
```

```
appe_work_directory = <AFP Support Path>\appe
                                # directory to put APPE work files into

log_file = <AFP Support Path>\appe\apped.log
                                #    where to write daemon log messages
log_size = 100                  #                  maximum log size in KB

#transform_trace_file = <AFP Support Path>\appe\appeTraceFile.log
                                #  where to write APPE transform traces
                                #        comment out to disable tracing

#transform_trace_size = 200    #               maximum trace size in KB
                                #  use 0 to disable trace size checking

#transform_trace_level = MDFL@-1
                #                                       APPE traces level
                # MMST@-1                  output most trace statements
                # MINT@-1          output intermediate level of tracing
                # MDFL@-1               output default trace statements

#appe_fonts_path =
                #list of directories where extra APPE fonts are located

appe_font_map_files = <Install Path>\appe\fontmaps\FontMapSample.cfg

appe_width = 8.5i               #              width of generated image
appe_length = 11i               #             length of generated image
appe_x_offset = 0i              #                left and right margins
appe_y_offset = 0i              #                top and bottom margins
appe_resolution = 300           #          resolution of target printer
appe_output_type = IO1_G4       #         type of AFP image to generate
#appe_is = 1                    #            the is afp compliance flag
#appe_compress_type = jpeg-sub
                # JPEG subsampled compression. Other options: jpeg, lzw
#appe_pagetype = DOCUMENT
                # type of afp structured field for each individual page
```

Sample ps2afp Configuration File

```
# ps2afp configuration file

###############################################################################
#                 CPSI, APPE and AGSPDL GENERAL SETTINGS
# KEYWORD             EQUIVALENT ps2afp FLAG                      PURPOSE
###############################################################################

port = 8251               # -P                 which TCP/IP port to use
appe_port = 8250          # -P        which TCP/IP port to use for appe
agspdl_port = 8254        # -P      which TCP/IP port to use for agspdl
server = localhost        # -S              which server to connect with

ps_max_memory = 96000K    # -M            maximum amount of memory that
                          #         PostScript uses; the 'K' is ignored

ps_job_timeout = 9999     # -j                maximum number of minutes
                          #                   to process PostScript job
ps_server_timeout = 360   # -s                maximum number of minutes
                          #                   server waits between jobs
ps_document_processor = agspdl  # -psproc            which ps document
```

```
                                #                          processor to use
pdf_document_processor = agspdl # -pdfproc          which pdf document
                                #                          processor to use

#############################################################################
#                    CPSI SPECIFIC SETTINGS
# KEYWORD              EQUIVALENT ps2afp FLAG                       PURPOSE
#############################################################################

ps_width = 8.5i           # -w                 width of generated image
ps_length = 11i           # -l                length of generated image
ps_x_offset = 0i          # -x                   left and right margins
ps_y_offset = 0i          # -y                   top and bottom margins
ps_resolution = 300       # -r             resolution of target printer
ps_output_type = IO1_G4   # -a            type of AFP image to generate
ps_imgsmall = 0.5i        #                  default value for imgsmall
ps_linesmall = 0.5i       #                 default value for linesmall
ps_txtsmall = 0.5i        #                  default value for txtsmall
#ps_is = 1                 #                 the is afp compliance flag
#ps_compress_type = jpeg-sub
                          # -cmp             JPEG subsampled compression
                          #                     other options: jpeg, lzw

#############################################################################
#                    APPE SPECIFIC SETTINGS
# KEYWORD              EQUIVALENT ps2afp FLAG                       PURPOSE
#############################################################################

appe_width = 8.5i           # -w                width of generated image
appe_length = 11i           # -l               length of generated image
appe_x_offset = 0i          # -x                  left and right margins
appe_y_offset = 0i          # -y                  top and bottom margins
appe_resolution = 300       # -r            resolution of target printer
appe_output_type = IO1_G4   # -a           type of AFP image to generate
#appe_is = 1                 #                 the is afp compliance flag
#appe_compress_type = jpeg-sub
                            # -cmp          JPEG subsampled compression
                            #                  other options: jpeg, lzw
#appe_pagetype = DOCUMENT
                            #               type of afp structured field
                            #                   for each individual page



#############################################################################
#                    AGSPDL SPECIFIC SETTINGS
# KEYWORD              EQUIVALENT ps2afp FLAG                       PURPOSE
#############################################################################
agspdl_output_type = IO1_G4  # -a        type of AFP image to generate
agspdl_resolution = 300      # -r         resolution of target printer
agspdl_width = 8.5i          # -w             width of generated image
agspdl_length = 11i          # -l            length of generated image
agspdl_is     = 1            #               the is afp compliance flag
#agspdl_compress_type = lzw
                             # -cmp        JPEG subsampled compression
                             #           other options: jpeg, jpeg-sub
#agspdl_page_size_control
                             # -psc           page size control options
                             #      ArtBox, BleedBox, CropBox, TrimBox

#############################################################################
```

```
# ENABLING THE PLEX COMMAND AND MAPPING BINS TO TRAYS
# NOTE: Uncomment only one of the options below.

##############################################################################

# ENABLING THE FINISHING FLAG ONLY
# If you want your users to be able to allow finishing operations,
# such as staple operations or punch operations, uncomment the
# following line.

# device_controls = finishing

##############################################################################

# ENABLING THE PLEX COMMAND ONLY
# If you want your users to be able to choose between single-sided and
# double-sided (duplexed) output, uncomment the following line.

# device_controls = plex

##############################################################################

# ENABLING BOTH PLEX AND FINISHING
# If you want your users to be able to both choose between single-
# sided and double-sided (duplexed) output AND allow finishing
# operations, such as staple operations or punch operations,
# uncomment the following line.

# device_controls = plex,finishing

##############################################################################

# ENABLING THE PLEX COMMAND AND MAPPING BINS TO TRAYS
# If you want your users to be able to both choose between single-
# sided and double-sided (duplexed) output AND specify which paper
# tray to use, uncomment the line below and fill in the correct values:

# Replace the Xs with the number of the AFP tray (between 1 and 255).
# Replace the Zs with the appropriate values.
# Replace size with one of the supported paper sizes \
(LETTER, LEGAL, A3, A4, B4, B5, LEDGER)

# device_controls = plex,inputX=(size,type=ZZZ,weight=ZZZ,color=ZZZ), \
inputX=(size,type=ZZZ,weight=ZZZ,color=ZZZ)

##############################################################################

# ENABLING THE PLEX COMMAND AND MAPPING BINS TO TRAYS
# If you want your users to be able to both choose between single-
# sided and double-sided (duplexed) output, AND allow finishing
# operations, AND specify which paper tray to use, uncomment the line
# below and fill in the correct values:

# Replace the Xs with the number of the AFP tray (between 1 and 255).
# Replace the Zs with the appropriate values.
# Replace size with one of the supported paper sizes \
(LETTER, LEGAL, A3, A4, B4, B5, LEDGER)

# device_controls = plex,finishing,inputX=(size,type=ZZZ,weight=ZZZ,\
color=ZZZ), inputX=(size,type=ZZZ,weight=ZZZ,color=ZZZ)
```

Sample ps2afpd Configuration File

The default **ps2afpd** daemon configuration file **ps2afpd.cfg** was installed in this directory:

With AIX or Linux

/usr/lpp/psf/ps2afp

With Windows

***install_path*/ps2afp**

The **ps2afpd** daemon configuration file contains most of the keywords as the **ps2afp** daemon. Values in the command configuration file override values in the daemon configuration file.

This is an example of the configuration file.

```
# ps2afpd configuration file

##############################################################################
# KEYWORD                                                          PURPOSE
##############################################################################

port = 8251              #                    which TCP/IP port to use

work_directory = <AFP Support Path>\ps2afp
                         #             directory to put work files into
log_file = <AFP Support Path>\ps2afp\ps2afpd.log
                         #                  where to write log messages
log_size = 100           #                       maximum log size in KB

ps_program = <Install Path>\cpsibin\ps2afpi.exe
                         #      name of PostScript interpreter program
ps_init_file = <Install Path>\ps\ps2afp.ps
                         #               name of PostScript interpreter
                         #                           initialization file
ps_files_path = <Install Path>\ps;\
        <Install Path>\config;\
        <Install Path>\reslib
                         #            path to search for jobInit files

ps_max_memory = 96000K   #               maximum amount of memory that
                         #         PostScript uses; the 'K' is ignored

ps_job_timeout = 9999    #                   maximum number of minutes
                         #                   to process PostScript job
ps_server_timeout = 360  #                   maximum number of minutes
                         #                   server waits between jobs

ps_font_map_files = <Install Path>\ps\fonts.map
                         #                  list of font mapping files

ps_width = 8.5i          #                    width of generated image
ps_length = 11i          #                   length of generated image
ps_x_offset = 0i         #                      left and right margins
ps_y_offset = 0i         #                      top and bottom margins
ps_resolution = 300      #                resolution of target printer
ps_output_type = IO1_G4  #                type of AFP image to generate
#following three parameters will apply only if threshsmall specified
ps_imgsmall = 0.5i       #                  default value for imgsmall
ps_linesmall = 0.5i      #                 default value for linesmall
ps_txtsmall = 0.5i       #                  default value for txtsmall
#ps_is = 1                #                   the is afp compliance flag
```

```
ps_compress_type = jpeg-sub  # JPEG subsampled compression. \
Other options: jpeg, lzw

##############################################################################

# ENABLING THE PLEX COMMAND AND MAPPING BINS TO TRAYS
# NOTE: Uncomment only one of the options below.

##############################################################################

# ENABLING THE FINISHING FLAG ONLY
# If you want your users to be able to allow finishing operations,
# such as staple operations or punch operations, uncomment the
# following line.

# device_controls = finishing

##############################################################################

# ENABLING THE PLEX COMMAND ONLY
# If you want your users to be able to choose between single-sided and
# double-sided (duplexed) output, uncomment the following line.

# device_controls = plex

##############################################################################

# ENABLING BOTH PLEX AND FINISHING
# If you want your users to be able to both choose between single-
# sided and double-sided (duplexed) output AND allow finishing
# operations, such as staple operations or punch operations,
# uncomment the following line.

# device_controls = plex,finishing

##############################################################################

# ENABLING THE PLEX COMMAND AND MAPPING BINS TO TRAYS
# If you want your users to be able to both choose between single-
# sided and double-sided (duplexed) output AND specify which paper
# tray to use, uncomment the line below and fill in the correct values:

# Replace the Xs with the number of the AFP tray (between 1 and 255).
# Replace the Zs with the appropriate values.
# Replace size with one of the supported paper sizes \
(LETTER, LEGAL, A3, A4, B4, B5, LEDGER)

# device_controls = plex,inputX=(size,type=ZZZ,weight=ZZZ,color=ZZZ), \
inputX=(size,type=ZZZ,weight=ZZZ,color=ZZZ)

##############################################################################

# ENABLING THE PLEX COMMAND AND MAPPING BINS TO TRAYS
# If you want your users to be able to both choose between single-
# sided and double-sided (duplexed) output, AND allow finishing
# operations, AND specify which paper tray to use, uncomment the line
# below and fill in the correct values:

# Replace the Xs with the number of the AFP tray (between 1 and 255).
# Replace the Zs with the appropriate values.
# Replace size with one of the supported paper sizes \
(LETTER, LEGAL, A3, A4, B4, B5, LEDGER)
```

```
# device_controls = plex,finishing,inputX=(size,type=ZZZ,weight=ZZZ,\
color=ZZZ), inputX=(size,type=ZZZ,weight=ZZZ,color=ZZZ)
```

The next table shows the **ps2afp** flags and their equivalent configuration file keywords. To override the values in the default configuration file, **ps2afp.cfg**, you can take one of these actions:

- Specify flags with the **ps2afp** or **pdf2afp** command at transform time.
- Specify a configuration file with **ps2afp -C** at transform time.
- Specify **ps2afp** flags with **-o** flags on an AIX print command, or with equivalent attributes with the **-x** flag or in an attributes file on the **pdpr** command, to transform a file and print it at the same time.

PostScript and PDF printing and processing options

ps2afp or pdf2afp Flag	*Keyword in ps2afp and ps2afpd Configuration Files*
Note The valid values for configuration file keywords are the same as for the corresponding **ps2afp** or **pdf2afp** command flag. For keywords used only in the ps2afpd daemon configuration file, which have no corresponding command flag, see ps2afpd utility: starts the ps2afpd daemon, p. 275.	

`-a OutputType`	`agspdl_output_type = value`
	(agspdl)
	`appe_output_type = value`
	(appe)
	`ps_output_type = value`
	(cpsi)

`-C ConfigurationFile`	None
`-c`	None (cpsi only)

`-cmp`	`ps_compress_type = value`
	`agspdl_compress_type = value`
	`appe_compress_type = value`

`-device`	`device_control =plex,input n = ( size,type = x , color = y , weight = z , insert )input n = ( size , type = x , color = y , weight = z , insert ) input n = ( )` (appe and cpsi)

`-F FontMapFile ,`	`ps_font_map_file = PathName`
	(cpsi only)
	`appe_font_map_file = PathName`
	(appe only)

`-g PageRange`	None (appe and cpsi)
`InputFile`	None

`-is`	`ps_is = value`
	`agspdl_is = value`
	`appe_is = value`

ps2afp or pdf2afp Flag	*Keyword in ps2afp and ps2afpd Configuration Files*	
	(agspdl, appe, and cpsi)	
-imgsmall sizeu nnnn.nnnu	ps_imgsmall = nnnn.nnn (cpsi only)	
-j nnnn	ps_job_timeout = nnnn (cpsi only)	
-l nnnn.nnnu	ps_length = nnnn.nnnu agspdl_length = nnnn.nnnu appe_length = nnnn.nnnu (agspdl, appe, and cpsi)	
-linesmall sizeu nnnn.nnnu	ps_linesmall = nnnn.nnnu (cpsi only)	
-M nnnnn	ps_max_memory = nnnnn (cpsi only)	
-o OutputFile	None	
-P nnnnn	port = PortNumber (agspdl, appe, and cpsi)	
-p PageRange	None (agspdl, appe, and cpsi)	
-pagetype	appe_pagetype = value (appe only)	
-pdfproc	pdf_document_processor = value	
-psproc	ps_document_processor = value	
-pragma ps_x_origin=nnnn.nnnu	pragma=ps_x_origin = nnnn.nnnu (appe and cpsi)	
-pragma ps_y_origin=nnnn.nnnu	pragma=ps_y_origin = nnnn.nnnu (appe and cpsi)	
-pragma OutputFaceUp={PS | enable | disable}	None (appe and cpsi)	
-psc	agspdl_page_size_control = value (agspdl only)	
-q	None	
-r nnn	ps_resolution = nnn agspdl_resolution = nnn appe_resolution = nnn (agspdl, appe, and cpsi)	
	Keyword in ps2afp Configuration File	***Keyword in ps2afpd Configuration Files***
-S ServerName	server = ServerName	None
-s nnnn	ps_server_timeout = nnnn (cpsi only)	

ps2afp or pdf2afp Flag	Keyword in ps2afp and ps2afpd Configuration Files	
-threshsmall {sc_ell | sc_euc}	None (cpsi only)	
-txtsmall sizeu nnnn.nnnu	ps_txtsmall = nnnn.nnnu (cpsi only)	
-w nnnn.nnnu	ps_width = nnnn.nnnu agspdl_width = nnnn.nnnu appe_width = nnnn.nnnu (agspdl, appe, and cpsi)	
-x nnnn.nnnu	ps_x_offset = nnnn.nnnu appe_x_offset = nnnn.nnnu (appe and cpsi)	
-y nnnn.nnnu -y *nnnn.nnnu*	ps_y_offset = nnnn.nnnu appe_y_offset = nnnn.nnnu (appe and cpsi)	
	Keyword in ps2afp Configuration File	**Keyword in ps2afpd, agspdld, and apped Configuration Files**
None	None	log_file = PathName
None	None	log_size = Size
None	None	transform_trace_file = Pathname transform_trace_size = Size transform_trace_level = TraceLevel (appe only)
None	None	mail_command = PathName (cpsi only)
None	None	notify = UserID (cpsi only)
None	None	ps_font_directory = PathName (agspdl only)
None	None	ps_init_file = PathName (cpsi only)
None	None	ps_program = PathName (cpsi only)
None	None	ps_support_program = PathName (cpsi only)
None	None	work_directory = PathName (agspdl and cpsi)

ps2afp or pdf2afp Flag	*Keyword in ps2afp and ps2afpd Configuration Files*	
None	None	`appe_fonts_path` = `PathName` (appe only)
None	None	`appe_work_directory` = `PathName` (appe only)
None	None	`agspdl_max_memory` = `Size` (agspdl only)

Examples

- To submit the PostScript file `sample.ps` to the logical printer named `molly-lp`, enter:

  For AIX

```
enq -Pmolly-lp -odatat=ps /usr/lpp/psf/ps2afp/sample.ps
```

  For Windows

```
pdpr -pmolly-lp  install_path\ps\sample.ps
```

- To transform the PDF file `myfile1` into an AFP data stream, and then submit it to the InfoPrint logical printer called `robin-lp`, enter:

```
pdpr -p robin-lp -x "default-printer-resolution=300" myfile1
```

  or

```
pdf2afp -r300 myfile1 | pdpr -p robin-lp
```

  Note

  You need to specify a resolution of 300 pels (`default-printer-resolution=300` or `-r300`) because `robin-lp` routes jobs to a 4019 printer device. The 4019 printer is a 300-pel resolution printer, and the default resolution for the **pdf2afp** command is 300 pels.

  To transform the PostScript file `myfile2` into an AFP data stream, with an image that is 8 inches high and 5 inches wide, and write the result to a file called `myfile2.afp`, enter:

```
ps2afp -l 8i -w 5i -o myfile2.afp myfile2
```

  or

```
ps2afp -l 8i -w 5i myfile2 > myfile2.afp
```

- To transform the PostScript file `myfile2` into an AFP data stream, creating a compressed IO (IOCA) image (the default image type for the **ps2afp** command), and piping the result to the **pdpr** command to submit the file to the InfoPrint logical printer called `molly-lp`, enter:

```
ps2afp myfile2 | pdpr -p molly-lp
```

  You can get the same result without piping (that is, using **pdpr** directly) by entering:

```
pdpr -p molly-lp myfile2
```

- To transform the PDF `myfile1` file into an AFP data stream in 300-pel resolution, as an IO1_MMR image, and send the result to the printer with the **pdpr** command, enter:

```
pdf2afp -aIO1_MMR -r300 myfile1 | pdpr -X myafp.X
```

or

```
pdpr -X myps.X myfile1
```

where the attributes file named `myafp.X` contains these settings:

```
document-format=modca-p
printer-name-requested=david-lp
```

and the attributes file named `myps.X` contains these settings:

```
document-format=pdf
printer-name-requested=david-lp
image-out-format=io1_mmr
default-printer-resolution=300
```

- Assume that the PostScript file `myfile2` uses the **BarKode.pfa** font that is a PostScript resource not installed for use by the **ps2afpd** on an AIX or Linux system named `robin`. Also assume that the **ps2afpd** daemon is running on `robin`, but you are logged into the AIX or Linux system named `molly`. To transform `myfile2` into an AFP data stream, but not print it:

```
ps2afp -S robin -c -o myfile2.afp BarKode.pfa myfile2
```

The **-c** flag concatenates the two input files, with the file `BarKode.pfa` first, so that the two files are processed together. In this way, `myfile2` uses `BarKode.pfa` as an inline resource.

- To create an FS45 overlay from a one-page PostScript file named `my.ps` and name the FS45 overlay `my.ovly`, enter:

```
ps2afp -a fs45.ovly -p1 my.ps -o my.ovly
```

- To create an FS45 page segment from an existing PostScript file named `logo.ps` and name the FS45 page segment `logofs45.pseg`, enter:

```
ps2afp -a fs45.pseg logo.ps -o logofs45.pseg
```

- To transform a PostScript file into an IS/3 compliant afp output:

```
ps2afp -is 3 -o output.afp input.ps
```

- To transform an input file using lzw compression:

```
ps2afp -cmplzw -o output.afp input.ps
```

- To transform a PDF file with the APPE processor:

```
ps2afp -pdfproc appe -o output.afp input.pdf
```

Files

For AIX or Linux:

/usr/lpp/psf/appebin/apped

PostScript and PDF APPE transform processing engine daemon

var/psf/appe/appeTraceFile.log

Provides additional information from the APPE transform engine.

/usr/lpp/psf/bin/ps2afp

PostScript transform executable

/usr/lpp/psf/bin/pdf2afp

PDF transform executable (linked to **/usr/lpp/psf/bin/ps2afp**)

/usr/lpp/psf/ps2afp/apped.cfg

apped daemon configuration file

/usr/lpp/psf/ps2afp/ps2afp.cfg

ps2afp command configuration file

/usr/lpp/psf/bin/ps2afpi

PostScript Level 3 interpreter program

/usr/lpp/psf/bin/ps2afpi.vm

PostScript interpreter program initial virtual memory

/usr/lpp/psf/ps2afp/ps2afp.ps

PostScript initialization file

/usr/lpp/psf/ps2afp/ps2afpe.ps

PostScript initialization file for extended error reporting

/usr/lpp/psf/psfonts.map

Default PostScript font mapping file

/var/psf/psfonts

User-defined PostScript fonts file

/usr/lpp/psf/bin/agspdld

PostScript and PDF Artifex GhostPDL transform processing engine daemon

var/psf/agspdl/agspdld.log

Provides additional information from the Artifex GhostPDL transform processing engine daemon

/usr/lpp/psf/ps2afp/agspdld.cfg

agspdl daemon configuration file

/usr/lpp/psf/agspdl/Resource

Artifex GhostPDL transform processing engine resources

For Windows:

*install_path***appebin\apped.exe**

PostScript and PDF transform processing daemon

var/psf/appe/appeTraceFile.log

Provides additional information from the APPE transform engine.

*install_path***bin\ps2afp.exe**

PostScript transform executable

*install_path***bin\pdf2afp.exe**

PDF transform executable

install_path\ps2afp\apped.cfg

apped daemon configuration file

install_path\ps2afp\ps2afp.cfg

ps2afp command configuration file

install_path\bin\ps2afpi.exe

PostScript Level 3 interpreter program

install_path\bin\ps2afpi.vm

PostScript interpreter program initial virtual memory

install_path\ps2afp\ps2afp.ps

PostScript initialization file

install_path\ps\fonts.map

Default PostScript font mapping file

install_path\var\psf\psfonts

User-defined PostScript fonts file

sap2afp command: transforms SAP OTF or ABAP data to AFP

This section describes the **SAP OTF** or **ABAP** to **AFP** transform and includes its syntax, options, and values.

Syntax

sap2afp

```
[-x]
[-formdef=formdef_name]
[-pagedef=pagedef_name]
[-chars=char1_name,char2_name]
[-environment { normal | japanese | spchinese | tdchinese |
                korean | cyrillic | unicode}]
[-is 1|3][-t ] [-g ] [-a  {FS10 | FS45  }]
[-r { 240 | 300 | 360 | 480 | 600 | 720 | 1200}]
[-fdeflib pathname]
[-fontlib pathname]
[-ovlylib pathname]
[-pdeflib pathname]
[-pseglib pathname]
[-reslib pathname]
[-userlib pathname]
[-abapcp filename]
[-pagedeftab filename]
```

```
[-imagetab filename ]
[-centerlines]
[-gocatext]
[-sap_bc_origin]
[-truetype]
[-useascii]
[-sapgof_st_chars]
[-S ServerName ]
[-P PortNumber ]
[ -o outfile]
[infile ]
[-inlinefdefpath=path]
[-?]
```

Description

The **sap2afp** transform can convert SAP OTF data into MO:DCA (Mixed Object: Document Content Architecture), while SAP ABAP data can only be converted into PTO:CA (Presentation Text Object: Content Architecture).

Automatic invocation

The PSF DSS automatically invokes the **sap2afp** transform command whenever you submit a OTF or ABAP file for printing. You can pass options to **sap2afp** using the **other-transform-options** attribute on the **pdpr** command or the **-o** flag of the print commands or the **lprafp** command. You can also pass options to **sap2afp** through theInfoPrint Submit Express client of InfoPrint Manager. Parameters that are not supported, such as **-r 300**, can be passed in InfoPrint Submit Express by clicking **Advanced** tab and entering them in the **Transform options** field.

Flags

This section describes the flags for the **sap2afp** transform:

-x

Specifies that resources found in the pagedef.tab are to be used for the transform. You can use this flag to transform an SAP Output Text Format (OTF) or Advanced Business Application Programming (ABAP) file into an AFP data stream file.

-formdef=*formdefname*

Specifies the name of the form definition to be used to transform an SAP Output Text Format (OTF) file into an AFP data stream file.

-is {1 | 3}

Specifies the interchange set version.

Values are:

1

This is the default value.

3

If you specify **3**, the output is IS/3 compliant.

Note

- Any other value different than **1** or **3** is signaled as an error.
- When using the sap2afp transform command to convert an ABAP file by specifying 3 as a value for the -is flag, it does not create IS/3 compliant AFP output. The sap2afp transform command creates IS/3 compliant AFP output only when the input file is an OTF file.
- When you use the -is3 flag, the sap2afp transform uses TrueType fonts instead of FOCA fonts. The default TrueType fonts that the sap2afp transform uses are the WorldType Fonts, Version 8.13. You can specify your choice of TrueType fonts in the sap2afp configuration files: `fonts.tab.unicode.truetype` and `pagedef.tab.unicode.truetype`. See The sap2afp configuration files for more information.

-pagedef=*pagedefname*

Specifies the name of the page definition to be used to transform an Advanced Business Application Programming (ABAP) file into an AFP data stream file.

-chars=*char1_name*,*char2_name*

Specifies the name of the fonts to be used by ACIF in order to transform an Advanced Business Application Programming (ABAP) file into an AFP data stream file in a non-Unicode environment.

-environment {normal | japanese | spchinese | tdchinese | korean | cyrillic | unicode}

Specifies one of the legal values for the possible environments. You can only use this flag when you are transforming an ASCII-encoded ABAP file.

-t

Traces program execution.

-g

Invokes the Graphics Object Content Architecture (GOCA) feature of the printer device. The GOCA feature lets you print boxes with four different levels of shading, and clear and solid boxes.

-a {FS10 | FS45}

Specifies the type of AFP image output that the transform generates from SAP OTF color image input:

- **FS10** generates bi-level output.
- **FS45** generates color IOCA FS45 output.

The default value is FS10.

-r { 240 | 300 | 360 | 480 | 600 | 720 | 1200}

Specifies the printer resolution as dots-per-inch (DPI) used to print image data in the job. If you do not specify the **-r** flag, the **DEFRES** value in the `image.tab` file is used. In the `image.tab` file shipped with InfoPrint Manager Transform Feature, the **DEFRES** value is **600**.

-fdeflib=*pathname*

Specifies the *pathname* for the form definition resources. You can only use this flag when you are transforming an ABAP file.

-fontlib=*pathname*

Specifies the *pathname* for the font resources. You can only use this flag when you are transforming an ABAP file.

-ovlylib=*pathname*

Specifies the *pathname* for the overlay resources. You can only use this flag when you are transforming an ABAP file.

-pdeflib=*pathname*

Specifies the *pathname* for the page definition resources. You can only use this flag when you are transforming an ABAP file.

-pseglib=*pathname*

Specifies the *pathname* for the page segment resources. You can only use this flag when you are transforming an ABAP file.

-reslib=*pathname*

Specifies the *pathname* for the system resources. You can only use this flag when you are transforming an ABAP file.

-userlib=*pathname*

Specifies the *pathname* for the user resources. You can only use this flag when you are transforming an ABAP file.

-abapcp *filename*

Specifies the *filename* to use instead of the information in the default defcp tab file selected. You can only use this flag when you are transforming an ABAP file, or in combination with the -useascii flag.

-pagedeftab *filename*

Specifies the *pathname* to use instead of the information in the default pagedef tab file selected.

-imagetab *filename*

Specifies the *pathname* to use instead of the information in `image.tab`.

-centerlines

Specifies the use of the SAP specification for centering BX boxes.

-gocatext

Specifies the use of GOCA fonts from the 6400fonts.tab for ST text data.

-sap_bc_origin

Specifies the SAP bar code orientation point as the lower left corner.

-truetype

Specifies the use of TrueType fonts. In the Unicode environment, it uses the configuration files `fonts.tab.unicode.truetype` and `pagedef.tab.unicode.truetype` which map the TrueType

fonts. For SAP OTF input files with TrueType inline fonts, the transform will output AFP data containing the referenced TrueType fonts as inline resources.

-useascii

Specifies that data should be interpreted as ASCII in SAPGOF OTF files, with ST commands that use Unicode codepages CP4102 or CP4103. If data is not interpreted as ASCII, any non-Unicode codepage file is specified using the -abapcp flag.

-sapgof_st_chars

Specifies that the OTF input file was generated using the `SAPGOF_ST_CHARS: X` entry from the SAP Unicode System. Using this flag, the **sap2afp** transform detects that for Unicode codepages the ST and BC commands counters are halved. They are also doubled internally, so that the SAP file is correctly processed. This parameter is ignored for ABAP files.

-is3

Specifies that the transform produce IS/3 compliant datastreams.

Note

- When you use the **-is3** flag, the **sap2afp** transform uses TrueType fonts instead of FOCA fonts. The default TrueType fonts that the **sap2afp** transform uses are the WorldType Fonts, Version 8.13. You can specify your choice of TrueType fonts in the **sap2afp** configuration files: `fonts.tab.unicode.truetype` and `pagedef.tab.unicode.truetype`. See The sap2afp configuration files, p. 463 for more information.

-S *`ServerName`*

Specifies the name of the server to be used for processing.

-P *`PortNumber`*

Specifies the port number that the server monitors (set by the **-S** flag).

-o *`outfile`*

Specifies the name of the output file.

`infile`

Specifies the name of the input file.

-inlinefdefpath=*`path`*

Specifies the search path for the used form definition, to include it inline in the resource group of the AFP output file. The *`path`* value can consist of one or multiple paths. If you use multiple paths, separate the paths by colon [:] on AIX or by semicolon [;] on Windows. The search order is given by the order you enter the paths. If you leave the value empty, the search is carried out in the default *`install_path`*`\reslib` folder.

-?

Displays the **sap2afp** help file.

The sap2afp configuration files

This section contains examples for the configuration files required with the **sap2afp** transform:

- **barcode.tab**
- **defcp.tab**
- **defcp.tab.unicode**
- **defcp.tab.japan**
- **defcp.tab.korea**
- **defcp.tab.spchinese**
- **defcp.tab.tdchinese**
- **defcp.tab.cyr**
- **fonts.tab**
- **fonts.tab.unicode**
- **fonts.tab.unicode.truetype**
- **image.tab**
- **pagedef.tab**
- **pagedef.tab.unicode**
- **pagedef.tab.unicode.truetype**
- **pagedef.tab.japan**
- **pagedef.tab.korea**
- **pagedef.tab.spchinese**
- **pagedef.tab.tdchinese**
- **pagedef.tab.cyr**
- **userenv**
- *xxxxyyyy*.**tab**

Note

- All tables can contain comments (starting with **//** in column 1) and empty lines. These lines are ignored by the **sap2afp** transform.
- All table entries are case-sensitive.

barcode.tab configuration file

This table describes the bar code mappings. SAP calls bar codes by names that must be mapped into the matching bar codes available with Bar Code Object Content Architecture (BCOCA).

Supported bar codes:

Bar code Type field values

Bar code Type field values	Description
X'01'	Code 3 of 9
X'02'	MSI
X'08'	EAN-8
X'09'	EAN-13
X'0C'	Interleaved 2 of 5

Bar code Type field values	Description
X'11'	Code 128
X'21'	Code 93
X'18'	POSTNET
X'1E'	PDF 417
X'1C'	Data Matrix
X'20'	QR Code

`barcode.tab` uses these keyword-value pairs:

BarCode

Specifies the OTF bar code names (**SAPBARCODE** parameter of the **BC** OTF command). The maximum length of this field is 8 bytes. It can contain any value.

Type

Specifies the AFP bar code type as defined in *InfoPrint Data Stream and Object Architectures: Bar Code Object Content Architecture Reference* for the **Barcode Type** parameter of the **Barcode Data Descriptor** Structured Field. The content can be any decimal value between 0 and 999. The **sap2afp** transform does not verify that this value maps to a valid hexadecimal barcode type.

Mode

Specifies the modifier byte in the **Barcode Modifier** parameter of the **Barcode Data Descriptor** Structured Field. Any numeric value between 0 and 999 is accepted and not verified.

Flag

Controls the printing of the Human Readable Interface (**HRI**) character. Specify one of these values:

0

Causes the **HRI** character to be printed

128

Causes the **HRI** character not to be printed

ModWidth=*n*

This optional keyword specifies the width of the smallest defined bar code element, using mils (thousandths of an inch). For bar code types that explicitly specify the module width, such as POSTNET or RM4SCC, this field is ignored. The range of values allowed is 1–254. If **ModWidth** is not specified, the printer default ModWidth is used.

n specifies the width of each module, using thousandths of an inch (1/1000) as the unit of measurement.

Ratio=*n*

This optional keyword specifies the ratio between the width of the wide and the narrow bar code elements. The range of values allowed is 100–500, but you must specify a value appropriate for your printer and bar code type. If the values you specify are not appropriate for your printer, error messages are issued at printing time. If **Ratio** is not specified, the printer default Ratio is used.

n specifies the **Ratio** as a percent value. The ratio value should be between 200 and 300 in the form*nnn*. For example, 200 represents a ratio of 2 to 1; 250 represents a ratio of 2.5 to 1. For bar code types that explicitly specify the module width (for example, POSTNET and RM4SCC, this field is ignored. If RATIO is not specified, the default ratio for the bar code symbol is used.

Note

- Many barcode types do not support Ratio values or if they do, the Ratio values are in certain ranges that are type-specific.

This example uses both the **Ratio** and **ModWidth** optional keywords:

```
BarCode=BC_CD39 Type=001 Mode=001 Flag=128 Ratio=200 ModWidth=10
```

Note

- The system administrator is responsible for the values entered in the table. Incorrect values are not verified and might result in errors.
- The second group of bar codes in the `barcode.tab` file (following the blank line) is supported from R/3 Release 3.0A only.
- Although 2D barcode support has been added to InfoPrint Manager, the system administrator needs to update the `barcode.tab` with the information for 2D barcode for users who need to use them.

The next figure shows a sample `barcode.tab` configuration file.

Sample barcode.tab configuration file

```
// Barcode table

// Format : Barcode=ARTNR Type=017 Mode=002

//BarCode = 30F9      Type = 001 Mode = 001 Flag = 000
//BarCode = 30F91     Type = 001 Mode = 002 Flag = 000
//BarCode = MSI       Type = 002 Mode = 002 Flag = 000
//BarCode = UPCA      Type = 003 Mode = 000 Flag = 000
//BarCode = UPCE      Type = 005 Mode = 000 Flag = 000
//BarCode = UPC2      Type = 006 Mode = 000 Flag = 000
//BarCode = UPC5      Type = 007 Mode = 000 Flag = 000
//BarCode = EAN8      Type = 008 Mode = 000 Flag = 000
//BarCode = EAN13     Type = 009 Mode = 000 Flag = 000
//BarCode = IND25     Type = 010 Mode = 002 Flag = 000
//BarCode = MAT25     Type = 011 Mode = 002 Flag = 000
//BarCode = INTER     Type = 012 Mode = 002 Flag = 000
//BarCode = CODA      Type = 013 Mode = 002 Flag = 000
//BarCode = C128      Type = 017 Mode = 002 Flag = 000
//BarCode = EAN2      Type = 022 Mode = 000 Flag = 000
//BarCode = EAN5      Type = 023 Mode = 000 Flag = 000
//BarCode = POST      Type = 024 Mode = 002 Flag = 000
//BarCode = AUFNR     Type = 001 Mode = 001 Flag = 128

BarCode = ARTNR     Type = 017 Mode = 002 Flag = 000
BarCode = AUFNR     Type = 017 Mode = 002 Flag = 000
BarCode = BARCLVS   Type = 001 Mode = 001 Flag = 000

BarCode = BC_C128B Type = 017 Mode = 002 Flag = 128
BarCode = BC_CD39  Type = 001 Mode = 001 Flag = 128
```

```
BarCode = BC_CD39C Type = 001 Mode = 002 Flag = 128
BarCode = BC_EAN13 Type = 009 Mode = 000 Flag = 128
BarCode = BC_EAN8  Type = 008 Mode = 000 Flag = 128
BarCode = BC_I25   Type = 012 Mode = 001 Flag = 128
BarCode = BC_I25C  Type = 012 Mode = 002 Flag = 128
BarCode = BC_MSI   Type = 002 Mode = 001 Flag = 128
BarCode = BC_MSIC  Type = 002 Mode = 002 Flag = 128
BarCode = BC_MSIC1 Type = 002 Mode = 003 Flag = 128
BarCode = BC_MSIC2 Type = 002 Mode = 005 Flag = 128

BarCode = KUNAUNR  Type = 017 Mode = 002 Flag = 000
BarCode = KUNAUPS  Type = 017 Mode = 002 Flag = 000
BarCode = MBBARC   Type = 017 Mode = 002 Flag = 000
BarCode = MBBARC1  Type = 008 Mode = 000 Flag = 000
BarCode = RSNUM    Type = 017 Mode = 002 Flag = 000
BarCode = RSPOS    Type = 017 Mode = 002 Flag = 000
BarCode = RUECKNR  Type = 017 Mode = 002 Flag = 000
```


defcp.tab configuration file

The next figure shows the default conversion table for the conversion of ASCII characters into EBCDIC. The **sap2afp** transform uses this table for ABAP data conversion.

The left column consists of the ASCII code, while the right column contains the corresponding EBCDIC value. The values are checked for a decimal numeric value between 0 and 255.

Sample defcp.tab configuration file

```
// Linedata CodePage
//--------------------------------------------------
// This file is used internally by sap2afp, as well as
// to convert ABAP data to linedata.

// Format : Ascii=Ebcdic

// T1000819 + box characters -> T1DABASE

000 = 064
001 = 064
002 = 064
⋮
253 = 064
254 = 062
255 = 223
```

defcp.tab.unicode configuration file

This file is used for processing ABAP files in a Unicode environment. Its structure is the same as the `defcp.tab` file with the addition of the Unicode conversion directives.

defcp.tab.japan configuration file

This file is used for processing ASCII-encoded ABAP files containing Japanese characters in a non-Unicode environment. The structure of the file is the same as the `defcp.tab` file with the addition of some conversion directives.

defcp.tab.korea configuration file

This file is used for processing ASCII-encoded ABAP files containing Korean characters in a non-Unicode environment. The structure of the file is the same as the `defcp.tab` file with the addition of some conversion directives.

defcp.tab.spchinese configuration file

This file is used for processing ASCII-encoded ABAP files containing Simplified Chinese characters in a non-Unicode environment. The structure of the file is the same as the `defcp.tab` file with the addition of some conversion directives.

defcp.tab.tdchinese configuration file

This file is used for processing ASCII-encoded ABAP files containing Traditional Chinese characters in a non-Unicode environment. The structure of the file is the same as the `defcp.tab` file with the addition of some conversion directives.

defcp.tab.cyr configuration file

This file is used for processing ASCII-encoded ABAP files containing Cyrillic characters in a non-Unicode environment. The structure of the file is the same as the `defcp.tab` file with the addition of some conversion directives.

fonts.tab configuration file

This table maps the fonts used in the OTF data stream to AFP fonts in a non-Unicode environment.

There are predefined mappings for these font families:
FONTFAMILY
Font

COURIER

Courier

HELVE

Helvetica

TIMES

Times New Roman

LETGOTH

Letter Gothic

LNPRINT

Line Print

OCRA

Optical Character Recognition A

OCRB

Optical Character Recognition B

JPMINCHO

Japanese Heisei Mincho

DBMINCHO

Japanese Heisei Mincho

DBGOTHIC

Japanese Heisei Gothic

KPSAMMUL

Korean

CNSONG

Simplified Chinese Song

CNHEI

Simplified Chinese Hei

CNKAI

Simplified Chinese Kai

TWSONG

Traditional Chinese Sung

COURCYR

Courier Cyrillic

HELVCYR

Helvetica Cyrillic

TIMECYR

Times New Roman Cyrillic

Note

- **JPMINCHO** and **DBMINCHO** are different names for the same font.

A font named **BARCODE** must be defined for the **HRI** character of a bar code. The predefined mappings for the font families specified do not refer to all possible font sizes.

These parameters in the `fonts.tab` configuration file set the format of the fonts you use to print:

DefCodePage

Specifies the default SBCS code page used if no **FC** OTF command is given or if the requested font is not found in the `fonts.tab` table.

DefCharSet

Specifies the default SBCS character set used if no **FC** OTF command is given or if the requested font is not found in the `fonts.tab` table.

DBDefCodePage

Specifies the default DBCS code page used if no **FC** OTF command is given or if the requested font is not found in the `fonts.tab` table.

DBDefCharSet

Specifies the default DBCS character set used if no **FC** OTF command is given or if the requested font is not found in the `fonts.tab` table.

SBDefCodePage

Specifies the default SBCS code page used for half-width characters in DBCS fonts if no **FC** OTF command is given or if the requested font is not found in the `fonts.tab` table.

SBDefCharSet

Specifies the default SBCS character set used for half-width characters in DBCS fonts if no **FC** OTF command is given or if the requested font is not found in the `fonts.tab` table.

Font

Describes the font family (**FONTFAMILY** parameter of the **FC** OTF command). The maximum size is 8 bytes and content is not verified.

Size

Specifies the font size in 1/10 of a point (**FONT SIZE** parameter of the **FC** OTF command). The value must be numeric and is not verified.

Type

Defines the font type (**BOLD** and **ITALIC** parameter of the **FC** OTF command). **Type=0** is normal, **Type=1** is italic, **Type=2** is bold, and **Type=3** is italic bold. Any other value is not valid.

CodePage

Specifies the code page and requires a valid AFP code page name (8 bytes). The value is not verified. An incorrect name can result in an error message.

CharSet

Specifies the AFP font character set. The content is not verified.

CodedFont

Specifies the AFP coded font. The content is not verified.

DB

Specifies whether the font is an SBCS font (**DB=0**) or a DBCS font (**DB=1**).

SBCodePage

Specifies the single-byte code page used for half-width characters in DBCS fonts. The value is not verified. An incorrect name can result in an error message.

SBCharSet

Specifies the AFP single-byte font character set used for half-width characters in DBCS fonts. The content is not verified.

SBCodedFont

Specifies the AFP single-byte coded font used for half-width characters in DBCS fonts. The content is not verified.

If an SBCS font that matches the **Font**, **Size** and **Type** values is not found, the code page and font character set from the **DefCodePage** and **DefCharSet** keywords are used and a warning message is displayed. If a DBCS font that matches the **Font**, **Size** and **Type** values is not found, the code pages and font character sets from the **DBDefCodePage**, **SBDefCodePage**, **DBDefCharSet**, and **SBDefCharSet** keywords are used and a warning message is displayed.

ISO 8859-1 (Latin-1) is the default code page that maps to the **1148** code page in the **fonts.tab** configuration table. This ISO code page maps to the German **T1V10273** code page and must be modified for non-Latin-1 installations. You can make this change on the *xxxxyyyy*`.tab` configuration file that is used to convert data from ASCII data to EBCDIC data so that these characters are mapped correctly.

Use the font Letter Gothic Latin1 of the coordinated font family for ABAP listings. If you do not want to install the coordinated font family and plan to use the traditional Gothic text fonts found in the IBM Compatibility Fonts, you can adjust the font names in the `pagedef.tab` configuration file.

If you wish to use fonts that are not supported, take these steps:

1. Obtain the font as Adobe Type 1.
2. Convert the font into a raster using the Type Transformer that can be downloaded from the IBM website for no-charge, unsupported use at http://www-01.ibm.com/support/docview.wss?uid=psd1P4000840.
3. Contact your Ricoh representative for further details.

The next two figures show examples of sections of the `fonts.tab` configuration file.

Header and Courier portions of a sample fonts.tab configuration file

```
// Fonts table

// Format :
// Font=COURIER Size=070 Type=0 CodePage=T1V10273 CharSet=C0420070 DB=0
// or
// Font=COURIER Size=090 Type=0 CodedFont=X0GT2A DB=0
// or
// Font=JPMINCHO Size=060 Type=0 CodePage=T10300 CharSet=CZJHMN DB=1 \
//                               SBCodePage=T1H01027 SBCharSet=CZJHMN
// or
// Font=JPMINCHO Size=060 Type=0 CodedFont=XZJHMN DB=1 \
//                                  SBCodedFont=XZN16J
```

```
DefCodePage = T1V10273
DefCharSet  = C0420000
DBDefCodePage = T10300
DBDefCharSet  = CZJHMN
SBDefCodePage = T1H01027
SBDefCharSet  = CZJHMN

// Courier
Font=COURIER  Size=070 Type=0 CodePage=T1V10273 CharSet=C0420070 DB=0
Font=COURIER  Size=070 Type=1 CodePage=T1V10273 CharSet=C0430070 DB=0
Font=COURIER  Size=070 Type=2 CodePage=T1V10273 CharSet=C0440070 DB=0
Font=COURIER  Size=070 Type=3 CodePage=T1V10273 CharSet=C0450070 DB=0
Font=COURIER  Size=080 Type=0 CodePage=T1V10273 CharSet=C0420080 DB=0
Font=COURIER  Size=080 Type=1 CodePage=T1V10273 CharSet=C0430080 DB=0
Font=COURIER  Size=080 Type=2 CodePage=T1V10273 CharSet=C0440080 DB=0
Font=COURIER  Size=080 Type=3 CodePage=T1V10273 CharSet=C0450080 DB=0
Font=COURIER  Size=100 Type=0 CodePage=T1V10273 CharSet=C0420000 DB=0
```

```
Font=COURIER  Size=100 Type=1 CodePage=T1V10273 CharSet=C0430000 DB=0
Font=COURIER  Size=100 Type=2 CodePage=T1V10273 CharSet=C0440000 DB=0
Font=COURIER  Size=100 Type=3 CodePage=T1V10273 CharSet=C0450000 DB=0
Font=COURIER  Size=120 Type=0 CodePage=T1V10273 CharSet=C04200B0 DB=0
Font=COURIER  Size=120 Type=1 CodePage=T1V10273 CharSet=C04300B0 DB=0
Font=COURIER  Size=120 Type=2 CodePage=T1V10273 CharSet=C04400B0 DB=0
Font=COURIER  Size=120 Type=3 CodePage=T1V10273 CharSet=C04500B0 DB=0
Font=COURIER  Size=140 Type=0 CodePage=T1V10273 CharSet=C04200D0 DB=0
Font=COURIER  Size=140 Type=1 CodePage=T1V10273 CharSet=C04300D0 DB=0
Font=COURIER  Size=140 Type=2 CodePage=T1V10273 CharSet=C04400D0 DB=0
Font=COURIER  Size=140 Type=3 CodePage=T1V10273 CharSet=C04500D0 DB=0
Font=COURIER  Size=200 Type=0 CodePage=T1V10273 CharSet=C04200J0 DB=0
Font=COURIER  Size=200 Type=1 CodePage=T1V10273 CharSet=C04300J0 DB=0
Font=COURIER  Size=200 Type=2 CodePage=T1V10273 CharSet=C04400J0 DB=0
Font=COURIER  Size=200 Type=3 CodePage=T1V10273 CharSet=C04500J0 DB=0
```

Heisei Gothic portion of a sample fonts.tab configuration file

```
// Japanese Gothic
```

```
Font=DBGOTHIC  Size=060 Type=0 CodePage=T10300 CharSet=CZJHKG DB=1 SBCodePage=T1H01027 SBC
Font=DBGOTHIC  Size=080 Type=0 CodePage=T10300 CharSet=CZJHKG DB=1 SBCodePage=T1H01027 SBC
Font=DBGOTHIC  Size=100 Type=0 CodePage=T10300 CharSet=CZJHKG DB=1 SBCodePage=T1H01027 SBC
Font=DBGOTHIC  Size=100 Type=1 CodePage=T10300 CharSet=CZJHKG DB=1 SBCodePage=T1H01027 SBC
Font=DBGOTHIC  Size=120 Type=0 CodePage=T10300 CharSet=CZJHKG DB=1 SBCodePage=T1H01027 SBC
Font=DBGOTHIC  Size=140 Type=0 CodePage=T10300 CharSet=CZJHKG DB=1 SBCodePage=T1H01027 SBC
Font=DBGOTHIC  Size=160 Type=0 CodePage=T10300 CharSet=CZJHKG DB=1 SBCodePage=T1H01027 SBC
Font=DBGOTHIC  Size=180 Type=0 CodePage=T10300 CharSet=CZJHKG DB=1 SBCodePage=T1H01027 SBC
```

fonts.tab.unicode configuration file

The `fonts.tab.unicode` file is used for processing **OTF** files in a Unicode environment. The structure of the file is the same as the `fonts.tab` file.

image.tab configuration file

This table defines values used to print image data. It contains these parameters:

DEFRES

Specifies the default resolution used for printing image data if you do not specify a value for the **-r** flag of the **sap2afp** command. Valid values are **240**, **300**, **360**, **480**, **600**, and **720**.

Width

Specifies the width of the dither matrix.

Height

Specifies the height of the dither matrix.

Cell

Specifies the values for the dither matrix.

Transform

Specifies 256 grayscale correction values.

The next figure shows an example of the `image.tab` configuration file.

Sample image.tab configuration file

```
// image.tab
// from image.tab.85lr
//
// This file is used to determine the dither matrix and the
// grayscale correction values.

// Define the default output resolution
DEFRES = 600

// Define the dither matrix
Width = 78
Height = 78
Cell =
 15  63 184 219 249 240 158 109  98  54  82 118 133 113  75  64
 87 104 166 215 234 229 179  62  38   4  15  59 186 220 246 240
166 123  87  61  65 108 133 118  78  64 100 105 167 219 234 230
⋮
 28  73 193 223 253 247 199  76  31   8  20  93 148 156 203 178
136 126 144 186 201 155 151  90  43  24  28  75 199 222 254 251
196  79  31   7

//
// Grayscale correction values
//

Transform =
0
1
2
⋮
248
252
255
```

fonts.tab.unicode.truetype configuration file

The `fonts.tab.unicode.truetype` file is used for specifying TrueType fonts to be used for **OTF** files in a Unicode environment. The structure of the file is similar as the `fonts.tab` file except for more additional parameters.

These additional parameters in the `fonts.tab.unicode.truetype` configuration file set the names and paths of the fonts you use to print:

DefFullFilePath

Specifies the default path for the font location. Specify only full paths.

FullFilePath

Specifies the path where the font is located. Specify only full paths.

LinkFontPaths

Specifies the linked fonts for the corresponding base font that was specified using **FullFilePath**. If the default font does not contain a certain character, that character is then searched in the fonts specified as linked fonts. You are allowed to enter multiple paths separated by semicolon (Windows) or colon (AIX). The linking order is the order you entered the linked fonts paths. This parameter is optional and may be entered only after the **FullFilePath** column. Specify only full paths.

DefFullFontName

Specifies the default full font name.

FullFontName

Specifies the font full name.

When the Full Font Name is specified, it is assumed that a Resource Access Table (RAT) is present for printing the resulted AFP file. Therefore, the TrueType/OpenType fonts are not embedded into the AFP file.

When the full path to the TrueType/OpenType font file is specified, it is assumed that there is no Resource Access Table (RAT) present at printing time. As result, the TrueType fonts are embedded into the AFP file.

Samples of the `fonts.tab.unicode.truetype` files.

Sample of the fonts.tab.unicode.truetype file without RAT present

```
DefFullFilePath = "/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"

// Courier
Font=COURIER  Size=070 Type=0
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf" \
LinkFontPaths="/usr/lpp/fonts/linkfntn.ttf:/usr/lpp/fonts/linkfntn2.ttf"
Font=COURIER  Size=070 Type=1
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=070 Type=2
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=070 Type=3
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=080 Type=0
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=080 Type=1
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=080 Type=2
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=080 Type=3
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=100 Type=0
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=100 Type=1
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=100 Type=2
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=100 Type=3
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=120 Type=0
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=120 Type=1
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=120 Type=2
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=120 Type=3
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=140 Type=0
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=140 Type=1
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=140 Type=2
```

```
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=140 Type=3
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=200 Type=0
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=200 Type=1
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=200 Type=2
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
Font=COURIER  Size=200 Type=3
FullFilePath="/usr/lpp/fonts/worldtype/v7.1/printer/wt_dw___.ttf"
```


Sample of the fonts.tab.unicode.truetype file with RAT present

```
DefFullFontName = "WT Serif Duo"

// Courier
Font=COURIER  Size=070 Type=0 FullFontName="WT Serif Duo"
Font=COURIER  Size=070 Type=1 FullFontName="WT Serif Duo"
Font=COURIER  Size=070 Type=2 FullFontName="WT Serif Duo"
Font=COURIER  Size=070 Type=3 FullFontName="WT Serif Duo"
Font=COURIER  Size=080 Type=0 FullFontName="WT Serif Duo"
Font=COURIER  Size=080 Type=1 FullFontName="WT Serif Duo"
Font=COURIER  Size=080 Type=2 FullFontName="WT Serif Duo"
Font=COURIER  Size=080 Type=3 FullFontName="WT Serif Duo"
Font=COURIER  Size=100 Type=0 FullFontName="WT Serif Duo"
Font=COURIER  Size=100 Type=1 FullFontName="WT Serif Duo"
Font=COURIER  Size=100 Type=2 FullFontName="WT Serif Duo"
Font=COURIER  Size=100 Type=3 FullFontName="WT Serif Duo"
Font=COURIER  Size=120 Type=0 FullFontName="WT Serif Duo"
Font=COURIER  Size=120 Type=1 FullFontName="WT Serif Duo"
Font=COURIER  Size=120 Type=2 FullFontName="WT Serif Duo"
Font=COURIER  Size=120 Type=3 FullFontName="WT Serif Duo"
Font=COURIER  Size=140 Type=0 FullFontName="WT Serif Duo"
Font=COURIER  Size=140 Type=1 FullFontName="WT Serif Duo"
Font=COURIER  Size=140 Type=2 FullFontName="WT Serif Duo"
Font=COURIER  Size=140 Type=3 FullFontName="WT Serif Duo"
Font=COURIER  Size=200 Type=0 FullFontName="WT Serif Duo"
Font=COURIER  Size=200 Type=1 FullFontName="WT Serif Duo"
Font=COURIER  Size=200 Type=2 FullFontName="WT Serif Duo"
Font=COURIER  Size=200 Type=3 FullFontName="WT Serif Duo"
```

pagedef.tab configuration file

The pagedef table provides the **PAGEDEF** and **FORMDEF** values used from the value of the ***PJPAPER** or ***PJFORM** (depending on the version of SAP used) parameter that is passed to the sap2afp transform with any access method that can submit SAPGOF to sap2afp, including the **E** or **L** access method. It also provides the fonts used for ABAP data.

The name of a **PAGEDEF** for line data is restricted to five digits instead of the usual six characters. The reason for this restriction is that the **PJPAPER** field is twelve bytes long and **must** begin with a **Z**. This restriction applies to ABAP reports (line data) with user-specific formatting only.

Paper

Specifies the value of the OTF print option parameter **PJPAPER**. The value is not verified.

FormDef

Specifies the name of the form definition to be used for printing both OTF and ABAP reports. This value is not verified. An error results if the form definition is not found on the print server system.

PageDef

Specifies the name of the page definition to be used for printing ABAP reports. This value is not verified. An error results if the page definition is not found on the print server system.

FontNorm

Specifies the normal coded font used for line data printing. The value is not verified.

FontBold

Specifies the bold coded font used for line data printing. The value is not verified.

The next figure shows a sample `pagedef.tab` configuration file:

Sample pagedef.tab configuration file

```
// PageDef table
// Format : Paper=X_65_132 FormDef=F1A10111 PageDef=P1H01SP1
// FontNorm = 50D0 FontBold = 50F0

// Notes:
// ======
// 1) The pagedefs apply to letter size paper.
//    A4 paper size might require modifying the PageDef field.
// 2) Z_INCH12 is a sample for a user specification
```

```
Paper=X_65_132 FormDef=F1A10111 PageDef=P1V06683 FontNorm = GB2A \
                                                 FontBold = GB2A
Paper=X_44_120 FormDef=F1A10111 PageDef=P1V06683 FontNorm = GB2A \
                                                 FontBold = GB2A
Paper=X_58_170 FormDef=F1A10111 PageDef=P1V06683 FontNorm = GT8A \
                                                 FontBold = GT8A
Paper=X_65_255 FormDef=F1A10111 PageDef=P1V06683 FontNorm = GT24 \
                                                 FontBold = GT24
Paper=X_65_80  FormDef=F1A10111 PageDef=P1C09182 FontNorm = GT2A \
                                                 FontBold = GB2A
Paper=X_90_120 FormDef=F1A10111 PageDef=P1C09182 FontNorm = GT5A \
                                                 FontBold = GT5A
Paper=X_PAPER  FormDef=F1A10111 PageDef=P1C09182 FontNorm = GT2A \
                                                 FontBold = GB2A
// Sample of an added user-defined pagedef entry:
// Paper=Z_INCH12 FormDef=F1SAPFD  PageDef=P1SAPPD  FontNorm = GT2A \
//                                                  FontBold = GB2A
```

pagedef.tab.unicode configuration file

The `pagedef.tab.unicode` file is used for processing the **ABAP** and **OTF** files in Unicode environment. The structure is the same as the `pagedef.tab` file.

The two new page definitions mapping the Courier Unicode font are used by default. If you need to process **ABAP** files containing CJK characters, specify the names of the corresponding Unicode page definitions for Japanese, Simplified Chinese, Traditional Chinese, or Korean in the `pagedef.tab.unicode` configuration file.

If you have your own custom page definitions that you want to use for Unicode processing, modify your sources to include mappings and associations for the needed Unicode fonts and recompile them.

Specify the name of the custom page definition either in the `pagedef.tab.unicode` configuration file or with the `-pagedef` parameter to **sap2afp**.

pagedef.tab.unicode.truetype configuration file

The `pagedef.tab.unicode.truetype` file is used for specifying the form definitions to be used with TrueType for **ABAP** and **OTF** input files, and page definitions to be used with TrueType for **ABAP** files, in Unicode environment. The structure is similar with the `pagedef.tab` file except for more additional parameters.

TTF_PATH

Specifies the path where the TrueType fonts are located. You are allowed to enter multiple paths separated by semicolon (Windows) or colon (AIX).

TTFembedNorm

Specifies the file name of the embedded TrueType normal font used for line data printing. This column must be used when no Resource Access Table (RAT) is present. You may enter both full and relative paths. The relative paths are based on the path specified on **TTF_PATH** and if not found, the search continues in the default `/reslib` and `/fontlib` folders.

TTFembedBold

Specifies the file name of the embedded TrueType bold font used for line data printing. This column must be used when no Resource Access Table (RAT) is present. You may enter both full and relative paths. The relative paths are based on the path specified on **TTF_PATH** and if not found, the search continues in the default `/reslib` and `/fontlib` folders.

TTFlinksNorm

Specifies the linked fonts for the corresponding embedded TrueType normal font. You are allowed to enter multiple paths separated by semicolon (Windows) or colon (AIX). The linking order is the order you entered the linked fonts paths. This parameter is optional and may be used only when **TTFembedNorm** is present. You may enter both full and relative paths. The relative paths are based on the path specified on **TTF_PATH** and if not found, the search continues in the default `/reslib` and `/fontlib` folders.

TTFlinksBold

Specifies the linked fonts for the corresponding embedded TrueType bold font. You are allowed to enter multiple paths separated by semicolon (Windows) or colon (AIX). The linking order is the order you entered the linked fonts paths. This parameter is optional may be used only when **TTFembedBold** is present. You may enter both full and relative paths. The relative paths are based on the path specified on **TTF_PATH** and if not found, the search continues in the default `/reslib` and `/fontlib` folders.

Sample of the pagedef.tab.unicode.truetype file without RAT present

```
// WARNING: Please specify here the path to the TrueType or
OpenType fonts!
TTF_PATH="/usr/lpp/fonts/worldtype/v7.1/printer/"

// ABAP Formats; FontNorm and FontBold are ignored in this table,
// because they are set in the corresponding unicode pagedef.
Paper=X_65_132 FormDef=F1SAP PageDef=P1UTT683 FontNorm=xxxx
FontBold=yyyy
TTFembedNorm="wt_dw___.ttf" TTFembedBold="wtsdw___.ttf"
```

```
Paper=X_44_120 FormDef=F1SAP PageDef=P1UTT683 FontNorm=xxxx
FontBold=yyyy
TTFembedNorm="wt_dw___.ttf" TTFembedBold="wtsdw___.ttf"
Paper=X_58_170 FormDef=F1SAP PageDef=P1UTT683 FontNorm=xxxx
FontBold=yyyy
TTFembedNorm="wt_dw___.ttf" TTFembedBold="wtsdw___.ttf"
Paper=X_65_255 FormDef=F1SAP PageDef=P1UTT683 FontNorm=xxxx
FontBold=yyyy
TTFembedNorm="wt_dw___.ttf" TTFembedBold="wtsdw___.ttf"
Paper=X_65_80  FormDef=F1SAP PageDef=P1UTT182 FontNorm=xxxx
FontBold=yyyy
TTFembedNorm="wt_dw___.ttf" TTFembedBold="wtsdw___.ttf"
Paper=X_90_120 FormDef=F1SAP PageDef=P1UTT182 FontNorm=xxxx
FontBold=yyyy
TTFembedNorm="wt_dw___.ttf" TTFembedBold="wtsdw___.ttf"
Paper=X_PAPER  FormDef=F1SAP PageDef=P1UTT182 FontNorm=xxxx
FontBold=yyyy
TTFembedNorm="wt_dw___.ttf" TTFembedBold="wtsdw___.ttf"
```

Sample of the pagedef.tab.unicode.truetype file with RAT present

```
TTF_PATH=""

// ABAP Formats; FontNorm and FontBold are ignored in this table,
// because they are set in the corresponding unicode pagedef.
Paper=X_65_132 FormDef=F1SAP PageDef=P1UTT683 FontNorm=xxxx
FontBold=yyyy
Paper=X_44_120 FormDef=F1SAP PageDef=P1UTT683 FontNorm=xxxx
FontBold=yyyy
Paper=X_58_170 FormDef=F1SAP PageDef=P1UTT683 FontNorm=xxxx
FontBold=yyyy
Paper=X_65_255 FormDef=F1SAP PageDef=P1UTT683 FontNorm=xxxx
FontBold=yyyy
Paper=X_65_80  FormDef=F1SAP PageDef=P1UTT182 FontNorm=xxxx
FontBold=yyyy
Paper=X_90_120 FormDef=F1SAP PageDef=P1UTT182 FontNorm=xxxx
FontBold=yyyy
Paper=X_PAPER  FormDef=F1SAP PageDef=P1UTT182 FontNorm=xxxx
FontBold=yyyy
```

pagedef.tab.japan configuration file

This file is used for processing ASCII-encoded ABAP files containing Japanese characters in a non-Unicode environment. The file structure is the same as the `pagedef.tab` file.

pagedef.tab.korea configuration file

This file is used for processing ASCII-encoded ABAP files containing Korean characters in a non-Unicode environment. The file structure is the same as the `pagedef.tab` file.

pagedef.tab.spchinese configuration file

This file is used for processing ASCII-encoded ABAP files containing Simplified Chinese characters in a non-Unicode environment. The file structure is the same as the `pagedef.tab` file.

pagedef.tab.tdchinese configuration file

This file is used for processing ASCII-encoded ABAP files containing Traditional Chinese characters in a non-Unicode environment. The file structure is the same as the `pagedef.tab` file.

pagedef.tab.cyr configuration file

This file is used for processing ASCII-encoded ABAP files containing Cyrillic characters in a non-Unicode environment. The file structure is the same as the `pagedef.tab` file.

userenv configuration file

The `userenv` configuration file is used to specify the environment for the ASCII-encoded **ABAP** files. The configuration file may contain one of these values:

NORMAL - specifies European non-Unicode environment. The `defcp.tab` and `pagedef.tab` files are used.

JAPANESE - specifies Japanese non-Unicode environment. The `defcp.tab.japan` and `pagedef.tab.japan` files are used.

KOREAN - specifies Korean non-Unicode environment. The `defcp.tab.korea` and `pagedef.tab.korea` files are used.

SPCHINESE - specifies Simplified Chinese non-Unicode environment. The `defcp.tab.spchinese` and `pagedef.tab.spchinese` files are used.

TDCHINESE - specifies Traditional Chinese non-Unicode environment. The `defcp.tab.tdchinese` and `pagedef.tab.tdchinese` files are used.

CYRILLIC - specifies Cyrillic non-Unicode environment. The `defcp.tab.cyr` and `pagedef.tab.cyr` files are used.

UNICODE - specifies Unicode environment. The `defcp.tab.unicode` and `pagedef.tab.unicode` files are used. If the -truetype flag is specified, then the `pagedef.tab.unicode.truetype` is selected as the pagedef table file.

xxxxyyyy.tab configuration file

These tables are used for the mapping of characters of an individual SAP ASCII code page into an EBCDIC codepage. SAP uses two kinds of code pages: input code pages and output code pages.

SAP provides the the code page configuration files listed in the next figure.

SAP code page configuration files

File Name	*Input Code Page*	*Description*	*Output Code Page*	*Description*
00000000.tab	T1000819	Latin-1 ISO ANSI 8-bit	T1V10273	Germany F.R./ Austria-CECP
11000000.tab	T1000819	Latin-1 ISO ANSI 8-bit	T1V10273	Germany F.R./ Austria-CECP
15000000.tab	T1000915	Cyrillic ISO 8859/5	T1001172	Cyrillic Multilingual with Box Draw
40010000.tab	T1000876 [1]	OCR-A ASCII	T1000892	OCR-A
40040000.tab	T1000877 [1]	OCR-B ASCII	T1000893	OCR-B

File Name	*Input Code Page*	*Description*	*Output Code Page*	*Description*
80000000.tab	IBM-943C	Japanese ISO Shift-JIS	IBM-1399-SAP2AFP	Japanese
83000000.tab	IBM-950	Traditional Chinese ISO Big5	IBM-937-SAP2AFP	Traditional Chinese
84000000.tab	IBM-1386	Simplified Chinese ISO GB2312	IBM-1388-SAP2AFP	Simplified Chinese
85000000.tab	IBM-970	Korean ISO KSC 5601	IBM-933-SAP2AFP	Korean

1. Both the OCR-A and the OCR-B code pages are equivalent to ISO-8859/1 with the special characters **hook**, **fork**, and **chair**.

The file names correspond to the 4-digit value of the **INPUTCODEPAGE** plus the 4-digit value **OUTPUTCODEPAGE** parameter of the **CP** OTF command.

Sample xxxxyyyy.tab configuration file (single-byte code pages)

```
// Codepage table

// Inp CodePage 0000
// Out CodePage 0000

// Format : Ascii=Ebcdic

000 = 000
001 = 001
002 = 002
003 = 003
⋮
253 = 064
254 = 062
255 = 223
```

Sample xxxxyyyy.tab configuration file (Double-Byte Code Pages)

```
// Japanese
// SAP2AFP is configured to use IBM-943C-SAP2AFP as the uconv
// "From" value.
// This table sets the "To" value to IBM-1399-SAP2AFP.
//

CONVERT FOR=8000
CONVERT TO=IBM-1399-SAP2AFP
```

tiff2afp command: transforms TIFF data to AFP

Syntax

tiff2afp [**-a** *ImageType*] [**-alg** *ProcessingAlgorithms*]
[**-calib** *calibration*] [**-choice** *ImageChoice*]
[**-C** *ConfigurationFile*] [**-clean** *cleanup*]
[**-cmp** *compression*] [**-cmrpath** *searchPath*[,*searchPath*...]
[**-cmrpath** *searchPath*[,*searchPath*]...]]
[**-crop** *CropFactors*] [**-devmodel** *model*] [**-devtype** *type*]
[**-f** *FileList*] [**-fit** {**trim** | **scale**}]
[**-force**] [**-gcorr** *FileName*]
[**-icmr** *colorResourceName*[,*colorResourceName*...]
[**-icmr** *colorResourceName*[,*colorResourceName*]...]]
[**-ink** {**black** | **white**}] [**-inline** {*yes* | *no*}]
[**-intent** {*relative* | *perceptual* | *saturation* | *absolute*}]
[**-inv**]
[**-is** 1|3] [**-j** *ScanOffsetFileName*] [**-l** *ImageLength*] [**-lut** *LookupTable*]
[**-M** *MemoryBound*] [**-mp** | **-nomp**]
[**-ms** *space*] [**-msf** *SpaceFraction*]
[**-o** *FileName*] [**-ocmr** *colorResourceName*]
[**-otag** {*none* | *normal* | *passthru*}]
[**-outbits** *NumberOfOutputBits*]
[**-outcolor** *OutputColorModel*] [**-P 6986**] [**-p** *PageRange*]
[**-pagetype** *PageType*] [**-paper** *PaperSize*]
[**-r** *resolution*] [**-respath** *ResourceSearchPath*]
[**-rot** *rotation*] [**-S {*Servername* | none**}]
[**-scale** *ImageSize*]
[**-sgcorr** *ScannerCorrection*]
[**-sniff** | **-nosniff**] [**-term** | **-noterm**]
[**-thresh** *FileName*] [**-v** | **-nov**]
[**-w** *ImageWidth*] [**-wrkdir** *WorkDirectory*]
[**-x** *LeftMargin*] [**-y** *TopMargin*] [**-z**]
[[*file* | *directory* | **-f** *FileList* | **@***FileList*]**...**]

Description

The **tiff2afp** command transforms a TIFF (Tag Image Format File) data stream into an AFP (MO:DCA-P) or PostScript Level 2 data stream file.

The transform can process extended TIFF Revision 6.0 images, including bi-level, gray scale and color images. The output can be bi-level (IM1 or IOCA FS10), 4-bit or 8-bit gray scale, or 24-bit YCbCr color (IOCA FS11), bi-level or 4-bit banded CMYK image at 1-bit per band (IOCA FS42), or a superset of FS42 that also contains 32–bit banded CMYK images, compressed with either JPEG or LZW algorithms (IOCA FS45). The transform automatically uses halftoning to convert the gray scale and color images to bi-level.

For more information about the **tiff2afp** transform, see "Working with Transforms" in the *InfoPrint Manager: Procedures* manual that is appropriate for your operating system.

Automatic invocation

The PSF DSS automatically invokes the **tiff2afp** transform command whenever you submit a TIFF file for printing. You can pass options to **tiff2afp** using the **other-transform-options** attribute on the **pdpr** command or the **-o** flag of the AIX print commands or the **lprafp** command. You can also pass options to **tiff2afp** through theInfoPrint Submit Express client of InfoPrint Manager. Parameters that are not supported, such as **-alg**, can be passed in InfoPrint Submit Express by clicking **Advanced** and entering them in the **Transform options** field.

Input and output

tiff2afp can process either standard input or multiple files specified on the command line. If no input file is specified, **stdin** is assumed. Standard input is cached to a file (see the **-wrkdir** option) and then processed. Only a single TIFF file should be submitted using **stdin**. If multiple TIFF files are concatenated using standard input, all except the first one are ignored.

If an input file is specified on the command line, it can be either a TIFF file, a directory, or a file list (**-f** and **@** prefixes). Multiple input file specifications are allowed. The transform processes each file in the order in which it was specified on the command line. If the **-z** option is specified, a list of file names to be processed is also submitted using standard input. The files on the list are processed as if the list were given using the **-f** option on the same place on the command line as **-z**.

If the file name points to a directory, **tiff2afp** processes every file in that directory. The files are processed in the order they would be shown using the **ls -a** command. Directory search is not recursive, that is, the subdirectories are not searched.

If the file name is preceded by the **-f** option or the at sign (**@**), **tiff2afp** assumes that the file contains the list of TIFF files to be processed. Each of the files in the list is processed in the order it was listed.

If a TIFF file has the extension **.tif**, **.tiff**, **.TIF**, or **.TIFF**, this extension need not be given explicitly. **tiff2afp** first tries to open the file as specified, and if unsuccessful, tries to append the extensions **.tif .tiff**, **.TIF**, and **.TIFF** in turn.

For example, suppose that:

- The directory `tFiles` contains the files `file1.tif`, `file2.tif`, `file3.tif`, and `file4.tif` and nothing else.
- The file `flist` in the current directory contains the two file names `tFiles/file2.tif` and `tFiles/file3.tif`. The names listed in the file list can have their extensions omitted.
- The file `flist2` contains the file name `tFiles/file4`. Again, the names listed in the file list can have their extensions omitted.

To process files `file1.tif`, `file2.tif`, `file3.tif`, and `file4.tif`, any of these invocations of **tiff2afp** would work:

```
tiff2afp tFiles/file1.tif tFiles/file2.tif tFiles/file3.tif
tFiles/file4.tif
tiff2afp tFiles/file1 tFiles/file2 tFiles/file3 tFiles/file4
tiff2afp tFiles/file*.tif
```

```
tiff2afp tFiles
tiff2afp tFiles/file1 -fflist tFiles/file4
tiff2afp tFiles/file1 -f flist tFiles/file4
tiff2afp tFiles/file1 -f flist -f flist2
tiff2afp tFiles/file1 @flist @flist2
```

Note

With InfoPrint Manager for Windows, you can enter separators in path names as backward slashes or forward slashes.

The file list files allow the display text to be added for each file. A display text is any text starting with the pound character (**#**) and extending to the end of the line. The display text should follow the file name, and can extend over several lines, up to 2048 characters long. The initial **#** character on each line is discarded. If a display text is present for a file name, that text is displayed in the status and error messages instead of the file name. This is useful if the **tiff2afp** is invoked using temporary files whose names are meaningless to the user. Any display text before the first file name is treated as comment and discarded. Display text is allowed also if you use the **-z** option to submit the file list via standard input.

TIFF files can contain multiple images. The **tiff2afp** transform can process and output all the images in the file, both full and reduced resolutions, subject to the values given in the **-choice** and **-p** options. Transparency maps are ignored. If the page numbers are available in the TIFF data, the pages are sorted on output. The pages are not sorted across file boundaries.

The output file name can be either specified explicitly using the **-o** option or derived from the input file name. If multiple input files have been specified, the default output file is standard output. If a single input file is given and the output file is not specified explicitly, the transform strips the **.tif** or **.tiff** extension from the input file name (if one is present) and appends the **.afp** extension for AFP output or the **.ps** extension for PostScript output to get the output file name.

To disable automatic output file name generation and force the default output stream to be the standard output in all cases, set the environment variable **TIFF2AFP_o** to **-** or **stdout**, or, alternatively, put the line **o=-** or **o=stdout** into the configuration file and invoke that configuration file using the **-C** option or the **TIFF2AFP_C** environment variable.

For example, all these commands:

```
tiff2afp myfile
tiff2afp myfile.tif
tiff2afp myfile -o myfile.afp
```

have `myfile.afp` as the output file. There is no requirement for the explicitly specified input and output files to have **.tif** and **.afp** extensions. To process TIFF file `foo.bar` into an AFP file `foo.bar2`, invoke the transform using:

```
tiff2afp foo.bar -o foo.bar2
```

The output data stream is MODCA-P or PostScript Level 2. MODCA-P data can be encoded as IM1 or IOCA Function Sets (FS) 10, 11, 42, or 45. IM1 images are bi-level and uncompressed. Function Set 42 is tiled, while Function Sets 10 and 11 are not. All IOCA function sets can contain bi-level image data. In addition, Function Set 11 can also contain 4- and 8-bit grayscale, as well as 24-bit (8 bits per plane) YCbCr color. In addition to bi-level images, Function Set 42 can also contain 4-bit (1 bit per plane) CMYK data. Function Set 45 is a superset of FS42 and supports 32-bit (8 bits per plane) CMYK images, as well as transparency masks and different relative resolutions.

While FS45 and FS42 can contain an image divided into a number of tiles, the transform currently outputs the image in a single tile. The IOCA output image data can be either uncompressed or

compressed using one of several algorithms (see the **-cmp** option). The default compression algorithm for bi-level image data is ITU-TSS T.6 Group 4, while the compression algorithm for grayscale and YCbCr defaults to no compression. CMYK images in FS42 are carried in the planar (banded) format, and each band is compressed separately as a bi-level image.

The default compression for FS45 output is JPEG, which is downsampled by a factor of two. Use **-cmp lzw** to obtain LZW-uncompressed, unsubsampled output.

Note

LZW compression should be used only for linework images and not for continuous tone images.

PostScript Level 2 images can be uncompressed or ITU-T T.6 Group 4 bi-level, uncompressed 8-bit grayscale or uncompressed 24-bit RGB color. By default, the transform leaves scaling and halftoning to the printer (that is, color TIFF images are output as 24-bit RGB color images).

Errors and error recovery

tiff2afp divides errors into fatal and non-fatal. The fatal error categories are:

- Errors in the user-specified parameters, either in the environment variables, the configuration file, or the command line arguments. These errors include unrecognized options, incorrect values for parameters, or inability to open the configuration file or the output file.
- Out of memory errors. The requested memory is larger than the memory specified using the **-M** option or the dynamic memory allocation has failed.
- Disk space errors. The transform guards against trying to write to a full file system. See the **-ms** and **-msf** options for setting the minimum free disk space requirements. If the file system is full, the transform deletes the partial output file before terminating.
- Internal errors.

In the case of a fatal error, the last output page might not be complete.

Errors found in the TIFF files are non-fatal and **tiff2afp** tries to recover from them. These errors include not being able to open an input file, an input file not being a TIFF file, or an input file containing features that cannot be processed. If the transform fails to open 15 or more input files, it assumes an error in the parameter list (for example, **-f** was used with a file that does not contain a file list) and terminates.

If an error is found in a file, the transform tries to recover with the next image in the file. If such recovery is not possible, **tiff2afp** tries to recover with the next input file. In both cases, a warning message is issued. Errors and warnings are output to standard error.

For example, let a directory `tFiles` contain files `file1.tif`, `file1.txt`, `file2.tif` and `file3.tif`, where `file1.txt` is an ASCII file. Invoking the transform with:

```
tiff2afp tFiles
```

processes the bi-level images in all three TIFF files correctly. A warning is issued that `file1.txt` is not a TIFF file.

Non-fatal errors can be made fatal by using the option **-term** or the corresponding environment variable or configuration file entry. If **-term** is set, the transform terminates in error if it encounters an error in the TIFF data stream.

Data transformations

If the input image is gray scale or color, and the output image type is bi-level (for example, IOCA FS10, or IM1), the transform internally scales the image to the desired size, then uses a halftoning algorithm (ordered dither, the default, or Floyd-Steinberg) to convert it to bi-level. In converting the image to bi-level, the characteristics of the output device, such as dot shape and dot gain, must be taken into consideration. The halftone screen and the calibration are extremely printer dependant. While the transform does contain an internal default (85 LPI screen at 45 degrees), an appropriate screen shipped with the InfoPrint Manager should be used and the halftone should be calibrated properly for best quality.

Some printers, such as the InfoPrint 4000, have two engines, one for each side of the sheet. Each engine commonly has a different calibration. Options **-thresh**, **-gcorr**, and **-e** provide the mechanism to specify halftone screen, grayscale correction curves, and rules for switching calibration based on the engine used to print a particular page. For very light or very dark images, the halftoning algorithms can be automatically recalibrated to preserve detail that would be lost using the default calibration. See option **-alg**.

To maintain the image quality, scaling must be done before halftoning. The halftoning algorithm is very compute-intensive. Unless the images are small, **tiff2afp** might not be able to process the color images fast enough to feed even a slow printer.

To achieve good image quality for the CMYK output, the input image colors must be converted to CMYK, bearing in mind the characteristics of the particular halftones used to generate the output image. The color conversion is done using a multidimensional lookup table, which is specified with the **-lut** option. If the transform cannot determine the appropriate lookup table or the lookup table is missing, a simple conversion of RBG to CMY is performed using the 255- algorithm. This conversion does not use black and generally leads to poor color quality.

The size and the position of the output image on the page depends on several factors. In addition to the size specified to the transform, the result depends on the form map specified at print time and also on the form and options loaded in the printer. If the image is too large to fit on the page, it is trimmed to size by default. Use the **-fit** option to instruct the printer to scale the image to paper size. If the paper size has not been specified explicitly with the **–paper** option, the paper defaults to US letter (8.5 by 11 inches). If the image is larger than this, the paper dimensions are increased as necessary. If the paper size has been specified explicitly, it is not increased if the image will not fit on paper. Options **-l** and **-w** have the same effect as **-paper**.

The size of the actual image, as opposed to the paper size, is controlled by the **-scale** option. The **-scale** option can either specify **"orig"**, or give an actual size. If **orig** has been specified, the output image has the same size as the input image. If **-scale** with an actual size has been specified, the output image is scaled to the desired size. A percentage enlargement/reduction can also be specified.

Even if **-scale orig** has been specified, the image might still need to be scaled if the input resolution is different from the output resolution. By default, the transform leaves scaling to the printer. The exceptions are images that are being halftoned, which are always scaled in the transform, and images that have different resolutions on the X and Y directions. The **-alg** option can be used to instruct the transform to do internal image scaling. Options **-alg**, **-clean**, and **-ink** select and configure various scaling algorithms used by the transform.

If possible, **tiff2afp** just rewraps the TIFF raster data in MODCA-P headers. This does not change the compression algorithm used in the data, even though it might be different than the output compression algorithm specified on the command line. The data is rewapped only if no changes are to be made in

the image and if the compression algorithm is supported by the IOCA standard. Besides the uncompressed data, the bi-level compression algorithms supported both by TIFF and IOCA are ITU-TSS T.4 Group 3 and T.6 Group 4 algorithms.

For 8-bit gray scale and 24-bit color images, both TIFF and IOCA FS11 support JPEG compression algorithms. However, TIFF and JPEG standards have different subsampling defaults than IOCA FS11. Thus, most 24-bit color images are not suitable for rewrapping, even if they use a JPEG compression algorithm and a color model supported by IOCA FS11. Also, JPEG is a lossy compression algorithm. Decompressing a JPEG image and then recompressing it again for output might result in reduced image quality. For that reason, the default is to use no compression for the gray or color output.

Be aware that not all the printers support all the recognized IOCA compression standards. To make sure that the transform decompresses the data and recompresses it using the specified algorithm, use the **-force** option. If the output image is IM1, the image is always decompressed and scaled in the transform.

The TIFF images are often divided into many segments for efficient memory handling. Some printers will terminate the printing in error if the page is too complex. For that reason, **tiff2afp** decompresses, repartitions, and compresses the data if it determines there are too many segments in the picture.

Parameters

tiff2afp behavior is governed by many parameters. The parameters are set by this hierarchy (least significant first):

- Internal defaults
- Environment variables
- Configuration file
- Command-line arguments

Command line arguments

- Options and input file names can appear on the command line in any order.
- When you run **tiff2afp** as a standalone transform, the blank between option and value is optional (for example, both `-inkblack` and `-ink black` are valid).
- When you use the **-o** flag of the **enq**, **lp**, **qprt**, or **lprafp** commands to pass options to **tiff2afp**, no blank is permitted between option and value (for example, `-o-inkblack` is valid, but `-o -ink black` is not).
- When you use the **other-transform-options** attribute on the **pdpr** command to pass options to **tiff2afp**, any string containing a blank must be surrounded by single quotes (for example, both `other-transform-options=-inkblack` and `other-transform-options='-ink black'` are valid).
- All values except file names are case-insensitive.
- If an option is specified multiple times, the last specification remains in force.
- If multiple configuration file names are given, they are processed in order.

Configuration file

The configuration file has entries of the form *option=value*, where each pair must be on a separate line. Options and other syntax are the same as for the command line arguments and the option names are the same. Input files and configuration files cannot be specified in the configuration file (that is, nested configuration files are not supported). In the case of options without values (for example, **-inv**), the equals sign must be present.

Some command line options, for example, **-calib**, cannot be used in the configuration file or as environment variables. Options available only on the command line are noted as such in their descriptions.

If you do not specify a configuration file on the command line with the **-C** option, the transform checks for the existence of the default configuration file, **/usr/lpp/psf/tiff2afp/tiff2afp.cfg**. If this file exists, the transform uses it as the configuration file.

Here is an example of a valid configuration file:

```
scale = letter
r= 300
o = -
inv=
alg=afp
```

Note

The spaces around the equals sign (**=**) are optional. In this example, the option-value pair **o = -** means that the default output file is the standard output. Output file name computation has been disabled.

Environment variables

Environment variables have the form **TIFF2AFP_***option*, where *option* is the same as on the command line and the configuration file.

Some command line options, for example, **-calib**, cannot be used in the configuration file or as environment variables. Options available only on the command line are noted as such in their descriptions.

For example, to achieve the same effect as the configuration file in the last example, these statements have to be executed in the calling shell:

```
export TIFF2AFP_scale=letter
export TIFF2AFP_r=300
export TIFF2AFP_o=-
export TIFF2AFP_inv=" "
export TIFF2AFP_alg=afp
```

There must be some value set for each desired option. For options that do not take a value, specify a blank surrounded by double quotes, for example:

```
export TIFF2AFP_inv=" "    correct
export TIFF2AFP_inv=       has no effect
```

Resource search path

For resource files, such as scan offset files and grayscale correction files, the transform searches the current directory by default. You can use the **-respath** option to specify a list of directories to be searched for such files. This resource path does not apply to the configuration file.

Limitations

This section lists the limitations for the **tiff2afp** transform:

- Only Huffman coding with baseline DCT JPEG algorithm is supported.
- Old style JPEG specification (Photometric Interpretation 6) is not supported. Photometric Interpretation 6 is obsolete and will be removed from the TIFF specification. Use the Photometric Interpretation 7 to incorporate the JPEG compressed images in TIFF files.
- Additional color information, such as alpha data, is disregarded.
- Transparency maps are ignored.
- At most 8-bit gray scale and 24-bit color are supported.
- The **-crop** flag is supported only when the output image type is IOCA FS 10.

Acknowledgments

This software is based in part on the work of the Independent JPEG Group.

Options and values

This section describes the options and values for the **tiff2afp** transform:

@*FileList*

Specifies a name of a file that contains a list of files to be processed by the transform. If the **@** option is present, the output file defaults to standard output, even if the list of files contains only a single entry. Multiple **@** options are allowed. Also see the **-f** and **-z** options. The **@** is not preceded by the dash, and is implemented to maintain compatibility with the **ps2afp** transform.

-a {IO1_G4 | IM1 | IO1 | IO1_MMR | PSEG_IO1_G4 | PSEG_IM1 | PSEG_IO1 | PSEG_IO1_MMR | OVLY_IO1_G4 | OVLY_IM1 | OVLY_IO1 | OVLY_IO1_MMR | FS45 | FS42 | FS10 | FS11}

Choice of the output image type. The first syntax selects between the IOCA FS 10 (**ioca**, **ioca10**), IOCA FS11 (**ioca11**), IM1, PostScript Level 2 (**PS.2**), IOCA FS42 (**ioca42**), and IOCA FS45 (**ioca45**) output. IOCA FS10 and IM1 yield bi-level images, while IOCA FS11 results in 4-bit or 8-bit gray or 24-bit color output (see option **-outbits**). IOCA FS42 can contain either bi-level or 4-bit banded CMYK image at 1-bit per band. IOCA FS45 is a superset of FS42 that also contains 32-bit banded CMYK images, compressed with either JPEG or LZW algorithms. The output compression algorithm is set with the **-cmp** option. To set the page type (page, overlay, page segment, or object), use the **-pagetype** option. FS45 produces IOCA FS45 output.

The second syntax is to maintain compatibility with the **ps2afp** transform, and sets the image type (**IO1** for IOCA FS10 or **IM1** for IM1 output), compression (**G4** for Group 4 or **MMR** for Group 3),

and page type (**PSEG** for page segment or **OVLY** for overlay). If **PSEG** or **OVLY** is not specified, the output is a printable page. If no compression algorithm is specified, the output is not compressed. The second syntax cannot be used for IOCA FS11 output.

Some older printers do not support IOCA images. In such cases, the IM1 output type should be chosen. IM1 images are uncompressed, and thus, use more space. The processing might also take longer since the IM1 image cannot be scaled by the printer, so internal scaling algorithms must be used. See option **-alg**.

The default is **ioca** for IOCA FS10 output compressed via Group 4 algorithm.

This option is similar to the **image-out-format** document attribute on the **pdpr** command.

-alg {afp | alg1 | alg2 | alg3}

-alg {htod1 | htfs}

-alg htcal1

Choice of the scaling and halftoning algorithms. You can specify multiple choices, separated by commas, for one **-alg** option. The effect is the same as specifying multiple **-alg** options. For example, `-alg htfs,htcal` is equivalent to `-alg htfs -alg htcal`.

The scaling algorithms are:

- If **afp** is chosen, the scaling is done using the default algorithm in the printer. This makes the transform much faster. If the image must be reduced, however, this algorithm might drop some information from the image, such as thin lines.
- **alg1** activates the internal scaling algorithm to scale the image explicitly to the specified size. This algorithm is guaranteed not to discard any ink. "White space" in the image, however, might be lost (that is, features close to one another might merge). This algorithm makes the transform run longer, and might occasionally make for a "dirty" image, since the occasional "noise pixels" in the scanned images tend to be amplified.
- **alg2** activates the more flexible version of **alg1**. If this algorithm is selected, option **-clean** can be used to specify the amount of ink "cleanup" to be performed. Option **-clean 0.0** makes the algorithm **alg2** perform like **alg1** (albeit more slowly). Increasing the value specified in **-clean** discards more and more ink, until **-clean 1.0** results in a blank page.
- **alg3** activates a scaling algorithm that works by deleting or duplicating rows and columns in the image. This is a fast general-purpose algorithm.

For bi-level images, the default is **afp** if the output image type is IOCA and **alg3** if the output image type is IM1. For color images with bi-level output, the scaling is always done before the halftoning algorithm. If a grayscale or color output is chosen (**-a ioca11**), this option is ignored and the algorithm is set to **afp**.

The halftoning algorithms are:

- **htod1** uses an ordered dither with a screen derived from the value of the **-thresh** option. The default is an 85 line per inch screen.
- **htfs** uses the Floyd-Steinberg algorithm.
- **htcal1** recalibrates the halftoning algorithm for each image. **htcal1** forces the transform to read the whole image into memory and requires an additional pass through the image. It should be used only for very light or very dark images.

The default is **htod1**. Each halftoning algorithm uses a different internal default calibration curve. If the automatic calibration is turned on, a still different set of calibration curves are used.

See options **-clean**, **-gcorr**, **-ink**, **-paper**, **-scale**, **-thresh**, **-l**, **-w**, **-x**, and **-y**.

-calib scanner

-calib {scanner | printer | patch | patchr},*name1***...**

Transform calibration for the scanner or printer. If **scanner** is specified, **-sgcorr** must be present. If **printer** is specified, **-sgcorr** might or might not be present. If **patch** or **patchr** is specified, **-sgcorr** (if present) is ignored. Detailed explanation of the calibration process is beyond the scope of this entry.

You cannot specify **-calib** in the configuration file or as an environment variable.

-choice {full | reduced | both}

TIFF image files can contain both full and reduced resolution versions of each image. The transform can output both versions, or full resolution only, or reduced resolution only, depending on the value for this option. The default is to output the full resolution images only.

See the **-mp** and **-nomp** options.

-C *ConfigurationFileName*

The name of a configuration file containing option-value pairs. If multiple **-C** options are given on the command line, they are processed in order. Specifying the configuration file on the command line overrides any specification done via the **TIFF2AFP_C** environment variable.

The default configuration file is **/usr/lpp/psf/tiff2afp/tiff2afp.cfg**.

-clean {0.5 | *x.xxx***}**

The internal scaling algorithm **alg2** allows for variable thresholding. The scaled pixel is declared painted if the fraction of its area greater than the threshold is painted in the original image. The value *x.xxx* is a real number between zero and 1 inclusive and gives this threshold.

If the option **-clean 0.0** is issued, **alg2** behaves like **alg1** and turns on a pixel as long as any part of the pixel has been painted in the original image. **-clean 1.0** results in a blank image because the output pixels are never painted.

Setting **-clean 0.95** and **0.9999999** turns on the pixels that had essentially all the area painted in the original picture. Depending on the data, most of the image will probably be preserved. Increasing **-clean** by a small amount to **1.0** erases the image. If the scaling algorithm is not **alg2**, this option is ignored. The default is **-clean 0.5**.

-cmp {none | mh | mmr | g3 | g4 | jpeg | lzw}

Choice of the output image compression algorithm:

none

Uncompressed output

mh

ITU-T T.4 G3 Modified Huffman

mmr

IBM Modified Modified Read

g3

ITU-T T.4 G3 Modified Read

g4

ITU-T T.6 G4

jpeg

JPEG non-differential Huffman coding with baseline DCT. The output image data should be compressed to reduce the file sizes and increase the printing speed.

lzw

If **lzw** is specified, linework of 600 dpi is produced, instead lossy JPEG at 300 dpi. **lzw** only applies to FS45.

The default compression is ITU-T T.6 Group 4 for bi-level images and no compression for grayscale or color images. Some printers might not support Group 4 compression algorithm and require using the **-cmp** option to select a different one. The JPEG algorithm can compress only 8-bit grayscale and 24-bit color images. 4-bit grayscale images cannot be compressed.

-cmrpath *searchPath*[**,***searchPath*...] [**-cmrpath** *searchPath*[**,***searchPath*]...]

Specifies the search order for locating color resources. This search order is a series of directory paths that color resources are located in. If you specify two or more **-cmrpath** flags, InfoPrint Manager will concatenate these search orders.

-crop *t,b,l,r*[**i | m | p | d**]

Image cropping. *t,b,l,r* specify how much should be cropped from the image top, bottom, left edge, and right edge. The numbers are floating point and can be either positive or negative. Negative numbers indicate that a blank space should be inserted. The units are inches, millimeters, points, and dots (pels), with the default being dots. The cropping is specified in the context of the output page, to that "top" means the top of the output page and so on, regardless of the **-rot** option. To crop, the transform will enlarge the image by the amount to be cropped, then crop the specified amount by manipulating the actual bitmap. The resulting image has the size as specified by the explicit (or implicit) **-scale** option. See also option **-j**.

If **-fit trim** is specified, the right and the bottom edge of the image are not cropped. Instead, the image grows as necessary. Because **-fit trim** causes the output data stream to contain the "position and trim" specification, the printer discards any extra image.

-devmodel *model*

Specify the device model of the actual device.

-devtype *type*

Specify the device type of the actual device.

-f *FileList*

Specifies the name of a file that contains a list of files to be processed by the transform. If the **-f** option is present, the output file defaults to standard output, even if the list of files contains only a single entry. Multiple **-f** options are allowed. See also options **@** and **-z**.

-fit {trim | scale}

Determines whether the printer behavior will be position-and-trim or scale-to-fit if the image is too large to fit on the paper. The default is **trim**.

This option is equivalent to the **image-fit** document attribute on the **pdpr** command.

-force

If present, this option forces **tiff2afp** to decompress and recompress the image, regardless of other factors.

-gcorr *FileName*

Specifies a file with grayscale mapping table for halftoning of the grayscale and color images to bi-level for output. The mapping table must be provided to compensate for the printing characteristics of the particular output device and paper type, such as dot gain. This file must contain either:

- 256 real numbers, one for each level of gray in the 8-bit grayscale image
- The PostScript **settransfer** operator

The algorithm converts every image to 8-bit grayscale before applying the halftoning algorithm. The default internal mapping table has been optimized for the 600-pel InfoPrint 4000 laser printer. You shouldn't change this unless you know what you are doing. See also options **-alg** and **-thresh**. PostScript code submitted via the **-thresh** option can have the same effect as **-gcorr**.

-icmr *colorResourceName***[,***colorResourceName***...] [-icmr** *colorResourceName***[,***colorResourceName***]...]**

Specifies one or more input or audit color resources. The color resources can be either ICC Profiles or Color Management Resources (CMRs). If you specify two or more **-icmr** flags on a transform command line, InfoPrint Manager will concatenate the resources together. If two or more resources that are specified by the **-icmr** flags are for the same color space, InfoPrint Manager will use the last specified resource.

-ink {black | white}

This option is used only with scaling algorithm **alg1** or **alg2**. The TIFF images can be either black on white or white on black. The internal scaling algorithm must know which, because "ink" is preserved at the expense of "non-ink" The default value, "black", indicates that the image is black on white.

If you use the option **-inv** to print the reversed image, the inversion is done as the data is read by the transform, before any processing is done. The black or white must thus be specified in the terms of the printed image, not in the terms of the input TIFF image.

-inline {*yes* **|** *no***}**

Specifies whether the output Color Management Resource (CMR) will be placed inline with the data stream. If you specify two or more **-inline** flags on a transform command line, InfoPrint Manager will use the last specified value.

-intent {*relative* **|** *perceptual* **|** *saturation* **|** *absolute***}**

Specifies the rendering intent. You can also use the **-pragma** option to specify the rendering intent by setting:

```
-pragma colorRendering=relative
```

If you specify two or more **-intent** flags on a transform command line, InfoPrint Manager will use the last specified value.

-inv

Reverses the image. Areas that are black in the original image become white and vice versa. The reversed image can be either black on white or white on black, depending on the original image.

-is {1 | 3}

Specifies the interchange set version.

Values are:

1

If you specify **1**, the output is IS/1 compliant. This is the default value.

3

If you specify **3**, the output is IS/3 compliant.

Note

1. Any other value different than **1** or **3** is signaled as error.
2. If you specify **3** as a value for the **-is** flag, make sure that the output type selected is one of the following: ioca, ioca10, ioca42, ioca45, FS10, FS42, FS45, IO1, IO1_G4, IO1_MMR, PSEG_IO1_G4, PSEG_IO1, PSEG_IO1_MMR, OVLY_IO1_G4, OVLY_IO1, and OVLY_IO1_MMR. Only these output types are compatible with the IS/3 flag.

-j *ScanOffsetFileName*

Sometimes input images must be shifted to get the desired positioning on the page. The scan offset file contains the directions for shifting. The file has the format of

```
[attribute]
values
⋮
values
[attribute]
values
⋮
values
```

Currently, the recognized attributes are **[Units]** (values **millimeters**, **mm**, **inches**, **in**, **points**, **dots**, **pels**) **[Page_Offset_Type]** (values **crop** or **grow**) and **[Page_Offsets]**. The values for page offsets are in the format *FileName*,**H***horiz*,**V***vert* Each entry refers to a file. The file names must be specified (or at least the leading comma must), but are currently ignored and the offset factors are applied to each file in turn. The same factors are applied to each image in the file. The *horiz* and *vert* values are the amount that the image is to be shifted, in the horizontal and vertical direction. The positive directions are down and right (that is, the origin is in the left upper corner of the page). The default units are millimeters. Like the values for the **-crop** option, the shifts are specified in the output space context.

Extra spaces and blank lines are allowed. Unrecognized attributes and their values are ignored. See the sample file **shift.sample**.

If the image is moved left or up, part of the bitmap is removed. If the image is moved down or right, removal is governed by the value of the **[Page_Offset_Type]** attribute. If **crop** is chosen, the transform removes the requisite amount from the right and bottom edges of the bitmap. If **grow** is chosen, the transform does not remove any space. The bitmap grows and the trimming, if any, is left to the printer. If the **-fit trim** option (the default) is specified, **[Page_Offset_Type]** defaults to **grow**. For **-fit scale**, **[Page_Offset_Type]** defaults to **crop**.

-l {11i | *yyy.yy*[d | m | i | p]}

Specifies the paper length. The optional units are (d)ots (pels), (m)illimeters, (i)nches, or (p)oints. The default unit is dots. If the unit is dots, decimals (if any) are ignored. The default paper length is 11 inches. See options **-w** to set the paper width or **-paper** to set both dimensions at the same time.

-lut *LookupTable file*[,rgb|lab|cmyk]

Specifies the filename for the color conversion lookup table file. Fast and accurate conversion between color spaces can be implemented as a multidimensional lookup with an interpolation algorithm for missing nodes. The file specified with the **-lut** option must contain a valid lookup table for the conversion between the input and output color spaces. The lookup tables currently come in either ASCII (.lut) or binary formats (.lutbin).

If the optional colorspace tag is not provided, the table is assumed to match the input image. If there is a serious mismatch between the table and the image (for example, the table is RGB to CMYK and the input image is CMYK), the **-lut** is ignored for the image. Otherwise, it is used to convert the colors and any mismatch (for example, using a **lab** table for **rgb** data) results in corrupted output.

If the colorspace tag is provided, the transform uses the lookup table only for the relevant colorspace image. Multiple **lut** tables can be specified if you are unsure of the input colorspace. If the **lut** files are binary, parsing extra files does not impose much of a performance penalty.

Example:

```
-lut 3170-005.rgb.cmyk.perceptual.lutbin,rgb
```

Where `3170-005` is the model-type; `rgb.cmyk` is for RGB images; and `perceptual` is the **color-rendering-intent** value. With InfoPrint Manager for AIX or InfoPrint Manager for Linux, filenames are listed in `/usr/lpp/psf/config`; and with InfoPrint Manager for Windows, filenames are listed in *`install-path`*`\config`.

-M {0 | nnn}

Limits the amount of memory available to **tiff2afp**. *nnn* is the maximum amount of memory in kilobytes. A value of **0** means there is no memory limit. *nnn* can be set from **0** to the maximum value that AIX or Linux allows. The default is **0**.

[-mp | -nomp]

Each TIFF image is supposed to have a marker bit set if there are multiple TIFF images in the file. This marker is sometimes missing, even if there are multiple images present in the file. The **-mp** option instructs the transform to behave as if the multipage marker bit were set. The transform then processes all the images in the file, subject to the **-p** and **-choice** options. The default is to leave the marker bit unset (**-nomp**).

-ms {10 | *nnn***}**

Requires that at least *nnn* kilobytes of disk space be available on the file system that contains the output file. This limit is enforced every time data is written to the output file. If the output is standard output, this option is ignored. The default is **10**. See option **-msf**.

-msf {0.1 | *x.xxx***}**

The number *x.xxx* is a real number between 0 and 1. It denotes the minimum space that must be left unused on the file system containing the output file. The space is given as a fraction of the total space in the file system. This limit is enforced every time data is written to the output file. If the output is standard output, this option is ignored. The default is **0.1**. See option **-ms**.

-nomp

See [**-mp** | **-nomp**].

-nosniff

See [**-sniff** | **-nosniff**].

-noterm

See [**-term** | **-noterm**].

-nov

See [**-v** | **-nov**].

-o *FileName*

Optional output file name. Specify **-** for standard output.

-ocmr *colorResourceName*

Specifies an output color resource. The color resource can be either an ICC Profile or a Color Management Resource (CMR). If you specify two or more **-ocmr** flags on a transform command line, InfoPrint Manager will use the last specified value.

-otag {*none* **|** *normal* **|** *passthru***}**

Specifies how the output AFP will be tagged with color information. The allowed values are:

none

There will be no tagging in the output AFP.

normal

InfoPrint Manager will use the specified **-ocmr** value to tag the output AFP as an input (audit) Color Management Resource (CMR).

passthru

InfoPrint Manager will use the specified **-ocmr** value to tag the output AFP as both an input (audit) CMR and an output (instruction) CMR.

If you specify two or more **-otag** flags on a transform command line, InfoPrint Manager will use the last specified value.

-outbits *NumberOfOutputBits*

Sets the number of bits per pel in output. This value must be **1**, **4**, **8**, or **24**. If the output image type is IOCA FS10 or IM1, the number of output bits is set to **1** and this option is ignored. For IOCA FS11 output, the default is **24**. This number represents the maximum number of bits used per pel. Thus, even if the number of bits is set to **24**, a 4-bit grayscale image is still displayed in 4-bit format.

-outcolor {cmyk | rgb | ycbcr | ycrcb}

Sets the output color model to CMYK, RGB, YCbCr, or YCrCb if the image type is IOCA FS11 and the number of output bits is 24. Otherwise, this option is ignored. The default is **ycbcr**.

-P 6986

Specifies the port number **gif2afp** uses to make a connection with the Transform Manager (set by the **-S** flag). When the **-S** flag is not specified or the **-S** flag specifies **none**, the **-P** flag is ignored.

6986

The port number if InfoPrint Manager is connected to Transform Manager.

Note

1. You can only access secure ports, 924 to 1023, with **root** user authority.
2. To find out which ports are already being used on your system (although they might or might not be active), look in the **/etc/services** file.

-p {even | odd | *nn* **|** *nn-mm* **|** *nn-***}**

Specifies that the output should only contain the specified pages. If no **-p** option is given, all the pages are output (but see the **-choice** option for printing full or reduced resolution images of each page). Multiple **-p** options can be specified. Their effect is cumulative. Regardless of the order in which the pages are specified, they are always printed in ascending order. The recognized values are:

even

Print all even pages

odd

Print all odd pages

nn

Print page *nn*

nn-mm

Print pages *nn* to *mm*, inclusive.

nn-

Print all pages starting with page *nn*

Pages are numbered starting with 1.

-pagetype {page | overlay | ovly | pseg | object}

Sets the output page type to be page, overlay, page segment or object. The same page type is set for every page in the output. Thus, unless you use option **-p** to select a single page, multiple overlays, page segments or overlays are stored in the output file. The default is **page**. See option **-a**.

-paper {a5 | a4 | a3 | letter | folio | legal | ledger | *xxx.xx,yyy.yy***[d | m | i | p]}**

Specifies the output paper size. The supported values are:

a3

A3 format (297 by 420 mm or 11.69 by 16.54 inches)

a4

A4 format (210 by 297 mm or 8.27 by 11.69 inches)

a5

A5 format (148 by 210 mm or 5.83 by 8.27 inches)

letter

8.5 by 11 inches (216 by 279 mm)

folio

8.5 by 13.0 inches (216 by 330 mm)

legal

8.5 by 14.0 inches (216 by 356 mm)

ledger

11.0 by 17.0 inches (279 by 432 mm)

*xx.xx,yy.yy***[d | m | i | p]**

Horizontal and vertical page dimensions. The optional units are (d)ots (pels), (m)illimeters, (i)nches, or (p)oints.

The default paper size is letter. If **-paper** is not used, the paper size is increased, if necessary, to contain the output image.

See options **-l**, **-w**, and **-scale**.

-r {300 | 600 | *nnn*} DEFAULT=600

The output device resolution, specified in dots per inch. The default is **600**.

This option is equivalent to the **default-printer-resolution** document attribute on the **pdpr** command.

-respath *directory***[:***directory***...]**

Sets the search path for resource files, such as the scan offset files and grayscale calibration curve files. If a resource file name is specified as a relative name (does not start with a **/**), the transform searches every directory in the path, in the order specified in the path, until it finds the file (or fails). See options **-j** and **-gcorr** for scan offsets and grayscale calibration curve. The default is the current directory.

-rot {0 | 90 | 180 | 270[p | i]} DEFAULT=0 DEFAULT=p

The image is rotated in the clockwise direction by the amount specified. The default is zero, that is, no rotation.

If **p** is specified, the transform sets the output data stream in such a way that the printer performs the actual image rotation. If **i** is specified, the transform rotates the output bitmap. When **i** is chosen, the transform takes much longer to run and uses much more memory. If no letter is specified, the default or any previous value (such as the value specified in the configuration file) remains in force. The default is **p**.

-S *ServerName* **| none**

Specifies the name of the system on which the Transform Manager is running. The value is:

ServerName

Any valid workstation name on which the Transform Manager is installed and running. The name is defined in the **/etc/hosts** file or by a name server, and can be a nickname like **molly**, or a dotted decimal address like **9.99.9.23**.

none

Processes the **gif2afp** transform locally.

Note

When the **-S** flag is not specified or the **-S** flag specifies **none**, the **-P** flag is ignored.

-scale {orig | a5 | a4 | a3 | letter | folio | legal | ledger | *xxx.xx,yyy.yy***[d | m | i |p] |** *xxx***%}**

Specifies the output image size. The image is scaled to this size and centered in the area defined by the paper size and margin options. The supported values are:

orig

Preserve the input image size, regardless of the printable paper area.

a3

A3 format (297 by 420 mm or 11.69 by 16.54 inches)

a4

A4 format (210 by 297 mm or 8.27 by 11.69 inches)

a5

A5 format (148 by 210 mm or 5.83 by 8.27 inches)

letter

8.5 by 11 inches (216 by 279 mm)

folio

8.5 by 13.0 inches (216 by 330 mm)

legal

8.5 by 14.0 inches (216 by 356 mm)

ledger

11.0 by 17.0 inches (279 by 432 mm)

*xx.xx,yy.yy***[d | m | i | p]**

Horizontal and vertical image dimensions. The optional units are (d)ots (pels), (m)illimeters, (i)nches, or (p)oints.

*xxx***%**

Magnification relative to the original image size. Numbers below 100% mean reduction, while Numbers above 100% mean enlargement. For example, **-scale 200%** causes the output image to be twice as long and twice as wide as the input image.

The default image size is **orig**.

-sgcorr *FileName*

Specifies the name of the scanner-related calibration file. To use this option in the calibration process (with the option **-calib**), you must specify a single file name. If **-calib** is absent, this option is ignored.

A detailed discussion of **-sgcorr** is beyond the scope of this document.

[-sniff | -nosniff]

Turns automatic conversion to black on white for bi-level images on (**-sniff**) or off (**-nosniff**). The automatic conversion algorithm counts the number of 0 and 1 bits in the image. If there are fewer zeros, it assumes the printed features are represented by zeros (white on black), and inverts the image to be black on white. The detection and conversion are done after the conversion specified by the Photometric Interpretation tag is applied (if any).

This option is ignored if the image is not bi-level. The default is **-nosniff**.

[-term | -noterm]

Disables (**-term**) or enables (**-noterm**) error recovery.

- When error recovery is disabled, on encountering an error in a TIFF file, the transform terminates with an error message and a nonzero return code.
- When error recovery is enabled, the errors in TIFF files are treated as non-fatal. The transform tries to recover with the next image in the file, or with the next file. The return code is zero.

The default is **-noterm**.

-thresh *FileName*

Specifies a file that contains a PostScript Type 1 or Type 3 halftone dictionary. Alternatively, the PostScript code can specify the **setscreen** operator instead of a Type 1 dictionary. You can use the halftone cell in the dictionary to overwrite the default ordered dither clustered dot halftone cell. If the PostScript code contains a transfer function, either in the halftone dictionary or specified by the **settransfer** operator, the current grayscale correction curve is overwritten as if **-gcorr** were used.

[-v | -nov]

Turns verbose mode on (**-v**) or off (**-nov**).

- When verbose mode is on, the transform prints a message as it opens each resource file, then echoes the command line, then prints a message for each file name as it is processed.
- When verbose mode is off, the transform prints only error messages.

The default is **-nov**.

-w {8.5i | *yyy.yy*[d | m | i | p]}

Specifies the paper width. The optional units are (d)ots (pels), (m)illimeters, (i)nches, or (p)oints. The default unit is dots. The default page width is 8.5 inches. See options **-l** to set the paper length or **-paper** to set both dimensions at the same time.

-wrkdir *WorkDirectoryName*

The TIFF data stream is by definition non-sequential. Thus, input from **stdin** must be cached on disk before it can be processed. This option specifies which directory to use for the caching of the standard input. If this option is absent or the directory cannot be opened, the transform first tries to use **/var/psf/tiff2afp** as the working directory and, if **/var/psf/tiff2afp** is absent, uses **/tmp**.

The **stdin** cache file is never visible to you because it is immediately unlinked after creation. Thus, the cache file is always deleted when **tiff2afp** finishes execution, even if **tiff2afp** is killed or otherwise terminates in error.

-x {0 | *nnn.nn*[d| m | i | p]}

Specifies the left margin. The optional units are (d)ots (pels), (m)illimeters, (i)nches, or (p)oints. The default unit is dots. The default is zero (no margin).

-y {0 | *nnn.nn*[d| m | i | p]}

Specifies the top margin. The optional units are (d)ots (pels), (m)illimeters, (i)nches, or (p)oints. The default unit is dots. The default is zero (no margin).

-z

Signifies that a list of files to be processed is submitted from standard input. See also options **-f** and **@**.

xml2afp transform: transforms XML data to AFP

Syntax

xml2afp [**-C** ***ConfigurationFile***]
[**-F** ***FontIndexFile***] [**-t** ***tracefilename***]
[**-a** { PT1_NO_COLOR | PT1 | PT2 | PT3 }] [**-f** ***fontpathlist***]
[**-l** ***nnn.nnn***]
[**-o** *outputfile*] [**-s** ***stylesheet*** **|** **none**] [**-w** ***nnn.nnn***]
[**-T**] [*inputfile*]

Description

The **xml2afp** command transforms a Extensible Markup Language (XML) data stream file into an AFP data stream file.

The PSF DSS runs the **xml2afp** command automatically whenever:

- InfoPrint identifies the format of a document in a print job as XML.
- You use the **pdpr** command to specify **document-format=xml** with the **-x** flag or in an attributes file.
- You specify a data type of **-odatatype=xml** with an AIX print command (**enq**, **lp**, or **qprt**) or with the **lprafp** command.

The **xml2afp** transform can be invoked from the command line, and the transform subsystem can be configured to invoke the **xml2afp** transform. Most **xml2afp** jobs will be submitted through the command line from an automated system that pulls the XML data from a database and uses existing style sheets.

For more information about the **xml2afp** transform, see "Working with Transforms" in the *InfoPrint Manager: Procedures* manual that is appropriate for your operating system.

Automatic invocation

The PSF DSS automatically invokes the **xml2afp** transform command whenever you submit a XML file for printing. You can pass options to **xml2afp** using the **other-transform-options** attribute on the **pdpr** command or the **-o** flag of the AIX print commands or the **lprafp** command. You can also pass options to **xml2afp** through theInfoPrint Submit Express client of InfoPrint Manager. Parameters that are not supported, such as **-a PT1**, can be passed in InfoPrint Submit Express by clicking **Advanced** and entering them in the **Transform options** field.

Limitations

The **xml2afp** transform has these limitations:

- Support for image formats other than MO:DCA page segments, MO:DCA overlays, and IOCA images is not included.

- Support for the Calibration GUI and halftones is not included.
- The XSL style sheet must be on the server where the transform is invoked or at a URL accessible from the InfoPrint Manager server.
- The transform must have access to the AFP and OpenType fonts used by PSF to print the job. The transform requires the fonts to get metrics for the different characters, and this path is specified in the configuration file or on the command line.
- To use the **xml2afp** transform with default configuration, you must install the appropriate font features for either InfoPrint Fonts, Version 1.1.0, or AFP Font Collection, Version 2.1.0.
- To use the **xml2afp** transform with default configuration, you must install the appropriate font features for either InfoPrint Collection, Version 3.1.0
- Specify ***Inputfile*** as the last argument on the command line for the **xml2afp** transform.

Flags and values

-C *ConfigurationFile*

Specifies the path and file name of the customized configuration file InfoPrint uses with the transform. The configuration file contains option-value pairs. If you specify multiple **-C** options on the command line, the configuration files are processed in the order that you specify them.

If you specify the **-C** flag with an AIX print command (**enq**, **lp**, or **qprt**), or with the **lprafp** command, specify the fully qualified name of the file, including its path; for example:

With AIX or Linux

/usr/lpp/psf/xmltransform/myfile.cfg

With Windows

***install_path*\xmltransform\myfile.cfg**

-F *outline_font_index* **|** *raster_font_index* **|** *fontindexname* **| none**

DEFAULT=outline_font_index

Specifies the path and file name of the customized font index file InfoPrint uses with the transform. The font index files specify mappings between fonts (such as, sizes and weights) and character sets and code pages. If you specify the **-F** flag with an AIX print command (**enq**, **lp**, or **qprt**), or with the **lprafp** command, specify the fully qualified name of the file, including its path; for example:

For AIX or Linux

/usr/lpp/psf/xmltransform/myfontfile

For Windows

***install_path*\xmltransform\myfontfile**

The font index files built into **xml2afp** include one that specifies outline fonts (outline_font_index) and one that specifies raster fonts (raster_font_index). You can define your own font index file or use the ones supplied with **xml2afp**.

The default font index file is outline_font_index.

-t *tracefilename*

Requests a trace for diagnostic purposes. Trace output is written to the specified file. A fully qualified path should be specified. If a relative path is provided, the path is relative from the directory where the **xml2afp** transform is invoked.

A dash can be specified for *tracefilename*. When a dash is specified, the trace is written to standard error.

-a { PT1_NO_COLOR | PT1 | PT2 | PT3 }

- Indicates the level of PTOCA supported by the target printer. This is used to generate proper color commands.
- Values are:

  PT1_NO_COLOR

  Converts all color commands to black. Use this option when a black and white printer is used that does not provide grey scaling simulation of colors. Typically, older printers do not provide this function, but newer printers do provide this function.

  The default is **PT1_NO_COLOR**.

  PT1

  Uses the basic PTOCA set color commands. Use this option on newer black and white printers that provide grey scale simulation of colors and printers that support highlight color.

  PT2

  This option is functionally equivalent to **PT1**, and it is provided for completeness with the PTOCA Architecture.

  PT3

  Uses the extended PTOCA set color commands. Use this option on printers that provide full process color support.

-f *fontpathlist*

Indicates the path or paths to the AFP font resources to use to print the output file. Information from the AFP font resources is used to format the output file.

If multiple paths are specified, they must be delineated by colons on AIX or Linux and semi-colons on Windows.

There is no program default, although a configuration default is provided in the configuration file.

-l *11i* **|***nnn.nnn*

Indicates the length of the page on which the output is printed. Specify a number followed directly by one of these units:

i

inches, the default

m

millimeters

For example:

```
-l 17i
```

- The default is 11 inches.
- The maximum value is 22.75i or 577.97m.

-o *OutputFile*

Specifies the output path and file into which the transformed files are to be written. If you do not specify the **-o** flag or if you specify a dash (-), InfoPrint writes the results to standard output.

-s { *stylesheet* **| none }**

DEFAULT=**none**

Specifies the name of the stylesheet used to transform XML data to XSL-FO data or whether no style sheet should be used.

Values are:

none

Specifies that no style sheet is to be used.

The default is **none**.

stylesheet

Specifies the file or URL for an XSL style sheet that is used to transform XML data to XSL-FO data. For example:

http://rpp.ricoh-usa.com/report.xsl

ftp://ftp.rpp.ricoh-usa.com/report.xsl

This option should only be specified when the input file contains XML data that must be transformed according to a specified style sheet; not when the input file contains XSL-FO data.

When you use the **xml2afp** as a standalone transform, it runs with the user's authority. When the **xml2afp** runs as an InfoPrint Manager server transform, it runs with InfoPrint Manager's authority. Therefore, if the transform is running under InfoPrint Manager, **xml2afp** must be able to access the file or resource named by the style sheet URL. For example, if `report.xsl` is the style sheet file a URL refers to, its file permissions must allow others to read it.

-T

Specifies that the transform should use OpenType fonts found in the resource path. This generates MOD:CA that uses the OpenType AFP structured fields. The output only prints on IPDS printers that support OpenType fonts.

If the font specified in the XML input file is not an OpenType font, the font index file, if specified, is used to map the font to a FOCA font.

-w *8.5i* **|***nnn.nnn*

Indicates the width of the page on which the output is printed. Specify a number followed directly by one of these units:

i

inches, the default

m

millimeters

For example:

```
-w 11i
```

- The default is 8.5 inches.
- The maximum value is 22.75i or 577.97m.

Inputfile

Specifies one or more input files to be transformed to AFP. An input file contains either XML data with no presentation information or XML data with XSL formatting objects (XSL-FO). If you specify multiple input files with a style sheet, each file is transformed according to the style sheet. Therefore, it is recommended that when you specify a style sheet, all input files contain XML data only.

If you do not specify an input file name, or if you specify a dash (-), the **xml2afp** transform uses standard input for the input file. If you specify more than one input file name, the **xml2afp** transform writes the output to a single AFP data stream that consists of multiple documents.

Note

The ***Inputfile*** must be the last entry on the command line.

The xml2afp configuration file

The sample **xml2afp** configuration file is provided in `/usr/lpp/psf/xmltransfrom/xml2afp.cfg` on AIX or Linux and *`install_path`*`\xmltransform\xml2afp.cfg` on Windows. These items are set in the file and can be modified:

1. The default location of the AFP fonts.
2. The default paper size.

Additionally, defaults for all the **xml2afp** options can be set in the configuration file.

The syntax of the configuration file is exactly the same as the command line syntax with these additional rules:

1. Blank lines are ignored.
2. All data on a line after a pound sign is ignored. The pound sign can occur anywhere on a line.
3. To include a pound sign in parameter data, it must be escaped; that is, it must be preceded by a backwards slash.
4. White space before and after parameter data is removed.
5. Parameter data on successive lines is concatenated with a single space between them.
6. Parameters can span lines as long as they follow rules 1 through 5.

The font index file for xml2afp

The sample font index file for **xml2afp** is provided in **`/usr/lpp/psf/xmltransform`** on AIX or Linux and ***`install_path`*`\xmltransform`** on Windows. The samples include an `outline_font_index` and a `raster_font_index` that you use to map XML font names to both outline FOCA fonts and raster fonts in the font path.

Note

If you are using OpenType fonts, the font index files are not necessary.

A font is referenced in XSL-FLO using these attributes:

family
size
style
weight

Font index files describe AFP fonts using these attributes. In addition, a map is defined that maps unicode code points into AFP code points.

The font index file consists of a sequence of key and value pairs, separated by whitespace (such as a space, tab, or newline). Comments can be inserted anywhere between the delimiters /* and */. You can also use // to indicate that the remainder of the current line is a comment.

The keys and their meanings are:

map

Select the named character map, creating it if it does not exist. A character map is used to map unicode code points to AFP code page names and code points. The default is `default`.

codepage

Set the code page to use for subsequent character mappings.

to

End a range of mapped unicode code points. The value must be an integer representing a valid unicode code point, and it must be greater than the beginning value of the range given by the closest preceding value for the **char** keyword. The value must be a valid unicode code point.

at

Creates a mapping using the closed range given by a preceding **char** value and an optional **to** value. The unicode characters from begin to end are mapped to the AFP code point range from the **at** value to the **at** value + end - begin, inclusive, using the closest preceding **codepage** value. This value must be an integer from 0 to 65535.

family

Establishes the current font family name. The value must be a string containing no whitespace characters.

size

A font size, expressed as a floating point value giving the vertical size of the font, in points (1/72nds inches). Size must be omitted when defining outline technology fonts, since they can take any size.

style

A font style. The value must be one of these keywords:

normal
italic
oblique
backslant

The default is **normal**.

weight

A font weight. The value can be one of these keywords:

normal

bold

The value can also be one of the values between 100 and 900 inclusive, in increments of 100. The keyword **normal** is equivalent to 400, and the keyword **bold** is equivalent to 700. The default value is **normal** (400).

charset

Define a font with the preceding values given for the font properties (family, size, style, and weight), or default values if no preceding property values have been established. The currently selected character map is associated with the font, and it is used for mapping unicode code points when the font is selected. If modifications are made to the map later in the file, those changes do not affect the defined font.

alias

Establish a font family alias for the current family.

Of the keywords listed, only two are active: **at** and **charset**. The other keywords collect values used when an active keyword is found. This allows for a variety of possible arrangements for a font index. For example:

```
family courier
alias monospace
size 7
weight normal
style normal
charset C04200070
style italic
charset C0430070
weight bold
style normal
charset C0440070
style italic
charset C0450070
```

Defines the same set of fonts as:

```
family courier size 7 weight normal style normal charset C0420070
family courier size 7 weight normal style italic charset C0430070
family courier size 7 weight bold style normal charset C0440070
family courier size 7 weight bold style italic charset C0450070
alias monospace
```

But might be considered more difficult to read.

Examples

To run the **xml2afp** transform through InfoPrint Manager, the stylesheet must be specified with a full path, so that the InfoPrint Manager server can find it when the transform is run. Specifically, if the path has spaces in it, there must be quotes around it, and backslashes must be either escaped with another backslash, or you can use forward slashes. This only applies to the stylesheet, not the xml file. For example:

```
pdpr -p ld -x document-format=xml
 -x "xsl-style-sheet='file:c:/Program Files/InfoPrint Manager
/xmltransform/test.xsl'" test.xml
```

When you run **xml2afp**, you can use either relative paths or absolute paths.

Using a relative path, enter:

```
xml2afp -o output.afp -s test.xsl test.xml
```

Using an absolute path, enter:

```
xml2afp -o output.afp -s c:\xslfiles\test.xsl c:\xmlfiles\test.xml
```


Files

For AIX or Linux:

/usr/lpp/psf/bin/xml2afp

XML transform executable

For Windows:

***install_path*\bin\xml2afp**

XML transform bat file

xml2pdf transform: transforms XML data to PDF

Syntax

xml2pdf [**-C** ***ConfigurationFile***] [**-t** ***tracefilename***]
[**-l** ***nnn.nnn***]
[**-o** *outputfile*] [**-s** ***stylesheet*** | **none**]
[**-w** ***nnn.nnn***] [*inputfile*]

Description

The **xml2pdf** command transforms a Extensible Markup Language (XML) data stream file into an PDF data stream file.

The **xml2pdf** transform can be invoked from the command line, and the transform subsystem can be configured to invoke the **xml2pdf** transform. Most **xml2pdf** jobs will be submitted through the command line from an automated system that pulls the XML data from a database and uses existing style sheets.

For more information about the **xml2pdf** transform, see "Working with Transforms" in the *InfoPrint Manager: Procedures* manual that is appropriate for your operating system.

Limitations

These are the limitations for the **xml2pdf** transform:

- Includes support for gif, jpeg, and bmp image formats.
- Support for the Calibration GUI and halftones is not included.
- The XSL style sheet must be on the server where the transform is invoked or at a URL accessible from the InfoPrint Manager server.
- If you specify multiple values for the same option, the **xml2pdf** transform uses the last value. The last value also takes precedence over the values in the configuration file.
- Specify ***Inputfile*** as the last argument on the command line for the **xml2pdf** transform.

Flags and values

This section describes the flags and values for the **xml2pdf** transform:

-C *ConfigurationFile*

Specifies the path and file name of the customized configuration file InfoPrint uses with the transform. The configuration file contains option-value pairs. If you specify multiple **-C** options on the command line, the configuration files are processed in the order that you specify them.

If you specify the **-C** flag with an AIX print command (**enq**, **lp**, or **qprt**), or with the **lprafp** command, specify the fully qualified name of the file, including its path; for example:

With AIX or Linux

/usr/lpp/psf/xmltransform/myfile.cfg

With Windows

***install_path*\xmltransform\myfile.cfg**

-t *tracefilename*

Requests a trace for diagnostic purposes. Trace output is written to the specified file. A fully qualified path should be specified. If a relative path is provided, the path is relative from the directory where the **xml2pdf** transform is invoked.

A dash can be specified for *tracefilename*. When a dash is specified, the trace is written to standard error.

-l *nnn.nnn*

- Indicates the length of the page on which the output is printed. Specify a number followed directly by one of these units:

  i

  inches, the default

  m

  millimeters
- For example:

```
-l 17i
```

- The default is 11 inches.
- The maximum value is 22.75i or 577.97m.

-o *OutputFile*

Specifies the output path and file into which the transformed files are to be written. If you do not specify the **-o** flag or if you specify a dash (-), InfoPrint writes the results to standard output.

-s { *stylesheet* **| none }**

DEFAULT=**none**

- Specifies the name of the stylesheet used to transform XML data to XSL-FO data or whether no style sheet should be used. Values are:

  none

  Specifies that no style sheet is to be used.

  The default is **none**.

  stylesheet

  Specifies the file or URL for an XSL style sheet that is used to transform XML data to XSL-FO data. For example:

  http://www.yourdomain.com/report.xsl

  ftp://ftp.yourdomain.com/report.xsl

  This option should only be specified when the input file contains XML data that must be transformed according to a specified style sheet; not when the input file contains XSL-FO data.
- When you use the **xml2pdf** as a standalone transform, it runs with the user's authority.

-w *nnn.nnn*

Indicates the width of the page on which the output is printed. Specify a number followed directly by one of these units:

i

inches, the default

m

millimeters

For example:

```
-w 11i
```

- The default is 8.5 inches.
- The maximum value is 22.75i or 577.97m.

Inputfile

Specifies one or more input files to be transformed to AFP. An input file contains either XML data with no presentation information or XML data with XSL formatting objects (XSL-FO). If you specify multiple input files with a style sheet, each file is transformed according to the style sheet. Therefore, IBM recommends that when specifying a style sheet, all input files contain XML data only.

If you do not specify an input file name, or if you specify a dash (-), the **xml2pdf** transform uses standard input for the input file. If you specify more than one input file name, the **xml2pdf** transform writes the output to a single AFP data stream that consists of multiple documents.

Note

The ***Inputfile*** must be the last entry on the command line.

Examples

The **xml2pdf** transform must be run outside of InfoPrint Manager. When you run **xml2pdf**, you can use either relative paths or absolute paths.

Using a relative path, enter:

```
xml2pdf -o output.pdf -s test.xsl test.xml
```


Using an absolute path, enter:

```
xml2pdf -o output.pdf -s c:\xslfiles\test.xsl c:\xmlfiles\test.xml
```

Files

For AIX or Linux:

/usr/lpp/psf/bin/xml2pdf

XML transform executable

For Windows:

install_path\bin\xml2pdf

XML transform bat file

3. InfoPrint Manager object attributes

- **About Destination Support Systems (DSSs)**
- **Attributes for actual destinations**
- **Attributes for auxiliary-sheet objects**
- **Attributes for documents and default documents**
- **Attributes for jobs and default jobs**
- **Attributes for logs**
- **Attributes for logical destinations**
- **Attributes for media**
- **Attributes for print rules**
- **Attributes for queues**
- **Attributes for resource contexts**
- **Attributes for servers**
- **Attributes for transforms**

Attribute Disclaimer

There are attributes and attribute values identified in the *ISO 10175-1 Information Technology - Text and Office Systems - Document Printing Application (DPA) Part 1: Abstract-Service Definition and Procedures* standard that InfoPrint Manager does not support. If you use any of these non-supported attributes or values, InfoPrint Manager might accept them. However, the results can be different than you expect. Sometimes, InfoPrint Manager might issue a message indicating that it does not support the attribute or value.

About Destination Support Systems (DSSs)

The programs that the actual destination uses to send jobs to the output device are called the destination support system (DSS).

Distribution of destination support systems across platforms

DSS	AIX	Linux	Windows
AIX DSS	Supported	Not available	Not available
Anyplace DSS	Supported	Supported	Supported
BSD DSS	Supported	Supported	Supported
CUPS DSS	Not available	Supported	Not available
DFE DSS	Supported	Supported	Supported
Email DSS	Supported	Supported	Supported
IPP DSS	Supported	Supported	Supported
Passthrough DSS	Not available	Not available	Supported
PSF DSS	Supported	Supported	Supported

DSSs supported on all platforms

Anyplace DSS

InfoPrint Manager uses the Anyplace DSS to securely pull print jobs from a printer. When requested at the printer console, the print job is processed by an Anyplace DSS before being handed off to

Streamline NX. You must configure the actual destination on the processing logical destinations to gain control over the job flow. The Anyplace DSS print jobs take their attributes from the Anyplace logical destination and not from the processing logical destination. All Anyplace actual destinations have the same configuration, especially for attributes which are reflected in the datastream.

InfoPrint Manager transforms jobs submitted to Anyplace destinations to PCL before sending them to the Streamline NX.

With the Anyplace DSS, you can submit jobs to an InfoPrint Manager logical destination assigned to an Anyplace queue that would print the jobs to an Anyplace actual destination.

BSD DSS

The BSD DSS permits InfoPrint Manager to bridge to existing printing subsystems and to remote printers. InfoPrint Manager sends jobs submitted to BSD physical printers as separate print requests to a local or remote print queue.

For local printer devices, InfoPrint Manager for AIX can use the `pioinfo` back-end program, while InfoPrint Manager for Linux can use the `piobe` back-end program. More typically, InfoPrint Manager for AIX and InfoPrint Manager for Linux use the `rembak` program and InfoPrint Manager for Windows uses the **lpr** command to send jobs to a printer device or to another system. This can be any device or system that supports the **lpd** protocol and that connects to the network using TCP/IP.

For remote printer devices, you must set up a remote queue and configure the remote system. See the printer configuration documentation of the remote device or system for details on how to set up a remote queue.

DFE DSS

The DFE DSS lets InfoPrint Manager send jobs to Ricoh color engines through a DFE (Digital FrontEnd) print server, using its added performance and advanced workflow tools.

Email DSS

InfoPrint Manager uses the email DSS to communicate with electronic mailing systems.

IPP DSS

InfoPrint Manager uses the IPP DSS to communicate with destinations through the Internet Print Protocol (IPP). This DSS allows InfoPrint Manager to access a printer using a Uniform Resource Locator (URL) string.

PSF DSS

The PSF DSS permits InfoPrint Manager to bridge to the IBM Print Services Facility (PSF) printing subsystem. This DSS allows communication with output devices that have Intelligent Printer Data Stream (IPDS) functions. The PSF DSS is the most flexible DSS. It provides a single point of control and tracking for print jobs. InfoPrint Manager transforms jobs submitted to PSF destinations to IPDS or PCL before sending them to the output device.

The way in which InfoPrint Manager communicates with the output device depends on the type of actual destination. For PSF DSS actual destinations, it also depends on the attachment type. (See Understanding attachment types for PSF actual destinations, p. 513.)

DSSs supported only by InfoPrint Manager for AIX

AIX DSS

The AIX DSS lets InfoPrint Manager for AIX to bridge to the AIX print-spooling subsystem. In standard AIX printing, users submit jobs to an AIX print queue. The AIX print-spooling subsystem schedules the jobs and passes them to a printer device by a back-end program, usually `piobe`, or if the queue is a remote queue, `rembak`.

In the AIX DSS, users submit jobs to a destination from which an InfoPrint Manager queue receives them. The InfoPrint physical printer submits jobs to the printer device using an AIX back-end program.

You should attach this type of printer device as specified by its documentation before creating its associated InfoPrint actual destination.

DSSs supported only by InfoPrint Manager for Linux

CUPS DSS

The CUPS DSS lets InfoPrint Manager for Linux to bridge to the Linux CUPS print spooling system. In standard Linux CUPS printing, users submit jobs to a CUPS printer. The CUPS print spooling system schedules the jobs and passes them to a printer device by a back-end program.

In the CUPS DSS, users submit jobs to an InfoPrint Manager destination from which a CUPS printer receives them. The CUPS printer submits jobs to the printer device using an associated back-end program, usually InfoPrint Manager **pioinfo** back end, InfoPrint Manager **piorpdm** back end for Ricoh printers, or one of the CUPS-provided back ends **ipp**, **ipps**, **socket**, **lpd**, and so on.

When you create a CUPS DSS destination, InfoPrint Manager attaches for you its associated CUPS printer.

DSSs supported only by InfoPrint Manager for Windows

Passthrough DSS

The Passthrough DSS lets InfoPrint Manager for Windows to bridge to the Windows print-spooling subsystem. This DSS supports mono-IPDS (PostScript or PCL) printers by using standard Windows ports and port monitors.

You must attach this type of printer device as specified by its documentation before creating its associated InfoPrint Manager for Windows destination.

Understanding attachment types for PSF actual destinations

The attachment type for an actual destination defines how the printer device attaches to the server and communications with InfoPrint Manager. Based on the printer device, the attachment type is one of:

- **TCP/IP**. The printer device communicates using the Intelligent Printer Data Stream (IPDS) and attaches to the server through the TCP/IP network. To create the actual destination, you must specify the Internet Protocol (IP) address of the printer device and the port number through which InfoPrint Manager communicates with the device. The port number for TCP/IP-attached printers is an integer from 5001 to 65535.
- **Other**. The PCL, PostScript, or PPDS printer device communicates using TCP/IP or attaches directly to the server through a parallel/serial port (or through a hardware alternative to such direct attachment). When you want to create the actual destination with InfoPrint Manager for Windows, you must specify the port associated with a port monitor needed to operate the printer.

- **Command**. You must attach this type of printer as specified by its documentation and configure it in AIX or Linux before creating its associated actual destination for InfoPrint Manager for AIX, InfoPrint Manager for Linux, **or** configure it to function as a Windows printer (using the standard Windows **Add Printer Wizard)** before creating its associated actual destination for InfoPrint Manager for Windows.
- **Upload-TCP/IP**. With InfoPrint Manager for AIX or InfoPrint Manager for Linux the printer device is attached to a host system. InfoPrint Manager communicates with PSF for OS/390 or PSF for MVS through the TCP/IP network. Before creating the actual destination, you must determine the Internet Protocol (IP) address of the host and the port number through which InfoPrint Manager communicates with the upload service. The port number for TCP/IP-attached printers is an integer from 5001 to 65535. You must also determine the code pages used on both the AIX or Linux and host systems.

Attributes displayed in the InfoPrint Manager Administration GUI

Attributes that include **GUI Label** are shown in the corresponding properties notebooks in the InfoPrint Manager Administration GUI. These objects have properties notebooks:

- Actual Destination
- Documents and Default Documents
- Jobs and Default Jobs
- Logical Destinations
- Servers
- Transforms

Introducing object attributes

All InfoPrint objects have associated attributes. Attributes provide information about the objects and determine what you can do with objects.

Attribute Disclaimer

There are attributes and attribute values identified in the ISO 10175-1 *Information Technology Text and Office Systems - Document Printing Application (DPA) - Part 1: Abstract-Service Definition and Procedures* standard that InfoPrint does not support. If you use any of these non-supported attributes or values, InfoPrint might accept them. However, the results can be different than you expect. At times you might receive a message stating that InfoPrint does not support the attribute or value.

Initially settable, resettable attributes, and non-settable

InfoPrint attributes fall into three categories:

Initially settable

For some attributes, you can set a value when you create the object with the **pdcreate** or the **pdpr** command. You cannot change these attributes afterwards.

For example, this command:

```
pdpr -x "job-originator='Anne Brown'" -d Sevv1-ld bigbook
```

creates a job containing a file called `bigbook` and identifies the person who submitted the job by name. The attribute **job-originator** is *initially settable* and you cannot change it.

Resettable

For some attributes, you can set or modify the value using the **pdmod** command (for jobs and documents) or the **pdset** command (for all objects, including jobs and documents), after you create the object.

For example, this command:

```
pdmod -x "job-end-message='Please call 5-9999 for pickup'" 37
```

sets a new value for the **job-end-message** attribute for the existing job whose local ID is `37`.

Non-settable

You cannot set a value for some attributes at any time.

For example, in this command:

```
pdcreate -c queue Serv1:Queue3
```

InfoPrint uses the command arguments to assign the queue attribute **queue-name** the value `Queue3`, and the **associated-server** attribute the value `Serv1`. You cannot set different values for these arguments using the **-x** flag of the **pdcreate** command and you cannot change them later.

Resetting attributes to the default value

This chapter shows default values for all attributes. For some attributes, the default value is "no value".

- When you create an object, InfoPrint assigns a default value (or values, for some multi-valued attributes) to each attribute. You can override these default values by specifying a different value using the **-x** and **-X** flags of the **pdmod** or **pdset** commands.
- You can change values back to their default values by using the **pdmod** or **pdset** commands and specifying the attribute name followed by two equals signs, ==, without any attribute value.

  For example, this command:

```
pdset -x "printer-end-sheet==" Serv3-pp
```

  sets the value assigned to **printer-end-sheet** for the actual destination `Serv3-pp` back to its default value.
- Deleting all the values from a multi-valued attribute or deleting the value of a single-valued attribute sets the attribute value to the default values.
- Setting a job or document attribute to the default results in the attribute getting set to the value of the default job's default attribute or the default document's default attribute.

Attribute syntax

This section describes the syntax to use when you set values for three types of attributes on the command line or in an attributes file. Most attributes are either **single-valued** (they can have only one value at a time) or **multi-valued** (they can have multiple values). InfoPrint also has some **complex attributes**.

Examples of these types of attributes follow.

Single-valued attributes

For single-valued attributes, the syntax is:

"*attribute*=*value*"
"*attribute*='*value with spaces*'"

Enclose the value in single quotation marks if it includes spaces, for example:

```
-x "message='Down for maintenance until 7AM'"
```

Note

The InfoPrint Manager Administration GUI does not require quotation marks.

Multi-valued attributes

For multi-valued attributes, the syntax is:

"*attribute*=*value1 value2 value3*"

where *value1 value2 value3* are multiple values of the attribute. Separate the values with spaces and enclose the attribute name and values in double quotation marks. For example:

```
-x "content-orientations-supported=portrait landscape"
```

assigns two values, **portrait** and **landscape**, to the **content-orientations-supported** attribute.

Note

In the InfoPrint Manager Administration GUI, most multi-valued attributes require you to specify each value on a separate line of a list box. When you must enter multiple values in a single field, separate the values by commas. For example, enter multiple values for the **chars** attribute like this:

Use of the * (asterisk) wildcard character

Some of the ***xxx*-ready** and ***xxx*-supported** actual destination attributes with which you can specify general text strings as values allow the use of the * (asterisk) wildcard character. When the * (asterisk) wildcard character is specified, **any** value of the ***xxx*** attribute is accepted in the validation and scheduling of a job. For example, if you specify **job-batches-ready=*** for an actual destination, a job with any value specified in the **job-batch** attribute is accepted and possibly scheduled for that actual destination.

These ***xxx*-ready** and ***xxx*-supported** actual destination attributes allow the use of the * (asterisk) wildcard character:

- **classes-ready**
- **forms-ready**
- **job-batches-ready**
- **media-ready**
- **end-sheets-supported**
- **input-trays-supported**

- **media-supported**
- **output-bins-supported**
- **separator-sheets-supported**
- **start-sheets-supported**

Complex attributes

Complex attributes can have multiple values, but each value itself has multiple components. Each component of a value has its own values. Two types of complex attributes are those that require braces, { }, enclosing each value, and those that have the components of each value separated by a colon, **:**.

Note

In the InfoPrint Manager Administration GUI, you enter each component in a separate field. No braces or colons are required.

Complex attributes that require braces

The only complex attribute that requires braces is **notification-profile**

- Each value for this complex attribute begins and ends with braces, { }.
- Each value has several components
- Each component has a name and associated values
- The sequence in which you enter the components is not important
- The component **event-identifiers** is the only component that can have multiple values

An example of creating a **notification profile** with one value for a queue follows:

```
pdset -c queue
   -x "notification-profile={event-identifiers=job-modified
   queue-state-changed delivery-method=message
   event-comment='This is a job modification or status event'
   delivery-address=dave@cowboy locale=En_US.IBM-850}" Queue1
```

If you change one component in the notification profile, InfoPrint sets all the rest of the components of that value to their default values. For example, this command sets the **delivery-address**, but InfoPrint sets the other components to their defaults:

```
pdset -c queue
-x "notification-profile={delivery-address=tom@hope}" Queue1
```

To maintain the existing values, you must specify them. You cannot use the add, +=, or delete, -=, operators of the **pdset** or **pdmod** commands when changing the component values in a **notification-profile** value. However, you can add or delete all components of a value from the **notification-profile** by using the add, += , or delete, -= , operators. For example, this command:

```
pdset -c queue
-x "notification-profile+={delivery-address=mary@cowboy} Queue1
```

adds another value to the previous one. Now the **notification-profile** has two values.

```
notification-profile=
{event-identifiers=job-modified queue-state-changed delivery-method=
message
event-comment='This is a job modification or status event'
delivery-address=dave@cowboy locale=En_US.IBM-850}

{event-identifiers=object-deleted object-cleaned queue-backlogged
```

```
delivery-method=message delivery-address=mary@cowboy
locale=En_US.IBM-850}
```

The second value contains default values for each component except the delivery address. If you want values other than defaults, you must specify them.

Complex attributes that require colons

All other complex attributes require colons between components.

- Do not enter the component name.
- Separate the values for the components with a colon, **:**, and no spaces
- Enter a colon even if you do not enter a value for a given component. InfoPrint sets the default value or no value for that component.
- If you use the default value for the last value, InfoPrint does not require the colon for that component.
- Separate each attribute value in a multi-valued attribute with spaces (see the example)

An example of setting the **notify-operator** attribute for a queue is:

```
pdset -c queue -x "notify-operator=
   message:White@Caddy.xyz.com email:Jones@Chevy.xyz.com"
   Queue2
```

Examples of setting the **results-profile** attribute for a job are:

```
pdset -c job -x "results-profile='dave@cowboy:pickup:2:Please staple'" 2

pdset -c job -x "results-profile='dave@cowboy::2:Please staple'" 2
```

The result of these two commands is the same because the default for the second component is **pickup**.

Using Windows Shell commands

When you use InfoPrint Manager with Windows Shell commands, you need to be aware that the Windows Shell commands interpret certain characters differently. For example, when you need to specify two double quotation marks, you might need to use a back slash to tell the Shell to recognize the double quotation mark as a double quotation mark and not as a command (\"). In a command file, similarly, you might need to specify two percent signs (%%) to tell the Shell to recognize one of the percent signs as a percent sign and not as a command file variable. For more information about the use of Shell commands, see documentation on Windows Shell Commands.

Attributes for actual destinations

Considerations about attributes for actual destinations:

- InfoPrint uses actual destinations for job validation and scheduling. See Job validation and scheduling, p. 1187 for an explanation of job validation and scheduling and for tables showing the attributes used for these tasks.
- InfoPrint uses the actual destination *xxx*-**supported** attributes for job validation. InfoPrint uses both the *xxx*-**ready** and the *xxx*-**supported** attributes for job scheduling.
- InfoPrint issues an error if you update an *xxx*-**ready** attribute with a value not currently assigned to the corresponding *xxx*-**supported** attribute.
- Actual destinations have different attribute sets based on the DSS that supports the destination.

- Device-specific actual destination attributes provide information that comes from the physical printer.

  Note

  The device-specific attributes are not returned when you ask for all the actual destination's attributes. You have to request the device-specific attributes individually or you can use `-r all-device` to query all the device-specific attributes. The **device-contact** and **device-location** device-specific attributes can only be modified with the **pdset** command or the Device Management GUI (DMG).
- InfoPrint supplies some files containing attributes that have the values for some of the actual destination attributes already set, based on the output device model or destination attachment type. You will find these files containing attributes in the **/usr/lpp/pd/attr** directory for InfoPrint Manager for AIX or InfoPrint Manager for Linux and in the ***install_path*\attr** directory for InfoPrint Manager for Windows.

Attributes not displayed in the InfoPrint Manager Administration GUI

While all actual destination attributes and attribute values are supported for both the standard and basic InfoPrint installations, neither InfoPrint Manager Administration GUI displays a complete set.

- The standard InfoPrint Manager Administration GUI displays most attributes and attribute values of greatest interest to Data Center (Production Printing) InfoPrint administrators, but omits a few that are used primarily in basic InfoPrint installations.
- The basic InfoPrint Manager Administration GUI displays only the attributes of greatest interest to Print on Demand (Commercial Printing) InfoPrint administrators.

You can list the values of attributes not displayed in the InfoPrint Manager Administration GUI using the **pdls** command. You can set the values of initially settable and resettable attributes using the **pdcreate** command. You can change the values of resettable attributes using the **pdset** command.

Initially settable attribute listing

You can set these attributes with the **pdcreate** command when you create an actual destination.

- **attachment-type**
- **destination-data-stream**
- **destination-realization**
- **destination-support-system**
- **device-name**
- **force-cse-sheet-eject**
- **print-queue-name**

Resettable attribute listing

You can set these attributes with the **pdcreate** command when you create an actual destination or modify them with the **pdset** command after you create the actual destination.

- accept-jobs
- accounting-exit
- ack-interval
- accounting-log-version
- add-carriage-returns
- add-line-feeds
- additional-accounting-log-attributes
- ascii-character-mapping
- ascii-font-map
- associated-queue
- attribute-map
- audit-exit
- automatic-postscript-mode-switch
- auxiliary-sheet-selections-supported
- backup-destinations
- booklet-fold
- capture-inline-cmr-resources
- capture-inline-otf-resources
- carriage-control-types-supported
- character-mappings-supported
- checkpoint-at-stacker
- classes-ready
- client-driver-names
- color-bits-per-plane
- color-bits-per-plane-supported
- color-mapping-table
- color-profile
- color-profiles-supported
- color-rendering-intent
- color-toner-saver
- color-toner-saver-supported
- connection-timeout
- content-orientations-supported
- convert-to-ebcdic-supported
- data-fidelity-problem-reported-supported
- default-font-fidelity-action
- default-font-resolution
- default-input-tray
- descriptor
- destination-command
- destination-locations
- destination-model

- **destination-pass-through**
- **destination-poll-interval**
- **destination-register-threshold**
- **destination-release-timer**
- **destination-tcpip-internet-address**
- **destination-tcpip-port-number**
- **destination-timeout-period**
- **document-finishings-supported**
- **document-formats-ripped-at-destination**
- **document-formats-supported**
- **document-types-supported**
- **dss-job-message-disposition**
- **dss-job-message-log-size**
- **dss-job-message-log-wrap**
- **ebcdic-character-mapping**
- **end-message-supported**
- **end-sheets-supported**
- **file-size-range-supported**
- **font-resolutions-supported**
- **force-destination-setup**
- **force-micr-font-print**
- **form-definition**
- **form-length-range-supported**
- **forms-ready**
- **halftones-supported**
- **image-fit-supported**
- **image-length**
- **image-out-formats-supported**
- **image-width**
- **input-data-user-exit**
- **input-trays-medium**
- **input-trays-supported** (BSD only; otherwise non-settable)
- **interchange-set-version**
- **interrupt-message-page-enabled**
- **interrupt-message-page-form-definition**
- **interrupt-message-page-edge-marks**
- **intervention-timer**
- **job-batches-ready**
- **job-finishings-supported**
- **job-retry-count-limit**
- **job-retry-interval**
- **job-rip-actions-supported**

- **job-size-range-ready**
- **job-size-range-supported**
- **job-start-wait-supported**
- **large-file-enabled**
- **list-of-managers**
- **log-accounting-data**
- **logical-destinations-assigned**
- **maximum-concurrent-jobs**
- **maximum-copies-supported**
- **maximum-fonts-to-keep**
- **maximum-overlays-to-keep**
- **maximum-presentation-object-containers-to-keep**
- **maximum-segments-to-keep**
- **media-ready** (BSD only; otherwise non-settable)
- **media-supported**
- **medium-preprinted-form-overlay-back**
- **medium-preprinted-form-overlay-front**
- **message**
- **message-font-type**
- **message-form-definition**
- **mid-release-timer**
- **mid-support-enabled**
- **non-process-runout-timer**
- **notification-profile**
- **notify-operator**
- **number-up-supported**
- **offset-stacking-available**
- **optimize-for-multiple-copies**
- **output-appearances-supported**
- **output-bin**
- **output-bin-numbers**
- **output-bins-supported**
- **output-color-management-resource**
- **output-data-user-exit**
- **output-format-supported**
- **overlay**
- **page-preprinted-form-overlay-back**
- **page-preprinted-form-overlay-front**
- **page-select-supported**
- **pcl-server-address**
- **pcl-server-port**
- **plex**

- plexes-supported
- postscript-server-address
- postscript-server-port
- presentation-fidelity-problem-reported
- presentation-object-container-extraction-mode
- print-edge-marks
- print-qualities-supported
- printer-end-sheet
- printer-escape-codes
- printer-memory
- printer-resolutions-ready
- printer-resolutions-supported
- printer-select-jdl
- printer-separator-sheet
- printer-start-jde-jdl
- printer-start-sheet
- psf-tray-characteristics
- public-context-presentation-object-container
- pull-print-printer
- remote-queue
- resource-context
- resource-context-font
- resource-context-form-definition
- resource-context-overlay
- resource-context-page-definition
- resource-context-page-segment
- resource-context-presentation-object-container
- reuse-inline-presentation-object-container
- reverse-page-order
- rip-ini-file
- scanner-corrections-supported
- scheduler-sort-primary-order
- scheduler-sort-secondary-order
- screen-frequencies-supported
- separator-sheets-supported
- shared-printer-name
- sides
- sides-supported
- snmp-active
- snmp-active-version
- snmp-community-name
- snmp-retry-count

- **snmp-timeout**
- **snmpv3-username**
- **snmpv3-authentication-type**
- **snmpv3-authentication-password**
- **snmpv3-privacy-password**
- **snmpv3-privacy-type**
- **snmpv3-security-level**
- **snmpv3-version-fallback**
- **snmp-write-community-name**
- **standard-barcode**
- **start-message-supported**
- **start-sheets-supported**
- **table-reference-characters-supported**
- **toner-version**
- **transform-sequence**
- **use-snmp**
- **wait-for-job-completion**
- **wait-for-job-completion-snmp-timeout**
- **x-image-shift-range-supported**
- **y-image-shift-range-supported**

accept-jobs

Indicates whether InfoPrint can assign newly submitted or resubmitted jobs to this actual destination.

GUI label

Accept jobs

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

true

Usage Guidelines

- A value of **false** does not prevent you from using the basic InfoPrint Manager Administration GUI to reassign jobs that have been assigned to another actual destination to this actual destination.
- When this value is **false** and the queue attribute **assign-to-destination** is true, InfoPrint rejects jobs sent to this actual destination.
- InfoPrint can assign jobs to this actual destination even if it is disabled. Of course, the jobs will not be printed or sent until the destination is enabled.
- The **accept-unsupported-jobs** server attribute overrides the **accept-jobs** attributes.

accounting-exit

Specifies the name of an auxiliary-sheet object that sets accounting exit parameters.

GUI label

Accounting exit

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter the name of any auxiliary sheet object. The supplied auxiliary sheet objects include:

accounting-log

Accounting information is written to the:

- **/var/psf/jobcompletion.log** file for AIX or Linux
- ***install_path*\var\psf\jobcompletion.log** file for Windows, where *install_path* indicates the path where you installed InfoPrint Manager for Windows.

brief

A sheet with brief accounting information is printed after the job.

full

A sheet with full accounting information is printed after the job.

job-ticket

Accounting information is written to:

- **/var/psf/podaccounting.log** file for AIX or Linux
- ***install_path*\var\psf\podaccounting.log** file for Windows, where *install_path* is the path where you installed InfoPrint Manager for Windows.

none

No accounting information is produced.

Default Value

- **accounting-log**

accounting-log-version

Contains user-defined information.

GUI label

Accounting Log Version

Type

Settable, single-valued

Allowed Values

Any string text up to 4096 characters

Default value

Empty

Usage notes

- The value of this attribute containing user-defined information is added to the actual destination accounting log if the attribute is added to the **additional-accounting-log-attributes**.
- The order of information in the existing accounting logs if you use the **additional-accounting-log-attributes** attribute is shifted if the **accounting-log-version** attribute is used.

ack-interval

Determines how often InfoPrint sends acknowledgement requests to the destination.

GUI label

Acknowledgement interval (pages)

DSS

Email, PSF

Type

Resettable, single-valued

Allowed Values

You can enter a value of 1 through 9999. This value represents pages.

Default Value

100

Usage Guidelines

The unit for this attribute is pages. If you change this attribute value, the change can affect performance. You can control how often InfoPrint updates the job attribute **pages-completed** by decreasing or increasing this value:

- Decreasing the value (number of pages) increases the number of acknowledgement requests during normal printing activities. This decreases the destination throughput and reduces the complexity of the exception recovery activities that InfoPrint performs.
- Increasing the value (number of pages) decreases the number of acknowledgement requests. This provides less accurate information about the destination and exception conditions.

Note

This attribute is only used for IPDS printers.

add-carriage-returns

Indicates whether InfoPrint should add carriage return characters when transforming ASCII documents for printing on this actual destination.

GUI label

Add ASCII carriage returns

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

No default value

add-line-feeds

Indicates whether InfoPrint should add line feed characters when transforming ASCII documents for printing on this actual destination.

GUI label

Add ASCII line feeds

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

No default value

additional-accounting-log-attributes

Allows the selection of additional job and document attributes to be added to the server accounting log.

GUI label

Additional Accounting Information

DSS

All

Type

Resettable, multi-valued

Allowed Values

- accounting1-text
- accounting2-text
- accounting3-text
- account-text
- actual-destinations-requested
- address1-text
- address2-text
- address3-text
- address4-text
- auxiliary-sheet-selection
- base-printer
- building-text
- chars
- color-bits-per-plane
- color-mapping-table
- color-profile
- color-rendering-intent
- color-toner-saver
- copy-count
- creation-time
- default-input-tray
- default-medium
- department-text
- destination-locations-requested
- destination-models-requested
- destination-name-requested
- destination-pass-through
- destinations-used
- document-comment
- document-content
- document-file-name
- document-finishing
- document-type
- email-from-address
- email-to-address
- fax-number
- fax-to-email-domain
- fax-to-name
- font-resolution
- form-definition
- halftone input-tray-select

- job-batch
- job-client-id
- job-comment
- job-copies-completed
- job-deadline-time
- job-discard-time
- job-finishing
- job-media-sheet-count
- job-originator
- job-page-count
- job-priority
- job-retain-until
- job-retention-period
- maintain-original-filename
- media-sheets-completed
- modification-time
- mvs-destination
- mvs-forms
- mvs-segment-id
- name-of-last-accessor
- name-text
- node-id-text
- number-of-documents
- number-up
- octet-count
- output-format
- page-count
- page-definition
- page-select
- plex
- print-quality
- processing-time
- programmer-text
- promotion-time
- queue-assigned
- record-count
- resource-context
- results-profile
- room-text
- sheet-range
- sides
- started-printing-time

- **subject-text**
- **title-text**
- **user-id-text**
- **user-locale**
- **user-name**
- **x-image-shift**
- **x-image-shift-back**
- **y-image-shift**
- **y-image-shift-back**

Default Value

none

Usage Guidelines

- When using the **default-medium** attribute for medium information, there is a limitation relative to accuracy. This situation occurs when the number of copies of each medium or sheet to be presented and the modifications that apply to each copy are specified in the AFP data stream or in the form definition, using the medium copy count and medium modification controls.

additional-accounting-log-attributes-supported

Contains the full list of possible job and document attributes that can be added to the server accounting log.

GUI label

Additional Accounting Attributes Supported

DSS

All

Type

Non-settable, multi-valued

Allowed Values

- **accounting1-text**
- **accounting2-text**
- **accounting3-text**
- **account-text**
- **actual-destinations-requested**
- **address1-text**
- **address2-text**
- **address3-text**

- address4-text
- authenticated-login
- auxiliary-sheet-selection
- base-printer
- building-text
- chars
- color-bits-per-plane
- color-mapping-table
- color-profile
- color-rendering-intent
- color-toner-saver
- copy-count
- creation-time
- default-input-tray
- default-medium
- department-text
- destination-accounting1-text
- destination-accounting2-text
- destination-accounting3-text
- destination-locations-requested
- destination-models-requested
- destination-name-requested
- destination-pass-through
- destinations-used
- document-comment
- document-content
- document-file-name
- document-finishing
- document-type
- email-from-address
- email-to-address
- fax-number
- fax-to-email-domain
- fax-to-name
- font-resolution
- form-definition
- halftone input-tray-select
- job-batch
- job-client-id
- job-comment
- job-copies-completed
- job-deadline-time

- job-discard-time
- job-finishing
- job-media-sheet-count
- job-originator
- job-page-count
- job-priority
- job-retain-until
- job-retention-period
- maintain-original-filename
- media-sheets-completed
- modification-time
- mvs-destination
- mvs-forms
- mvs-segment-id
- name-of-last-accessor
- name-text
- node-id-text
- number-of-documents
- number-up
- octet-count
- output-format
- page-count
- page-definition
- page-select
- plex
- print-quality
- processing-time
- programmer-text
- promotion-time
- queue-assigned
- record-count
- resource-context
- results-profile
- room-text
- sheet-range
- sides
- started-printing-time
- subject-text
- title-text
- user-id-text
- user-locale
- user-name

- x-image-shift
- x-image-shift-back
- y-image-shift
- y-image-shift-back

Default Value

- accounting1-text
- accounting2-text
- accounting3-text
- account-text
- actual-destinations-requested
- address1-text
- address2-text
- address3-text
- address4-text
- auxiliary-sheet-selection
- base-printer
- building-text
- chars
- color-bits-per-plane
- color-mapping-table
- color-profile
- color-rendering-intent
- color-toner-saver
- copy-count
- creation-time
- default-input-tray
- default-medium
- department-text
- destination-locations-requested
- destination-models-requested
- destination-name-requested
- destination-pass-through
- destinations-used
- document-comment
- document-content
- document-file-name
- document-finishing
- document-type
- email-from-address
- email-to-address
- fax-number

- fax-to-email-domain
- fax-to-name
- font-resolution
- form-definition
- halftone input-tray-select
- job-batch
- job-client-id
- job-comment
- job-copies-completed
- job-deadline-time
- job-discard-time
- job-finishing
- job-media-sheet-count
- job-originator
- job-page-count
- job-priority
- job-retain-until
- job-retention-period
- maintain-original-filename
- media-sheets-completed
- modification-time
- mvs-destination
- mvs-forms
- mvs-segment-id
- name-of-last-accessor
- name-text
- node-id-text
- number-of-documents
- number-up
- octet-count
- output-format
- page-count
- page-definition
- page-select
- plex
- print-quality
- processing-time
- programmer-text
- promotion-time
- queue-assigned
- record-count
- resource-context

- **results-profile**
- **room-text**
- **sheet-range**
- **sides**
- **started-printing-time**
- **subject-text**
- **title-text**
- **user-id-text**
- **user-locale**
- **user-name**
- **x-image-shift**
- **x-image-shift-back**
- **y-image-shift**
- **y-image-shift-back**

ascii-character-map

Indicates the ASCII code page that AIX or Linux uses to map the attributes of this PSF upload-TCP/IP-attached destination.

GUI label

ASCII code page to use

DSS

PSF (AIX or Linux)

Type

Resettable, single-valued

Allowed Values

You can enter the name of an ASCII code page, such as ISO8859–1.

Default Value

No default value

Usage Guidelines

- InfoPrint uses this attribute for PSF upload-TCP/IP-attached actual destinations and ignores it for other attachment types.
- If no value is specified for **ascii-character-map**, PSF upload uses the default code page of the server.

ascii-font-map

Defines how the destination maps the ASCII font escape sequences to AFP character sets that InfoPrint uses for ASCII fonts. InfoPrint uses this attribute to map each font-change escape to an AFP font character set.

GUI label

ASCII fonts mappings

DSS

PSF

Type

Resettable, multi-valued, complex

Syntax

font-escape:font-name

Separate each pair of values with a colon, for example:

```
10cpi:C02055D0
```

Components

- **font-escape**
  Specifies the name of an ASCII font-escape sequence.
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a text string containing the sequence name.
- **font-name**
  Specifies the name of an AFP font character set.
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a text string containing the font character set name.

Default Values

font-escape Value	*font-name Value*
10cpi	**C02055D0**
10cpi-emphasized	**C02075D0**

font-escape Value	*font-name Value*
10cpi-subscript	C02055P0
10cpi-subscript-emphasized	C02075P0
10cpi-2wide	C02059A0
10cpi-2wide-emphasized	C02079A0
10cpi-2wide-2high	C02059L0
10cpi-2wide-2high-emphasized	C02079L0
10cpi-2wide-subscript	C02055J0
10cpi-2wide-subscript-emphasized	C02075J0
10cpi-2high	C02051K0
10cpi-2high-emphasized	C02071K0
10cpi-condensed	C02055F0
10cpi-condensed-subscript	C02051R0
10cpi-condensed-2wide	C02059C0
10cpi-condensed-2wide-subscript	C02056N0
12cpi	C02055E0
12cpi-emphasized	C02075E0
12cpi-subscript	C02054Q0
12cpi-subscript-emphasized	C02074Q0
12cpi-2wide	C02059B0
12cpi-2wide-emphasized	C02079B0
12cpi-2wide-subscript	C02058M0
12cpi-2wide-subscript-emphasized	C02078M0
proportional	C02055G0
proportional-emphasized	C02075G0
proportional-subscript	C02055S0
proportional-subscript-emphasized	C02075S0
proportional-2wide	C02059G0
proportional-2wide-emphasized	C02079G0
proportional-2wide-2high	C02057S0
proportional-2wide-2high-emphasized	C02077S0

font-escape Value	*font-name Value*
proportional-2wide-subscript	**C02051H0**
proportional-2wide-subscript-emphasized	**C02071H0**
proportional-2high	**C02055H0**
proportional-2high-emphasized	**C02075H0**

associated-queue

Identifies the queue from which this actual destination receives jobs.

GUI label

Queue fed by

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 255 characters long that contains the ID of the queue. The ID cannot contain the cell name.

Default Value

No default value

Usage Guidelines

The value for this attribute is the name of a queue. The associated queue must exist and be in communication with the destination before you can enable the actual destination.

associated-sap-printer

Associates an SAP printer to an InfoPrint Manager actual destination.

GUI label

Associated SAP printer

DSS

All

Type

Initially settable, single-valued

Allowed Values

An 8-character alphanumeric string that contains the SAP system name (3 characters) and the SAP printer short name (4 characters) separated by a colon (:).

Default Value

No default value

Usage Guidelines

- The value for this attribute contains the name of an SAP system and a printer defined in that SAP system. InfoPrint Manager deletes the associated SAP printer when the actual destination is deleted.

associated-server

Identifies the name of the server where this actual destination is located.

GUI label

Server

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 255 characters that contains the name of a valid InfoPrint Manager server.

Default Value

The name of the server on which the actual destination was created.

Usage Guidelines

- You can set this attribute using the **pdset** command to transfer the actual destination to a different server.

- When you change this attribute value, InfoPrint Manager removes the actual destination and all its dependent objects from the current server and recreates them on the specified target server.
- All attribute values and object states are preserved during the transfer.
- If the transfer fails, the operation is rolled back and all objects are restored on the source server.
- Both the source and target servers must be running and accessible for the transfer to succeed.

attachment-type

Identifies how the output device that this actual destination represents attaches to the DSS and how InfoPrint communicates with the output device.

DSS

DFE, PSF

Type

Initially settable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Explanation*
command	InfoPrint communicates with this printer device by forwarding print requests to the remote print system or printer with a command. You might need to create a queue on the remote print system.
other-driver	InfoPrint communicates directly with the printer device through an AIX printer backend program, Linux CUPS backend, or a Windows printer port.
tcpip	InfoPrint communicates with this TCP/IP LAN-attached printer device directly through the TCP/IP network.
upload-tcpip	This printer device is attached to an MVS system. InfoPrint communicates with PSF/MVS through the TCP/IP network. **Note** This value is only supported by the PSF DSS for AIX or Linux.

Default Value

No default value

Usage Guidelines

- You need to specify a value for this attribute when you create a PSF actual destination.
- Some actual destination attributes apply only to certain attachment types.

attribute-map

Provides a list of InfoPrint Manager attributes and their associated generated command flags.

GUI label

Map attributes to flags

DSS

BSD

Type

Resettable, multi-valued, complex

Syntax

attribute:flag

Separate each pair of values with a colon, for example:

```
destination-pass-through:-o
```

Components

- **attribute**
  The name of an InfoPrint Manager document or job attribute that corresponds to a flag of the generated command.
  - *GUI label*
    InfoPrint Manager attribute
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a text string containing an attribute name.
- **flag**
  The name of a flag of the generated command.
  - *GUI label*
    Output command option
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a text string containing a flag.

Default Values

For BSD

destination-pass-through:-o

Usage Guidelines

- With AIX by default, BSD assumes the generated command is a **rembak** command.
- With Linux by default, BSD assumes the generated command is an **InfoPrint Manager LPR** command.
- With Windows by default, BSD assumes the generated command is a **lpr** command.
- Some printer devices do not support the BSD **-Z** flag. If you receive this error message when you try to print on one of these printers:

```
0782-597 The value of -Z attribute is not in the ring list
specified in the limits field
```

  delete the **job-name:-o-Z** value from the **attribute-map** attribute.

audit-exit

Specifies the name of the auxiliary-sheet object that sets audit exit parameters.

GUI label

Audit exit

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter the name of an auxiliary sheet object. The supplied auxiliary sheet objects include:

accounting-log

Audit information is written to the:

- **/var/psf/audit.log** file for AIX or Linux
- ***install_path*\var\psf\audit.log** file for Windows, where *install_path* indicates the path where you installed InfoPrint Manager for Windows.

brief

A sheet with brief audit information is printed after the job.

full

A sheet with full audit information is printed after the job.

job-ticket

A sheet with full audit information from the job ticket is printed after the job.

none

No audit information is produced.

Default Value

No default value

Usage Guidelines

If you do not set a value, InfoPrint produces no audit information at the end of a job submitted to this actual destination.

automated-backup-destination-enabled

This attribute indicates if the automated backup function is enabled for this actual destination.

GUI label

Automated backup destination enabled

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
True	**yes**
False	**no**

Default value

False.

Usage Guidelines

- When this attribute is set to **true**, InfoPrint Manager automatically reroutes jobs requesting to print on this destination to one of the backup destinations identified by the **backup-destinations** attribute values if the actual destination is in the **needs-key-operator** state.
- InfoPrint Manager automatically moves only the jobs having **job-state** value set to pending and the **actual-destination-requested** value set to this destination.

- When this attribute is set to **true** and the actual destination is in the **needs-key-operator** state, InfoPrint Manager queries the status of each job in the associated queue at every **backup-destination-retry-interval** seconds.
- This attribute cannot be set to **true** if the **pull-print-printer** attribute is set to **true**.

automatic-postscript-mode-switch

Indicates whether this actual destination supports switching into PostScript mode using controls placed in the data stream.

GUI label

Switch to PostScript automatically

DSS

AIX, CUPS

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

- If this actual destination has this feature, it can print PostScript documents among non-PostScript documents.
- The value for this attribute does not change if you delete the **document-formats-supported** value of **postscript**.

auxiliary-sheet-selections-supported

Identifies the combination of start, separator, and end sheets selection that this actual destination supports for jobs.

GUI label

Auxiliary sheets allowed

DSS

AIX, CUPS, DFE, IPP, Passthrough, PSF

Type

Resettable, multi-valued

Allowed Values

For AIX, CUPS, and PSF, you can enter any of these fixed values:

- **end**
- **none**
- **sep**
- **sep-end**
- **start**
- **start-end**
- **start-sep**
- **start-sep-end**

For IPP and Passthrough, you can enter any of these fixed values:

- **none**
- **start**

For CUPS, you can enter any of this fixed values:

- **end**
- **none**
- **sep**
- **start**

For DFE, you can enter any of these fixed values:

- **end**
- **none**
- **start**
- **start-end**

Default Values

AIX, CUPS, and PSF defaults: **end**, **none**, **sep**, **sep-end**, **start**, **start-end**, **start-sep**, **start-sep-end**.

Internet Printing Protocol (IPP) and Passthrough defaults: **none**, **start**.

DFE defaults: **end**, **none**, **start**, **start-end**.

Usage Guidelines

- InfoPrint compares the job attribute **auxiliary-sheet-selection** to this attribute for validation and scheduling.
- You can use this attribute to restrict how much control users have over **auxiliary-sheet-selection** on this actual destination.
- If you remove all values that specify a particular auxiliary sheet (such as **start**), the job submitter cannot "turn off" the corresponding actual destination attribute (such as **printer-start-sheet**).

backup-destinations

Identifies other actual destinations that end users can use if this actual destination is unavailable. The administrator can use this attribute to identify one or more backup destinations for an actual destination, so that when an actual destination is unavailable, the end user can use this information to locate an alternative destination to submit a job to.

GUI label

Backup destinations

DSS

All

Type

Resettable, multi-valued

Input Synonyms

You can use the synonym **backup-printers**.

Allowed Values

You can enter a text string of up to 255 characters that contains the names of actual destinations that can be backup destinations.

Default Value

None.

Usage Guidelines

- When the **automated-backup-destination-enabled** attribute is set to **false**, this attribute identifies one or more backup destinations for the actual destination, so that when the actual destination is unavailable, the end user can use this information to locate an alternative destination to submit a job to.
- When the **automated-backup-destination-enabled** attribute is set to **true**, this attribute identifies one or more backup actual destinations for the actual destination, so that when the actual destination is unavailable, InfoPrint Manager can automatically use this attribute's value to reroute the job.

- Make sure that the **logical-destination-assigned** attribute is set on the actual destinations set to be the backup destinations.
- Make sure that at least one of the backup destinations is not in the **needs-key-operator** state.
- To successfully reroute the jobs when the **automated-backup-destination-enabled** attribute is set to **true**, the **backup-destination** attribute values should point to similarly configured actual destinations.

backup-destination-retry-interval

Specifies the time interval in seconds that passes between two InfoPrint Manager attempts to reroute the jobs waiting to print on this device if the actual destination enters the **needs-key-operator** state.

GUI label

Backup destination retry interval

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 1 to 9999.

Note

1. The unit is seconds.
2. When you specify the attribute value as 9999, the time interval is 9999 seconds but not indefinite.

Default value

60.

Usage Guidelines

- To use this attribute, the **automated-backup-destination-enabled** attribute must be set to **true**.
- When this attribute is set to **true** and the actual destination is in the **needs-key-operator** state, InfoPrint Manager queries the status of each job in the associated queue at every **backup-destination-retry-interval** seconds.

block-resident-fonts

Indicates whether to block the use of the printer-resident fonts. Blocking the printer-resident fonts saves processing time and increases the network speed only when the required fonts are inline or requested from the font library.

GUI label

Block Resident Fonts

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input synonym*
true	yes
false	no

Default value

False

booklet-fold

Specifies how booklets are ordered and folded on this output device.

GUI label

Fold booklet

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

- **up**
- **down**

Default Value

down

For PSF InfoPrint 4000 printers

up

For all other printers

3

Usage Guidelines

- The inline booklet makers attached to the InfoPrint 4000s fold booklets **down**; that is, the cover (if any) is inserted at the end of the booklet, and after the booklet prints, it is saddle-stitched from the top and folded downward.
- The **reverse-page-order** attribute does not apply to booklet jobs.

cancel-individual-document-supported

Indicates whether this actual destination is capable of cancelling a single document in a multi-document job.

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to **false**.

Default Value

false

capture-inline-cmr-resources

Indicates whether inline color management resources (CMRs) can be downloaded by InfoPrint Manager, and optionally captured and used by PSF TCP/IP printers. Capturing a CMR means the resource is downloaded to the printer and remains resident on the printer for future reuse.

GUI label

Capture inline CMR resources

DSS

PSF TCP/IP

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

- When this attribute is set to **true** and an inline CMR has an object identifier (OID), and if the CMR is not already captured (that is, made resident) in the printer, InfoPrint Manager downloads the CMR and tells the printer to capture it.
- When this attribute is set to **false** (the default) and an inline CMR has an object identifier (OID), InfoPrint Manager tries to activate the CMR in the printer. If the CMR is not in the printer, InfoPrint Manager downloads the CMR, but does not tell the printer to capture it.
- When an inline CMR resource does not have an object identifier (OID), InfoPrint Manager can download the CMR, but the printer cannot capture the CMR.

Note

A printer must support CMR capture to take advantage of **capture-inline-cmr-resources**.

For more information about the use of CMRs with InfoPrint Manager, see the appropriate InfoPrint Manager procedures manual.

capture-inline-otf-resources

Indicates whether inline OpenType Fonts can be downloaded by InfoPrint Manager and captured and used by PSF TCP/IP printers. Capturing a font means it is downloaded to the printer and remains resident on the printer for future reuse.

GUI label

Capture inline otf resources

DSS

PSF TCP/IP

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

- When this attribute is set to **true** and an inline OpenType font has an object identifier (OID), and if the font is not already captured (that is, made resident) in the printer, InfoPrint Manager downloads the font and tells the printer to capture it.
- When this attribute is set to **false** (the default) and an inline OpenType font has an object identifier (OID), InfoPrint Manager tries to activate the font in the printer. If the font is not in the printer, InfoPrint Manager downloads the font, but does not tell the printer to capture it.
- When an inline OpenType font does not have an object identifier (OID), InfoPrint Manager can download the font, but it cannot be captured by the printer.

Note

A printer must support OpenType font capture to take advantage of **capture-inline-otf-resources**.

For more information about the use of OpenType and WorldType fonts with InfoPrint Manager, see "Using OpenType fonts" in the appropriate InfoPrint Manager procedures manual.

carriage-control-types-supported

Identifies the types of carriage controls that this actual destination supports.

GUI label

Carriage control types allowed

DSS

DFE, Email, PSF

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

- **ansi-ascii**
- **ansi-ebcdic**
- **machine**
- **none**

Default Values

ansi-ascii, **ansi-ebcdic**, **machine**, **none**

Usage Guidelines

- InfoPrint compares the document attribute **carriage-control-type** to this attribute for validation and scheduling.
- You can use this attribute to restrict use of this actual destination.

character-mappings-supported

Identifies the character mappings (code pages) that this actual destination supports.

GUI label

Character mappings allowed

DSS

AIX, Email, PSF

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

- **ibm-437**
- **ibm-850**
- **ibm-860**
- **ibm-863**
- **ibm-865**
- **ibm-932**
- **ibm-938** with InfoPrint Manager for AIX only
- **ibm-euccn**
- **ibm-eucjp**
- **ibm-euckr**

- **ibm-euctw**

Default Values

AIX

The value of the **destination-model** attribute for the actual destination determines the default value.

PSF, Email

ibm-437, **ibm-850**, **ibm-860**, **ibm-863**, **ibm-865**, **ibm-eucjp**, **ibm-euckr**, **ibm-euctw**

Usage Guidelines

InfoPrint compares the document attribute **default-character-mapping** to this attribute for scheduling.

checkpoint-at-stacker

Indicates where to pause jobs printing on this actual destination.

GUI label

Checkpoint at stacker

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

When this attribute is set to **false** (the default), the checkpoint for paused jobs occurs at the operator viewing point on the printer device (the printhead). This means that when a paused job resumes, printing begins where it stopped, without reprinting any pages.

Set this attribute to **yes** if you want the checkpoint to occur at the stacker. This means that when a paused job resumes, all pages not stacked will be reprinted. This guarantees that, even if there is a

paper jam between the printhead and the stacker, you will have at least one copy of each printed page.

checkpoint-formats-supported

InfoPrint Manager sets this attribute to identify the checkpoints supported for paused jobs for this actual destination.

GUI label

Checkpoint formats allowed

DSS

AIX, Email, PSF

Type

Non-settable, multi-valued

Allowed Values

InfoPrint Manager sets this value to any of these fixed values:

- **dsf-document-number**
- **dsf-job-copy**
- **dsf-results-profile**
- **no-context-info**
- **psf-interrupt**

Default Values

AIX

dsf-document-number, **dsf-job-copy**, **dsf-results-profile**

PSF

dsf-results-profile, **psf-interrupt**

Email

dsf-results-profile

Usage Guidelines

InfoPrint Manager uses this information to reschedule paused jobs.

classes-ready

The **classes-ready** attribute is used with the **class** document/default document attribute for scheduling. A document with a class matching **classes-read**y will be scheduled to the appropriate actual destination.

GUI label

Classes ready (A-Z, 0–9, @, *)

DSS

All

Type

Resettable, multi-valued

Allowed Values

You can enter a text string.

Default Value

The default is an * (asterisk).

Usage Guidelines

- When this attribute contains an * (asterisk), any job will be scheduled to the associated actual destination.
- There is no associated supported attribute for **classes-ready**, so a job specifying any class value will be accepted, but it can remain in the queue until the appropriate **classes-ready** value is set.
- InfoPrint compares the **class** document attribute with the **classes-ready** actual destination attribute for validation and scheduling.

client-driver-names

Identifies the Windows print drivers that can submit a data stream to this actual destination. Setting this attribute makes the actual destination usable from InfoPrint Manager Select.

GUI label

Client drivers

DSS

All

Type

Resettable, multi-valued

Allowed Values

You can enter a text string that contains the string form of the Windows print driver for each permitted Windows print driver. Begin and end the string with single quotation marks.

Default Value

No default value

Usage Guidelines

Perform this procedure to determine the valid client driver names:

1. Click **My Computer** from the desktop.
2. Click **Control Panel**.
3. Click **Printers**.
4. Click **Add Printer**.
5. The values listed in the **Printer:** list box in the **Add Printer Wizard** are the names of the Windows destination drivers that you can install on the workstation; for example, **4039 LaserPrinter PS**.

Note

1. Other destination drivers are available and might not display in the list for a particular workstation.
2. If you will be submitting jobs from the Windows Select client to a PSF actual destination, you should select a generic destination driver, such as a PostScript driver, instead of one for a specific type of destination. Otherwise, the driver might generate device-specific data streams that InfoPrint cannot transform correctly.

color-bits-per-plane

For PSF, specifies whether the transform is to produce monochrome (FS10) or color images (FS42 or FS45).

For CUPS destinations, specifies whether InfoPrint Manager is to pass to the underlying printing system the corresponding driver option which produces monochrome or color output. For more information, see "Mapping Attributes and Values to PPD Options" in the *RICOH InfoPrint Manager for Linux: Getting Started*.

GUI label

Color bits per plane

DSS

CUPS, DFE, Email, PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

- **0-bits** (monochrome FS10 for PSF and Email, monochrome for CUPS and DFE)
- **1-bit** (color FS42 for PSF and Email)
- **8-bits** (color FS45 for PSF and Email, color for CUPS and DFE)

Default Value

For InfoPrint 5000, RICOH Pro C7500, RICOH Pro C9500, and the RICOH Pro VC series printers, the default is **8-bits**.

For DFE printers, the default is **8-bits**.

For all other actual destinations, the default is **0-bits**.

Usage Guidelines

- **For Email and PSF**
  - If you use this attribute, verify if the transform, driver, and printer support these options.
  - For GIF, JPEG, PCL, PDF, PostScript, and TIFF document formats, the value derived from the **color-bits-per-plane** attribute overwrites the value of the **image-out-format** attribute.
  - For the Email DSS, PSF-Command DSS, and PSF-Other DSS, this attribute is only supported for PCL, PDF, or PostScript document formats.
  - For the **sap2afp** transform, if the value of this attribute is **8-bits (FS45)**, InfoPrint Manager requests FS45 transform output. Otherwise, the attribute is ignored.
- **For CUPS and DFE**
  - InfoPrint Manager does not transform the data, it passes the corresponding driver option to the underlying printing system.

color-bits-per-plane-supported

Specifies the types of images supported on the actual destination when printing a document.

GUI label

Color bits per plane allowed

DSS

DFE, Email, IPP, PSF

Type

Resettable, multi-valued

Allowed Values

You can enter one of these fixed values:

- **0-bits** (monochrome FS10)
- **1-bit** (color FS42 for Email and PSF only)
- **8-bits** (color FS45)

Default Value

For Email and PSF destinations, InfoPrint 5000, RICOH Pro C7500, RICOH Pro C9500, and the RICOH Pro VC series printers, these defaults apply:

- **0-bits** (monochrome FS10)
- **1-bit** (color FS42)
- **8-bits** (color FS45)

For all other actual destinations, the default is **0-bits** (monochrome FS10).

Usage Guidelines

- Black and white printers or black and white printers with spot-color attachments support **0-bits**.
- For Email DSS, this attribute is only supported for PCL, PDF or PostScript document formats.
- For DFE DSS and IPP DSS, this attribute does not support the **1-bit** value.

color-mapping-table

Identifies the default color mapping table (CMT) that the output device uses when printing a document.

GUI label

Color mapping table

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 8 characters that contains the identification of the color mapping table.

Default Value

No default value

Usage Guidelines

- See "Generating and submitting color mapping table source and output files" in the *InfoPrint Manager: Procedures* manual that is appropriate for your operating system.
- See "Appendix A" in *InfoPrint Data Stream and Object Architectures: Mixed Object Document Content Architecture Reference* for more detailed information about the use of color mapping tables.

color-profile

Specifies the color profile, if any, to be used by the PostScript transform (**ps2afp**) and the PDF transform (**pdf2afp**).

GUI label

Color profile

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

SWOP

Specifications for Web Offset Publications (SWOP) standard in the United States used for tuning Cyan-Magenta-Yellow-Black (CMYK) color.

Euroscale

European standard used for tuning Cyan-Magenta-Yellow-Black (CMYK) color.

none

No color profile.

Default Value

none

color-profiles-supported

Identifies which color profiles can be used by the actual destination when printing a document.

GUI label

Color profiles allowed

DSS

PSF

Type

Resettable, multi-valued

Allowed Values

You can enter one of these fixed values:

SWOP

Specifications for Web Offset Publications (SWOP) standard in the United States used for tuning Cyan-Magenta-Yellow-Black (CMYK) color.

Euroscale

European standard used for tuning Cyan-Magenta-Yellow-Black (CMYK) color

none

No color profile

Default Value

None

Usage Guidelines

- You can use this attribute to restrict the use of **color-profile**.

color-rendering-intent

Identifies which color rendering dictionary (CRD) can be used by the PostScript RIP and which lookup table (LUT) can be used by the TIFF RIP.

GUI label

Color rendering intent

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	Explanation
relative	When you specify **relative**, InfoPrint Manager maps in-gamut colors exactly and maps out-of-gamut colors to the closest in-gamut color.
perceptual	When you specify **perceptual**, InfoPrint Manager maps all colors in such a way as to provide subjectively more pleasing hardcopy output.

Input Synonym

You can use the synonym **color-rendering-intent-colormetrics**.

Default Value

None

Usage Guidelines

- For the vast number of colors possible with 32–bit color, an actual destination can only physically render a subset of the possible range of colors, and this range is referred to as the color gamut for the actual destination. When a color is specified in PostScript or TIFF and is then transformed into AFP, the transform needs to map the colors that fall outside of the color gamut for the actual destination into a color in the gamut, so it can be printed with fidelity. The **color rendering intent** attribute specifies which Color Rendering Dictionary (CRD) to use for the PostScript mapping and which Lookup Table (LUT) to use for the TIFF mapping.
- For PostScript, the CRD depends on the value of the **color-toner-saver** attribute.
- For TIFF, the LUT depends on the value of the **color-profile** and **color-toner-saver** attributes.
- The color PostScript RIP must be installed to make use of this attribute.
- If this attribute is specified and a pragma setting for the transform is specified through **other-transform-options**, the value in **other-transform-options** takes effect.
- If color rendering intent is specified inside the PostScript data stream, that value takes effect regardless of any attribute setting.
- Color rendering intent cannot be specified inside the TIFF/GIF/JPEG data stream.
- The **color-rendering-intent** attribute is not the same value as the *ColorRenderingIntent* in the form definition for color management resources (CMRs).

color-toner-saver

For PSF destinations, when cyan, magenta, and yellow (cmyk) are combined in a certain proportion, the result approximates black. When the **color-toner-saver** attribute is used, the proportion of cyan, magenta, and yellow are reduced and substituted with black toner, which reduces the amount of color toner used. This option only applies to non-cmyk PostScript (for example, RGB) for which a color rendering dictionary (CRD) is used to determine the cmyk values to use.

For CUPS destinations, enable this setting to pass to the underlying printing system the corresponding driver option which prints using a reduced amount of toner when printing out copies. Print results are

lighter in density than normal. For more information, see "Mapping Attributes and Values to PPD Options" in the *RICOH InfoPrint Manager for Linux: Getting Started*.

GUI label

Color toner saver

DSS

CUPS, PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	Input Synonym
true	**yes**
false	**no**

For PSF actual with the **color-toner-saver** attribute, a value of **true** or **yes** substitutes black for common cyan, magenta, and yellow components to reduce consumption of toner and to reduce the cost per page; while a value of **false** or **no** uses the cmyk proportions specified.

For CUPS actual destinations, a value of **true** or **yes** maps the corresponding driver (PPD) option which prints using a reduced amount of toner when printing out copies.

Default Value

false

Usage Guidelines

- Setting **color-toner-saver** to **True** or **Yes** results in less vibrant process colors.
- The **color-toner-saver** actual destination attribute can be used with color management resources (CMRs).
- For PSF actual destinations, the **color-toner-saver** actual destination attribute can be used with color management resources (CMRs).

color-toner-saver-supported

Identifies the values that can be specified for **color-toner-saver**.

GUI label

Color toner saver allowed

DSS

PSF

Type

Resettable, multi-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	Input Synonym
true	**yes**
false	**no**

Default Value

- **true or yes**
- **false or no**

Usage Guidelines

- For explanations on the attribute values, see the destination attribute **color-toner-saver**.
- You can use this attribute to restrict the use of **color-toner-saver**.

command

See **destination-command**.

connection-timeout

Sets the connection timeout parameter for TCP/IP-attached actual destinations. This time period is the amount of time that InfoPrint Manager waits before it stops trying to communicate with the output device when it cannot make a connection.

GUI label

Connection time out (sec)

DSS

Email, PSF

Type

Resettable, single-valued

Allowed Values

You can enter a value of 0 through 9999. The unit is seconds.

Default Value

Email, PSF

30

Usage Guidelines

- A value of **0** prevents any time out.
- InfoPrint Manager uses this attribute with TCP/IP-attached actual destinations and ignores it for other attachment types.

content-orientations-supported

Identifies the page presentations that this actual destination supports.

GUI label

Orientations allowed

DSS

AIX, CUPS

Type

Resettable, multi-valued

Input Synonym

You can use the synonym **orientations-supported**.

Allowed Values

You can enter any of these fixed values:

- **landscape**
- **portrait**
- **reverse-landscape**
- **reverse-portrait**

Default Values

portrait

Usage Guidelines

- InfoPrint compares the document attribute **content-orientation** to this attribute for validation and scheduling.
- You can use this attribute to restrict use of this actual destination.

convert-to-ebcdic-supported

Indicates whether this actual destination supports converting document data from ASCII to EBCDIC.

GUI label

Convert to EBCDIC allowed

DSS

DFE, Email, PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	Input Synonym
true	**yes**
false	**no**

Default Value

true

Usage Guidelines

- InfoPrint Manager compares the value of the document attribute **convert-to-ebcdic** to this attribute for job validation and scheduling.
- InfoPrint uses the document attribute **convert-to-ebcdic** when printing line-data documents.
- You can use this attribute to restrict use of this actual destination.

data-fidelity-problem-reported-supported

Identifies which types of data fidelity errors this actual destination reports.

GUI label

Data fidelity problems allowed

DSS

PSF

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

- **all**
- **character**
- **none**
- **position**

Default Values

all, **character**, **none**, **position**

Usage Guidelines

- InfoPrint compares the document attribute **data-fidelity-problem-reported** to this attribute for scheduling.
- Use this attribute to specify whether InfoPrint issues error messages for print-positioning and invalid-character errors that occur for TCP/IP-attached and upload-TCP/IP-attached printer devices.

  Print positioning errors occur when the print position for the data is beyond the valid printable areas as defined by the intersection of the physical and logical pages. (A logical page identifies the printing boundaries of a physical page.)

  Invalid-character errors occur when the code point does not map to a character in a font.

default-font-fidelity-action

Indicates what InfoPrint should do if a font required to print a document is not available in the resolution specified by the data stream, the document **font-resolution** attribute, or the actual destination **default-font-resolution** attribute.

GUI label

Default font fidelity action

DSS

PSF, Email

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Explanation*
stop	Stop printing the job.
continue	Try to substitute a similar font at a different resolution.

Default Value

continue

Usage Guidelines

The value of the document attribute **font-fidelity-action** and the value specified in the data stream override the value of this attribute.

default-font-resolution

Specifies the font resolution, in pels, used for documents printed on this actual destination when no value is specified in the data stream or by the document **font-resolution** attribute.

GUI label

Default font resolution

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

- **240**
- **300**
- **open-type**
- **outline**

Default Value

outline

Usage Guidelines

- The value of this attribute must be one of the values of the **font-resolutions-supported** attribute.

- Usually the font resolution and the printer resolution match, but there are two cases when they do not:
  - Some printer devices, such as InfoPrint 4000s, can print fonts of any resolution, although the print head is always 600 pels.
  - It is possible to print a document created with fonts of one resolution on a printer device with a different resolution by substituting fonts. Depending on the document, the output might or might not be acceptable.
- The **open-type** value is only valid for printers that support TrueType or OpenType fonts. When you enter the **open-type** value for this attribute, the **-truetype** parameter is passed to the **sap2afp** command and is valid only for SAP datastreams. For more information about the **sap2afp** command, see sap2afp command: transforms SAP OTF or ABAP data to AFP, p. 459. For more information about TrueType or OpenType fonts, see *Using OpenType Fonts in an AFP System*.

default-input-tray

Specifies the name of the default input tray for a PSF actual destination.

GUI label

Default input tray

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter any value as long as the value maps to one of the actual destination **input-trays-supported** or **psf-tray-characteristics** attribute values.

Default Value

No default value

Usage Guidelines

- The value you specify must be one of the values specified for the **input-trays-supported** or **psf-tray-characteristics** actual destination attribute.
- InfoPrint only uses the value you supply for this attribute if:
  - The user does not specify a medium or input tray.
  - The form definition InfoPrint uses for the job does not specify an input tray.

default-setup-name-fidelity

Specifies what InfoPrint Manager should do if the activation of a setup is not supported by the printer, if the setup name specified by the job or the actual destination **setup-name** attribute is not available on the physical printer or if the **setup-name** activation requires operator intervention.

GUI label

Default Setup Name Fidelity Action

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Explanation*
continue	Continue printing the job.
stop	Stop printing the job.

Default Value

Stop

descriptor

Provides a textual description of this actual destination.

GUI label

Description

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 4095 characters long that describes this actual destination. You might want to include such things as the type and location of the output device that this actual destination represents and any usage information, such as restrictions for this actual destination.

Default Value

No default value

Usage Guidelines

The use of this attribute is optional. However, a detailed description is useful to users who want to specify a given destination or to determine which destination can handle their jobs. A description is also helpful when you create a new logical destination and want to determine which actual destinations you should associate with the new logical destination.

destination-accounting1-text

Contains user-defined information.

GUI label

Accounting 1 text

Type

Resettable, single-valued

Allowed Values

Any string text up to 4096 characters

Default value

Empty

Usage Guidelines

If added to the list of the server's or actual destination's **additional-accounting-log-attributes**, it allows you to add the actual destination specific information to each record in the actual destination's accounting log.

destination-accounting2-text

Contains user-defined information.

GUI label

Accounting 2 text

Type

Resettable, single-valued

Allowed Values

Any string text up to 4096 characters

Default value

Empty

Usage Guidelines

If added to the list of the server's or actual destination's **additional-accounting-log-attributes**, it allows you to add the actual destination specific information to each record in the actual destination's accounting log.

destination-accounting3-text

Contains user-defined information.

GUI label

Accounting 3 text

Type

Resettable, single-valued

Allowed Values

Any string text up to 4096 characters

Default value

Empty

Usage Guidelines

If added to the list of the server's or actual destination's **additional-accounting-log-attributes**, it allows you to add the actual destination specific information to each record in the actual destination's accounting log.

destination-command

Specifies the command-line entry to print the job data.

GUI label

Printer command

DSS

AIX, BSD, CUPS, PSF

Type

Resettable, single-valued

Input Synonyms

You can use the synonym **printer-command** or **command**.

Allowed Values

You can enter a text string up to 4095 characters long that contains the command.

Default Value

AIX, CUPS

No default

BSD for InfoPrint Manager for AIX

/usr/lpd/rembak

BSD for InfoPrint Manager for Windows

No default

CUPS

No default

PSF other-driver attached actual destinations for InfoPrint Manager for AIX or InfoPrint Manager for Linux only

No default

PSF command-attached actual destinations for InfoPrint Manager for AIX

qprt -P*xxx* **-dp -Z!**

where *xxx* is the value of the **print-queue-name** attribute. If there is no value for the **print-queue-name** attribute, *xxx* is

asc

If the **destination-data-stream=ppds**

pcl

If the **destination-data-stream=pcl4, pcl5, pcl5c,** or **pcl6**

PSF command-attached actual destinations for InfoPrint Manager for Linux

No default

PSF command-attached actual destinations for InfoPrint Manager for Windows

No default

Usage Guidelines

- For AIX actual destinations:
  - InfoPrint Manager uses the value as the command that the AIX actual destination executes for each document printed. It should include the full path name for the backend program you are using for your printer device.

    With the **wait-for-job-completion** actual destination attribute, you can use **pioinfo**, **piorpdm**, and **pioipps** backends that can provide job status and accounting information.

    Examples:

    - **destination-command=/usr/lpd/pio/etc/pioinfo ip_address** , where *ip_address* is the ip address of the printer.
    - **destination-command=/usr/lpd/pio/etc/pioipps ipp_uri**, where *ipp_uri* is the IPP printer's URI, e.g. https://ricohprinter.yourcompany.com:443/ipp/print.

    See wait-for-job-completion, p. 769 for more information.
  - If the printer backend program is a variation of, or front end to, **rembak**, specify **true** on the **remote-queue** actual destination attribute. Examples of **rembak**–based backend programs include **piorflb** and **piocolor**.

    For more information about **rembak**, see remote-queue, p. 728.
  - If the **destination-command** attribute is set to **pioinfo** backend, InfoPrint Manager disables the auxiliary pages if it detects a **Print and Hold** job request.
- For CUPS actual destinations:
  - InfoPrint Manager uses the value as the **device-uri** (backend connection) that the associated CUPS printer runs for each job in order to send the data to the printing device.
  - CUPS-provided backend programs can be used for printing.

    Examples:

    - **destination-command=ipps://ip_address:443/ipp/print**
    - **destination-command=socket://ip_address**
  - With the addition of the **wait-for-job-completion** actual destination attribute, the **pioinfo** or **piorpdm** CUPS backend programs can be used for printing.

    Examples:

    - **destination-command=pioinfo://ip_address**
    - **destination-command=piorpdm://ip_address**
- For PSF **other-driver** or **command** actual destinations:
  - InfoPrint Manager uses the command string to invoke the printer backend program for **other-driver** attached actual destinations.
  - InfoPrint Manager uses the value as the command string to print a job on the **command-attached** printer and to send the job to the correct remote queue.
  - With the PSF DSS for AIX or LINUX:

- If you do not specify this attribute for **command-attached** actual destinations, InfoPrint Manager fills in the value of *XXX* (shown under Default Value) with the value of the **print-queue-name** attribute.
- With a PSF **other-driver** attached printer, **destination-command** is supported for an AIX server; however, it is not supported for a Windows server.
- With a PSF **other-driver** attached printer for InfoPrint Manager for AIX, you can use the same backend program as for AIX actual destinations.
- With a PSF **other-driver** attached printer for InfoPrint Manager for Linux, you can use the same backend connection as for CUPS actual destinations.
- With PSF DSS for AIX, if the **destination-command** attribute is set to **pioinfo** backend, InfoPrint Manager disables the auxiliary pages if it detects a **Print and Hold** job request.

- For BSD actual destinations, you can use the **attribute-map** actual destination attribute to map InfoPrint Managerattributes to command flags appropriate for your destination command. The **attribute-map** defaults apply to **remback** (on AIX), **lpr** (on Windows), or **InfoPrint Manager LPR** (on Linux).
- The resource path `/ipp/print` is commonly used by most of the IPP Printers to define an IPP print service. Still, consult your printer documentation or the Printer's Bonjour (DNS-SD) registration information to determine the proper host name, port number, and path to use for your Printer. You can also use the CUPS **ipptool** to retrieve printer IPP attributes. See the "Using the CUPS ipptool command" topic in *RICOH InfoPrint Manager for AIX: Getting Started* for more information.

destination-data-stream

Identifies the data stream format that is output to the printer device.

GUI label

Data Stream

DSS

PSF

Type

Initially settable, single-valued

Allowed Values

You can enter one of these fixed values:

- **pcl4**
- **pcl5**
- **pcl5c**
- **pcl6**
- **ppds**
- **ipds**

Note

ipds is not an allowed value for command-attached and other-driver attached printers.

- **afpds**

Note

afpds can only be used with the Upload TCP/IP attachment type.

For more information about attachment types, see Understanding attachment types for PSF actual destinations, p. 513.

Input Synonym

You can use the synonym **printer-data-stream**.

Default Value

Other-driver attached actual destinations

pcl4

Command-attached actual destinations

pcl4

Other attachment types

ipds

Usage Guidelines

For AIX, CUPS, and PSF-Other DSS actual destinations, you must have the correct driver for the data stream format you want to output to the printer device.

destination-locations

Identifies the location of the output device.

GUI label

Locations

DSS

All

Type

Resettable, multi-valued

Input Synonyms

You can use the synonym **printer-locations** or **locations**.

Allowed Values

You can enter a text string up to 4095 characters long, for each value, that describes the physical location of the output device. Each value is a different description for the same location.

Default Values

No default value

Usage Guidelines

InfoPrint compares the job attribute **destination-locations-requested** to this attribute for scheduling. You can specify the **destination-locations-requested** job attribute to request that InfoPrint use the output device at this specific location to process the job.

destination-model

Identifies the make and model number defined by the manufacturer of the output device.

GUI label

Model

DSS

AIX, BSD, CUPS, DFE, Email, IPP, Passthrough, PSF

Type

Initially settable with AIX, CUPS, and PSF-Other attached actual destinations; resettable, single-valued with other listed DSSs

Input Synonyms

You can use the synonym **printer-model** or **model**.

Allowed Values

You can enter a text string up to 4095 characters long that contains the make and model number of the output device.

Default Value

If SNMP communication is active, InfoPrint Manager queries the printer device and sets the values according to the response; otherwise no default value.

With Internet Printing Protocol (IPP) printers when SNMP communication is not active, the default comes from IPP.

Usage Guidelines

- If you specify a value for the **destination-model** attribute, you deactivate the default provided by SNMP.

- If you allow SNMP to determine this value for an AIX actual destination or a PSF other-driver attached actual destination, it must be one of the values of the server **snmp-aix-printer-models** attribute.
- For CUPS actual destinations and PSF Other-driver attached actual destinations on a Linux server, this value must match a PPD file in the default directory, **/usr/share/cups/model**. If the printer PPD file is not located in the default location, this value must be the full path to the PPD file. For example, for a **Ricoh Aficio MP5000**, the value you can specify is **/printing/drivers/Ricoh-Aficio_MP_5000_PS.ppd**.
- For AIX actual destinations and PSF other-driver attached actual destinations on an AIX server, this value must match the file prefix of a file in the **/usr/lib/lpd/pio/predef** directory on the AIX processor on which the actual destination was created unless the **destination-model** is an InfoPrint model and then the external name is mapped to the predefined name for you.
- For AIX actual destinations, InfoPrint Manager uses the value you specify here to determine the values to set for the **document-formats-supported** attribute.
- For PSF TCP/IP-attached actual destinations capable of printing halftones, and for any PSF actual destination that represents a printer device with a finisher attached, specify the model name in the format **InfoPrint***xxxx*. where *xxxx* is the model number, for example, **InfoPrint4000-IR3-IR4**. Do not put a space between **InfoPrint** and the model number.

  Note

  If you configure these printer models as PSF other-driver attached actual destinations or as AIX actual destinations on an AIX server, specify the model name as the file prefix of a file in the **/usr/lib/lpd/pio/predef** directory unless the **destination-model** is an InfoPrint model and then the external name is mapped to the predefined name for you.
- InfoPrint Manager compares the job attribute **destination-models-requested** to this attribute for scheduling.
- For IPP printers, InfoPrint Manager uses the **destination-model** information for validation and scheduling.

destination-name

Identifies the name of this actual destination.

DSS

All

Type

Non-settable, single-valued

Input Synonyms

You can use the synonym **printer-name**, **printer**, or **physical-printer**.

Allowed Values

InfoPrint sets this value to the *DestinationName* portion of the argument used with the **pdcreate** command or with the **pdmigpp** utility when this actual destination was created.

Default Value

No default value

Usage Guidelines

- InfoPrint compares the job attribute **actual-destination-requested** to this attribute for validation and scheduling.
- The name must be unique in the namespace.

destination-needs-attention-time

Reports the amount of time the output device has been waiting for simple intervention, such as loading paper.

GUI label

Attention needed

DSS

All

Type

Non-settable, single-valued

Input Synonym

You can use the synonym **printer-needs-attention-time**.

Allowed Values

InfoPrint sets this value to [HH:]MM. The unit is minutes or hours and minutes, separated by a colon.

Default Value

No default value

destination-needs-key-operator-attention-time

Reports the amount of time the output device has been waiting for the attention of a key (or skilled) operator.

GUI label

Operator needed

DSS

All

Type

Non-settable, single-valued

Input Synonym

You can use the synonym **printer-needs-key-operator-attention-time**.

Allowed Values

InfoPrint sets this value to [HH:]MM. The unit is minutes or hours and minutes, separated by a colon.

Default Value

No default value

destination-pass-through

Lets you pass information to the DSS (destination driver). InfoPrint does not process the information, but passes it directly to the DSS. With the AIX DSS, the information is used to update the actual destinations's colon file.

For information about the use of **destination-pass-through** with **other-transform-options**, see other-transform-options, p. 1139.

GUI label

Other options

DSS

AIX, BSD, CUPS, PSF

Type

Resettable, single-valued

Input Synonyms

You can use the synonym **printer-pass-through** or **other-options**.

Allowed Values

You can enter a text string up to 4095 characters long containing update information.

Syntax

With AIX DSS:

'*colon-file-attribute*=*value* ...'

For example, to set the data stream filter attribute (**_d**) in the printer colon file to "passthrough" (**p**), enter:

```
destination-pass-through='_d=p'
```

With CUPS DSS:

'*printer-driver-or-cups-printing-option*=*value* ...'

For example, to send the data directly to the printer without any CUPS filtering enter:

```
destination-pass-through=raw
```


Default Value

No default value

Usage Guidelines

If you use the **destination-pass-through** attribute when submitting a job to a PSF-other actual destination, you can either direct the options to the PSF DSS or to the backend specified in the value of the **destination-command** attribute. When you specify **-BE** in the value for the **destination-pass-through** attribute, InfoPrint passes all values preceding **-BE** to the PSF DSS. InfoPrint passes any values following **-BE** to the backend program.

destination-poll-interval

Specifies the amount of time in seconds between job status polls of a Internet Printing Protocol (IPP) printer or a Passthrough printer.

GUI label

Poll interval (sec)

DSS

IPP, Passthrough

Type

Resettable, single-valued

Allowed Values

You can enter a value from 0 through 2147483647.

Default Value

2

destination-realization

Indicates whether the destination is an actual destination or a logical destination.

DSS

All

Type

Initially settable, single-valued

Input Synonym

You can use the synonym **printer-realization**.

Allowed Values

You can enter **actual** as the value for the destination-realization attribute for an actual destination.

Default Value

There is no default.

destination-register-threshold

Specifies the amount of time that this actual destination will wait between attempts to communicate (register) with the server.

GUI label

Try to register with server

DSS

All

Type

Resettable, single-valued

Input Synonyms

You can use the synonym **printer-register-threshold** or **register-threshold**.

Allowed Values

You can enter a value of [HH:]MM. The unit is minutes or hours and minutes, separated by a colon.

Default Value

10

Usage Guidelines

The **destination-register-threshold** value applies when the actual destination and the queue are in separate InfoPrint servers. If the InfoPrint server containing the queue is not running, the printer in the running server keeps trying to establish contact with the server that contains the queue. This attempt is made every *n* minutes with this effect:

- If you lower the **destination-register-threshold** value, network traffic increases when the server is down, but the actual destination registers more quickly when you bring up the server.
- If you raise the **destination-register-threshold** value, network traffic decreases when the server is down, but the actual destination registers more slowly when you bring up the server.

destination-release-timer

Specifies the maximum amount of time between jobs, in seconds, before InfoPrint Manager gives up control of a PSF actual destination.

GUI label

Release time (sec)

DSS

PSF

Type

Resettable, single-valued

Input Synonym

You can use the synonym **printer-release-timer**.

Allowed Values

You can enter an integer from 0 through 9999. The unit value is seconds.

Default Value

9999

Usage Guidelines

- The **destination-release-timer** allows InfoPrint Manager to share an output device with a print manager. Specify a value of 9999 if the output device is not shared.
- The **destination-release-timer** allows time for all processes to stop running gracefully as InfoPrint Manager gives up control of the attached PSF actual destination.

- If the **non-process-runout-timer** attribute has a greater value than the **destination-release-timer** attribute, InfoPrint Manager issues an automatic NPRO. However, it is recommended that you set **non-process-runout-timer** to a lower value than **destination-release-timer**.

destination-state

Identifies the current state of the actual destination.

GUI label

State

DSS

All

Type

Non-settable, single-valued

Input Synonym

You can use the synonym **printer-state**.

Allowed Values

InfoPrint sets and updates the value to one of these fixed values:

Fixed Value	*Explanation*
connecting-to-printer	The actual destination has received a job and is trying to connect to its printer device. After it connects to the device, the actual destination locks the printer device until it finishes processing the job so that another print system cannot use the device. Note This state applies only to AIX actual destinations and PSF other-driver attached actual destinations on InfoPrint Manager for AIX.
idle	The actual destination is waiting for a job. An actual destination can be idle even if its output device is printing a job from some other AIX process or from the AIX print-spooling subsystem; or from some other Windows application or the Windows spooler.
needs-attention	The actual destination can connect to the output device, but for some reason the output device cannot print.
needs-key-operator	This state occurs when there is a serious problem with the output device. Either the actual destination cannot connect to the output device or there is some other problem. For example, a printer device might be out of printer supplies. InfoPrint automatically disables the actual destination when the actual destination enters this state. If the actual destination uses SNMP,

Fixed Value	*Explanation*
	InfoPrint automatically re-enables it when the problem is corrected, with one exception, which is the case of the PSF DSS printer backend returning an error. To prevent automatic re-enabling, manually disable the actual destination.
paused	The actual destination was paused with the **pdpause** command or by a job with **job-start-wait=true**.
printing	The actual destination is processing a job.
shutdown	The actual destination was shut down with the **pdshutdown** command. Note This state applies only to PSF actual destinations.
timed-out	The actual destination received a job, but the actual destination could not connect to the printer device in the time specified by the **printer-timeout-period** actual destination attribute. Note This state applies only to AIX actual destinations and PSF other-driver attached actual destinations.

Default Value

There is no default value.

destination-support-system

Identifies the type of destination support system for this actual destination.

attributes of

DSS

All

Type

Initially settable, single-valued

Input Synonym

You can use the synonym **device-support-system**.

Allowed Values

For AIX:

Fixed Value	*Input Synonym*
aix	piobe
anyplace	
bsd	
dfe	ricoh-dfe
email	
ipp	
psf	

For Linux:

Fixed Value	*Input Synonym*
anyplace	
bsd	
cups	
dfe	ricoh-dfe
email	
ipp	
psf	

For Windows:

Fixed Value	*Input Synonym*
anyplace	
bsd	
dfe	ricoh-dfe
email	
ipp	
psf	
windows	passthrough

Default Value

psf

Usage Guidelines

- InfoPrint Manager compares the job attribute **dss-requested** to this attribute for scheduling.
- You must enter a value for this attribute when you create an actual destination unless it will use the PSF DSS.

destination-tcpip-internet-address

Identifies the Internet Protocol address (IP Address parameter) of this actual destination. This is the Internet Protocol address assigned to the output device.

GUI label

TCP/IP address

DSS

AIX, BSD, CUPS, DFE, IPP, Passthrough, PSF

Type

Resettable, single-valued

Input Synonym

You can use the synonym **printer-tcpip-internet-address**.

Allowed Values

You can enter a text string up to 4095 characters long that is either of these types of address:

Hostname (recommended):

The host name of this actual destination. For example: example.domain.com.

IPv4 address

A series of integers in the range of 0 to 255, each separated by a period (.) (decimal address). For example:

```
9.99.12.85
```

IPv6 address

Eight groups of four hexadecimal digits, each group has 16 bits. The groups are separated by colons (:). For example:

```
2001:0ce8:58a3:0000:0000:6a2e:0370:3734
```

Note

When you create an SNMP printer, you must specify either the fully qualified printer name or the internet address. If you create an SNMP printer with an abbreviated printer name, InfoPrint issues the `SNMP connection lost` message when you try to enable the printer.

Default Value

No default value

Usage Guidelines

- You must enter a value for destinations to use SNMP. If you do not want to use SNMP to monitor the printer, set the **use-snmp** attribute to **false**.
- You must enter a value for PSF TCP/IP-attached actual destinations and for PSF upload-TCP/IP-attached actual destinations.
- This attribute is required if the **pull-print-printer** actual destination attribute needs to be set to **true**.

destination-tcpip-port-number

Identifies the Port Number parameter for PSF TCP/IP-attached and upload-TCP/IP-attached actual destinations. This is the TCP/IP port number configured at the output device.

GUI label

TCP/IP port number

DSS

DFE, PSF

Type

Resettable, single-valued

Input Synonym

You can use the synonym **printer-tcpip-port-number**.

Allowed Values

You can enter an integer from 1 through 2147483647, but you typically enter an integer from 5001 to 65535. For devices whose port is configurable, the port you specify must match the port configured at the output device.

Default Value

5001

Usage Guidelines

You must enter a value for PSF TCP/IP-attached and upload-TCP/IP-attached actual destinations if the default is not correct for your printer. InfoPrint Manager ignores this attribute for other attachment types.

destination-timeout-period

Specifies the amount of time, in seconds, that InfoPrint Manager allows for the server to try to connect to a shared network printer (printer device) after the actual destination receives a new job request.

DSS

AIX, CUPS, DFE, PSF

Type

Resettable, single-valued

Input Synonym

You can use the synonym **timeout-period** or **printer-timeout-period**.

Allowed Values

You can enter an integer from 0 through 2147483647. The unit is seconds.

Default Value

60

Usage Guidelines

- For PSF actual destinations, this attribute applies only to actual destinations with an attachment type of **other**.
- While the server is trying to connect to the printer device, this actual destination is in the **timed-out** state, but it can still accept jobs.
- If the server cannot connect to the printer device in the specified time:
  - The printer state becomes **timed-out**.
  - This actual destination will not accept new jobs.
  - InfoPrint Manager might issue a warning message, depending on the notification profile of this actual destination.
  - The server continues to try to connect to the printer device until successful, or until this actual destination is disabled.
  - InfoPrint Manager sends a warning message at the end of each timeout period (if specified by the notification profile).

device-contact

Identifies the contact for the output device associated with an actual destination.

DSS

All

Type

Settable, single-valued

Allowed Values

You can enter a text string up to 4095 characters long that contains the device's contact information.

Default Value

No default value

Usage Guidelines

- While this attribute is accessed through an actual destination, the information comes from the device the actual destination represents and not the actual destination, which is why InfoPrint considers this a device-specific attribute. This attribute is not contained in the actual destination's attributes set. You can list the device-specific attributes with the **pdls** command by specifying `-r all-device`.
- If the value of the **snmp-active** actual destination attribute is **false**, this attribute is ignored.
- The device must support this attribute to query or set this attribute.
- To change the **device-contact** attribute with SNMPv1 activ, you must have write permission to the actual destination and the **snmp-write-community-name** actual destination attribute must be set properly.
- To change the **device-contact** attribute with SNMPv3 activ, you must have write permission to the actual destination and the **snmpv3-username** actual destination attribute must be set properly.
- The actual destination does not need to be disabled to change the value of this attribute.
- You can not set device attributes and actual destination attributes in the same request.
- You can not use anything other than the Replace operator of the **pdset** command for this attribute.

device-description

Identifies the description of the output device associated with an actual destination.

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to a text string that contains a description of the device.

Default Value

No default value

Usage Guidelines

- While this attribute is accessed through an actual destination, the information comes from the device the actual destination represents and not the actual destination, which is why InfoPrint considers this

a device-specific attribute. This attribute is not contained in the actual destination's attributes set. You can list the device-specific attributes with the **pdls** command by specifying `-r all-device`.
- If the value of the **snmp-active** actual destination attribute is **false**, this attribute is ignored.
- The device must support this attribute to query this attribute.

device-input-trays

Identifies information about the input trays of the output device associated with an actual destination.

DSS

All

Type

Non-settable, multi-valued

Allowed Values

InfoPrint sets each value to a text string that contains information about each of the device's input trays that could include medium, capacity, and level of medium.

Default Value

No default value

Usage Guidelines

- While this attribute is accessed through an actual destination, the information comes from the device the actual destination represents and not the actual destination, which is why InfoPrint considers this a device-specific attribute. This attribute is not contained in the actual destination's attributes set. You can list the device-specific attributes with the **pdls** command by specifying `-r all-device`.
- If the value of the **snmp-active** actual destination attribute is **false**, this attribute is ignored.
- The device must support this attribute to query this attribute.

device-ip-address

Identifies the Internet Protocol (IP) address of the output device associated with an actual destination.

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to a text string that contains the device's IP address.

Default Value

No default value

Usage Guidelines

- While this attribute is accessed through an actual destination, the information comes from the device the actual destination represents and not the actual destination, which is why InfoPrint considers this a device-specific attribute. This attribute is not contained in the actual destination's attributes set. You can list the device-specific attributes with the **pdls** command by specifying `-r all-device`.
- If the value of the **snmp-active** actual destination attribute is **false**, this attribute is ignored.
- The device must support this attribute to query this attribute.

device-location

Identifies the location for the output device associated with an actual destination.

DSS

All

Type

Settable, single-valued

Allowed Values

You can enter a text string up to 4095 characters long that contains the device's contact information.

Default Value

No default value

Usage Guidelines

- While this attribute is accessed through an actual destination, the information comes from the device the actual destination represents and not the actual destination, which is why InfoPrint considers this a device-specific attribute. This attribute is not contained in the actual destination's attributes set. You can list the device-specific attributes with the **pdls** command by specifying `-r all-device`.
- If the value of the **snmp-active** actual destination attribute is **false**, this attribute is ignored.
- The device must support this attribute to query or set this attribute.
- To change the **device-location** attribute with SNMPv1 activ, you must have write permission to the actual destination and the **snmp-write-community-name** actual destination attribute must be set properly.
- To change the **device-location** attribute with SNMPv3 activ, you must have write permission to the actual destination and the **snmpv3-username** actual destination attribute must be set properly.

- The actual destination does not need to be disabled to change the value of this attribute.
- You cannot set device attributes and actual destination attributes in the same request.
- You cannot use anything other than the Replace operator of the **pdset** command for this attribute.

device-manufacturer

Identifies the manufacturer of the output device associated with an actual destination.

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to a text string that contains the device's manufacturer.

Default Value

No default value

Usage Guidelines

- While this attribute is accessed through an actual destination, the information comes from the device the actual destination represents and not the actual destination, which is why InfoPrint considers this a device-specific attribute. This attribute is not contained in the actual destination's attributes set. You can list the device-specific attributes with the **pdls** command by specifying `-r all-device`.
- If the value of the **snmp-active** actual destination attribute is **false**, this attribute is ignored.
- The device must support this attribute to query this attribute.

device-marker-supplies

Identifies the printer supplies level of the output device associated with an actual destination.

DSS

All

Type

Non-settable, multi-valued

Allowed Values

InfoPrint sets each value to a text string containing information about each of the printer's supplies' capacity and level.

Default Value

No default value

Usage Guidelines

- While this attribute is accessed through an actual destination, the information comes from the device the actual destination represents and not the actual destination, which is why InfoPrint considers this a device-specific attribute. This attribute is not contained in the actual destination's attributes set. You can list the device-specific attributes with the **pdls** command by specifying `-r all-device`.
- If the value of the **snmp-active** actual destination attribute is **false**, this attribute is ignored.
- The device must support this attribute to query this attribute.

device-media-supported

Identifies the information regarding the media supported by the output device associated with an actual destination.

DSS

All

Type

Non-settable, multi-valued

Allowed Values

InfoPrint sets this value to a text string that contains information about each of the media supported by the device.

Default Value

No default value

Usage Guidelines

- While this attribute is accessed through an actual destination, the information comes from the device the actual destination represents and not the actual destination, which is why InfoPrint considers this a device-specific attribute. This attribute is not contained in the actual destination's attributes set. You can list the device-specific attributes with the **pdls** command by specifying `-r all-device`.
- If the value of the **snmp-active** actual destination attribute is **false**, this attribute is ignored.
- The device must support this attribute to query this attribute.

device-model

Identifies the model of the output device associated with an actual destination.

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to a text string that contains the device's model.

Default Value

No default value

Usage Guidelines

- While this attribute is accessed through an actual destination, the information comes from the device the actual destination represents and not the actual destination, which is why InfoPrint considers this a device-specific attribute. This attribute is not contained in the actual destination's attributes set. You can list the device-specific attributes with the **pdls** command by specifying `-r all-device`.
- If the value of the **snmp-active** actual destination attribute is **false**, this attribute is ignored.
- The device must support this attribute to query this attribute.

device-name

Identifies the output device that this actual destination represents.

GUI label

Device or Windows port name (PSF Other-driver)

Windows port name (Passthrough DSSs)

URL (IPP)

Device (All other supported DSSs)

DSS

AIX, IPP, PSF Other-driver, Passthrough

Type

Initially settable, single-valued

Allowed Values

For AIX DSS and PSF Other-driver DSS on AIX, you can enter a text string up to 255 characters long that contains the name (ID) of the output device that prints jobs assigned to this actual destination. The value can identify the path to the device name, commonly located in **/dev** directory (such as **/dev/lp0**), `/var/slppol/lpd/stat/`, or more generally, it is the name of an empty file used for controlling access to the device. InfoPrint Manager for AIX creates the empty file in `/var/pd/servername/` for you if you do not specify one or if you do not specify an absolute path.

For Internet Printing Protocol (IPP) DSS, enter the URL for the IPP printer.

For Passthrough DSS and PSF Other-driver DSS on Windows, enter the Windows **Port Name**.

Default Value

No default value except when you use this with the AIX DSS or the PSF Other-driver DSS on AIX. For these two DSSs, InfoPrint Manager for AIX creates a unique value for you.

Usage Guidelines

- On Windows, you must enter a value for this attribute when you create a PSF other-driver-attached actual destination or a Passthrough actual destination.
- On Windows, the device name must be the name of a Windows port that has already been created.
- If an AIX print queue has been configured for this actual destination, the device name appears in the **/etc/qconfig** file.
- Do not specify a value for PSF TCP/IP-attached or upload-TCP/IP-attached destinations.When you are working with AIX DSS actual destinations, see “Creating and Managing Actual Destinations” in the *InfoPrint Manager for AIX: Administrator's Guide* for information about correcting the configuration of **remote-queue** printers that have **device-name** set to /dev/null.
- When you are driving the same physical device with multiple AIX DSSs and PSF Other-driver DSSs on AIX, use the same **device-name** for the actual destinations since the **device-name** is what InfoPrint Manager uses to control access to the physical device.

device-op-panel-locked

Identifies whether the operation panel of the output device associated with an actual destination is locked.

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to one of these fixed values:

true

false

Default Value

No default value

Usage Guidelines

- While this attribute is accessed through an actual destination, the information comes from the device the actual destination represents and not the actual destination, which is why InfoPrint considers this a device-specific attribute. This attribute is not contained in the actual destination's attributes set. You can list the device-specific attributes with the **pdls** command by specifying `-r all-device`.
- If the value of the **snmp-active** actual destination attribute is **false**, this attribute is ignored.
- The device must support this attribute to query this attribute.

device-output-bins

Identifies information about the output bins for the output device associated with an actual destination.

DSS

All

Type

Non-settable, multi-valued

Allowed Values

InfoPrint sets each value to a text string that contains information about one of the device's output bins that could include medium, capacity, and level of medium.

Default Value

No default value

Usage Guidelines

- While this attribute is accessed through an actual destination, the information comes from the device the actual destination represents and not the actual destination, which is why InfoPrint considers this a device-specific attribute. This attribute is not contained in the actual destination's attributes set. You can list the device-specific attributes with the **pdls** command by specifying `-r all-device`.
- If the value of the **snmp-active** actual destination attribute is **false**, this attribute is ignored.
- The device must support this attribute to query this attribute.

device-printer-name

Identifies the name of the model of the output device associated with an actual destination.

DSS

All

Type

Non-settable, single valued

Allowed Values

InfoPrint sets this value to a text string that contains the device's model name.

Default Value

No default value

Usage Guidelines

- While this attribute is accessed through an actual destination, the information comes from the device the actual destination represents and not the actual destination, which is why InfoPrint considers this a device-specific attribute. This attribute is not contained in the actual destination's attributes set. You can list the device-specific attributes with the **pdls** command by specifying `-r all-device`.
- If the value of the **snmp-active** actual destination attribute is **false**, this attribute is ignored.
- The device must support this attribute to query this attribute.

device-ready-media

Identifies information about the media ready on the output device associated with an actual destination.

DSS

All

Type

Non-settable, multi-valued

Allowed Values

InfoPrint sets this value to a text string that contains information about the device's ready media.

Default Value

No default value

Usage Guidelines

- While this attribute is accessed through an actual destination, the information comes from the device the actual destination represents and not the actual destination, which is why InfoPrint considers this a device-specific attribute. This attribute is not contained in the actual destination's attributes set. You can list the device-specific attributes with the **pdls** command by specifying `-r all-device`.

- If the value of the **snmp-active** actual destination attribute is **false**, this attribute is ignored.
- The device must support this attribute to query this attribute.

device-serial-number

Identifies the serial number of the output device associated with an actual destination.

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets each value to a text string that contains information about the device's serial number.

Default Value

No default value

Usage Guidelines

- While this attribute is accessed through an actual destination, the information comes from the device the actual destination represents and not the actual destination, which is why InfoPrint considers this a device-specific attribute. This attribute is not contained in the actual destination's attributes set. You can list the device-specific attributes with the **pdls** command by specifying `-r all-device`.
- If the value of the **snmp-active** actual destination attribute is **false**, this attribute is ignored.
- The device must support this attribute to query this attribute.

device-state

Identifies the state of the output device associated with an actual destination.

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to one the these device states:

idle

processing
started
stopped
unknown

Default Value

No default value

Usage Guidelines

- While this attribute is accessed through an actual destination, the information comes from the device the actual destination represents and not the actual destination, which is why InfoPrint considers this a device-specific attribute. This attribute is not contained in the actual destination's attributes set. You can list the device-specific attributes with the **pdls** command by specifying `-r all-device`.
- If the value of the **snmp-active** actual destination attribute is **false**, this attribute is ignored.
- The device must support this attribute to query this attribute.

device-support-system

See **destination-support-system**.

device-version

Identifies the version of the output device associated with an actual destination.

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to a text string that contains the device's version.

Default Value

No default value

Usage Guidelines

- While this attribute is accessed through an actual destination, the information comes from the device the actual destination represents and not the actual destination, which is why InfoPrint considers this a device-specific attribute. This attribute is not contained in the actual destination's attributes set. You can list the device-specific attributes with the **pdls** command by specifying `-r all-device`.

- If the value of the **snmp-active** actual destination attribute is **false**, this attribute is ignored.
- The device must support this attribute to query this attribute.

dfe-password

Specifies the password that InfoPrint Manager uses to log in to the DFE server.

GUI label

Password

DSS

DFE

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 4095 characters.

Default Values

None

Usage Guidelines

- InfoPrint Manager encodes the password information.

dfe-preset-requested

Identifies the job presets requested for a job.

GUI label

DFE preset requested

DSS

DFE

Type

Resettable, single-valued

Allowed Values

You can enter a text string that identifies the name of the preset to use.

Default Values

None

Usage Guidelines

- The **dfe-preset-requested** attribute is used with the **dfe-presets-ready** attribute.

dfe-presets-ready

Identifies the job presets saved on the DFE server.

GUI label

None

DSS

DFE

Type

Non-settable, multi-valued

Allowed Values

InfoPrint Manager sets these values using the DFE server information.

Default Values

None

Usage Guidelines

- When you apply a preset to a job, the preset settings become part of the job, and remain with the job until you modify them.

dfe-user

Specifies the user name that InfoPrint Manager uses to log in to the DFE server.

GUI label

User name

DSS

DFE

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 4095 characters.

Default Values

None

document-attributes-supported

Identifies the document attributes that this actual destination supports. InfoPrint Manager checks the values listed with this attribute and merges them with the values supported by the server (found on the **document-attributes-supported** server attribute) during validation to allow jobs whose documents have these attributes to continue on to this actual destination.

DSS

All

Type

Non-settable, multi-valued

Allowed Values

InfoPrint Manager sets the values that lists the document attributes that this actual destination supports.

Note

This list includes only document attributes that directly affect the actual destination. Documents with attributes that affect the server, for example, **initial-value-document**, can be printed even though those attributes are not on this list.

Default Value

This list lists the **document-attributes-supported** by DSS that are merged with the **document-attributes-supported** by the server:

- **AIX**

  content-orientation
  default-character-mapping
  default-input-tray
  default-medium
  destination-pass-through
  page-select
  plex
  print-quality
  sides

- **BSD**

destination-pass-through

- **CUPS**

  copy-count
  document-content
  document-format
  document-type
  default-input-tray
  default-medium
  content-orientation
  page-select
  plex
  printer-pass-through
  sides
  number-up

- **DFE**

account-text
address1-text
address2-text
address3-text
address4-text
base-printer
base-printer-used
bin-used
building-text
carriage-control-type
chars
color-bits-per-plane
color-mapping-table
convert-to-ebcdic
copy-count
default-character-mapping
default-input-tray
default-medium
default-printer-resolution
department-text
document-comment
document-content
document-finishing
document-fomat
document-pdf-processor
document-ps-processor
document-type
explicit-page-placement
font-fidelity-action
font-resolution
font-processing-messages
form-definition
halftone
image-fit
image-length
image-length-used
image-out-format
image-out-format-used
image-width
image-width-used
input-exit
input-tray-select
job-terminate-message-count
mvs-class
mvs-destination
mvs-forms
mvs-segment-id
name-text
new-line-option
new-line-option-data-encoding
number-up
other-transform-options
output-bin
output-format
overlay
overlay-back
overlay-front
page-definition
page-select
plex
printer-pass-through
printer-resolution-used
programmer-text
resource-context
resource-context-font
resource-context-form-definition
resource-context-page-definition
resource-context-page-segment
resource-context-overlay
resource-context-user
reverse-page-order
room-text
scanner-correction
screen-frequency
segment-file-size
shared-formdef
shift-out-shift-in
sides
start-on-new-sheet
table-reference-characters
title-text
transform-message-file-name
transform-output-file-name
use-non-unicode-environment
user-id-text
x-image-shift
x-image-shift-back
xsl-style-sheet
y-image-shift
y-image-shift-back

- Email

account-text
address1-text
address2-text
address3-text
address4-text
carriage-control-type
chars
convert-to-ebcdic
default-character-mapping
email-from-address
email-to-address
font-fidelity-action
font-resolution
form-definition
image-fit
image-length
image-width
input-exit
job-terminate-message-count
new-line-option
new-line-option-data-encoding
number-up
other-transform-options
output-bin
output-format
overlay
overlay-back
overlay-front
page-definition
page-select
plex
resource-context
resource-context-font
resource-context-form-definition
resource-context-overlay
resource-context-page-definition
resource-context-page-segment
resource-context-user
reverse-page-order
shared-formdef
shift-out-shift-in
sides
subject-text
table-reference-characters
transform-message-file-name
transform-output-file-name
x-image-shift
xsl-style-sheet
y-image-shift

- Passthrough (Windows) and IPP

default-medium
destination-pass-through
page-select

- PSF other-driver and command

account-text
address1-text
address2-text
address3-text
address4-text
base-printer
building-text
carriage-control-type
chars
color-mapping-table
convert-to-ebcdic
data-fidelity-problem-reported
default-character-mapping
default-input-tray
default-medium
default-printer-resolution
department-text
destination-pass-through
document-finishing
font-fidelity-action
font-resolution
font-processing-messages
form-definition
halftone
image-fit
image-length
image-out-format
image-width
input-exit
input-tray-select
job-terminate-message-count
jog-between-job-copies
maximum-messages-printed
maximum-transform-pages-ahead
mvs-destination
mvs-forms
mvs-segment-id
name-text
new-line-option
new-line-option-data-encoding
node-id-text
number-up
other-transform-options
output-appearance
output-bin
output-format
overlay
overlay-back
overlay-front
page-definition
page-media-select
page-select
plex
printer-resolutions-used
programmer-text
resource-context
resource-context-font
resource-context-form-definition
resource-context-overlay
resource-context-page-definition
resource-context-page-segment
resource-context-user
resource-exit
reverse-page-order
room-text
scanner-correction
screen-frequency
segment-file-size
shared-formdef
shift-out-shift-in
sides
start-on-new-sheet
table-reference-characters
b-text
transform-message-file-name
transform-output-file-name
user-id-text
x-image-shift
x-image-shift-back
xsl-style-sheet
y-image-shift
y-image-shift-back

- PSF TCP/IP

account-text
address1-text
address2-text
address3-text
address4-text
base-printer
building-text
carriage-control-type
chars
color-mapping-table
color-bits-per-plane
color-profile
color-toner-saver
color-rendering-intent
convert-to-ebcdic
data-fidelity-problem-reported
default-character-mapping
default-input-tray
default-medium
default-printer-resolution
department-text
destination-pass-through
document-finishing
font-fidelity-action
font-resolution
font-processing-messages
form-definition
form-length
halftone
image-fit
image-length
image-out-format
image-width
input-exit
input-tray-select
job-terminate-message-count
jog-between-job-copies
maximum-messages-printed
maximum-transform-pages-ahead
mvs-destination
mvs-forms
mvs-segment-id
name-text
new-line-option
new-line-option-data-encoding
node-id-text
number-up
other-transform-options
output-appearance
output-bin
output-format
overlay
overlay-back
overlay-front
page-definition
page-media-select
page-select
plex
programmer-text
resource-context
resource-context-font
resource-context-form-definition
resource-context-page-definition
resource-context-page-segment
resource-context-presentation-object-container
resource-context-overlay
resource-context-user
resource-exit
reverse-page-order
room-text
scanner-correction
screen-frequency
segment-file-size
shared-formdef
shift-out-shift-in
sides
start-on-new-sheet
table-reference-characters
b-text
transform-message-file-name
transform-output-file-name
user-id-text
x-image-shift
x-image-shift-back
xsl-style-sheet
y-image-shift
y-image-shift-back

- PSF Upload-TCP/IP (these types AIX only)

account-text
address1-text
address2-text
address3-text
address4-text
base-printer
building-text
carriage-control-type
chars
color-mapping-table
color-bits-per-plane
color-profile
color-toner-saver
color-rendering-intent
convert-to-ebcdic
data-fidelity-problem-reported
default-character-mapping
default-input-tray
default-medium
default-printer-resolution
department-text
destination-pass-through
document-finishing
font-fidelity-action
font-resolution
font-processing-messages
form-definition
halftone
image-fit
image-length
image-out-format
image-width
input-exit
input-tray-select
job-terminate-message-count
jog-between-job-copies
maximum-messages-printed
maximum-transform-pages-ahead
mvs-destination
mvs-forms
mvs-segment-id
name-text
new-line-option
new-line-option-data-encoding
node-id-text
number-up
other-transform-options
output-appearance
output-bin
output-format
overlay
overlay-back
overlay-front
page-definition
page-media-select
page-select
plex
printer-pass-through
programmer-text
resource-context
resource-context-font
resource-context-form-definition
resource-context-page-definition
resource-context-page-segment
resource-context-presentation-object-container
resource-context-overlay
resource-context-user
resource-exit
reverse-page-order
room-text
scanner-correction
screen-frequency
segment-file-size
shared-formdef
shift-out-shift-in
sides
start-on-new-sheet
table-reference-characters
b-text
transform-message-file-name
transform-output-file-name
user-id-text
x-image-shift
x-image-shift-back
xsl-style-sheet
y-image-shift
y-image-shift-back

Note

The PSF for AIX and PSF for Windows default values are now listed under:

- PSF TCP/IP
- PSF other-driver and Command
- Upload TCP/IP

document-finishings-supported

Identifies the document finishing options that this actual destination supports.

GUI label

Finishing options allowed

DSS

DFE and PSF

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values for the PSF-supported printers, that is printers that use the PSF DSS except for PSF Other-driver and PSF Command attachment types:

- **double-gate-fold-in**
- **double-gate-fold-out**
- **double-parallel-fold-in**
- **double-parallel-fold-out**
- **z-fold**

You can enter this fixed value for the DFE printers:

- **z-fold**

Default Values

No default value

Usage Guidelines

- InfoPrint compares the document attribute **document-finishing** to this attribute for validation and scheduling.
- You can use this attribute to restrict use of this actual destination.
- The **document-finishings-supported** attribute is not applicable to UP^{3}I devices. For information about UP^{3}I devices, see the *InfoPrint Page Printer Formatting Aid: User's Guide*.

document-formats-ripped-at-destination

Identifies the document formats that can be ripped at this actual destination.

GUI label

Formats to RIP at destination

DSS

DFE, Email, PSF other-driver

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

Fixed Value	*Input Synonym*	*DSS*
pcl	**hppcl, hp-pcl**	PSF other-driver
pdf	**pdf**	PSF other-driver
postscript	**ps**	PSF other-driver
tiff		PSF other-driver

Note

You can set any document format for DFE DSS and Email DSS.

Default Value

- **ascii** for Email DSS
- **ascii**, **pcl**, **pdf**, **postscript**, and **tiff** for DFE DSS

Usage Guidelines

- Particular InfoPrint Manager attributes negate the **document-format-ripped-at-destination** setting and force jobs to be transformed. For more information about these attributes, see *InfoPrint Manager: Getting Started*.
- When you specify the **document-formats-ripped-at-destination** attribute for a PSF other-driver actual destination that actual destination can be used in three ways:
  1. To pass specified document-format jobs, especially with PostScript or PCL data, directly to the actual destination.
  2. To transform a job to AFP and then to PCL image when necessary.
  3. To transform all other datastreams (SAP, TIFF, JPEG, PDF, and so forth) to AFP and then to PCL image when necessary.

- For PSF other-driver DSS, when jobs are transformed, they print with PSF style auxiliary sheets, and the jobs obtain accounting information from PSF, which appears in the PSF accounting logs.
- For PSF other-driver DSS, when jobs are passed through directly to the actual destination, they print with "other-driver" style auxiliary sheets, and the jobs obtain accounting information the way the other driver does (for example, the way the AIX DSS obtains the information on AIX, and the way the Passthrough DSS obtains the information on Windows).
- For DFE DSS, jobs print with DFE style auxiliary sheets, and jobs obtain accounting information the way the DFE DSS does.
- For PSF other-driver DSS, when a **document-format** value is included in the **document-formats-ripped-at-destination** attribute list, the **default-medium** attribute value is ignored. The job is ripped at destination using the data stream settings when printing.

document-formats-supported

Identifies the document formats that this actual destination supports. InfoPrint Manager sets this value dynamically based on the DSS and the document formats for which transforms are available.

GUI label

Formats allowed

DSS

All

Type

Resettable, multi-valued

Allowed Values

There are no restrictions for these values based on the DSS type. However, it is the InfoPrint Manager Administrator's responsibility when modifying the defaults to make sure that either the DSS can handle the specified formats or to set up a transform object associated with the actual destination to transform the format into something that the DSS can handle.

Fixed Value	*Input Synonym*
ascii	
dbcs-ascii	
ditroff	
dpf-ipds	
d630	
epson	
gif	
hpgl	**hp-gl**

Fixed Value	*Input Synonym*
iso-6429	
jpeg	
kgl	
line-data	
modca-p	**afpds**
passthru	
pcl	**hppcl, hp-pcl**
pdf	
postscript	**ps**
ppds	
sap	
sap-abap	
simple-text	**text**
tiff	
xml	

Default Values

AIX

ascii, **hpgl**, **iso-6429**, **passthru**, **pcl**, **pdf**, and **postscript**.

Based on the value of the **destination-model** attribute and how the **/usr/lpd/pio/predef** directory defines the printer model.

BSD

ascii, **iso-6429**, **pcl**, **ppds**, **postscript**, **simple-text**.

CUPS

ascii, **pcl**, **pdf**, **postscript**

PSF upload-TCP/IP-attached actual destination

If all transforms are available, **dbcs-ascii**, **ditroff**, **gif**, **jpeg**, **line-data**, **modca-p**, **pcl**, **postscript**, **sap**, **sap-abap**, **tiff**, **xml**

DFE

ascii, **dbcs ascii**, **ditroff**, **dpf ipds**, **gif**, **jpeg**, **line-data**, **modca-p**, **pcl**, **pdf**, **postscript**, **sap**, **sap-abap**, **tiff**, **xml**

Email

ascii, and if all transforms are available, **dbcs-ascii**, **ditroff**, **gif**, **jpeg**, **line-data**, **modca-p**, **pcl**, **pdf**, **postscript**, **sap**, **sap-abap**, **sap-otf**, **tiff**, **xml**

Other PSF actual destinations with PSF DSS for AIX or Linux

If all transforms are available, **ascii**, **dbcs-ascii**, **ditroff**, **gif**, **jpeg**, **line-data**, **modca-p**, **pcl**, **pdf**, **postscript**, **sap** (when SAP Print feature is installed), **sap-abap** (when SAP Print feature is installed), **tiff**, **xml**

Other PSF actual destinations with PSF DSS for Windows

If all transforms are available, **ascii**, **dbcs-ascii**, **dpf-ipds**, **line-data**, **modca-p**, **pcl**, **pdf**, **postscript**, **gif**, **jpeg**, **sap** (when SAP Print feature is installed), **sap-abap** (when SAP Print feature is installed), **tiff**, **xml**

Passthrough

ascii, **iso-6429**, **pcl**, **pdf**, **ppds**, **postscript**, **simple-text**.

IPP

InfoPrint Manager interrogates the printer to get information about the supported document formats.

Usage Guidelines

- When you create a PSF or Email actual destination, InfoPrint Manager sets these values to the document formats for which transforms are available. When the server is shut down and restarted, InfoPrint updates the values to reflect transforms that have been added or deleted. You can also modify these values.
- InfoPrint Manager compares the document attribute **document-format** to this attribute for validation and scheduling.
- Delete attribute values to restrict use of this actual destination.
- For an AIX DSS and CUPS DSS, if the printer natively supports printing PDF data stream, you can add the value **pdf** to the **document-formats-supported** actual destination attribute.
- For a PSF-other DSS on an AIX or Linux server, if the **document-formats-ripped-at-destination** attribute contains the value **pdf**, you can add the value **pdf** to the **document-formats-supported** actual destination attribute.
- If you cannot print PDF data stream to an AIX DSS after you added the **pdf** value to the **document-formats-supported** actual destination attribute, you can look in the `error.log` file of the server for this message:"`0782-026 A virtual printer has not been configured for print queue and queue device PD__Cojnec:queue_device. Refer to the mkvirprt command, or use local problem reporting procedures.`" If you find this message, it indicates that you have an old printer that was created before you migrated to the latest version of InfoPrint Manager. To resolve this problem, create a new printer.

document-types-supported

Identifies the types of documents that this actual destination supports.

GUI label

Types allowed

DSS

All

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

Fixed Value	*DSS*
color-mapping-table	PSF
email-body	Email
email-signature	Email
file-reference	All
font	PSF, Email
form-definition	PSF, Email
formatted-job-ticket	PSF, Email
insert-sheet	PSF, Email
job-ticket	PSF, Email
overlay	PSF, Email
page-definition	PSF, Email
page-segment	PSF, Email
page-shift-file	PSF, Email
printable	All
resource	PSF DSS for AIX and Linux, Email

Default Values

AIX, BSD, CUPS

file-reference, **printable**

DFE

file-reference, **font**, **form-definition**, **formatted-job-ticket**, **insert-sheet**,**job-ticket**, **overlay**, **page-definition**, **page-segment**, **page-shift-file**, **printable**, **resource**

PSF DSS for AIX or Linux

color-mapping-table, **file-reference**, **font**, **form-definition**, **formatted-job-ticket**, **insert-sheet**, **job-ticket**, **overlay**, **page-definition**, **page-segment**, **page-shift-file**, **printable**, **resource**

PSF DSS for Windows

color-mapping-table, **file-reference**, **font**, **form-definition**, **formatted-job-ticket**, **insert-sheet**, **job-ticket**, **overlay**, **page-definition**, **page-segment**, **page-shift-file**, **printable**

Email

email-body, **email-signature**, **file-reference**, **font**, **form-definition**, **formatted-job-ticket**, **insert-sheet**, **job-ticket**, **overlay**, **page-definition**, **page-segment**, **page-shift-file**, **printable**, **resource**

Passthrough

file-reference, **printable**

IPP

file-reference, **printable**

Usage Guidelines

- InfoPrint compares the document attribute **document-type** to this attribute for scheduling.
- You can use this attribute to restrict use of this actual destination.

document-varying-attributes-supported

Identifies the document-varying attributes that this actual destination supports. InfoPrint Manager checks this attribute during validation to allow jobs whose documents have these attributes to continue on to this actual destination.

DSS

All

Type

Non-settable, multi-valued

Allowed Values

InfoPrint Manager sets these values to include the varying document attributes that this actual destination supports.

Note

This list includes only document attributes that directly affect the actual destination. Documents with attributes that affect the server, for example, **initial-value-document**, can be printed even though those attributes are not on this list.

Default Value

- **PSF**

carriage-control-type
chars
convert-to-ebcdic
copy-count
default-input-tray
default-medium
document-finishing
document-format
halftone
image-fit
image-length
image-out-format
image-width
initial-value-document
input-exit
new-line-option
new-line-option-data-encoding
other-transform-options
output-appearance
output-bin
overlay
overlay-back
overlay-front
page-definition
page-select
plex
resource-context-page-definition
resource-context-user
resource-exit
scanner-correction
screen-frequency
shift-out-shift-in
sides
start-on-new-sheet
table-reference-characters
transform-message-file-name
transform-output-file-name
x-image-shift
x-image-shift-back
y-image-shift
y-image-shift-back

- AIX

content-orientation
copy-count
default-character-mapping
default-input-tray
default-medium
destination-pass-through
document-content
document-format
document-type
plex
print-quality
sides

- CUPS

copy-count
document-content
document-format
document-type
default-input-tray
default-medium
content-orientation
plex
printer-pass-through
sides
number-up

- DFE

copy-count
document-format
medium-map-name
page-select
transport-output-file-name
chars
carriage-control-type
convert-to-ebcdic
document-pdf-processor
document-ps-processor
input-exit
new-line-option
new-line-option-data-encoding
page-definition
resource-context-user
resource-context-page-definition
shift-out-shift-in
table-reference-characters
transform-message-file-name
image-fit
image-length
image-width
other-transform-options
xsl-style-sheet
sides
plex
output-bin
bin-used
x-image-shift
y-image-shift
overlay
overlay-front
overlay-back

- **Email**

carriage-control-type
chars
convert-to-ebcdic
copy-count
document-format
image-fit
image-length
image-width
input-exit
new-line-option
new-line-option-data-encoding
other-transform-options
output-bin
overlay
overlay-back
overlay-front
page-definition
page-select
plex
resource-context-page-definition
resource-context-user
shift-out-shift-in
sides
table-reference-characters
transform-message-file-name
transform-output-file-name
x-image-shift
y-image-shift

dss-job-message-disposition

Indicates how job messages about errors detected by the device support system (DSS), such as data stream errors, are recorded.

GUI label

Record job messages

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

- **both**
- **log**
- **print**

Default Value

print

Usage Guidelines

If you specify **log** or **both**, messages are written to the:

- **/var/psf/*DestinationName*/jobmessage.log** file for AIX or Linux, where *DestinationName* is the name of this actual destination.
- ***install_path*\var\psf*DestinationName*\jobmessage.log** file for Windows, where *DestinationName* is the name of this actual destination and *install_path* indicates the path where you installed InfoPrint Manager for Windows.

dss-job-message-log-size

Indicates the size, in kilobytes, the DSS job message log can grow to.

GUI label

Job message log size (KBytes)

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 10 to 2000000. The unit is kilobytes.

Default Value

8192

Usage Guidelines

This attribute is used only when the value of the **dss-job-message-disposition** attribute is **log** or **both**.

dss-job-message-log-wrap

Indicates whether InfoPrint should start overwriting messages at the beginning of the DSS job message log when the log is full.

GUI label

Wrap job message log

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

true

Usage Guidelines

This attribute is used only when the value of the **dss-job-message-disposition** attribute is **log** or **both**.

ebcdic-character-mapping

Indicates the EBCDIC code page that PSF/MVS uses to map the attributes of this PSF upload-TCP/IP-attached destination.

GUI label

EBCDIC code page to use

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter the name of an EBCDIC code page.

Default Value

ibm-037

Usage Guidelines

InfoPrint requires this attribute for PSF upload-TCP/IP-attached actual destinations and ignores it for other attachment types.

enable-setup-names-ready

Specifies whether InfoPrint Manager lists the **setup-names-ready** values and updates them with the ones defined on the physical printer.

GUI label

Enable printer setup names

DSS

PSF TCP/IP

Type

Resettable, single-valued, per-printer

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	yes
false	no

Default Value

No default value

Usage Guidelines

- This attribute should only be enabled if the destination supports *IPDS ACR #516 – Setup Name* and *MO:DCA ACR #191 – Setup Name*.

- This attribute enables InfoPrint Manager to communicate with the physical printer and to retrieve any setup names defined on the device.
- This attribute can be set to **true** only if the actual destination is in shutdown state.
- Setting this attribute to **false** resets the **setup-names-ready** destination attribute.
- Setting this attribute to **false** does not affect the **setup-name** value.

enabled

Indicates whether this actual destination is enabled and can accept jobs.

GUI label

Enabled

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to:

- **true** when an InfoPrint administrator has issued the **pdenable** command, and the queue associated with the destination exists and is in communication with this actual destination.
- **false** when an InfoPrint administrator has disabled this actual destination with the **pddisable** command, or when some printer error has been detected.

Default Value

false

end-message-supported

Indicates whether this actual destination supports the job attribute **job-end-message**.

GUI label

Send job completed message

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

true

Usage Guidelines

- Use this attribute to allow operators to receive messages that users specify with the **job-end-message** job attribute when they submit the job. When the value of this attribute is **true**, InfoPrint sends the message to the operators specified by the **notify-operator** attribute for this actual destination when the job finishes printing.
- InfoPrint compares the job attribute **job-end-message** to this attribute for validation and scheduling.
- You can use this attribute to restrict use of this actual destination.

end-sheets-supported

Identifies the types of end sheets that this actual destination supports.

GUI label

End sheets allowed

DSS

AIX, CUPS, DFE, PSF

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values. For PSF only, you can enter a string up to 255 characters long that contains identifiers of auxiliary-sheet objects.

Fixed Value	*DSS*	*Explanation*
accounting-log	PSF	This value is technically valid, but should not be used for end sheets.
blank	PSF	The end sheet is blank.
brief	AIX, CUPS, PSF	For AIX and PSF the end sheet style is brief. For CUPS the end sheet style is standard.
full	AIX, DFE, CUPS, PSF	For AIX and PSF the end sheet style is full. For CUPS and DFE the end sheet style is standard.
job-ticket	PSF	The job ticket is printed on the end sheet.
none	AIX, CUPS, PSF	No end sheet prints.
64*xx*	PSF	The end sheet style is for the 64xx and 6500 printers.

Default Values

AIX

brief, **full**, **none**

CUPS

brief, **full**, **none**

DFE

full

PSF

accounting-log, **blank**, **brief**, **full**, **job-ticket**, **none**, **64*xx***, and the names of other defined auxiliary sheets which have legal PSF auxiliary sheet attributes.

Usage Guidelines

- PSF actual destinations can use auxiliary-sheet objects if they have valid **psf-exit-***xxx* values. AIX actual destinations print start and end sheets, but they do not use auxiliary-sheet objects.
- InfoPrint Manager verifies that the value of the **printer-end-sheet** attribute is a value of this attribute.
- You cannot delete a value from this attribute if the value you want to delete is the value of the **printer-end-sheet** attribute.
- For PSF actual destinations, InfoPrint Manager sets this value dynamically to the names of all defined auxiliary sheets with legal attributes. You should never have to reset this value.

file-size-range-supported

Defines the range of document file sizes in bytes (octets) that this actual destination can accept.

DSS

All

Type

Resettable, single-valued, complex

Syntax

lower-limit:upper-limit

Separate the values with a colon, for example:

```
0:1000000
```

Components

- **lower-limit**
  Identifies the lower limit value of the file size. The unit value is octets (bytes).
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter an integer from 0 to 9223372036854775800. The lower limit must be less than or equal to the upper limit.
  - *Default Value*
    0
- **upper-limit**
  Identifies the upper limit value of the file size. The unit value is octets (bytes).
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter an integer from 0 to 9223372036854775800. The upper limit must be greater than or equal to the lower limit.
  - *Default Value*
    0:2147483647

Usage Guidelines

- You use this attribute to indicate whether your system is large-file enabled.

- You can use the **large-file-enabled** actual destination attribute to set the **file-size-range-supported** actual destination attribute. However, you cannot specify both **large-file-enabled** and **file-size-range-supported**.
- InfoPrint compares the **octet-count** document attribute to this attribute for validation and scheduling.

font-resolutions-supported

Indicates the values of the document attribute **font-resolution** that this actual destination accepts.

GUI label

Font resolutions allowed

DSS

DFE, PSF

Type

Resettable, multi-valued

Allowed Values

- **240**
- **300**
- **open-type**
- **outline**

Default Values

DFE

240, **300**, **outline**

PSF

240, **300**, **open-type**, **outline**

Usage Guidelines

- Usually the font resolution and the printer resolution match, but there are two cases when they do not:
  - Some printer devices, such as the InfoPrint 4000s, can print fonts of any resolution, although the print head is always 600 pels.
  - It is possible to print a document created with fonts of one resolution on a printer device with a different resolution by substituting fonts. Depending on the document, the output might or might not be acceptable.
- InfoPrint Manager compares the document attribute **font-resolution** to this attribute for validation and scheduling.
- You can use this attribute to restrict use of this actual destination.

- The **open-type** value is only valid for printers that support TrueType and OpenType fonts. For more information about TrueType or OpenType fonts, see *Using OpenType Fonts in an AFP System*.

force-cse-sheet-eject

Indicates whether InfoPrint Manager should force a sheet eject before offset stacking (JOG) while printing in cut sheet emulation (CSE) mode.

Force CSE sheet eject at JOG.

DSS

PSF

Type

Settable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Values	*Input Synonym*
false	**yes**
true	**no**

Default values

false

Usage Guidelines

- Use this attribute to force InfoPrint Manager to eject to a new sheet between jobs.
- Use this attribute to force InfoPrint Manager to eject to a new sheet between copies of the jobs when using it together with the **job-copies** component of the **results-profile** job attribute.
- Use this attribute when a new copygroup is selected in the data and that specific copygroup requests JOG. This is useful when separate accounts are offset from each other. Forcing a sheet eject makes sure that the new account starts on the left sheetlet when printing in CSE mode.

Note

The **force-cse-sheet-eject** can cause extra blank pages in the output if the page ranges for reprints are calculated by counting pages. These pages need to be skipped when counting.

force-destination-setup

Indicates whether jobs requiring resources that this actual destination does not have ready or does not support should be held or scheduled to print.

GUI label

Disable on job mismatch

DSS

All

Type

Resettable, single-valued

Input Synonym

You can use the synonym **force-printer-setup**.

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

- When the value of **force-destination-setup** is **false**, InfoPrint checks that the actual destination can process each job in the queue before scheduling the job to print. If the job requires any resources that are not ready or not supported, the job is RIPped if appropriate, then held. The **required-resources-not-ready** job attribute indicates what resources are not ready. The **required-resources-not-supported** job attribute indicates what resources are not supported.
- When the value of **force-destination-setup** is **true**, InfoPrint does not check whether the actual destination can process the job until the job is sent to the actual destination. At that time, if any required resources are not ready or not supported, InfoPrint disables the actual destination and sends a message to the operator to change the destination setup. When the operator enables the actual destination, the job is printed or sent.
- The value of the **force-destination-setup** attribute cannot be set to **true** if the **pull-print-printer** actual destination attribute needs to be set to **true**.

force-micr-font-print

Indicates whether PSF will force jobs requesting MICR fonts to print on non-MICR printers.

GUI label

Force MICR font print

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

- When the value of **force-micr-font-print** is **false**, InfoPrint Manager will not submit jobs that use MICR fonts to non-MICR printers, and the job is terminated.
- When the value of **force-micr-font-print** is **true**, InfoPrint Manager will send jobs that use MICR fonts to non-MICR printers. These jobs might or might not be printed using regular toner on a non-MICR printer.

force-printer-setup

See **force-destination-setup**.

form-definition

Identifies the default form definition that the output device uses when printing or sending a document.

GUI label

Form definition

DSS

DFE, Email, PSF

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 8 characters long that contains the form-definition ID.

Default Value

Standard InfoPrint Manager Administration GUI and command line

F1A10111

Basic InfoPrint Manager Administration GUI

F100D

DFE, Email

F100S

Usage Guidelines

- The form definition controls positioning of the output image on the page.
- A form definition can specify overlays, a paper source for cut-sheet printers (input bin selection), duplex printing, and text suppression on a page.

form-length-range-supported

Specifies, in millimeters, the lower and upper numeric boundaries for the **form-length** document attribute that lets you specify the length of the form on the physical printer.

GUI label

Form length range supported

DSS

PSF TCP/IP

Type

Resettable, single-valued, complex

Syntax

lower-limit:upper-limit

Separate values with colons, for example,

0:0

To turn off the **form-length** attribute specification for the destination (because a value of 0 for **form-length** has no effect).

0:609.6

To enforce the maximum value for **form-length**, which is 609.6 mm (24.0 inches).

Components

- **lower-limit**
  Defines the minimum length that you can specify with the **form-length** document or default document attribute.
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a numeric value from 0 mm through 3467.9 mm. The unit of measure is millimeters.
  - *Default Value*
    0
- **upper-limit**
  Defines the maximum length that you can specify with the **form-length** document or default document attribute.
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a numeric value from 0 mm through 3467.9 mm. The unit of measure is millimeters.
  - *Default Value*
    3467.9

Usage Guidelines

- InfoPrint compares the **form-length** document attribute to this attribute for validation and scheduling.
- You can use this attribute to restrict use of this actual destination.

forms-ready

Indicates the forms to use with the actual destination. Used with the **forms** job/default job attribute for scheduling.

Forms ready

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter a text string that identifies the name of the form to use.

Default Value

The default is an * (asterisk).

Usage Guidelines

- There is no **supported** attribute associated with the **forms-ready** attribute. Therefore, a job with any form will be accepted, but it can remain in the queue until the appropriate **forms-ready** value is set.
- If you specify an * (asterisk) for the **forms-ready** attribute, any job will be scheduled to the associated actual destination.
- InfoPrint compares the **forms-ready** attribute with the **forms** job/default job attribute for validation and scheduling.

halftones-supported

Identifies the values for the **halftone** document attribute that this actual destination supports. The halftone values are used to prepare color and gray-scale documents for printing on bi-level, black and white printers.

GUI label

Halftones allowed

DSS

PSF

Type

Resettable, multi-valued

Allowed Values

The value of a **halftone** attribute is a combination of screen-name and output-appearance in the format: *screen-name:output-appearance*.

For custom halftones, the value can also be a combination of screen-name, output-appearance, and saved-calibration in the format: *screen-name:output-appearance.saved-calibration*.

You can enter a customized value or any of the supported (default) values for a particular model. The supported values by models follow.

With the InfoPrint 4000 (IR1/IR2) or InfoPrint 4000-IR3-IR4 printer, you can enter one of these halftone values:

- **ibm71lpi:standard**
- **ibm71lpi:highlight-midtones**

- **ibm71lpi:dark**
- **ibm71lpi:standard.enhtoner**
- **ibm71lpi:highlight-midtones.enhtoner**
- **ibm71lpi:dark.enhtoner**
- **ibm85lpi:standard**
- **ibm85lpi:highlight-midtones**
- **ibm85lpi:dark**
- **ibm85lpi:standard.enhtoner**
- **ibm85lpi:highlight-midtones.enhtoner**
- **ibm85lpi:dark.enhtoner**
- **ibm106lpi:standard**
- **ibm106lpi:highlight-midtones**
- **ibm106lpi:dark**
- **ibm106lpi:standard.enhtoner**
- **ibm106lpi:highlight-midtones.enhtoner**
- **ibm106lpi:dark.enhtoner**
- **ibm141lpi:standard**
- **ibm141lpi:highlight-midtones**
- **ibm141lpi:dark**
- **ibm141lpi:standard.enhtoner**
- **ibm141lpi:highlight-midtones.enhtoner**
- **ibm141lpi:dark.enhtoner**

With the InfoPrint 4100-HD1-HD2, 4100-HD3-HD4, 4100-HD5-HD6, 4100-HS1, 4100-HS2, 4100-HS3, 4100-MD1-MD2, 4100-MS1, 4100-PD1-PD2, 4100-PD3-PD4, 4100-PS1, 4100-PS2, 4100-TS1, 4100-TS2, 4100-TS3, 4100-TD1-TD2, 4100-TD2-TD3, 4100-TD3-TD4, 4100-TD5-TD6, 5000–AS1, 5000–AD1–AD2, 5000–AS3, 5000–AD3–AD4, 5000–AD3–AD4–XR3, 5000–MP-MD3–MD4, 5000–MP-MC1–MC2, 5000–KM3, 5000–KM3–MD4 printers, you can enter one of these halftone values:

- **ibm71lpi:standard**
- **ibm71lpi:highlight-midtones**
- **ibm71lpi:dark**
- **ibm71lpi:dark2**
- **ibm71lpi:accutone**
- **ibm71lpiRot90:standard**
- **ibm71lpiRot90:highlight-midtones**
- **ibm71lpiRot90:dark**
- **ibm71lpiRot90:dark2**
- **ibm71lpiRot90:accutone**
- **ibm85lpi:standard**
- **ibm85lpi:highlight-midtones**
- **ibm85lpi:dark**
- **ibm85lpi:dark2**

- **ibm85lpi:accutone**
- **ibm85lpiRot90:standard**
- **ibm85lpiRot90:highlight-midtones**
- **ibm85lpiRot90:dark**
- **ibm85lpiRot90:dark2**
- **ibm85lpiRot90:accutone**
- **ibm106lpi:standard**
- **ibm106lpi:highlight-midtones**
- **ibm106lpi:dark**
- **ibm106lpi:dark2**
- **ibm106lpi:accutone**
- **ibm106lpiRot90:standard**
- **ibm1061lpiRot90:highlight-midtones**
- **ibm106lpiRot90:dark**
- **ibm106lpiRot90:dark2**
- **ibm106lpiRot90:accutone**
- **ibm141lpi:standard**
- **ibm141lpi:highlight-midtones**
- **ibm141lpi:dark**
- **ibm141lpi:dark2**
- **ibm141lpi:accutone**
- **ibm141lpiRot90:standard**
- **ibm141lpiRot90:highlight-midtones**
- **ibm141lpiRot90:dark**
- **ibm141lpiRot90:dark2**
- **ibm141lpiRot90:accutone**

For all other base-printer models, you can enter one of these halftone values:

- **ibm71lpi:standard**
- **ibm71lpi:highlight-midtones**
- **ibm71lpi:dark**
- **ibm85lpi:standard**
- **ibm85lpi:highlight-midtones**
- **ibm85lpi:dark**
- **ibm106lpi:standard**
- **ibm106lpi:highlight-midtones**
- **ibm106lpi:dark**
- **ibm141lpi:standard**
- **ibm141lpi:highlight-midtones**
- **ibm141lpi:dark**

Default Value

See **Allowed Values**.

Usage Guidelines

- InfoPrint compares the **halftone** document attribute to this attribute for validation and scheduling.
- You can use this attribute to restrict the use of this actual destination.
- The **halftones-supported** actual destination attribute is used only for GIF, JPEG, PDF, PostScript, and TIFF documents.

image-fit-supported

Specifies the methods of adjusting images to fit on the printed page that this actual destination supports.

GUI label

Image fit allowed

DSS

DFE, Email, PSF

Type

Resettable, multi-valued

Allowed Values

You can enter one of these fixed values:

Value	Image formats
position-and-trim	All image formats
scale-to-fit	TIFF, GIF, and JPEG image formats

Default Value

No default value

Usage Guidelines

InfoPrint compares the document attribute **image-fit** to this attribute for validation and scheduling.

image-length

Specifies the default length of a page of PostScript, PCL, TIFF, GIF, JPEG, or PDF data after it has been transformed for InfoPrint Manager printing or transmission.

GUI label

Finished page length (inches) or (mm)

DSS

DFE, Email, PSF

Type

Resettable, single-valued

Allowed Values

The value you specify is in the form *nnnn.nnnu*

nnnn.nnn	is a number that can optionally contain a decimal point.
u	is the units in inches (**i**) or millimeters (**m**). If you do not specify a unit, the default unit is pels. You cannot use a decimal point when the unit is pels.

For 240-pel resolution printers, valid values are:

16 - 12720	pels
0.065 - 53	inches
1.641 - 1346.2	millimeters

For 300-pel resolution printers, valid values are:

16 - 15900	pels
0.052 - 53	inches
1.313 - 1346.2	millimeters

For 480-pel resolution printers, valid values are:

16 - 25440	pels
0.065 - 53	inches
1.641 - 1346.2	millimeters

For 600-pel resolution printers, valid values are:

16 - 31800	pels
0.052 - 53	inches
1.313 - 1346.2	millimeters

Default Value

No default value

Usage Guidelines

- This attribute is valid only for GIF, JPEG, PCL, PDF, PostScript, and TIFF documents.
- This attribute is not valid for ASCII documents.
- If a text margin is already built into the file, try **image-length=11i** to set the length to 11 inches.
- This attribute is used if you do not specify a value for the **image-length** document attribute or in the file specified by the **rip-ini-file** attribute.

image-out-formats-supported

Specifies the formats of image data, produced by the program that transforms line data to AFP data, that this actual destination supports.

GUI label

Image out formats allowed

DSS

DFE, PSF

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

- **ioca-uncompressed**
- **im1**
- **io1**
- **io1-g4**
- **io1-mmr**
- **asis**

Default Values

ioca-uncompressed, **im1**, **io1**, **io1-g4**, **io1-mmr**, **asis**

Usage Guidelines

InfoPrint compares the document attribute **image-out-format** to this attribute for validation and scheduling. You should use the document attribute when you print line-data documents.

image-width

Specifies the default width of a page of PostScript, PCL, TIFF, GIF, JPEG, or PDF data after it has been transformed for InfoPrint printing or transmission.

GUI label

Finished page width (inches) or (mm)

DSS

DFE, PSF

Type

Resettable, single-valued

Allowed Values

The value you specify is in the form *nnnn.nnnu*

nnnn.nnn	is a number that can optionally contain a decimal point.
u	is the units in inches (**i**) or millimeters (**m**). If you do not specify a unit, the default unit is pels. You cannot use a decimal point when the unit is pels.

For 240-pel resolution printers, valid values are:

16 - 8160	pels
0.065 - 34	inches
1.641 - 863.628	millimeters

For 300-pel resolution printers, valid values are:

16 - 10200	pels
0.052 - 34	inches
1.313 - 863.628	millimeters

For 480-pel resolution printers, valid values are:

16 - 16320	pels
0.065 - 34	inches
1.641 - 863.628	millimeters

For 600-pel resolution printers, valid values are:

16 - 20400	pels
0.052 - 34	inches
1.313 - 863.628	millimeters

Default Value

No default value

Usage Guidelines

- This attribute is valid only for GIF, JPEG, PCL, PDF, PostScript, and TIFF documents.
- If a text margin is already built into the file, try **image-width=8.5i** to set the width to 8.5 inches.
- This attribute is used if you do not specify a value for the **image-width** document attribute or in the file specified by the **rip-ini-file** attribute.

input-data-user-exit

Specifies the name of a program that monitors input data to this actual destination. For example, if a certain document format is printed on special media, the input data exit program can issue a message requesting the operator to change the paper whenever a job in that format is submitted.

GUI label

Input data exit

DSS

DFE, Email, PSF

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 255 characters.

Default Value

No default value

Usage Guidelines

You can use the sample input data exit program supplied:

- With InfoPrint:
  - For AIX or Linux, **/usr/lpp/psf/bin/ainuxind** (source **/usr/lpp/psf/exits/ainuxind.c**)
  - For Windows, *install_path***\bin\ainuxind** (source *install_path***\psf\exits\ainuxind.c** or *install_path***\psf\exits\ainuexit.h**), where *install_path* indicates the path where you installed InfoPrint Manager for Windows.

For more information about user-exit programs for InfoPrint Manager, visit the Ricoh website.

input-trays-medium

Identifies which input medium is in which printer tray.

GUI label

Media ready

DSS

AIX, CUPS, DFE

Type

Resettable, multi-valued, complex

Syntax

tray-identification:medium-identifier

Separate each pair of values with a colon, for example:

```
tray-1:A4-colored
```

Components

- **tray-identification**
  Identifies the type of input tray.
  - *GUI label*
    Input tray
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter one of these fixed values:

    auto-envelope-feed
    automatic-tray
    auxiliary-envelope
    auxiliary-paper
    bottom
    capacity-2000-sheet
    continuous-form-feed
    current-selected-tray
    envelope
    extended-option-feed-tray
    high-capacity-feeder
    interposer-tray
    interposer-lower-tray
    interposer-upper-tray
    large-capacity
    manual
    manual-envelope-feed
    middle
    perfect-binder-lower-interposer-tray
    perfect-binder-upper-interposer-tray
    top
    tray-1
    tray-2
    tray-3
    tray-4
    tray-5
    tray-6
    tray-7
    tray-8
    tray-9
    tray-10
    tray-a
    tray-t1
    tray-t2

  - *Default Value*
    If Simple Network Management Protocol (SNMP) communication is active, InfoPrint Manager queries the printer device and sets the value according to the response; otherwise **tray-1**. However, if you specify a value for **input-tray**, you deactivate the SNMP default.

    For DFE actual destinations, InfoPrint Manager queries the DFE server and sets the values according to the response.
- **medium-name**
  Identifies the medium in the input tray.
  - *GUI label*
    Media ready
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a text string up to 255 characters long that contains the name of the medium or one of the fixed values of the **medium-identifier** attributes of the default media. See the medium attribute **medium-identifier** for a list of these values.

– *Default Value*

If Simple Network Management Protocol (SNMP) communication is active, InfoPrint Manager queries the printer device and sets the values according to the response; otherwise **letter**. However, if you specify a value for **medium-identifier**, you deactivate the SNMP default.

For DFE actual destinations, InfoPrint Manager queries the DFE server and sets the values according to the response.

Usage Guidelines

- InfoPrint Manager automatically sets the values for the **input-trays-supported** and **media-ready** attributes from the values of this attribute.
- InfoPrint Manager verifies that the values of the *medium-name* component of this attribute are values of the **media-supported** attribute.
- The InfoPrint Manager server can automatically set the values for **input-trays-medium** for an SNMP printer **only** if you do **not** explicitly set the attribute when creating or modifying the actual destination or if you reset the attribute to the InfoPrint Manager default.

Note

For media, the automatic default only detects the **size** of the medium. If you have different media that are the same size (for example, three different letter-size preprinted forms) and you need to differentiate between them in the attributes, you must explicitly set the attributes instead of using the automatic default.

input-trays-supported

Identifies the types of input trays, such as top or envelope, supported on the printer device.

GUI label

Input trays allowed

DSS

AIX, BSD, CUPS, DFE, Email, PSF

Type

Non-settable (AIX and PSF) or resettable (BSD), multi-valued

Allowed Values

AIX, CUPS, DFE

InfoPrint Manager sets the values for this attribute based on the values of the **input-trays-medium** attribute.

BSD

You can enter any names that describe input trays.

PSF

InfoPrint Manager sets the values for this attribute based on the values of the **psf-tray-characteristics** attribute.

Default Values

AIX, CUPS, DFE

The value of the **input-trays-medium** attribute

BSD

No default value

PSF

The value of the **psf-tray-characteristics** attribute

Usage Guidelines

- InfoPrint Manager uses this attribute for job validation and scheduling:

  AIX, CUPS, DFE

  InfoPrint Manager compares the document attribute **default-input-tray** to this attribute.

  BSD

  This attribute is for information only.

  PSF

  InfoPrint Manager compares the document attribute **default-input-tray** or **input-tray-select** to this attribute.
- You can use this attribute to restrict use of this actual destination.

interchange-set-version

This attribute indicates the interchange set version for the resulting AFP data stream.

GUI label

Interchange set version

DSS

PSF TCP/IP

Type

Resettable, single-valued

Allowed values

You can enter one of these fixed values:

- IS1

- IS3

Default value

IS1

Usage Guidelines

- The **interchange-set-version** attribute can be used with only these transform commands: ps/pdf2afp, pcl2afp, sap2afp, gif2afp, tiff2afp, and jpeg2afp.
- When using the sap2afp transform command to convert an ABAP file by specifying 3 as a value for the -is flag, it does not create IS/3 compliant AFP output. The sap2afp transform command creates IS/3 compliant AFP output only when the input file is an OTF file.

interrupt-message-page-enabled

Indicates whether InfoPrint Manager is running with Interrupt Message Page (IMP) on or off.

GUI label

Interrupt message page enabled

DSS

PSF TCP/IP

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

- When the value of **interrupt-message-page-enabled** is **false**, InfoPrint will not print interrupt message pages.
- When the value of **interrupt-message-page-enabled** is **true**, InfoPrint prints interrupt message pages.

interrupt-message-page-form-definition

Identifies the form definition to use when generating interrupt message pages.

GUI label

Interrupt message page form definition

DSS

PSF TCP/IP

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 8 characters long that contains the name of the form definition to use when printing interrupt message pages.

Default Value

F1MG0110

Usage Guidelines

The InfoPrint Manager Interrupt Message Page support includes a form definition (F1MGIMP) that is similar to the default message page form definition (F1MG0110), but F1MGIMP enables offset-stacking.

interrupt-message-page-edge-marks

Indicates whether InfoPrint Manager marks the page edges when running with Interrupt Message Page (IMP) on.

GUI label

Interrupt message page edge marks

DSS

PSF TCP/IP

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

- When the value of **interrupt-message-page-enabled** is **false**, InfoPrint will not print edge marks on the interrupt message pages.
- When the value of **interrupt-message-page-enabled** is **true**, InfoPrint prints edge marks on the interrupt message pages.

interrupt-message-report-enabled

Indicates whether InfoPrint Manager is running with Interrupt Message Report (IMR) on or off.

GUI label

Interrupt message report enabled

DSS

PSF TCP/IP

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

- When the value of **interrupt-message-report-enabled** is **false**, InfoPrint will not print a interrupt message report.
- When the value of **interrupt-message-report-enabled** is **true**, InfoPrint prints a interrupt message report.

interrupt-message-report-form-definition

Identifies the form definition to use when generating interrupt message report pages.

GUI label

Interrupt message report form definition

DSS

PSF TCP/IP

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 8 characters long that contains the name of the form definition to use when printing a interrupt message report.

Default Value

F1MR0110

Usage Guidelines

The InfoPrint Manager Interrupt Message Report form definition (F1MR0110) highlights the error message pages generated for the printer intervention cases.

intervention-timer

Specifies the maximum amount of time, in seconds, that InfoPrint waits before it treats an intervention-required condition at the output device as a permanent error.

GUI label

Intervention timer (sec)

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter a value of 1 through 9999. The unit is seconds.

Default Value

9999

Usage Guidelines

A value of **9999** specifies that a permanent error condition can never occur.

intra-job-edge-marks-enabled

Specifies whether this actual destination enables intra-job edge marks on the output.

GUI label

Intra-job edge marks enabled

DSS

PSF TCP/IP

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

true

Usage Guidelines

The MO:DCA architecture defines a medium modification named **Offset stack/edge mark change**. This function allows the print server to offset stack or modify the change edge marks in the output, whenever a new medium map is selected in the datastream and that medium map specifies offset stack or edge mark change.

This attribute is valid only if the printer profile attribute **print-edge-marks** is set to **true**.

job-attributes-supported

Identifies the job attributes that this actual destination supports. InfoPrint Manager checks the values listed with this attribute and merges them with the values supported by the server (found on the **job-attributes-supported** server attribute) during validation to allow jobs with these attributes to continue on to this actual destination.

DSS

All

Type

Non-settable, multi-valued

Allowed Values

InfoPrint Manager sets the values that list the job attributes that this actual destination supports.

Note

This list includes only job attributes that directly affect the actual destination. Jobs with attributes that affect the server, for example, **job-retention-period**, can be printed even though those attributes are not on this list.

Default Values

This list lists the **job-attributes-supported** by DSS that are merged with the **job-attributes-supported** by the server:

AIX, CUPS

auxiliary-sheet-selection, **job-batch**, **job-start-wait**

BSD

job-batch, **job-start-wait**

DFE

auxiliary-sheet-selection, **current-page-printing**, **delete-segment-list**, **dfe-job-dentifier**, **dfe-preset-requested**, **document-rip-attributes**, **document-rendering-attributes**, **formatted-job-ticket-content**, **job-finishing**, **job-rendering-attributes**,**job-rip-action**, **job-ripped-by-server**, **job-rip-files**, **job-version-attributes**, **media-sheets-completed**, **page-counts-for-ripped-files**, **segment-list-file-name**

PSF

auxiliary-sheet-selection, **delete-segment-list**, **formatted-job-ticket-content**, **job-batch**, **job-finishing**, **job-rip-action**, **job-start-wait**, **media-sheets-completed**, **optimize-for-multiple-copies**, **segment-list-file-name**

Email

delete-segment-list, **formatted-job-ticket-content**, **job-batch**, **job-rip-action**, **job-ripped-by-server**, **job-start-wait**, **media-sheets-completed**, **segment-list-file-name**

Passthrough

auxiliary-sheet-selection, **job-batch**, **job-start-wait**

IPP

auxiliary-sheet-selection, **job-batch**, **job-start-wait**

job-batches-ready

Specifies which job-batch values can currently print to this actual destination.

GUI label

Job batches ready

DSS

All

Type

Resettable, multi-valued

Allowed Values

You can enter a text string up to 4095 characters long, for each value, that contains the job-batch name.

Default Value

No default values.

Usage Guidelines

InfoPrint compares the value of the job attribute **job-batch** to this attribute during job scheduling.

job-finishings-supported

Identifies the job finishing options that this actual destination supports.

GUI label

Finishing options allowed

DSS

CUPS, DFE, and PSF

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values for printers that use the CUPS DSS:

- **the values for PSF-supported printers**
- **staple-2-top**
- **staple-2-left**
- **staple-2-right**
- **staple-2-center**

You can enter any of these fixed values for printers that use the DFE DSS:

- **punch-2-left**
- **punch-2-right**
- **punch-2-top**
- **punch-3-left**
- **punch-3-right**
- **punch-3-top**
- **punch-4-left**
- **punch-4-right**
- **punch-4-top**
- **staple-2-center**
- **staple-2-left**
- **staple-2-right**
- **staple-2-top**
- **staple-top-left**
- **staple-top-right**

You can enter any of these fixed values for the PSF-supported printers, that is printers that use the PSF DSS except for PSF Other-driver and PSF Command attachment types:

- **accordion-fold-in**
- **accordion-fold-out**
- **c-fold-in**
- **c-fold-out**
- **center-fold-out**
- **edge-stitch**
- **edge-stitch-2**
- **edge-stitch-3**
- **edge-stitch-bottom**
- **edge-stitch-left**

- **edge-stitch-right**
- **edge-stitch-top**
- **perfect-bind-left**
- **perfect-bind-right**
- **perfect-bind-top**
- **punch-2**
- **punch-3**
- **punch-4**
- **punch-2-bottom**
- **punch-2-left**
- **punch-2-right**
- **punch-2-top**
- **punch-3-bottom**
- **punch-3-left**
- **punch-3-right**
- **punch-3-top**
- **punch-4-bottom**
- **punch-4-left**
- **punch-4-right**
- **punch-4-top**
- **ring-bind-left**
- **ring-bind-right**
- **ring-bind-top**
- **saddle-fold**
- **saddle-stitch**
- **saddle stitch-in**
- **single-gate-fold-in**
- **single-gate-fold-out**
- **staple-bottom-left**
- **staple-bottom-right**
- **staple-top-left**
- **staple-top-right**

Default Values

No default value

Usage Guidelines

- For explanations on the attribute values, see the job attribute **job-finishing**.
- InfoPrint Manager compares the job attribute **job-finishing** to this attribute for validation and scheduling.
- You can use this attribute to restrict the use of finishing options for an actual destination.
- The **job-finishings-supported** attribute is not applicable to UP³I devices. For information about UP³I devices, see the *InfoPrint Page Printer Formatting Aid: User's Guide*.
- The presence of a finishing value on this attribute does not guarantee that the finishing option will work; the appropriate finishing hardware must be installed to support the finishing value.

job-page-range-ready

Defines the range of job sizes in pages that this actual destination can accept and print.

GUI label

Page range ready

DSS

All

Type

Resettable, single-valued, complex

Syntax

lower-limit:upper-limit

Separate the values with a colon, for example:

```
1:100
```

You can omit either value, for example:

```
25:
:100
```

Components

- **lower-limit**
  Identifies the lower limit value of the job size. The unit value is pages.
  - *GUI label*
    Lower limit
  - *Type*
    Single-valued
  - *Allowed Values*

You can enter an integer from 0 to 2147483647. The lower limit must be less than or equal to the upper limit.

  - *Default Value*
    0

- **upper-limit**
  Identifies the upper limit value of the job size. The unit value is pages.

  - *GUI label*
    Upper limit
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter an integer from 0 to 2147483647. The upper limit must be greater than or equal to the lower limit.
  - *Default Value*
    2147483647

Usage Guidelines

- You can use this attribute to restrict jobs sent to this actual destination according to the capacity of the output device or your policy for output device use.
- You must set the range for this attribute in the range of the **job-page-range-supported** value.
- InfoPrint compares the job attribute **job-page-count** to this attribute for scheduling.

job-page-range-supported

Defines the range of job sizes in pages that this actual destination can accept.

GUI label

Page range allowed

DSS

All

Type

Resettable, single-valued, complex

Syntax

lower-limit:upper-limit

Separate the values with a colon, for example:

```
1:100
```

You can omit either value, for example:

```
20:
:100
```

Components

- **lower-limit**
  Identifies the lower limit value of the job size. The unit value is pages.
  - *GUI label*
    Lower limit
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter an integer from 0 to 2147483647. The lower limit must be less than or equal to the upper limit.
  - *Default Value*
    0
- **upper-limit**
  Identifies the upper limit value of the job size. The unit value is pages.
  - *GUI label*
    Upper limit
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter an integer from 0 to 2147483647. The upper limit must be greater than or equal to the lower limit.
  - *Default Value*
    2147483647

Usage Guidelines

- You can use this attribute to restrict jobs sent to this actual destination according to the capacity of the output device or your policy for output device use.
- You must set the range for this attribute equal to or greater than the range you specify for the **job-page-range-ready** attribute value.
- InfoPrint compares the job attribute **job-page-count** to this attribute for validation and scheduling.

job-result-set-delivery-methods-supported

Identifies the job result-set delivery methods supported by this actual destination.

DSS

All

Type

Non-settable, multi-valued

Allowed Values

Fixed Value	DSS
pickup	All other DSSs

Default Values

All other DSSs

pickup

job-retry-count-limit

Indicates the number of times that InfoPrint should try to submit a job to this device after an initial failure.

GUI label

Number of times to retry jobs

DSS

AIX, BSD, CUPS, PSF, Passthrough, IPP

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 0 through 2147483647.

Default Value

0

Usage Guidelines

- Values greater than **0** are useful when poor network line quality causes temporary loss of communication between this actual destination and the backend program. A second or subsequent attempt to submit the job can succeed if communication can be reestablished.
- If the job cannot be submitted in the specified number of attempts, InfoPrint disables the destination and places it in the **needs-key-operator** state.

- The **job-retry-interval** actual destination attribute indicates the number of seconds between attempts.
- If the value of this attribute is **0**, the **job-retry-interval** attribute is ignored.
- If the value of the **job-retry-interval** attribute is **0**, this attribute is ignored.
- On InfoPrint Manager for Windows, the **job-retry-count-limit** should not be set to a large value if the **job-retry-interval** is set to a small value because several processes start and terminate on each retry. After a period of time, such retries could result in the InfoPrint Manager server stopping or the Windows operating system becoming unresponsive.

job-retry-interval

Indicates the number of seconds that InfoPrint should wait between attempts to submit a job to this device.

GUI label

Interval to retry jobs (sec)

DSS

AIX, BSD, CUPS, PSF, Passthrough, IPP

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 0 through 2147483647.

Default Value

0

Usage Guidelines

- If the job cannot be submitted in the specified number of attempts, InfoPrint disables the destination and places it in the **needs-key-operator** state.
- The **job-retry-count-limit** actual destination attribute indicates the number of attempts after an initial failure.
- If the value of this attribute is **0**, the **job-retry-count-limit** attribute is ignored.
- If the value of the **job-retry-count-limit** attribute is **0**, this attribute is ignored.
- On InfoPrint Manager for Windows, if the **job-retry-interval** is set to a small value, the **job-retry-count-limit** should not be set to a large value because several processes start and terminate on each retry. After a period of time, such retries could result in the InfoPrint Manager server stopping or the Windows operating system becoming unresponsive.

job-rip-actions-supported

Indicates whether this actual destination supports converting a PostScript job to raster image patterns and holding the job, printing the job, or neither.

GUI label

RIP options allowed

DSS

DFE, Email, PSF

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

- **rip-and-hold**
- **rip-and-hold-ignore-ready**
- **rip-and-print**
- **rip-and-print-ignore-ready**
- **rip-only**
- **rip-only-ignore-ready**

Default Value

Email and PSF

rip-and-hold, **rip-and-hold-ignore-ready**, **rip-and-print**, **rip-and-print-ignore-ready**, **rip-only**, **rip-only-ignore-ready**

DFE

rip-and-hold, **rip-and-print**, **rip-only**

Usage Guidelines

InfoPrint Manager compares the job attribute **job-rip-action** to this attribute for validation and scheduling.

job-size-range-ready

Defines the range of job sizes in bytes (octets) that this actual destination can accept and print.

GUI label

Size ready (Bytes)

DSS

All

Type

Resettable, single-valued, complex

Syntax

lower-limit:upper-limit

Separate the values with a colon, for example:

```
1025:1000000
```

You can omit either value, for example:

```
1025:
:1000000
```

Components

- **lower-limit**
  Identifies the lower limit value of the job size. The unit value is octets (bytes).
  - *GUI label*
    Lower limit
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter an integer from 0 to 9223372036854775800. The lower limit must be less than or equal to the upper limit.
  - *Default Value*
    0
- **upper-limit**
  Identifies the upper limit value of the job size. The unit value is octets (bytes).
  - *GUI label*
    Upper limit
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter an integer from 0 to 9223372036854775800. The upper limit must be greater than or equal to the lower limit.
  - *Default Value*

9223372036854775800

Usage Guidelines

- You can use this attribute to restrict jobs sent to this actual destination according to the capacity of the output device or your policy for output device use.
- You must set the range for this attribute in the range of the **job-size-range-supported** value.
- InfoPrint compares the job attribute **total-job-octets** to this attribute for scheduling.

job-size-range-supported

Defines the range of job sizes in bytes (octets) that this actual destination can accept.

GUI label

Size allowed (Bytes)

DSS

All

Type

Resettable, single-valued, complex

Syntax

lower-limit:upper-limit

Separate the values with a colon, for example:

```
1025:1000000
```

You can omit either value, for example:

```
1025:
:1000000
```

Components

- **lower-limit**
  Identifies the lower limit value of the job size. The unit value is octets (bytes).
  - *GUI label*
    Lower limit
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter an integer from 0 to 9223372036854775800. The lower limit must be less than or equal to the upper limit.

- *Default Value*
  0

- **upper-limit**
  Identifies the upper limit value of the job size. The unit value is octets (bytes).
  - *GUI label*
    Upper limit
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter an integer from 0 to 9223372036854775800. The upper limit must be greater than or equal to the lower limit.
  - *Default Value*
    9223372036854775800

Usage Guidelines

- You can use this attribute to restrict jobs sent to this actual destination according to the capacity of the output device or your policy for output device use.
- You must set the range for this attribute equal to or greater than the range you specify for the **job-size-range-ready** attribute value.
- InfoPrint compares the job attribute **total-job-octets** to this attribute for validation and scheduling.

job-start-wait-supported

Indicates whether job submitters are allowed to set the **job-start-wait** job attribute to pause the actual destination just before the job prints.

GUI label

Wait to start job allowed

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

The default is **true**.

Usage Guidelines

InfoPrint compares the job attribute **job-start-wait** to this attribute for validation and scheduling.

large-file-enabled

Indicates whether you have enabled your system to support large files (files larger than 2 GB). Setting this attribute automatically sets the **file-size-range-supported** attribute.

GUI label

Large file enabled

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

true

Usage Guidelines

- The **large-file-enabled** actual destination attribute is provided as an easy way to set the **file-size-range-supported** actual destination attribute.
- You cannot specify both **large-file-enabled** and **file-size-range-supported**.
- While the **large-file-enabled** actual destination attribute appears on all DSSs, a value of **true** is only supported on the PSF DSS.

list-of-managers

Identifies the people responsible for the configuration of this actual destination and maintenance of the output device associated with this actual destination.

GUI label

Managers

DSS

All

Type

Resettable, multi-valued

Input Synonym

You can use the synonym **managers**.

Allowed Values

You can enter a text string up to 255 characters long, for each value, that contains such things as the name, user ID, office number, or telephone number of the person responsible for this actual destination and the output device associated with it.

Default Value

No default value

Usage Guidelines

This attribute is useful if a user needs to contact someone to report a problem or to request a change.

locations

See **destination-locations**.

log-accounting-data

Defines whether the accounting log is active for this actual destination. If you set the value to the default by using the == operator, the value of the server attribute **log-accounting-data** is used.

GUI label

Log accounting data

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Note

The accounting logs are stored in an InfoPrint server directory called **accounting.logs**.

Default Value

No default value

Usage Guidelines

You can use this attribute to activate or deactivate the accounting log for this actual destination.

Note

The accounting log contains these job attributes and values for each job processed for this actual destination:

- **actual destination name** (up to 255 characters)
- **job owner** (up to 255 characters)
- **global job-id** without *ServerName*
- **submission-time** (GMT format)
- **submission-time** (date in server's displayable locale and time zone)
- **submission-time** (time in server's displayable locale and time zone)
- **completion-time** (GMT format)
- **completion-time** (date in server's displayable locale and time zone)
- **completion-time** (time in server's displayable locale and time zone)
- **pages-completed**
- **octets-completed**
- **data stream** (first document only)
- **job name** (up to 255 characters)

You can also add any of the additional-accounting-log-attributes values for logging purposes.

logical-destinations-assigned

Indicates the logical destination through which submissions to this actual destination are forwarded.

GUI label

Route submitted jobs to

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 255 characters that contains the name of the logical destination.

Default Value

No default value

Usage Guidelines

When a job submission is received at an actual destination object with the **logical-destinations-assigned** set, the **actual-destinations-requested** attribute is set to the name of the actual destination that received the request, and then the job is submitted through the specified **logical-destinations-assigned**.

If **logical-destinations-assigned** is **not** set in the actual destination, the actual destination does not accept direct job submission requests, which are rejected with an unsupported error message.

This attribute is required if the **pull-print-printer** actual destination attribute needs to be set to **true**.

maintain-original-filename

Specifies if the original submitted file name or the subject-text attribute is used for the file name email of the attachment.

DSS

Email

Type

Resettable, single-valued, per-job

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

False

Usage Guidelines

To preserve the original file name from the **document-file-name** attribute of the first printable document in a job sent to the Email DSS as the file name of the email attachment, you must configure the Email DSS actual destination attribute **maintain-original-filename** to **true**.

managers

See **list-of-managers**.

maximum-concurrent-jobs

Defines an upper limit for the number of jobs that this actual destination can process at a time.

GUI label

Maximum concurrent jobs

DSS

All

Type

Resettable, single-valued

Allowed Values

AIX

You can enter an integer from 1 through 9.

BSD

You can enter an integer from 1 through 9.

CUPS

You can enter an integer from 1 through 9.

DFE

You can enter an integer from 1 through 99.

PSF

You can enter an integer from 1 through 150.

Note

When you are using a PSF other-driver attached actual destination, the maximum value is 9.

Email

You can enter an integer from 1 through 99.

Passthrough

You can enter an integer from 1 through 9.

IPP

1

Default Value

AIX

2

BSD

1

CUPS

1

DFE

12

PSF other-driver attached actual destinations

2

PSF command-attached actual destinations

1

Other PSF actual destinations

4

Email

12

Passthrough

1

IPP

1

Usage Guidelines

- You can use this attribute to tune your InfoPrint Manager system to efficiently use your destination resources.
- When you are using two interoperating InfoPrint Transform Manager servers with InfoPrint Manager, set **maximum-concurrent-jobs** to **8** to benefit from load balancing between the InfoPrint Transform Manager servers. This number needs to be increased as the number of interoperating InfoPrint Transform Manager servers increases.
- If you print mostly small jobs to a continuous form printer, such as the InfoPrint 5000 printer, increase the value of the **maximum-concurrent-jobs** actual destination attribute to 120. This reduces the lag time between jobs and eliminates clutching.

maximum-copies-supported

Indicates the number of document copies, in a single job, that this actual destination allows.

GUI label

Maximum copies allowed

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 1 through 2147483647.

Default Value

2147483647

Usage Guidelines

- You can use this attribute to restrict jobs sent to this actual destination according to the capacity of the output device or your policy for output device use.
- InfoPrint compares the document attribute **copy-count** to this attribute for scheduling.

maximum-fonts-to-keep

Specifies the maximum number of fonts to keep in the memory of the printer device between jobs.

GUI label

Maximum fonts to keep

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 0 through 999.

Default Value

10

Usage Guidelines

- Fonts are a single size and typeface in a particular type family, including letters, numerals, punctuation marks, special characters, and ligatures.
- If you specify that the printer device can store fonts in its memory between jobs, the printer will not have to download the same fonts for the next job. However, this requires additional printer memory.

maximum-overlays-to-keep

Specifies the maximum number of overlays to keep in the memory of the printer device between jobs.

GUI label

Maximum overlays to keep

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 0 through 999.

Default Value

0

Usage Guidelines

- Overlays are collections of predefined data such as lines, shading, test boxes, and logos that the printer device can merge with variable data on a page or a form.
- If you specify that the printer device can store overlays in its memory between jobs, the printer will not have to download the same overlays for the next job. However, this requires additional printer memory.

maximum-presentation-object-containers-to-keep

Specifies the maximum number of presentation object containers (called data object resources in the IPDS Reference) to keep in the memory of the printer device between jobs.

GUI label

Maximum presentation object containers to keep

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 0 through 32511.

Default Value

100

Usage Guidelines

For accounting purposes, InfoPrint Manager treats color management resources (CMRs) as data object resources, so CMRs are counted as part of the **maximum-presentation-object-containers-to-keep**.

maximum-segments-to-keep

Specifies the maximum number of page segments to keep in the memory of the printer device between jobs.

GUI label

Maximum segments to keep

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 0 through 999.

Default Value

0

Usage Guidelines

- Page segments contain text and images that the printer device can include at any addressable point on a page or an electronic overlay.
- If you specify that the printer device can store page segments in its memory between jobs, the printer will not have to download the same page segments for the next job. However, this requires additional printer memory.

media-ready

Identifies the media now loaded in the printer device.

GUI label

Media ready

DSS

AIX, BSD, CUPS, DFE, PSF, IPP, Passthrough

Type

Non-settable (AIX, CUPS, and PSF) or resettable (BSD, IPP, and Passthrough), multi-valued

Allowed Values

AIX, CUPS, and DFE

InfoPrint Manager sets the values for this attribute based on the values of the **input-trays-medium** attribute.

BSD

You can enter any values of the **media-supported** attribute.

PSF

InfoPrint Manager sets the values for this attribute based on the values of the **psf-tray-characteristics** attribute.

IPP and Passthrough

You can enter any values of the **media-supported** attribute.

Default Values

For AIX, BSD, CUPS, PSF actual destinations, Passthrough, and IPP, if SNMP communication is active, InfoPrint Manager queries the printer device and sets the values according to the response; otherwise, see the following list.

For DFE actual destinations, InfoPrint Manager queries the DFE server media catalog and sets the values according to the response; otherwise:

AIX, CUPS, and DFE

The default comes from the values of the **input-trays-medium** attribute.

BSD

No default value

PSF

The default comes from the values of the **psf-tray-characteristics** attribute.

IPP

The default value comes from IPP.

Passthrough

There is no default.

Usage Guidelines

- InfoPrint Manager restricts the possible values for this attribute to the values currently specified for the **media-supported** attribute.
- InfoPrint Manager compares the document attribute **default-medium** to this attribute for job scheduling.
- The InfoPrint Manager server can automatically set the value for **media-ready** based on the **input-trays-medium** or **psf-tray-characteristics** actual destination attribute for an SNMP printer **only** if you do **not** explicitly set the attribute when creating or modifying the actual destination.

  Note

  For media, the automatic default only detects the **size** of the medium. If you have different media that are the same size (for example, three different letter-size preprinted forms) and you need to differentiate between them in the attributes, you must explicitly set the attributes instead of using the automatic default.

media-supported

Identifies the types of media that the actual destination supports.

GUI label

Media allowed

DSS

AIX, BSD, CUPS, DFE, PSF, IPP, Passthrough

Type

Resettable, multi-valued

Allowed Values

You can enter a text string that contains the names of the media. These can be:

- The medium identifiers of medium objects created by the **pdcrmed** utility. For these fixed values, see medium-identifier, p. 1043.
- The medium identifiers of medium objects you created yourself.
- For PSF actual destinations, DFE printers, IPP printers, Passthrough printers, and BSD actual destinations, any names that describe the media, even if no medium objects with those names exist.

Default Value

For AIX, BSD, CUPS, PSF, IPP, and Passthrough actual destinations, if SNMP communication is active, InfoPrint Manager queries the printer device and sets the values according to the response; otherwise, see the following list.

For DFE actual destinations, InfoPrint Manager queries the DFE server media catalog and sets the values according to the response; otherwise:

AIX, CUPS

letter

BSD

No default value

DFE

No default value

PSF (when created with the Standard InfoPrint Manager Administration GUI and command line)

Command-attached actual destinations

letter

other-driver attached actual destinations

letter

Other PSF models (when created with the Standard or Basic InfoPrint Manager Administration GUI)

letter, legal, a3, a4, jis-b4–white, jis-b5–white, tabloid, ledger

Other actual destinations

No default values

PSF (when created with the Basic InfoPrint Manager Administration GUI)

All allowed fixed values

IPP

With Internet Printing Protocol (IPP) printers, the default comes from IPP.

Passthrough

No default value

Usage Guidelines

- InfoPrint Manager uses this attribute for job validation:

  AIX, CUPS

  InfoPrint Manager compares the document attribute **default-medium** to this attribute for job validation and scheduling.

  BSD

  This attribute is for information only.

  PSF

  InfoPrint Manager compares the document attribute **default-medium** or **page-media-select** to this attribute for job validation and scheduling.
- For AIX actual destinations, InfoPrint Manager verifies that the values of the *medium-identifier* component of the **input-trays-medium** attribute are values of this attribute.
- For PSF actual destinations, InfoPrint Manager verifies that the values of the *medium-loaded* component of the **psf-tray-characteristics** attribute are values of this attribute.
- The actual destination does not automatically update this attribute. When you create a medium object, you must add its medium identifier to each actual destination that supports it.
- You can use this attribute to restrict use of this actual destination.
- The InfoPrint Manager server can automatically set the value for **media-supported** based on the **input-trays-medium** or **psf-tray-characteristics** actual destination attribute for an SNMP printer **only** if you do **not** explicitly set the attribute when creating or modifying the actual destination or if you reset the attribute to the InfoPrint Manager default.

  Note

  For media, the automatic default only detects the **size** of the medium. If you have different media that are the same size (for example, three different letter-size preprinted forms) and you need to differentiate between them in the attributes, you must explicitly set the attributes instead of using the automatic default.

medium-preprinted-form-overlay-back

Specifies the medium preprinted form overlays for the back sheet side.

GUI label

Medium preprinted form overlay back

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 8 characters long that contains the name of the overlay.

Default Value

No default value

medium-preprinted-form-overlay-front

Specifies the medium preprinted form overlays for the front sheet side.

GUI label

Medium preprinted form overlay front

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 8 characters long that contains the name of the overlay.

Default Value

No default value

message

Provides information associated with this actual destination.

GUI label

Message

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 4095 characters long that contains information about this actual destination.

Default Value

No default value

Usage Guidelines

Use of this descriptive attribute is optional.

message-font-type

Identifies the font type that the printer device uses to print the message page.

GUI label

Message page font type

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

- **normal**
- **condensed**

Default Value

normal

message-form-definition

Identifies the AFP form definition that the printer device uses to process the message page.

GUI label

Message page form definition

DSS

PSF

Type

Resettable, single-valued

Allowed Values

A text string up to 255 characters long that contains the form definition ID.

Default Value

F1MG0110

mid-release-timer

Identifies the length of time without additional print requests that the device will wait before suspending the IPDS session.

GUI label

MID Release Timer

DSS

PSF TCP/IP

Type

Resettable, single-valued

Input Synonyms

None

Allowed Values

You can enter an integer from 1 through 9999. The unit value is seconds.

Default Values

15

Usage Guidelines

- If you are using the **destination-release-timer** attribute to control sharing of the print mechanism, you can turn off the **destination-release-timer** function because the **mid-release-timer** attribute can provide the same function without loss of connectivity.
- If you are only using the **destination-release-timer** attribute to share the device with other IPDS hosts, do not use the **mid-release-timer** attribute because other IPDS hosts will not be allowed to connect while the physical connection still exists.
- To share the device with both another IPDS host and non-IPDS data streams, follow these guidelines to configure the timers so that they do not conflict with each other:
  - Always set **mid-release-timer** attribute to be lower than the value of the **destination-release-timer** attribute; otherwise the **mid-release-timer** attribute will never be activated.
  - Make sure that the difference in timing between the **mid-release-timer** attribute and the **destination-release-timer** attribute is adequate, so that the device will return control of the print mechanism before the IPDS connection is released.

    Note

    The clocking of the **destination-release-timer** function will stop if the PSF host receives subsequent print requests.

mid-support-enabled

Specifies whether the Manage IPDS Dialog (MID) function (if supported by the device) is enabled for a specific actual destination.

GUI label

Enable MID Support

DSS

PSF TCP/IP

Type

Resettable, single-valued

Input Synonyms

None

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Values

false

Usage Guidelines

- The **MID** function provides the print sharing method of a device with non-IPDS data streams.
- When the **MID** function is enabled, the printer can request that the PSF host releases the control of the print engine without dropping the TCP/IP connection. In this situation, the print engine can print data streams other than IPDS when the IPDS activity is minimal.
- If you release the print mechanism, the IPDS host might stop processing subsequent print requests until the print mechanism control is returned. And the time when the control is returned depends on the device.

model

See **destination-model**.

non-process-runout-timer

Designates the amount of time, in seconds, that a continuous-forms printer device waits for the next job before it runs the forms from the print transfer station to the stacker after the last page of a job prints.

GUI label

Non-process runout timer (sec)

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 0 through 9999. The unit is seconds.

Default Value

60

Usage Guidelines

If you enter a value of **0**, InfoPrint does not allow the timer to expire.

notification-profile

Designates which users InfoPrint notifies of specified events related to this actual destination, and how InfoPrint notifies them.

GUI label

Notification profile

DSS

All

Type

Resettable, multi-valued, complex

Syntax

-x "notification-profile={event-identifiers=*event* **...**
delivery-address=*name@node* **delivery-method=***value*
event-comment='*some text***' locale=***locale***}"**

You can omit any of these components, for example:

```
-x "notification-profile={event-identifiers=class-actual-destination-status
   class-warning delivery-address=jeff@ttank
   event-comment='Its still going' locale=En_US.IBM-850}"
```

Components

- **event-identifiers**
  Specifies the events for which the user receives messages.
  - *GUI label*
    Events
  - *Type*
    Multi-valued
  - *Allowed Values*
    You can enter any of the values listed for the server attribute **events-supported**.
  - *Default Values*
    object-deleted, **object-cleaned**, **printer-needs-administrator**, **printer-needs-attention**, **printer-needs-operator**, **printer-timed-out**
- **delivery-address**

Provides the address of the person who receives the event messages or the directory location and file name where InfoPrint stores the message.

– *GUI label*
  Address

– *Type*
  Single-valued

– *Allowed Values*
  You can enter a text string that contains the user name and node (optional) of the person that receives the information or the path to the directory and file name.

– *Default Value*
  The login ID of the user who created this actual destination.

– *Usage Guidelines*
  You must specify a value for **delivery-address** if you specify a value of **file**, **file-add-to**, **exit**, or **wireless** for the **delivery-method** component.

- **delivery-method**
  Specifies how the user or file receives event messages.

  – *GUI label*
    Method

  – *Type*
    Single-valued

  – *Allowed Values*
    You can enter one of these fixed values:

Fixed Value	*Input Synonym*
electronic-mail	**e-mail**, **email**
file	
file-add-to	
message	
exit	
none	
wireless	

  – *Default Value*
    message

  – *Usage Guidelines*

    ♦ If you specify a value of **file**, **file-add-to**, **exit**, or **wireless**, you must specify a value for the **delivery-address** component.
    ♦ When you specify a value of **file**, the file is used for the life of the object. If you create another object with the same file name, the file gets replaced.

- When you specify a value of **file-add-to**, several objects write notifications to the same file, and it is never erased or recreated.

- **event-comment**
  Supplies textual information that InfoPrint prepends to the event message.
  - *GUI label*
    Comment
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a text string up to 4095 characters long that contains the comment.
  - *Default Value*
    No default value
- **locale**
  Defines the language and code page of notification messages.
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter the name of any locale for which the InfoPrint messages in the corresponding language are installed.
  - *Default Value*
    The locale of the person who created this actual destination.

notify-operator

Identifies people who are to receive the messages specified by the job attributes **job-start-message** and **job-end-message**.

GUI label

Operators to notify

DSS

All

Type

Resettable, multi-valued, complex

Input Synonym

You can use the synonym **operators**.

Syntax

delivery-method:delivery-address

Separate each pair of values with a colon, for example:

```
message:op2@phyptr1
```

Components

- **delivery-method**
  Specifies how the person receives the messages.
  - *GUI label*
    Method
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter one of these fixed values:

Fixed Value	*Input Synonym*
electronic-mail	**e-mail**, **email**
exit	
message	
none	
wireless	

  - *Default Value*
    message
  - *Usage Guidelines*
    - If you specify a value of **wireless** for the **delivery-method** component, you must specify a value for the **delivery-address** component of the **notify-operator** attribute.
    - If you specify a value of **exit** for the delivery-method component, you must specify the name of the exit program to execute in the **delivery-address** component of the **notify-operator** attribute.
- **delivery-address**
  Provides the address of the person to receive the messages.
  - *GUI label*
    Address
  - *Type*
    Single-valued
  - *Allowed Values*
    Enter a login ID and node.

– *Default Value*
The login ID of the person who created this actual destination.

– *Usage Guidelines*

- If you specify a value of **wireless** for the **delivery-method** component, you must specify a value for the **delivery-address** component of the **notify-operator** attribute.
- If you specify a value of **exit** for the delivery-method component, you must specify the name of the exit program to execute in the **delivery-address** component of the **notify-operator** attribute.

number-up-supported

Specifies the number of pages that this actual destination can print on a single side of the paper.

GUI label

Number up allowed

DSS

CUPS, Email, PSF

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

Fixed Value	*Input Synonym*
imposition-simple-1-up	**1up**
imposition-simple-2-up	**2up**
imposition-simple-3-up	**3up**
imposition-simple-4-up	**4up**
generic-none	

Default Values

imposition-simple-1-up, **imposition-simple-2-up**, **imposition-simple-3-up**, **imposition-simple-4-up**, **generic-none**

Usage Guidelines

- The value **generic-none** applies only to the actual destination. You cannot request this value with the document attribute **number-up**.

When the values for **number-up-supported** include **generic-none**, the actual destination accepts documents without a value for the **number-up** attribute. The actual destination also accepts documents without a value for the **number-up** attribute when there are no values for **number-up-supported**.

- InfoPrint Manager compares the document attribute **number-up** to this attribute for validation and scheduling.
- You can use this attribute to restrict use of this actual destination.
- For CUPS DSS destinations, the ability to generate **number-up** pages depends on the printer driver file (PPD) associated with the **printer-model**.

object-class

Identifies the object class to which this object belongs.

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to **destination**.

Default Value

destination

offset-stacking-available

Indicates whether PSF command-attached or other-driver attached actual destinations support offsetting jobs in the output stack.

GUI label

Allow offset stacking

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

- This attribute applies only to PSF command-attached and other-driver attached actual destinations. Other actual destinations ignore this attribute.
- Offset stacking occurs only if the form definition for the job specifies offset stacking.
- PPDS and PCL4 data streams do not support the offset stacking option; therefore, this attribute has no effect on destinations using those data streams.
- This attribute is not used for job validation or scheduling.

operators

See **notify-operator**.

optimize-for-multiple-copies

Used with the **optimize-for-multiple-copies** job attribute to indicate whether the printer device should save pages to print multiple copies of the job faster.

GUI label

Optimize for copies

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

true

For these models created using the basic InfoPrint Manager Administration GUI:

InfoPrintColor130Plus
InfoPrint4000
InfoPrint4000-ID5-ID6
InfoPrint4000-IR3-IR4
InfoPrint4100-HD1-HD2
InfoPrint4100-HD3-HD4
InfoPrint4100-HD5-HD6
InfoPrint4100-MD1-MD2
InfoPrint4100-PD1-PD2
InfoPrint4100-TD1-TD2
InfoPrint4100-TD3-TD4
InfoPrint4100-TD5-TD6
InfoPrint5000-AD1-AD2
InfoPrint5000-AD3-AD4
InfoPrint5000-AD3-AD4-XR3
InfoPrint5000-AS1
InfoPrint5000-AS3
InfoPrint5000-KM3
InfoPrint5000-KM3/MD4
InfoPrint5000-MP-MC1-MC2
InfoPrint5000-MP-MD3-MD4
InfoPrintProC900AFP

false

All other actual destinations

Usage Guidelines

- Do not use this attribute for any MO:DCA file that the **Include Saved Page** structured field is specified.
- Do not use this attribute for any document that you created using the **output-format** attribute.
- This attribute is used in combination with the **optimize-for-multiple-copies** job attribute:

Job Attribute	*Destination Attribute*	*Results*
true	**true**	Pages are saved
true	**false**	Pages are not saved
false	**true**	Pages are not saved
false	**false**	Pages are not saved
No value	**true**	Pages are saved
No value	**false**	Pages are not saved

- If the printer device cannot save pages, the job is printed and this attribute is ignored.
- When **optimize-for-multiple-copies** is set to **true** or **yes**, the job does not print until all the pages in the job are loaded on the printer.
- The **optimize-for-multiple-copies** attribute does not apply to ASCII data unless the ASCII data has been processed by ACIF.
- If **optimze-for-multiple-copies** is **true**, the **delete-segment-list** job attribute is **false**, and the actual destination is in save pages mode, the job stays on the job queue and can be reprinted at a later time. However, when a retained job is on a printer that supports color management resources (CMRs), InfoPrint Manager issues message `0424-517 Printer color setup may have changed from when pages were saved` that states color fidelity on the retained job cannot be guaranteed, processing continues, and the printed output should be verified.

orientations-supported

See **content-orientations-supported**.

other-options

See **destination-pass-through**.

output-appearances-supported

Use the **halftones-supported** attribute to specify the **output-appearances-supported** attribute values. (See halftones-supported, p. 632 for more information.) The **output-appearances-supported** attribute is supported to maintain downward compatibility, but it is not the recommended attribute for specifying the output-appearance values that this actual destination supports.

Identifies the values for the document attribute **output-appearance** that this actual destination supports.

DSS

PSF

Type

Resettable, multi-valued

Allowed Values

You can enter a customized value or any of these fixed values:

- **standard**
- **accutone**
- **highlight-midtones**
- **dark**
- **dark2**

Default Values

standard, **accutone**, **highlight-midtones**, **dark**,**dark2**

Usage Guidelines

- InfoPrint compares the document attribute **output-appearance** to this attribute for validation and scheduling.
- You can use this attribute to restrict use of this actual destination.

output-bin

Specifies the name of the output bin to which you want InfoPrint Manager to direct output.

GUI label

Default output bin

DSS

CUPS, DFE, PSF

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 255 characters long that contains the output bin name.

Default Value

CUPS, DFE, and PSF

No default value

Usage Guidelines

- **For PSF**

  The name you specify must match the name in one of the values for these attributes:

  PSF

  output-bin-numbers
- InfoPrint Manager only uses the value you specify for the **output-bin** actual destination attribute if you do not specify a value for the **output-bin** document attribute and if the form definition InfoPrint Manager uses for the job does not specify an output bin.
- This attribute is valid for ASCII documents in a job only if it is not changed between documents in the job.
- With PSF command and PSF other:
  - If a job is requesting Medium Maps with a bin, the job goes to the appropriate bin.
  - If the user sets a default bin, the job goes to the appropriate bin if the bin name is numeric.
- **For CUPS**
  - InfoPrint Manager maps the value to an output bin using the corresponding driver option set in the printer model configuration file. For more information, see "Mapping Attributes and Values to PPD Options" in the *RICOH InfoPrint Manager for Linux: Getting Started*.
- **For DFE**
  - InfoPrint Manager maps the value to the corresponding output bin option that the DFE server understands.

output-bin-numbers

Specifies a bin name followed by a bin number. For PSF, InfoPrint Manager uses this attribute to map names of output bins, such as `top`, to bin numbers that the printer device understands.

For DFE, InfoPrint Manager uses this attribute to map names of output bins to bin options that the DFE server understands.

For CUPS, InfoPrint Manager uses this attribute to map names of output bins, such as top, and bin numbers, such as 1, to the corresponding driver option set in the printer model configuration file. For more information, see "Mapping Attributes and Values to PPD Options" in the *RICOH InfoPrint Manager for Linux: Getting Started*.

GUI label

Map output bin to number

DSS

CUPS, DFE, PSF

Type

Resettable, multi-valued, complex

Syntax

bin-name:bin-number

Separate each pair of values with a colon, for example:

```
top:1
staple:2
```

Components

- **bin-name**
  The name of an output bin.
  - *GUI label*
    Bin name
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a text string containing a bin name.
- **bin-number**
  The number that the printer device has assigned to the output bin.
  - *GUI label*
    Bin number
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a numeric value.

Default Values

For CUPS and PSF printers, if SNMP communication is active, InfoPrint Manager queries the printer device and sets the values according to the response; otherwise no default value.

Usage Guidelines

- For explanations on the attribute values, see the job attribute **output-bin**.
- InfoPrint Manager automatically updates the **output-bins-supported** actual destination attribute from the value or values that you set for this attribute.
- For DFE printers, the **bin-number** component is not used.
- For CUPS and PSF printers, the InfoPrint Manager server can automatically set the value for **output-bin-numbers** for an SNMP printer **only** if you do **not** explicitly set the attribute when creating or modifying the actual destination or if you reset the attribute to the InfoPrint Manager default.

Note

For PSF Other and PSF Command attached printers, the **output-bin** name needs to be numeric to be used by PSF. Otherwise, the default **output-bin** is used.

output-bins-supported

Identifies the supported output bins on the printer device.

Output bins allowed

DSS

CUPS, DFE, IPP, PSF

Type

Resettable, multi-valued

Allowed Values

CUPS, PSF

InfoPrint Manager sets this value from the values you supply for the **output-bin-numbers** actual destination attribute. If you add or delete a value from the **output-bin-numbers** attribute, InfoPrint Manager modifies this attribute to match your change.

Default Values

CUPS, PSF

No default value

DFE

- **banner-sheet-stacker**
- **extended-option**
- **finisher-shift-tray-1**
- **finisher-shift-tray-2**
- **finisher-booklet**
- **folding-unit**
- **limitless-finisher**
- **limitless-stacker**
- **second-stacker**
- **second-stacker-upper**
- **stacker**
- **stacker-upper**

Usage Guidelines

- For explanations on the attribute values, see the job attribute **output-bin**.
- InfoPrint Manager compares the value of the **output-bin** document attribute to this attribute during job validation and scheduling.

- You can use this attribute to restrict the use of this actual destination.

output-color-management-resource

Specifies the information for the output or instruction color resource.

GUI label

Output color management resource

DSS

PSF

Type

Resettable, single-valued, per-document

Allowed Values

You can enter any valid output color resource values, including ICC Profiles, ICC Profile file names, Color Management Resource (CMR) short names, CMR file names, and CMR long names.

Default Value

No default value

Usage Guidelines

- This attribute is used to support color resource management.
- Use this attribute together with the **color-rendering-intent**, **destination-model**, and **resource-context** attributes.
- In normal processing, specify an **input-color-management-resources** attribute along with an associated **output-color-management-resources** attribute. If one is specified without the other, there will not be any error and InfoPrint will use the internal default values as the not specified attribute values at the transform level.
- If you do not specify the **input-color-management-resources** document/default document attribute and the **output-color-management-resource** attribute, and you specify the **output-color-management-resource-tag** document/default document attribute, InfoPrint will ignore the **output-color-management-resource-tag** attribute.
- If you specify the **output-color-management-resource** as an ICC Profile instead of an AFP CMR, InfoPrint will ignore the **output-color-management-resource-tag** and **output-color-management-resource-inline** attributes at the transform level.

output-data-user-exit

Specifies the name of a program that monitors output data from this actual destination. For example, the output data exit program can print a report at the end of a job listing the start and end time and the

number of fonts, page segments, and overlays in the job so that you can track output device performance.

GUI label

Output data exit

DSS

DFE, Email, PSF

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 255 characters.

Default Value

No default value

Usage Guidelines

You can use the sample output data user exit program supplied with InfoPrint Manager:

- for AIX: **/usr/lpp/psf/bin/ainuxout** (source **/usr/lpp/psf/exits/ainuxout.c**)
- for Windows: *install_path***\bin\ainuxout** (source *install_path***\usr\lpp\psf\exits\ainuxout.c)**, where *install_path* indicates the path where you installed InfoPrint Manager for Windows.

or you can write your own user-exit program.

For more information about user-exit programs for InfoPrint Manager, visit the Ricoh website.

output-format-supported

Used to identify the ways of imposing pages on a sheet that this actual destination supports.

GUI label

Output formats allowed

DSS

CUPS, Email, PSF

Type

Resettable, multi-valued

Allowed Values

You can specify any of these fixed values for Email, PSF:

- **side-by-side-copies**
- **simple-n-up**
- **booklet-print**
- **booklet-print-with-integrated-cover**
- **slit-and-merge**

You can specify any of these fixed values for CUPS:

- **booklet-print**

Default Value

For Email, PSF:

- **booklet-print-with-integrated-cover**
- **side-by-side-copies**
- **simple-n-up**
- **booklet-print**
- **slit-and-merge**

For CUPS:

- **booklet-print-with-integrated-cover**

Usage Guidelines

- See the document attribute **output-format** for explanations of the attribute values.
- InfoPrint compares the document attribute **output-format** to this attribute for validation and scheduling.
- You can use this attribute to restrict use of this actual destination.
- You should not use **booklet-print** or **booklet-print-with-integrated-cover** with a job ticket. The other output formats listed with **output-format-supported** should be used with caution with job tickets, because the other output formats apply to signatures and not individual pages.
- The **booklet-print**, **booklet-print-with-integrated-cover**, and **simple-n-up** values are not supported when the **reverse-page-order** actual destination and document attributes are true.

overlay

Specifies an overlay that InfoPrint uses for each sheet-side for all jobs printed on this actual destination.

GUI label

Medium overlay

DSS

DFE, Email, PSF

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 8 characters long that contains the name of the overlay.

Default Value

No default value

Usage Guidelines

This attribute is valid for ASCII documents in a job only if it is not changed between documents in the job.

page-preprinted-form-overlay-back

Specifies the preprinted form overlays for the pages on the back sheet side.

GUI label

Page preprinted form overlay back

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 8 characters long that contains the name of the overlay.

Default Value

No default value

page-preprinted-form-overlay-front

Specifies the preprinted form overlays for the pages on the front sheet side.

GUI label

Page preprinted form overlay front

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 8 characters long that contains the name of the overlay.

Default Value

No default value

page-select-supported

Specifies the type of page numbering that this actual destination supports.

GUI label

Range of pages allowed

DSS

AIX, CUPS, DFE, Email, Passthrough, PSF

Type

Resettable, multi-valued

Allowed Values

You can enter a fixed value of **numeric**.

Default Value

numeric

Usage Guidelines

InfoPrint Manager compares the document attribute **page-select** to this attribute for validation and scheduling.

pcl-server-address

Identifies the Internet Protocol address (IP Address parameter) of the host where the daemon that transforms PCL data imbedded in an AFP data file is located in.

GUI label

PCL server address

DSS

DFE, Email, PSF

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 4095 characters long that is either of these types of address:

Hostname (recommended):

The host name of this actual destination. For example: example.domain.com.

IPv4 address

A series of integers in the range of 0 to 255, each separated by a period (.) (decimal address). For example:

```
9.99.12.85
```

IPv6 address

Eight groups of four hexadecimal digits, each group has 16 bits. The groups are separated by colons (:). For example:

```
2001:0ce8:58a3:0000:0000:6a2e:0370:3734
```

Default Value

127.0.0.1 (the local host)

Usage Guidelines

This attribute is not used in transforming PCL data that is not imbedded in AFP data files.

pcl-server-port

Identifies the Port Number parameter of the host where the daemon that transforms PCL data imbedded in an AFP data file is located in.

GUI label

PCL server port

DSS

DFE, Email, PSF

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 1 through 2147483647, but you typically enter an integer from 5001 to 65535.

Default Value

8253

Usage Guidelines

This attribute is not used in transforming PCL data that is not imbedded in AFP data files.

physical-printer

See **destination-name**.

plex

Identifies the plexes that this printer prints. Plex indicates whether the page images of the output document are conditioned for eventual one-sided or two-sided printing and the relative orientation of consecutive pages.

GUI label

Plex to print

DSS

AIX, CUPS, DFE, PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

- **simplex**
- **tumble**

Default Values

AIX, CUPS

simplex

DFE

No default value

PSF

simplex

Usage Guidelines

- The value of the **plex** attribute must be one of the values of the **plexes-supported** attribute.
- This attribute is valid for ASCII documents in a job only if it is not changed between documents in the job.
- InfoPrint Manager uses plex specifications in this order:

  1. The **plex** document attribute unless you specify different values for this attribute for each document in a job and also specify a value for the document form-definition attribute. In this case, InfoPrint Manager ignores the **plex** document attribute.
  2. The plex specification in the document or default document form definition.
  3. The **plex** actual destination attribute.

  Note

  Because all supplied form definitions contain a plex specification, the **plex** actual destination attribute is used only with custom form definitions that do not contain a plex specification.

plexes-supported

Identifies the plexes that this actual destination supports. Plex indicates whether the page images of the output document are conditioned for eventual one-sided or two-sided printing and the relative orientation of consecutive pages.

GUI label

Plexes allowed

DSS

AIX, BSD, CUPS, DFE, PSF

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

- **simplex**
- **tumble**

Default Values

AIX, CUPS

simplex

BSD

No default value

DFE

simplex, tumble

PSF (standard InfoPrint Manager Administration GUI and command line)

If SNMP communication is active, InfoPrint Manager queries the printer device and sets the values according to the response; otherwise **simplex**, **tumble**.

PSF (basic InfoPrint Manager Administration GUI)

If SNMP communication is active, InfoPrint Manager queries the printer device and sets the values according to the response; otherwise **simplex**, **tumble**.

Usage Guidelines

- InfoPrint Manager compares the document attribute **plex** to this attribute for scheduling.
- The InfoPrint Manager server can automatically set the value for **plexes-supported** for an SNMP printer **only** if you do **not** explicitly set the attribute when creating or modifying the actual destination or if you reset the attribute to the InfoPrint Manager default.

postscript-server-address

Identifies the Internet Protocol address (IP Address parameter) of the host where the daemon that transforms PostScript data imbedded in an AFP data file is located.

GUI label

PostScript server address

DSS

DFE, Email, PSF

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 4095 characters long that is either of these types of address:

Hostname (recommended):

The host name of this actual destination. For example: example.domain.com.

IPv4 address

A series of integers in the range of 0 to 255, each separated by a period (.) (decimal address). For example:

```
9.99.12.85
```


IPv6 address

Eight groups of four hexadecimal digits, each group has 16 bits. The groups are separated by colons (:). For example:

```
2001:0ce8:58a3:0000:0000:6a2e:0370:3734
```

Default Value

127.0.0.1 (the local host)

Usage Guidelines

This attribute is not used in transforming PostScript data that is not imbedded in AFP data files.

postscript-server-port

Identifies the Port Number parameter of the host where the daemon that transforms PostScript data imbedded in an AFP data file is located in.

GUI label

PostScript server port

DSS

DFE, Email, PSF

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 1 through 2147483647, but you typically enter an integer from 5001 to 65535.

Default Value

8251

Usage Guidelines

This attribute is not used in transforming PostScript data that is not imbedded in AFP data files.

presentation-fidelity-problem-reported

Identifies the types of errors that cause this actual destination to stop printing when InfoPrint detects them.

GUI label

Presentation fidelity problem reported

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Explanation*
barcode	InfoPrint stops printing the file when it detects an error in bar code data in the Bar Code Object Content Architecture (BCOCA) data stream or if the printer device does not support BCOCA.
image	InfoPrint stops printing the file when it detects an error in image or graphics data in the Image Object Content Architecture (IOCA) or Graphics Object Content Architecture (GOCA) data streams, or if the printer device does not support IOCA or GOCA.
all	InfoPrint stops printing the file if it detects either barcode or image data problems.
none	InfoPrint prints the file without reporting barcode or image errors.

Default Value

none

presentation-object-container-extraction-mode

Specifies the degree of optimization attempted by transforms.

GUI label

Presentation object container extraction mode

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

ignore

All data is ripped.

inline

Resources are identified and extracted for reuse in a document, and the resources are kept as part of the file.

Default Value

ignore

print-edge-marks

Specifies whether this actual destination prints edge marks on the output.

GUI label

Print edge marks

DSS

PSF TCP/IP

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

print-qualities-supported

Identifies the levels of print quality available on this actual destination.

GUI label

Print qualities allowed

DSS

AIX, BSD

Type

Resettable, multi-valued

Input Synonym

You can use the synonym **qualities-supported**.

Allowed Values

You can enter any of these fixed values:

- **draft**
- **high**
- **normal**

Default Values

AIX

normal

BSD

No default value

Usage Guidelines

- InfoPrint compares the document attribute **print-quality** to this attribute for validation and scheduling.
- You can use this attribute to restrict use of this actual destination.

print-queue

See **print-queue-name**.

print-queue-name

Specifies which print queue is the default value for the **destination-command** attribute.

GUI label

```
AIX print queue (AIX DSS)
Windows print queue (Passthrough DSS)
```

DSS

AIX, Passthrough, PSF

Type

Initially settable, single-valued

Input Synonym

You can use the synonym **print-queue**.

Allowed Values

You can enter a text string up to 255 characters long that contains the name of the appropriate print queue.

Default Value

No default value

Usage Guidelines

- Do not confuse this attribute with the **associated-queue** attribute, which specifies the InfoPrint queue that sends jobs to this actual destination.
- If the attachment-type is **AIX**, InfoPrint uses this attribute to determine the default value following the **-P** flag in the **destination-command** attribute.
- If the attachment type is not AIX, Passthrough, or PSF Other, InfoPrint does not use the **print-queue-name** attribute.

printer

See **destination-name**.

printer-command

See **destination-command**.

printer-data-stream

See **destination-data-stream**.

printer-end-sheet

Identifies the style of end sheet that the printer device uses.

GUI label

End sheet

DSS

AIX, CUPS, DFE, PSF

Type

Resettable, single-valued

Allowed Values

You can enter the name of any auxiliary sheet object. For PSF only, you can enter an identifier of an auxiliary-sheet object. The supplied auxiliary sheet objects include:

Fixed Value	*DSS*	*Explanation*
accounting-log	PSF	This value is technically valid, but should not be used for end sheets.
blank	PSF	The end sheet is blank.
brief	AIX, CUPS, PSF	For AIX and PSF the end sheet style is brief. For CUPS the end sheet style is standard.
full	AIX, DFE, CUPS, PSF	For AIX and PSF the end sheet style is full. For CUPS and DFE the end sheet style is standard.
job-ticket	PSF	The job ticket is printed on the end sheet.

Fixed Value	*DSS*	*Explanation*
none	AIX, DFE, CUPS, PSF	No end sheet prints.
64*xx*	PSF	The end sheet style is for the 64*xx* and 6500 printers.

Default Value

AIX

full

CUPS, DFE, PSF

none

Usage Guidelines

- PSF actual destinations can use auxiliary-sheet objects if they have valid **psf-exit-***xxx* values. AIX actual destinations print auxiliary sheets, but they do not use auxiliary-sheet objects.
- InfoPrint verifies that the value of this attribute is a value of the **end-sheets-supported** attribute.
- For the **AIX DSS** and the **PSF-Other DSS**, if the **destination-command** attribute is set to **pioinfo** backend, InfoPrint Manager disables the auxiliary pages if it detects a **Print and Hold** job request.

printer-escape-codes

Specifies the printer escape codes that this actual destination uses to print line-data jobs.

GUI label

Escape codes

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter a string up to 4095 characters long containing the printer escape codes.

Syntax

Escape codes must be in lowercase format and cannot include spaces. You must enter unprintable characters, and can enter printable characters, in this format:

\x*nn*

where *nn* is a two-character (one-byte) hexadecimal code. For example:

```
\x1b
```

represents ESC

Default Value

No default value

Usage Guidelines

Use printer escape codes to control fonts, line spacing, and the size of the output page, enabling more than 80 characters to print on a line. For example, this hex string:

```
\x1b\x5b\x53\x0c\x00\x01\x20\x01\x20\x00\x00\x4b\x60\x38\x40\x4e\xc0
```

translates to these values:

1b

ESC

5b

Left square bracket

53

S

0c00

Length of command

0120

Top margin (0.2 inches)

0120

Bottom margin (0.2 inches)

0000

Left margin (0 inches)

4b60

Right margin (13.4 inches)

3840

Page length (10 inches)

4ec0

Page width (14 inches)

The first four values (ESC, [, S, command length) are always the same in a string of escape codes specifying page dimensions. The values representing the margins and page length and width are hex values in 1440ths of an inch and can be changed to meet your specifications. All dimensions are measured as if the page were printed in portrait.

printer-locations

See **destination-location**.

printer-memory

Defines the amount of printer memory (in kilobytes) for this PSF command-attached or other-driver attached printer.

GUI label

Memory (KBytes)

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 512 to 65535. The unit is kilobytes.

Default Value

Other-driver attached actual destinations

65535

Command-attached actual destinations

65535

Other attachment types

No default value

Usage Guidelines

- InfoPrint Manager uses this attribute with PSF command-attached actual destinations and other-driver attached actual destinations and ignores it for other attachment types.
- If the printer device reports an out-of-memory condition, you can add more memory to the printer device or decrease the value for this attribute.
- When printing with double byte fonts, the value for the **printer-memory** actual destination attribute must be 65535 kilobytes.

printer-model

See **destination-model**.

printer-name

See **destination-name**.

printer-needs-attention-time

See **destination-needs-attention-time**.

printer-needs-key-operator-attention-time

See **destination-needs-key-operator-attention-time**.

printer-pass-through

See **destination-pass-through**.

printer-realization

See **destination-realization**.

printer-register-threshold

See **destination-realization**.

printer-release-timer

See **destination-release-timer**.

printer-resolutions-ready

Specifies which of the values specified for the **printer-resolutions-supported** attribute this actual destination is ready to use.

GUI label

Resolutions ready

DSS

CUPS, DFE, Email, PSF

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values: **240, 300, 360, 480, 600, 720, 1200**.

The unit is pels for PSF and dpi for CUPS and DFE.

Default Values

InfoPrint 5000 printer

720, **360**

Basic InfoPrint Manager Administration GUI

600

CUPS, DFE

600

Email

300

For all other printers (Standard InfoPrint Manager Administration GUI and command line)

None

Usage Guidelines

- For explanations on the attribute values, see the job attribute **default-printer-resolution**.
- This attribute applies only for printing image data. It has no effect on font resolutions.
- See the printer device documentation for information about the resolution you should specify.
- If you specify a resolution that the printer device does not support, jobs will still print under most conditions. However, you might see poor printed results.
- The values of the **printer-resolutions-ready** attribute must be a subset of the values of the **printer-resolutions-supported** attribute.

- If you do not provide a printer resolution when you submit the job or the printer does not support the current value for the **default-printer-resolution** document attribute, the job might still print, but you might see poor printed results.
- If the **default-printer-resolution** document attribute is not set, the first value specified with the **printer-resolutions-ready** attribute will be used.
- The InfoPrint 5000 series printers only support 360 and 720 resolutions. All other printer models do not support these resolutions.
- If the **printer-resolution-ready** attribute is not set, the image transform uses the value specified in the transform configuration file, while the other transforms use the 300 resolution.

printer-resolutions-supported

Specifies the resolution, for PSF and Email in pels and for CUPS in dpi, at which the printer device can print jobs.

GUI label

Resolutions allowed

DSS

CUPS, DFE, Email, PSF

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

Fixed Value	*DSS*
240	CUPS, Email, PSF
300	CUPS, Email, PSF
360	CUPS, Email, PSF
480	CUPS, Email, PSF
600	CUPS, Email, PSF
720	CUPS, Email, PSF
1200	CUPS, Email, PSF

The unit is pels for PSF and Email, and dpi for CUPS.

Default Values

CUPS

1200, 240, 300, 360, 480, 600, 720

PSF

InfoPrint 5000 printer (command line): 720, 360

All other printers: none

DFE, PSF (basic and standard InfoPrint Manager Administration GUI)

1200, 240, 300, 360, 480, 600, 720

Usage Guidelines

- For explanations on the attribute values, see the job attribute **default-printer-resolution**.
- This attribute applies only for printing image data. It has no effect on font resolutions.
- See the printer device documentation for information about the resolution you should specify.
- If you specify a resolution that the printer device does not support, jobs will still print under most conditions. However, you might see poor printed results.
- You can use this attribute to restrict use of this actual destination.
- The InfoPrint 5000 series printers only support 360 and 720 resolutions. All other printer models do not support these resolutions.

printer-separator-sheet

Identifies the style of separator sheet that the printer device uses.

GUI label

Slip/Separator sheet

DSS

AIX, CUPS, PSF

Type

Resettable, single-valued

Allowed Values

You can enter the name of any auxiliary sheet object. For PSF only, you can enter an identifier of an auxiliary-sheet object. The supplied auxiliary sheet objects include:

Fixed Value	*DSS*	*Explanation*
accounting-log	PSF	This value is technically valid, but should not be used for separator sheets.
blank	PSF	The separator sheet is blank.
brief	AIX, CUPS, PSF	For AIX and PSF the separator sheet style is brief.

Fixed Value	*DSS*	*Explanation*
full	AIX, CUPS, PSF	For CUPS the separator sheet style is standard. For AIX and PSF the separator sheet style is full.
job-ticket	PSF	For CUPS the separator sheet style is standard. The job ticket is printed on the separator sheet.
none	AIX, CUPS, PSF	No separator sheet prints.
64*xx*	PSF	The separator sheet style is for the 64*xx* and 6500 printers.

Default Value

AIX

none

CUPS

none

PSF

none

Usage Guidelines

- PSF actual destinations can use auxiliary-sheet objects if they have valid **psf-exit-***xxx* values. AIX actual destinations print start, separator, and end sheets, but they do not use auxiliary-sheet objects.
- For AIX DSS and PSF-Other DSS, if the **destination-command** attribute is set to **pioinfo** backend, InfoPrint Manager disables the auxiliary pages if it detects a **Print and Hold** job request.
- InfoPrint verifies that the value of this attribute is a value of the **separator-sheets-supported** attribute.

printer-start-sheet

Identifies the type of start sheet that this printer device uses.

GUI label

Start sheet

DSS

AIX, CUPS, DFE, IPP, PSF, Passthrough

Type

Resettable, single-valued

Allowed Values

You can enter the name of any auxiliary sheet object. For PSF only, you can enter an identifier of an auxiliary-sheet object. The supplied auxiliary sheet objects include:

Fixed Value	*DSS*	*Explanation*
accounting-log	PSF	This value is technically valid, but should not be used for start sheets.
blank	PSF	The start sheet is blank.
brief	AIX, CUPS, PSF, IPP, Passthrough	For AIX, IPP, Passthrough, and PSF the start sheet style is brief. For CUPS the start sheet style is standard
full	AIX, CUPS, PSF, IPP, Passthrough, DFE	For AIX, IPP, Passthrough, and PSF the start sheet style is full. For CUPS and DFE, the start sheet style is standard.
job-ticket	PSF	The job ticket is printed on the start sheet.
none	AIX, CUPS, PSF, IPP, Passthrough, DFE	No start sheet prints.
filename	IPP, Passthrough	The location of a customized auxiliary sheet template.
64*xx*	PSF	The start sheet style is for the 64xx and 6500 printers.

Default Value

AIX, IPP, Passthrough, DFE

full

CUPS

none

PSF (standard InfoPrint Manager Administration GUI and command line)

full

PSF (basic InfoPrint Manager Administration GUI)

job-ticket

Usage Guidelines

- PSF actual destinations can use auxiliary-sheet objects if they have valid **psf-exit-***xxx* values. AIX actual destinations print start and end sheets, but they do not use auxiliary-sheet objects.
- For the **AIX DSS** and the **PSF-Other DSS**, if the **destination-command** attribute is set to **pioinfo** backend, InfoPrint Manager disables the auxiliary pages if it detects a **Print and Hold** job request.
- InfoPrint verifies that the value of this attribute is a value of the **start-sheets-supported** attribute.
- For IPP and Passthrough printers, the auxiliary sheets specified with *filename* can be customized by copying and modifying one of these template files shipped with InfoPrint Manager for Windows:

  install_path\bin\brief.ps

  Template for "brief" format, Postscript output format

  install_path\bin\full.ps

  Template for "full" format, Postscript output format

  install_path\bin\brief.txt

  Template for "brief" format, PCL/ASCII output format

  install_path\bin\full.txt

  Template for "full" format, PCL/ASCII output format

  The template files contain special *insert formatting* characters that are used to indicate where the Passthrough DSS inserts certain information about the print job:

  %B

  Large *banner style* job-owner/job-originator/user-name (whichever is found first)

  %t, %T

  job-name heading, job-name contents

  %p, %P

  time printed heading, time printed contents

  %q, %Q

  job-submission-time heading, job-submission-time contents

  %h, %H

  actual-destination and server heading, actual-destination and server contents

  %s, %S

  job-owner/job-originator/user-name heading, job-owner/job-originator/user-name contents

  %d, %D

  results-profile delivery-address, %s heading, results-profile delivery-address, or %S contents

  %c, %C

  job-comment heading, job-comment contents

printer-state

See **destination-state**.

printer-tcpip-internet-address

See **destination-tcpip-internet-address**.

printer-tcpip-port-number

See **destination-tcpip-port-number**.

printer-timeout-period

See **destination-timeout-period**.

printer-webpage-internet-address

Identifies the location of the printer webpage.

GUI label

Printer Web Page

DSS

AIX, CUPS, DFE, PSF TCP/IP, PSF Other, PSF Command, BSD, Passthrough, IPP.

Type

Resettable, multi-valued

Syntax

text

Allowed Values

Any valid web addresses.

Default Value

`http://destination-tcpip-internet-address`

Usage Guidelines

When you copy an actual destination, the value of the **printer-webpage-internet-address** attribute is automatically updated with the new value of the **destination-tcpip-internet-address** attribute.

problem-message

Provides information about the cause of a problem with a actual destination.

GUI label

Problem message

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to a text string that contains the message information.

Default Value

No default value

Usage Guidelines

- This attribute can contain problem information whenever the actual destination state is not **idle**, **connecting-to-printer**, or **printing**.
- If the actual destination state is **needs-key-operator**, InfoPrint disables the actual destination. If the actual destination uses SNMP, InfoPrint automatically re-enables it when the problem is corrected. To prevent automatic re-enabling, manually disable the actual destination.

protected-attributes

Specifies one or more actual destination attributes that InfoPrint Manager operators cannot modify.

GUI label

Protected attributes

Type

Resettable, multi-valued

Allowed Values

You can enter one or more actual destination attribute names.

Default Value

This attribute always specifies itself, **protected-attributes**, as a value.

Usage Guidelines

Anyone with **write** permission for actual destinations can set values for actual destination attributes. By default, the **admin** and **oper** groups both have **write** permission. Once you define an actual destination attribute as a protected attribute, you must have actual-destination **delete** permission to modify the attribute. Members of the **oper** group do not have actual-destination **delete** permission unless the administrator modifies the default permissions for that group.

psf-tray-characteristics

Defines the current characteristics of the input trays on this output device.

GUI label

Media ready

DSS

PSF

Type

Resettable, multi-valued, complex

Syntax

input-tray:medium-loaded:job-bin-number:tray-number:duplex-supported

Separate values with colons, for example:

```
top:letter:1:1:false
```

Components

- **input-tray**
  Specifies which input tray this value defines.
  - *GUI label*
    Input tray
  - *Type*

Single-valued

– *Allowed Values*

You can enter any name you want, for example:

- **alternate**
- **bottom**
- **envelope**

Note

For PSF command-attached and PSF other-driver-attached printers, the string `envelope` must be included in the name.

- **insert**

Note

The **insert** input tray is on the finisher, not the printer device itself. This means that you cannot print inserts with the rest of the job. If you want printed inserts, preprint them and load the printed sheets into the **insert** input tray.

- **large-capacity**
- **main**
- **manual**

Note

For PSF command-attached and PSF other-driver-attached printers, the string `manual` must be included in the name.

- **side**
- **top**

– *Default Value*

The first value in the InfoPrint Manager GUI for input tray.

• **media-loaded**

Specifies the medium that is now in the input tray. InfoPrint adds the value you specify for this component automatically to the **media-ready** actual destination attribute.

– *GUI label*

Media ready

– *Type*

Single-valued

– *Allowed Values*

The value you specify does not have to match one of the values specified by the **medium-identifier** medium attributes. However, it must be one of the values specified by the **media-supported** attribute for this actual destination.

For PSF-other and PSF-command DSSs, these types of media is supported:

a3
iso-a3-colored
iso-a3-white

a4
iso-a4-colored
iso-a4-transparent
iso-a4-white
a5
iso-a5–colored
iso-a5-white
a6
iso-a6-white
jis-b4
jis-b4-colored
jis-b4-white
b5
iso-b5-colored
iso-b5-envelope
iso-b5-white
jis-b5
jis-b5-colored
jis-b5-white
jis-b6
jis-b6-white
executive
legal
na-legal-colored
na-legal-white
letter
na-letter-colored
na-letter-transparent
na-letter-white
na-number-9-envelope
iso-c5-envelope
iso-designated-long-envelope
na-number-10-envelope
monarch-envelope
folio
8x13
invoice
tabloid
jpost
jpostd
hagaki
env-b5

– *Default Value*

The default value for PSF command-attached and other-driver attached actual destinations is **letter**. For other actual destinations, there is no default value.

– *Usage Guidelines*

If you want to change the value of this component, make sure you add the value to the **media-supported** attribute first.

- **job-bin-number**

Specifies a bin number that the data stream can specify to select this input tray.

– *GUI label*

Bin number

– *Type*

Single-valued

– *Allowed Values*

You can enter an integer from 1 to 255.

– *Default Value*

If SNMP communication is active, InfoPrint queries the printer device and sets the values according to the response; otherwise, the default value for PSF command-attached and other-driver attached actual destinations is **3**. For other actual destinations, there is no default value.

– *Usage Guidelines*

♦ Each AFP printer device model has its own configuration of paper input trays, known as bins, each with a specific number. This component maps the value specified for the input tray and loaded media to a bin number that InfoPrint understands and uses. Some values have special meanings:

Input tray names, job bin numbers, and tray numbers on AFP printer devices

Input Tray Name	*Job Bin Number*	*Tray Number*
envelope	65	6
manual	100	2

♦ For PSF-other and PSF command-attached actual destinations, **job-bin-number** must be unique for each input tray. For example, if the actual destination has three input trays, each input tray must have a different **job-bin-number**.

- **tray-number**

Identifies the tray number of the input tray, depending on the printer model, associated with the job bin number.

– *GUI label*

Tray number

– *Type*

Single-valued

– *Allowed Values*

You can enter any integer value that the printer recognizes.

– *Default Value*

The default value for PSF command-attached and other-driver attached actual destinations is **1**. This component does not apply to other attachment types.

For command-attached actual destinations and other-driver attached actual destinations, if you specify any of the values for the **input-tray** name shown in the table under **job-bin-number** and no value for this component, the value for this component defaults to the value shown in the explanation of the **job-bin-number** component.

– *Usage Guidelines*

See the documentation for the printer device for further information about which types of input trays this printer supports.

- **duplex-supported**

Specifies whether two-sided printing is possible from this input tray.

– *GUI label*

Duplex

– *Type*

Single-valued

– *Allowed Values*

You can enter one of these fixed values:

Fixed Value
Input Synonym

true

yes

false

no

– *Default Value*

The default value for PSF command-attached and other-driver attached actual destinations is **false**. This component does not apply to other attachment types.

Default Values

If SNMP communication is active, InfoPrint queries the printer device and sets the values according to the response; otherwise, the default values are as described for each component.

Usage Guidelines

- With PSF command-attached or PSF other-driver attached printers, you can specify a maximum of 15 values, one for each input tray of the printer device.
- For PSF-other and PSF command-attached actual destinations, **job-bin-number** must be unique for each input tray. For example, if the actual destination has three input trays, each input tray must have a different **job-bin-number**.
- With PSF TCP/IP attached printers, there is no limit on the number of values you can specify for **psf-tray-characteristics**.
- InfoPrint automatically sets the **media-ready** and **input-trays-supported** actual destination attributes from the value you set here.

- InfoPrint verifies that the values of the **media-loaded** component of this attribute are values of the **media-supported** attribute.
- The InfoPrint Manager server can automatically set the values for **psf-tray-characteristics** for an SNMP printer **only** if you do **not** explicitly set the attribute when creating or modifying the actual destination or if you reset the attribute to the InfoPrint Manager default.

  Note

  For media, the automatic default only detects the **size** of the medium. If you have different media that are the same size (for example, three different letter-size preprinted forms) and you need to differentiate between them in the attributes, you must explicitly set the attributes instead of using the automatic default.

public-context-presentation-object-container

Identifies which presentation object containers (called data object resources in the IPDS Reference) are public. Any uniquely identified resource found in a directory that is listed in this directory path is a candidate for reuse across jobs.

GUI label

Public presentation object containers

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter the name of a public-context-presentation object or a text string up to 1023 characters long that defines the directory path to the public-context-presentation object. You can specify one or more paths for one public context. You can specify paths for file systems mounted to AIX or Linux, such as MVS data sets and VM minidisks.

Syntax

path:path `for AIX`
path:path `for Linux`
path;path `for Windows`

Separate path names with colons on AIX or Linux, for example:

```
/dor:/dept123/presentation-object-container
```

Separate path names with semicolons on Windows, for example:

```
d:\dor;d:\dept123\presentation-object-container
```

Default Value

With AIX, no default value.

With Linux, no default value.

With Windows, no default value.

pull-print-printer

Indicates that LDAP authenticated jobs are held in the actual destination queue until they are released from the printer device configured in a Pull Print or Anyplace Print environment. If the LDAP authenticated jobs are not released from the printer device, they are deleted from the system according to pull-print-job-timeout.

GUI label

Pull Print Printer

DSS

AIX, CUPS, Passthrough, PSF Other

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

- The **pull-print-printer** attribute can only be set if the Pull Print feature is installed.
- This attribute can be set to **true** only if the **force-printer-setup** is set to **false**, and the **logical-destinations-assigned** and **printer-tcpip-internet-address** attributes are set to any values.
- If you do not want to use SNMP to monitor the printer, set the **use-snmp** attribute to **false**.
- If a printer identified by the **printer-tcpip-internet-address** attribute does not have the Pull Print or Anyplace Print embedded client installed, no pull print jobs can be scheduled to this actual destination.
- On a Passthrough actual destination, the **device-name** attribute must be set to the same printer identified by the **printer-tcpip-internet-address** actual destination attribute. On an AIX and CUPS

actual destination, the **printer-command** attribute must point to the same printer identified by the **printer-tcpip-internet-addres** actual destination attribute.

- The Pull Print Feature does not work if the **pull-print-printer** actual destination is associated with a logical destination in a pdserver and that pdserver does not have a **pull-print-job-timeout** server attribute.

For more information, see *RICOH InfoPrint Manager: Secure Print: Installing and Configuring*.

qualities-supported

See **print-qualities-supported**.

register-threshold

See **destination-register-threshold**.

registered-with-spooler

Indicates whether this actual destination and the server containing the actual destination's queue have established communication.

GUI label

Registered with spooler

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets one of these fixed values:

- **true**
- **false**

Default Value

false

remote-queue

Indicates whether the backend program sends data to a remote print queue rather than controlling this AIX actual destination directly.

GUI label

Use remote print queue

DSS

AIX, PSF (AIX only with other-driver attachment type)

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

- If the printer backend program is a variation of, or front end to, **rembak**, specify **true**. Examples of **rembak**–based backend programs include **piorflb** and **piocolor**.
- When you are working with AIX DSS actual destinations, see "Creating and Managing Actual Destinations" in the *InfoPrint Manager for AIX: Administrator's Guide* for information about correcting the configuration of **remote-queue** printers that have **device-name** set to /dev/null.

resource-context

Defines the default directory paths that InfoPrint Manager searches for AFP resources, including fonts, form definitions, overlays, page definitions, page segments, and color mapping tables.

GUI label

Location of resources

DSS

DFE, Email, PSF

Type

Resettable, single-valued

Allowed Values

You can enter the name of a resource-context object or a text string up to 4095 characters long that defines the directory path to fonts. You can specify one or more paths for one resource context. You can specify paths for file systems mounted to AIX or Linux, such as MVS data sets and VM minidisks.

For more information about how InfoPrint Manager searches file extensions for resources, see "Creating and Managing Resource-Context Objects" in *RICOH InfoPrint Manager for AIX: Procedures* or *RICOH InfoPrint Manager for Linux: Procedures*.

Syntax

path:path:resourcecontextname `for AIX`
path:path:resourcecontextname `for Linux`
path;path;resourcecontextname `for Windows`

Where *resourcecontextname* is the name of the resource context object that is located in the server namespace.

Separate multiple paths with a colon on AIX and Linux or a semicolon on Windows, for example:

- In AIX or Linux,

```
/fonts:/dept123/fonts
```

- In Windows,

```
d:\fontlib;d:\dept123\fonts
```

Default Value

With AIX or Linux, no default values, but InfoPrint Manager always searches:

1. **/usr/lpp/psf/reslib**
2. **/usr/lpp/afpfonts**
3. **/usr/lpp/psf/fontlib**

With Windows, no default values, but InfoPrint Manager always searches:

1. *install_path***\reslib**
2. *install_path***\fontlib**

Usage Guidelines

- You can use this attribute to locate default resources or color mapping tables.
- The path length is limited to 4095 characters. Moreover, the total combined length of all paths specified by the following attributes must not exceed 7700 characters:
  - **resource-context**

- **resource-context-font**
- **resource-context-form-definition**
- **resource-context-overlay**
- **resource-context-page-segment**

- InfoPrint Manager searches resource paths in this order:

1. **resource-context-user** document attribute
2. **resource-context-font**, **resource-context-form-definition**, **resource-context-overlay**, **resource-context-page-definition**, or **resource-context-page-segment** document attribute, as appropriate for the type of resource.
3. **resource-context** document attribute
4. **PSFPATH** environment variable
5. **resource-context-font**, **resource-context-form-definition**, **resource-context-overlay**, **resource-context-page-definition**, or **resource-context-page-segment** actual destination attribute, as appropriate for the type of resource
6. **resource-context** actual destination attribute
7. With AIX or Linux:
    1) **/usr/lpp/psf/reslib**
    2) **/usr/lpp/psf/afp2pdf/reslib;/usr/lpp/psf/reslib** (Email only)
    3) **/usr/lpp/afpfonts**
    4) **/usr/lpp/psf/fontlib**
8. With Windows, where *install_path* indicates the path where you installed InfoPrint Manager for Windows:
    1) *install_path***reslib**
    2) *install_path***fontlib**
    3) *install_path***afp2pdf\reslib;install_path\reslib** (Email only)

Note

InfoPrint Email DSS searches resource paths in the mentioned order during processing. At print time, InfoPrint Email DSS uses the **resource-context** document/default document/destination attribute.

If InfoPrint Manager cannot find the resource because none of the paths contain the resource, it still processes the job and prints error messages at the end of the job. InfoPrint Manager reports the job as completed.

- InfoPrint Manager uses the default directory paths for AFP resources specified with **resource-context** at print time; they are not searched by ACIF or the **line2afp** transform during processing. When you need to have ACIF or the **line2afp** transform search the default directory paths for AFP resources, use the **resource-context** document/default document attribute.
- When using Color Mapping Tables with InfoPrint Manager, you must identify the path for your table explicitly. There is no default path for Color Mapping Tables.

resource-context-font

Defines the directory paths that InfoPrint Manager searches for fonts for the job.

GUI label

Location of fonts

DSS

DFE, Email, PSF

Type

Resettable, single-valued

Allowed Values

You can enter the name of a resource-context object or a text string up to 1023 characters long that defines the directory path to the AFP resources. You can specify one or more paths for one resource context.

Syntax

path:path `for AIX`
path:path `for Linux`
path;path `for Windows`

Separate multiple paths with a colon on AIX and Linux or a semicolon on Windows.

Default Value

With AIX or Linux, no default values, but InfoPrint Manager always searches **/usr/lpp/psf/reslib**.

With Windows, no default values, but InfoPrint Manager always searches *install_path***reslib**.

Usage Guidelines

- You can use this attribute to locate default resources.
- The path length is limited to 1023 characters. Moreover, the total combined length of all paths specified by the following attributes must not exceed 7700 characters:
  - **resource-context**
  - **resource-context-font**
  - **resource-context-form-definition**
  - **resource-context-overlay**
  - **resource-context-page-segment**
- InfoPrint Manager searches resource paths in this order:
  1. **resource-context-user** document attribute
  2. **resource-context-font** document attribute
  3. **resource-context** document attribute
  4. **PSFPATH** environment variable
  5. **resource-context-font** actual destination attribute
  6. **resource-context** actual destination attribute

7. With AIX or Linux:
    1) **/usr/lpp/psf/reslib**
    2) **/usr/lpp/afpfonts** for fonts
    3) **/usr/lpp/psf/fontlib** for fonts
8. With Windows:
    1) *install_path***reslib**
    2) *install_path***fontlib** for fonts

- If InfoPrint Manager cannot find the resource because none of the paths contain the resource, it still processes the job and prints error messages at the end of the job. InfoPrint Manager reports the job as completed.
- InfoPrint Manager uses the directory paths for fonts specified with **resource-context-font** at print time; they are not searched by ACIF or the **line2afp** transform during processing. When you need to have ACIF or the **line2afp** transform search the directory paths for fonts, use the **resource-context-font** document/default document attribute.

resource-context-form-definition

Defines the directory paths that InfoPrint Manager searches for the form definition for the job.

GUI label

Location of form definitions

DSS

DFE, Email, PSF

Type

Resettable, single-valued

Allowed Values

You can enter the name of a resource-context object or a text string up to 1023 characters long that defines the directory path to form definitions. You can specify one or more paths for one resource context. You can specify paths for file systems mounted to AIX or Linux, such as MVS data sets and VM minidisks.

Syntax

path:path `for AIX`
path:path `for Linux`
path;path `for Windows`

Separate path names with colons on AIX and Linux or semicolons on Windows, for example:

- For AIX or Linux:

```
/formdef:/dept123/form
```

- For Windows:

```
install_path\reslib\formdef;d:\dept123\form
```

Default Value

With AIX or Linux, no default values, but InfoPrint Manager always searches **/usr/lpp/psf/reslib**.

With Windows, no default values, but InfoPrint Manager always searches *install_path***reslib**.

Usage Guidelines

- You can use either the document or the actual destination **form-definition** attribute to specify the form definition.
- The path length is limited to 1023 characters. Moreover, the total combined length of all paths specified by the following attributes must not exceed 7700 characters:
  - **resource-context**
  - **resource-context-font**
  - **resource-context-form-definition**
  - **resource-context-overlay**
  - **resource-context-page-segment**
- InfoPrint Manager searches paths in this order:
  1. **resource-context-user** document attribute
  2. **resource-context-form-definition** document attribute
  3. **resource-context** document attribute
  4. **PSFPATH** environment variable
  5. **resource-context-form-definition** actual destination attribute
  6. With AIX or Linux, **/usr/lpp/psf/reslib**
  7. With Windows, *install_path***reslib**
- If InfoPrint Manager cannot find the resource because none of the paths contain the resource, it still processes the job and prints error messages at the end of the job. InfoPrint Manager reports the job as completed.
- InfoPrint Manager uses the directory paths for the form definition for the job specified with **resource-context-form-definition** at print time; they are not searched by ACIF or the **line2afp** transform during processing. When you need to have ACIF or the **line2afp** transform search the directory paths for the form definition for the job, use the **resource-context-form-definition** document/default document attribute.

resource-context-overlay

Defines the directory paths that InfoPrint Manager searches for an overlay for the job.

GUI label

Location of overlays

DSS

DFE, Email, PSF

Type

Resettable, single-valued

Allowed Values

You can enter the name of a resource-context object or a text string up to 1023 characters long that defines the directory path to overlays. You can specify one or more paths for one resource context. You can specify paths for file systems mounted to AIX or Linux, such as MVS data sets and VM minidisks.

Syntax

path:path `for AIX`
path:path `for Linux`
path;path `for Windows`

Separate path names with colons on AIX or Linux, for example:

```
/overlay:/dept123/overlay
```

Separate path names with semicolons on Windows, for example:

```
c:\overlay;d:\dept123\overlay
```

Default Value

With AIX or Linux, no default values, but InfoPrint Manager always searches **/usr/lpp/psf/reslib**.

With Windows, no default values, but InfoPrint Manager always searches *install_path***\reslib**.

Usage Guidelines

- You use a form definition for the job to specify the overlay.
- The path length is limited to 1023 characters. Moreover, the total combined length of all paths specified by the following attributes must not exceed 7700 characters:
  - **resource-context**
  - **resource-context-font**
  - **resource-context-form-definition**
  - **resource-context-overlay**
  - **resource-context-page-segment**
- InfoPrint Manager searches paths in this order:
  1. **resource-context-user** document attribute
  2. **resource-context-overlay** document attribute
  3. **resource-context** document attribute
  4. **PSFPATH** environment variable
  5. **resource-context-overlay** actual destination attribute
  6. With AIX or Linux, **/usr/lpp/psf/reslib**

7. With Windows, *install_path***reslib**

- If InfoPrint Manager cannot find the resource because none of the paths contain the resource, it still processes the job and prints an error messages at the end of the job. InfoPrint Manager reports the job as completed.
- InfoPrint Manager uses the directory paths for an overlay for the job specified with **resource-context-overlay** at print time; they are not searched by ACIF or the **line2afp** transform during processing. When you need to have ACIF or the **line2afp** transform search the directory paths for an overlay for the job, use the **resource-context-overlay** document/default document attribute.

resource-context-page-definition

Defines the directory paths that InfoPrint Manager searches for a page definition for the job.

GUI label

Location of page definitions

DSS

DFE, Email, PSF

Type

Resettable, single-valued

Allowed Values

You can enter the name of a resource-context object or a text string up to 4095 characters long that defines the directory path to page definitions. You can specify one or more paths for one resource context. You can specify paths for file systems mounted to AIX or Linux, such as MVS data sets and VM minidisks.

Syntax

path:path `for AIX`
path:path `for Linux`
path;path `Windows`

Separate path names with colons on AIX or Linux for example:

```
/pagedef:/dept123/page-definition
```

Separate path names with semicolons on Windows, for example:

```
c:\pagedef;d:\dept123\page-definition
```

Default Value

With AIX or Linux, no default values, but InfoPrint Manager always searches **/usr/lpp/psf/reslib**.

With Windows, no default values, but InfoPrint Manager always searches *install_path***reslib**.

Usage Guidelines

- You use the **page-definition** document attribute to specify the page definition for the job.
- InfoPrint Manager searches paths in this order:
  1. **resource-context-user** document attribute
  2. **resource-context-page-definition** document attribute
  3. **resource-context** document attribute
  4. **PSFPATH** environment variable
  5. **resource-context-page-definition** actual destination attribute
  6. With AIX or Linux, **/usr/lpp/psf/reslib**
  7. With Windows, *install_path***reslib**
- If InfoPrint Manager cannot find the resource because none of the paths contain the resource, it still processes the job and prints error messages at the end of the job. InfoPrint Manager reports the job as completed.
- InfoPrint Manager uses the directory paths for a page definition for the job specified with **resource-context-page-definition** at print time; they are not searched by ACIF or the **line2afp** transform during processing. When you need to have ACIF or the **line2afp** transform search the directory paths for a page definition for the job, use the **resource-context-page-definition** document/default document attribute.

resource-context-page-segment

Defines the directory paths that InfoPrint Manager searches for page segments for the job.

GUI label

Location of page segments

DSS

DFE, Email, PSF

Type

Resettable, single-valued

Allowed Values

You can enter the name of a resource-context object or a text string up to 1023 characters long that defines the directory path to page segments. You can specify one or more paths for one resource context. You can specify paths for file systems mounted to AIX or Linux, such as MVS data sets and VM minidisks.

Syntax

path:path `for AIX`
path:path `for Linux`
path;path `for Windows`

Separate path names with colons on AIX or Linux, for example:

```
/pageseg:/dept123/page-segment
```

Separate path names with semicolons on Windows, for example:

```
d:\pageseg;d:\dept123\page-segment
```

Default Value

With AIX or Linux, no default values, but InfoPrint Manager always searches **/usr/lpp/psf/reslib**.

With Windows, no default values, but InfoPrint Manager always searches *install_path***reslib**.

Usage Guidelines

- Page segments are identified in the document. If the document refers to a page segment that is located external to the document, its location must be specified in at least one of the components of the search path as described below.
- InfoPrint Manager searches paths in this order:
  1. **resource-context-user** document attribute
  2. **resource-context-page-segment** document attribute
  3. **resource-context** document attribute
  4. **PSFPATH** environment variable
  5. **resource-context-page-segment** actual destination attribute
  6. For AIX or Linux, **/usr/lpp/psf/reslib**
  7. For Windows, *install_path***reslib**
- If InfoPrint Manager cannot find the resource because none of the paths contain the resource, it still processes the job and prints error messages at the end of the job. InfoPrint Manager reports the job as completed.
- InfoPrint Manager uses the directory paths for a page segment for the job specified with **resource-context-page-segment** at print time; they are not searched by ACIF or the **line2afp** transform during processing. When you need to have ACIF or the **line2afp** transform search the directory paths for a page segment for the job, use the **resource-context-page-segment** document/default document attribute.
- The path length is limited to 1023 characters. Moreover, the total combined length of all paths specified by the following attributes must not exceed 7700 characters:
  - **resource-context**
  - **resource-context-font**
  - **resource-context-form-definition**
  - **resource-context-overlay**
  - **resource-context-page-segment**

resource-context-presentation-object-container

Adds to the directory paths that InfoPrint searches for color management resources (CMRs) and presentation object containers (called data object resources in the *IPDS Reference*, such as EPS, IOCA images, or PDF pages) for the actual destination.

GUI label

Location of presentation object containers

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter the name of a resource-context-presentation object, a CMR, or a text string up to 1023 characters long that defines the directory path to the resource-context-presentation object. You can specify one or more paths for one resource context. You can specify paths for file systems mounted to AIX or Linux, such as MVS data sets and VM minidisks.

Syntax

path:path `for AIX`
path:path `for Linux`
path;path `for Windows`

Separate path names with colons on AIX or Linux, for example:

```
/dor:/dept123/presentation-object-container
```

```
/cmr:/dept321/color-management-resource
```

Separate path names with semicolons on Windows, for example:

```
d:\dor;d:\dept123\presentation-object-container
```

```
d:\cmr;d:\dept321\color-management-resource
```

Default Value

With AIX or Linux, no default values, but InfoPrint always searches **/usr/lpp/psf/reslib**.

With Windows, no default values, but InfoPrint always searches *install_path***reslib**.

Usage Guidelines

- Presentation objects are identified in the document. If the document refers to an object that is located external to the document, its location must be specified in at least one of the components of the search path as described below.
- InfoPrint searches paths in this order:

1. **resource-context-user** document attribute
2. **resource-context-presentation-object-container** document attribute
3. **resource-context** document attribute
4. **PSFPATH** environment variable
5. **resource-context-presentation-object-container** actual destination attribute
6. For AIX or Linux, **/usr/lpp/psf/reslib**
7. For Windows, *install_path***\reslib**

- If InfoPrint cannot find the resource because none of the paths contain the resource, it still processes the job and prints error messages at the end of the job. InfoPrint reports the job as completed.
- InfoPrint Manager uses the directory paths for presentation object containers for the actual destination specified with **resource-context-presentation-object-containers** at print time; they are not searched by ACIF or the **line2afp** transform during processing. When you need to have ACIF or the **line2afp** transform search the directory paths for presentation object containers for the actual destination, use the **resource-context-presentation-object-container** document/default document attribute.

reuse-inline-presentation-object-container

Specifies whether uniquely identified resources discovered inline are candidates for reuse across jobs. For printers that support the capture of presentation-object containers, resources can be reused across invocations of PSF or in shared environments with PSF/MVS.

GUI label

Reuse inline presentation object containers

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

reverse-page-order

Indicates whether this actual destination should print pages of a job in reverse order, that is, last page first.

GUI label

Reverse page order

DSS

CUPS, DFE, Email, PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

- When you use **reverse-page-order**, there is a delay before a job begins printing because the entire job must rip before the pages can be printed in reverse order.
- When you use **reverse-page-order**, the **explicit-page-placement** attribute and the form definition can be affected. While the **reverse-page-order** attribute reverses the order of the pages in the job, it does not alter the layout that InfoPrint Manager uses for the job. This can result in the pages of the job appearing in different positions on the sheet than if **reverse-page-order** were not used. For example, with a two-page job, if the form definition has the front page offset by a certain amount, but not the back page, then after reversing the job, page 2, which is now first to be output, will be offset instead of page 1, which is now on the back of the sheet. To fix this situation, the form definition and other attributes (such as, **overlay**, **overlay-front**, **overlay-back**, **x-image shift**, **x-image-shift-back**, **y-image-shift**, and **y-image-shift-back**) should be modified to get the correct placement of the pages on the output sheets. This modification needs to be done by the user or system administrator.
- The **reverse-page-order** attribute does not apply to ASCII, booklet jobs, or simple-n-up jobs.
- When using **reverse-page-order** with simplex jobs, a blank page can be added at the front of the document if the document has an odd number of pages.
- When using **reverse-page-order** with **slit-and-merge** value on the **output-format** attribute, a blank sheet can be added if more than one blank page would be needed to make the document a

multiple of 4 pages. For instance, if the document has 1 or 2 pages, 5 or 6 pages, 9 or 10 pages, then a blank sheet is added to the end of the reversed job, after the first page from the input file. This would mean that, when flipping the output over, the blank sheet is in front of page 1. For cases where no pages need to be added, or only one page needs to be added, as in the case of a 7 or 8-page document, the output does not contain any blank sheets.

scanner-corrections-supported

Identifies the scanner calibration methods for which this actual destination supports correction.

GUI label

Scanner corrections allowed

DSS

PSF

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

- **Ricoh420**
- **XeroxDocuimage620S**
- **none**

Default Values

Ricoh420, **XeroxDocuimage620S**, **none**

Usage Guidelines

InfoPrint compares the document attribute **scanner-correction** to this attribute for validation and scheduling.

scheduler-sort-primary-order

Identifies which of the schedulers specified by the **schedulers-supported** attribute InfoPrint uses to determine how to schedule jobs.

GUI label

Primary scheduler

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Explanation*
deadline	InfoPrint schedules jobs with the earliest deadline first.
fifo	InfoPrint schedules jobs in the order they are submitted.
job-priority	InfoPrint schedules jobs in order of priority.
longest-job-first	InfoPrint schedules jobs in order of job page count, longest first.
shortest-job-first	InfoPrint schedules jobs in order of job page count, shortest first.

Default Value

job-priority

Usage Guidelines

The **scheduler-sort-primary-order** and **scheduler-sort-secondary-order** actual destination attributes work together in scheduling jobs and have these interdependencies:

- If **scheduler-sort-primary-order** is set to **fifo**, the **scheduler-sort-secondary-order** is cleared.
- If **scheduler-sort-primary-order** changes from **fifo** to a value other than **fifo**, **scheduler-sort-secondary-order** must be set to some value at the same time on the same command or an error occurs trying to set **scheduler-sort-primary-order**.

scheduler-sort-secondary-order

Identifies which of the schedulers specified by the **schedulers-supported** attribute InfoPrint uses to determine how to break ties produced by the scheduler specified by the **scheduler-sort-primary-order** attribute. For example, if you normally schedule jobs by priority, you can specify that when two jobs have the same priority, InfoPrint should schedule the shorter one first.

GUI label

Secondary scheduler

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Definition*
deadline	InfoPrint schedules jobs with the earliest deadline first.
fifo	InfoPrint schedules jobs in the order they are submitted.
job-priority	InfoPrint schedules jobs in order of priority.
longest-job-first	InfoPrint schedules jobs in order of job page count, longest first.
shortest-job-first	InfoPrint schedules jobs in order of job page count, shortest first.

Default Value

fifo

Usage Guidelines

The **scheduler-sort-primary-order** and **scheduler-sort-secondary-order** actual destination attributes work together in scheduling jobs and have these interdependencies:

- If **scheduler-sort-primary-order** is set to **fifo**, the **scheduler-sort-secondary-order** is cleared.
- If **scheduler-sort-primary-order** changes from **fifo** to a value other than **fifo**, **scheduler-sort-secondary-order** must be set to some value at the same time on the same command or an error occurs trying to set **scheduler-sort-primary-order**.

schedulers-supported

Identifies the scheduling algorithms that this actual destination supports.

GUI label

Schedulers allowed

DSS

All

Type

Non-settable, multi-valued

Allowed Values

InfoPrint sets this value to these fixed values:

Fixed Value	*Definition*
deadline	InfoPrint schedules jobs with the earliest deadline first.
fifo	InfoPrint schedules jobs in the order they are submitted.
job-priority	InfoPrint schedules jobs in order of priority.
longest-job-first	InfoPrint schedules jobs in order of job page count, longest first.
shortest-job-first	InfoPrint schedules jobs in order of job page count, shortest first.

Default Values

deadline, **fifo**, **job-priority**, **longest-job-first**, **shortest-job-first**

screen-frequencies-supported

Use the **halftones-supported** attribute to specify the **screen-frequencies-supported** attribute values. (See halftones-supported, p. 632 for more information.) The **screen-frequencies-supported** attribute is supported to maintain downward compatibility, but it is not the recommended attribute for specifying screen frequencies for printing halftones.

Identifies the screen frequencies used for printing halftones that this actual destination supports.

DSS

DFE, Email, PSF

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

- **71**
- **85**
- **106**
- **141**

Default Values

71, **85**, **106**, **141**

Usage Guidelines

InfoPrint Manager compares the document attribute **screen-frequency** to this attribute for validation and scheduling.

separator-sheets-supported

Identifies the separator sheets that this actual destination supports.

GUI label

Slip/Separator sheets allowed

DSS

AIX, CUPS, PSF

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values. For PSF only, you can enter a string up to 255 characters long that contains identifiers of auxiliary-sheet objects.

Fixed Value	*DSS*	*Explanation*
accounting-log	PSF	This value is technically valid, but should not be used for separator sheets.
blank	PSF	The separator sheet is blank.
brief	AIX, CUPS, PSF	For AIX and PSF the separator sheet style is brief. For CUPS the separator sheet style is standard.
full	AIX, CUPS, PSF	For AIX and PSF the separator sheet style is full. For CUPS the separator sheet style is standard.
job-ticket	PSF	The job ticket is printed on the separator sheet.
none	AIX, CUPS, PSF	No separator sheet prints.
64xx	PSF	The separator sheet style is for the 64xx and 6500 printers.

Default Values

AIX, CUPS

none, **brief**, **full**

PSF

accounting-log, **blank**, **brief**, **full**, **job-ticket**, **none**, **64*xx***, and the names of other defined auxiliary sheets which have legal PSF auxiliary sheet attributes.

Usage Guidelines

- PSF actual destinations can use auxiliary-sheet objects if they have valid **psf-exit-***xxx* values. AIX actual destinations print start, separator, and end sheets, but they do not use auxiliary-sheet objects.
- InfoPrint verifies that the value of the **printer-separator-sheet** attribute is a value of this attribute.
- You cannot delete a value from this attribute if the value you want to delete is the value of the **printer-separator-sheet** attribute.
- For PSF actual destinations, InfoPrint sets this value dynamically to the names of all defined auxiliary sheets with legal attributes. You should never have to reset this value.

setup-name

Specifies a setup name that includes a group of settings to use for printing. The setup is created by a user of the printer. Depending on the printer vendor, the setup name might be referred to as "printer setup", "printer snapshot" or "printer profile".

GUI label

Setup name

DSS

PSF TCP/IP

Type

Resettable, single-valued, per-job

Allowed Values

Any string text up to 100 bytes.

Default Value

No default value

Usage Guidelines

- The value you specify for this attribute overrides any selection in the form definition.
- If the setup name is not already the active setup on the printer, the start auxiliary sheet does not print using the requested setup name for the job.
- If the setup name requested for a job is not already the active setup name on the printer, the printer ejects to a new sheet and stacks all received pages. This can result in a blank sheet while printing in cut sheet emulation (CSE) mode, a blank side if duplex is used, or a blank partition if N-up is being used.

- The **setup-name** attribute is used together with the **setup-names-ready** actual destination attribute.

setup-names-ready

Lists the setup names stored on an IPDS printer.

GUI label

Setup names ready

DSS

PSF TCP/IP

Type

Non-settable, multi-valued, per-printer

Allowed Values

A list of setup-names from the physical printer, each text string up to 100 bytes.

Default Value

No default value

Usage Guidelines

- There is no supported attribute associated with the **setup-names-ready** attribute. Therefore, a job with any **setup-name** is accepted, but it can remain in the queue until the appropriate **setup-names-ready** value is set.
- InfoPrint Manager compares the **setup-names-ready** attribute with the **setup-name** job or default job attribute for validation and scheduling.
- InfoPrint Manager sets this attribute when **enable-setup-names-ready** is set to **true** and if the **destination-state** value is **shutdown**.
- InfoPrint Manager sets this attribute when the **destination-tcpip-internet-address** value is changed or immediately after the actual destination was shut down if **enable-setup-names-ready** is set to **true**.
- InfoPrint Manager does not check if the values read from the physical IPDS printer conform to the maximum length of 100 characters.
- InfoPrint Manager resets this attribute when the **enable-setup-names-ready** destination attribute is set to **false**.

shared-printer-name

Specifies the names of the InfoPrint gateway shared printer, if any, that forwards jobs to this destination.

GUI label

Shared gateway printer

DSS

All with Windows servers

Type

Resettable, single-valued

Allowed Values

Text name of a gateway shared printer.

Default Values

Derived from the actual destination name if the server's **auto-create-shared-printers** attribute is **true**; otherwise, no default.

Usage Guidelines

The **shared-printer-name** is automatically set when the gateway printers are automatically created.

sides

Indicates whether the printer device prints on one or two sides of the media.

GUI label

Sides to print

DSS

CUPS, DFE, PSF, Passthrough

Type

Resettable, single-valued

Allowed Values

You can enter an integer value of **1** or **2**.

Default Values

CUPS, DFE

none

PSF, Passthrough

1

Usage Guidelines

- The value of the **sides** attribute must be one of the values of the **sides-supported** attribute.
- This attribute is valid for ASCII documents in a job only if it is not changed between documents in the job.
- InfoPrint Manager uses sides specifications in this order:

  1. The **sides** document attribute unless you specify different values for this attribute for each document in a job and also specify a value for the **form-definition** document attribute. In that case, InfoPrint Manager ignores the **sides** document attribute.
  2. The sides specification in the document or default document form definition.
  3. The sides specification in the actual destination form definition.
  4. The **sides** actual destination attribute.

  Note

  Because all supplied form definitions contain a sides specification, the **sides** actual destination attribute is used only with custom form definitions that do not contain a sides specification.
- When working with the IPP or Passthrough DSSs, set the **sides** attribute to the default duplexing value set on the printer.
- When using the **reverse-page-order** attribute for actual destination or document, the value of the **sides** attribute determines which formdef is used, either simplex or duplex.

sides-supported

Indicates whether this actual destination supports printing on one or two sides of the media.

GUI label

Sides allowed

DSS

AIX, BSD, CUPS, DFE, IPP, PSF, Passthrough

Type

Resettable, multi-valued

Allowed Values

You can enter an integer of 1 or 2.

Default Values

With AIX, PSF, and BSD, if SNMP communication is active, InfoPrint Manager queries the printer device and sets the values according to the response; otherwise, the default follows:

AIX

1

BSD

No default value

CUPS

1

DFE, IPP, PSF- when created with the Standard or Basic (InfoPrint Manager Administration GUI)

1, **2**

Passthrough

1

Usage Guidelines

- You can use this attribute to restrict jobs sent to this actual destination according to the capacity of the output device or your policy for output device use.
- InfoPrint Manager compares the document attribute **sides** to this attribute for scheduling.
- The InfoPrint Manager server can automatically set the value for **sides-supported** for an SNMP printer **only** if you do **not** explicitly set the attribute when creating or modifying the actual destination or if you reset the attribute to the InfoPrint Manager default.
- For CUPS DSS destinations, the ability to print on two sides of the media depends on the printer driver file (PPD) associated with the **printer-model**.

single-cell-type

Indicates the single cell type to be used.

GUI label

Single cell type

Type

Settable, single-valued

Allowed Values

None, elliptical, or euclidian.

Default value

None

Usage Guidelines

- Use this attribute to set the single cell halftone type: none, elliptical, or euclidian.
- This only applies to InfoPrint 4100 model printers. If this attribute is set on a different printer model, the job fails at rip time.

snmp-active

Indicates whether InfoPrint Manager has established Simple Network Management Protocol (SNMP) communications with the output device that this actual destination represents.

GUI label

SNMP is active

DSS

AIX, BSD, CUPS, DFE, PSF, IPP, Passthrough

Type

Non-settable, single-valued

Allowed Values

InfoPrint Manager sets this value to one of these fixed values:

- **true**
- **false**

Default Value

If you have defined a value for the **destination-tcpip-internet-address** attribute and InfoPrint Manager has established SNMP communication with the printer device, **true**; otherwise **false**.

Usage Guidelines

- If you are using SNMPv3 and the **snmp-active** attribute is not set to **true**, the **context-name** attribute might not be set. Some printers require the **context-name** attribute to be set to a specific printer vendor value to allow SNMPv3 connections.
- For DFE printers, the SNMP communication is only used for determining the printer condition. SNMP defaulting of attributes is disabled. However, you can list the device-specific attributes with the **pdls** command by specifying

```
-r all-device
```

snmp-active-version

Specifies which version of SNMP InfoPrint Manager is using to communicate with a printer.

GUI label

SNMP active version

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets one of these fixed values:

- SNMPv1
- SNMPv3
- none

Default Value

none

Usage Guidelines

The **snmp-active-version** attribute indicates which version of SNMP InfoPrint Manager currently uses to communicate with a printer. The value may be different than the value of **snmp-version** if the SNMPv3 communication fails.

snmp-community-name

Specifies the name of the SNMP community that the printer device that this actual destination represents belongs to.

GUI label

Community name

DSS

AIX, BSD, CUPS, DFE, PSF, IPP, Passthrough

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 255 characters long that contains the SNMP community name.

Default Value

public

Usage Guidelines

- If the value of the **use-snmp** attribute is **false**, this attribute is ignored.
- If **snmp-write-community-name** attribute is already set then it is used for both reading and setting SNMP data; in this case the **snmp-community-name** attribute is ignored
- If **snmp-write-community-name** attribute is not set then **snmp-community-name** attribute is used. In this case, any attempts of setting some SNMP data on the device might fail.

snmp-device-conditions

Identifies any conditions reported by SNMP for the printer associated with an actual destination.

DSS

All

Type

Non-settable, multi-valued

Allowed Values

InfoPrint Manager sets and updates the values to one or more of these items that represent the device's conditions:

- **cover-open**
- **fuser-over-temp**
- **fuser-under-temp**
- **input-tray-empty**
- **input-tray-missing**
- **interlock-open**
- **marker-supply-empty**
- **marker-supply-low**
- **marker-supply-missing**
- **marker-waste-almost-full**
- **marker-waste-full**
- **media-empty**
- **media-low**
- **media-missing**
- **moving-offline**
- **moving-online**
- **offline**
- **output-bin-full**
- **output-bin-missing**
- **output-bin-near-full**
- **paper-jam**

- **power-off**
- **service-requested**
- **warmup**

Default Value

No default value

Usage Guidelines

- InfoPrint Manager uses this attribute only when SNMP communications is active for the printer device (**snmp-active** = **true**).
- Depending on the device, only a subset of the possible conditions might be reported.

snmp-retry-count

The **snmp-retry-count** and **snmp-timeout** attributes are used when an SNMP request sent to a particular printer fails. The SNMP request can fail, for example, if there is a network problem. See the **snmp-normal-poll-interval** and **snmp-problem-poll-interval** server attributes for more information about the periodic polling of normal and problem SNMP printers.

Because the server performs periodic polling of all SNMP printers, the **snmp-retry-count** and **snmp-timeout attributes** should be left as the default (small) values. A large number of retries over an extended timeout period are not necessary because the SNMP printer will be contacted again when the next periodic polling of all SNMP printers happens. Large **snmp-retry-count** and **snmp-timeout attributes** values can unnecessarily increase the amount of time required to complete the polling of all the SNMP printers

GUI label

Number of times to retry

DSS

AIX, BSD, CUPS, DFE, PSF, IPP, Passthrough

Type

Resettable, single-valued

Allowed Values

You can enter an integer. If an SNMP request cannot be resolved using a couple of retries, it cannot be resolved. Therefore, it does not accomplish anything to set this at a higher number.

Default Value

2

Usage Guidelines

- Do not change the **snmp-retry-count** attribute unless instructed to do so by Ricoh Support.
- If the value of the **use-snmp** attribute is **false**, this attribute is ignored.

snmp-timeout

The **snmp-retry-count** and **snmp-timeout** attributes are used when an SNMP request sent to a particular printer fails. The SNMP request can fail, for example, if there is a network problem. See the **snmp-normal-poll-interval** and **snmp-problem-poll-interval** server attributes for more information about the periodic polling of normal and problem SNMP printers.

Because the server performs periodic polling of all SNMP printers, the **snmp-retry-count** and **snmp-timeout attributes** should be left as the default (small) values. A large number of retries over an extended timeout period are not necessary because the SNMP printer will be contacted again when the next periodic polling of all SNMP printers happens. Large **snmp-retry-count** and **snmp-timeout attributes** values can unnecessarily increase the amount of time required to complete the polling of all the SNMP printers

GUI label

Timeout (sec)

DSS

AIX, BSD, CUPS, DFE, PSF, IPP, Passthrough

Type

Resettable, single-valued

Allowed Values

You can enter an integer. If an SNMP request cannot be resolved using a couple of retries, it cannot be resolved. Therefore, it does not accomplish anything to set this at a higher number.

Default Value

5

Usage Guidelines

- Do not change the **snmp-timeout** attribute unless instructed to do so by Ricoh Support.
- Set a value of **0** to use the SNMP default timeout period.
- If the value of the **use-snmp** attribute is **false**, this attribute is ignored.

snmpv3-authentication-type

Specifies the authentication protocol used to encrypt and/or decrypt the messages exchange between InfoPrint Manager and the printer.

GUI label

Authentication type

DSS

All

Type

Resettable, single-valued

Allowed Values

Select one of these values:

- MD5
- SHA

Default Value

The default value is `MD5`.

Usage Guidelines

These authentication protocols are supported:

- HMAC-MD5-96 authentication protocol.
- HMAC-SHA-96 authentication protocol.

If the **snmpv3-security-level** attribute is set to `medium` or `maximum`, it specifies the type of authentication protocol used.

Note

This attribute is ignored if SNMPv1 is used. To be valid, this attribute must match the printer settings.

snmpv3-authentication-password

Specifies the authentication key to use with the authentication protocol.

GUI label

Authentication password

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter 8 to 255 ASCII characters.

Default Value

none

Usage Guidelines

This attribute is SNMPv3 specific, and it is mandatory for `medium` or `maximum` security-level. The password used in this field must match the one set up on the printer.

snmpv3-context-name

Specifies the context name set on the printer.

GUI label

Context name

Type

Resettable, single-valued

Allowed Values

Any ASCII string longer or equal to 0 character and shorter or equal to 32

Default value

None

Usage Guidlines

This attribute is SNMPv3 specific, and it is optional. Refer to the printer specifications for more information

snmpv3-privacy-password

Specifies the privacy key to use with the privacy protocol.

GUI label

Privacy password

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter 8 to 255 ASCII characters

Default Value

none

Usage Guidelines

The privacy password set in this field and the privacy password set on the printer must match.

Note

This attribute is SNMPv3 specific, and it is mandatory for maximum security-level.

snmpv3-privacy-type

Specifies the type of privacy protocol.

GUI label

Privacy type

DSS

All

Type

Resettable, single-valued

Allowed Values

DES

The Data Encryption Standard uses a 56-bit key for each 64-bit block of data.

AES-128

The Advanced Encryption Standard uses a 128-bit key for a fixed block size of 128-bit.

AES-192

d
The Advanced Encryption Standard uses a 192-bit key for a fixed block size of 128-bit.

AES-256
The Advanced Encryption Standard uses a 256-bit key for a fixed block size of 128-bit.

Default Value

DES

Usage Guidelines

This attribute setting, must match the printer SNMPv3 privacy type. If the **snmpv3-security-level** attribute is not set to maximum, the **snmpv3-privacy-type** attribute is ignored.

snmpv3-security-level

Specifies the SNMP Version 3 (SNMPv3) security level.

GUI label

Security level

DSS

All

Type

Resettable, single-valued

Allowed Values

Select one of these values:

- maximum
- medium
- minimum

Default Value

minimum

Usage Guidelines

This attribute is related to **snmpv3-username**, **snmpv3-authentication-type**, **snmpv3-authentication-password**, **snmpv3-privacy-type** and **snmpv3-privacy-password** attributes.

- To use the minimum security level, enter a username.
- To use the medium security level:
  - Enter a username and an authentication password.

  - Select the authentication type or leave the default value.
- To use the maximum security level:
  - Select the authentication type or leave the default value.
  - Enter a username and an authentication password.
  - Select the privacy type, or leave the default value.
  - Enter a privacy password.

Note

This attribute is ignored if the **snmp-version** attribute is not set to SNMPv3.

If InfoPrint Manager SNMP v3 security is set higher than the one on the printer, the communication will still be possible because the printer uses only the SNMP attributes it needs.

snmpv3-username

Specifies the name of the user the message is being exchanged for.

GUI label

User name

DSS

All

Type

Resettable, single-valued

Allowed Values

Any ASCII string from 1 to 32 characters.

Default Value

none

Usage Guidelines

This attribute is SNMPv3 specific and must be set when changing the **snmp-version** attribute to SNMPv3. The attribute value must match the same value set on the printer.

snmp-version

Specifies which version of SNMP InfoPrint Manager should use to communicate with a printer.

GUI label

SNMP version

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter one of these allowed values::

- SNMPv1
- SNMPv3

Default Value

SNMPv1

Usage Guidelines

- If this attribute is set to SNMPv3, all the SNMPv3 protocol attribute values must match with the values set on the printer.
- If the value is set to SNMPv1, all the SNMPv3 protocol attributes are ignored.
- You must specify the **snmpv3-username** if you specify the **snmp-version** attribute as **SNMPv3**.

snmp-version-fallback

Specifies if InfoPrint Manager should use SNMPv1 if the communication failed using SNMPv3 protocol.

GUI label

SNMP version fallback

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

- When you set the **snmp-version-fallback** to `true`, InfoPrint Manager automatically sets the **snmp-active-version** attribute to SNMPv1 in case communication errors occur using SNMPv3.
- InfoPrint Manager does not reattempt to connect to a device using SNMPv3 automatically, unless the user requests that by setting the **use-snmp** to **false** and back to **true**.

snmp-write-community-name

Specifies the name of the SNMPv1 write community that the printer device that this actual destination represents belongs to.

GUI label

Write community name

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 255 characters long that contains the SNMP write community name.

Default Value

No default value

Usage Guidelines

- If the value of the **use-snmp** attribute is **false**, this attribute is ignored.
- You must have write permission to the actual destination to view the value of this attribute.
- This attribute must be set to perform the set and execute device management commands.
- If **snmp-write-community-name** attribute is set then it is used for both reading and setting SNMP data; in this case **snmp-community-name** attribute is ignored
- If **snmp-write-community-name** attribute is not set then **snmp-community-name** attribute will be used. In this case, any attempts to set SNMP data on the device might fail.

standard-barcode

Allows the selection of standard or adjusted barcodes for **PSF** command and **PSF other** actual destinations.

GUI label

Standard Barcode

DSS

PSF Other, PSF Command.

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

start-message-supported

Indicates whether the actual destination supports the job attribute **job-start-message**.

GUI label

Send job start message

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

true

Usage Guidelines

- When you set this attribute value to **true**, operators can receive messages that users specify with the **job-start-message** job attribute when they submit the job. InfoPrint sends the message to the operators specified by the **notify-operator** attribute for this actual destination when the job starts printing. Sending a start message does not stop the job from printing; normally the job prints without operator intervention.
- InfoPrint compares the job attribute **job-start-message** to this attribute for validation and scheduling.
- You can use this attribute to restrict use of this actual destination.

start-sheets-supported

Identifies the start sheets that this actual destination supports.

GUI label

Start sheets allowed

DSS

AIX, CUPS, DFE, PSF, IPP, Passthrough

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values. For PSF only, you can enter a string up to 255 characters long that contains identifiers of auxiliary-sheet objects.

Fixed Value	*DSS*	*Explanation*
accounting-log	PSF	This value is technically valid, but should not be used for start sheets.
blank	PSF	The start sheet is blank.
brief	AIX, CUPS, PSF, IPP, Passthrough	For AIX, IPP, Passthrough, and PSF the start sheet style is brief.

Fixed Value	*DSS*	*Explanation*
		For CUPS the start sheet style is standard.
full	AIX, CUPS, DFE, PSF, IPP, Passthrough	For AIX, IPP, Passthrough, and PSF the start sheet style is full. For CUPS and DFE the start sheet style is standard.
job-ticket	PSF	The job ticket is printed on the start sheet.
none	AIX, CUPS, PSF, IPP, Passthrough	No start sheet prints.
64*xx*	PSF	The start sheet style is for the 64xx and 6500 printers.

Default Values

AIX, CUPS, IPP, Passthrough

brief, **full**, **none**

DFE

full

PSF

accounting-log, **blank**, **brief**, **full**, **job-ticket**, **none**, **64*xx***, and the names of other defined auxiliary sheets which have legal PSF auxiliary sheet attributes.

PSF created with Basic InfoPrint Manager Administration GUI

job-ticket

Usage Guidelines

- PSF actual destinations can use auxiliary-sheet objects if they have valid **psf-exit-***xxx* values. AIX actual destinations print start and end sheets, but they do not use auxiliary-sheet objects.
- InfoPrint Manager verifies that the value of the **printer-start-sheet** attribute is a value of this attribute.
- You cannot delete a value from this attribute if the value you want to delete is the value of the **printer-start-sheet** attribute.
- For PSF actual destinations, InfoPrint Manager sets this value dynamically to the names of all defined auxiliary sheets with legal attributes. You should never have to reset this value.

table-reference-characters-supported

Indicates whether this actual destination supports table reference characters. Some line-data applications produce table reference characters to specify font changes.

GUI label

Table reference characters allowed

DSS

DFE, Email, PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

true

Usage Guidelines

- InfoPrint Manager compares the document attribute **table-reference-characters** to this attribute for scheduling.
- You can use this attribute to restrict use of this actual destination.

timeout-period

See **printer-timeout-period**.

toner-version

Identifies the toner version installed on the printer associated with the actual destination.

GUI label

Toner version

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

- **toner-version-standard**
- **toner-version-2**
- **toner-version-2pqi**
- **toner-version-3**
- **toner-version-5**
- **toner-version-7**
- **toner-version-7pqi**
- **toner-version-8**
- **toner-version-r**

You can also enter a customized value representing a custom halftone version.

Default Value

No default value

Usage Guidelines

- This attribute is used to eliminate the need to run the InfoPrint Manager halftone scripts when you have different toner versions on different printers of the same printer model.
- Use this attribute if you do not want to run the InfoPrint Manager halftone scripts again after applying InfoPrint Manager service updates.
- If you use the **toner-version** attribute and InfoPrint Manager cannot find the halftone in the toner version you specify, the RIP fails.
- See the **halftone** and **halftones-supported** attributes for more information about halftones and how InfoPrint Manager uses halftones.

transform-sequence

Specifies a list of names of transform objects that make up the transform sequence for this actual destination. The order of the values in this attribute determines the order that the transforms are run.

GUI label

Transforms to use

DSS

All

Type

Resettable, multi-valued

Allowed Values

Names of the transform objects.

Default Values

None.

use-snmp

Indicates whether InfoPrint Manager should try SNMP communication with the output device that this actual destination represents.

GUI label

Use SNMP

DSS

AIX, BSD, CUPS, DFE, PSF, IPP, Passthrough

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

true

Usage Guidelines

If InfoPrint Manager fails to establish SNMP contact with an output device, it uses the **ping** command to test whether it is possible to communicate with the device in other ways. If the **ping** command succeeds, InfoPrint Manager concludes that the device is not an SNMP device and resets this attribute to **false**.

Set the **use-snmp** attribute to **false** if you do not want to monitor a pull print printer with SNMP.

wait-for-job-completion

Indicates if InfoPrint Manager asks the printer backend program or the DFE printer to wait for the job to print completely before reporting the job as completed rather than reporting the job as completed as soon as all the data has been sent to the printer.

GUI label

Report job completed when printed

DSS

AIX, CUPS, DFE, PSF Other-Driver on AIX, PSF Other-Driver on Linux

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

true

- for AIX, CUPS, or PSF Other-Driver when the printer and backend support PJL USTATUS or IPP protocol
- for DFE printers

false

- for AIX, CUPS, or PSF Other-Driver when the printer or the backend do not support PJL USTATUS or IPP protocol

Usage Guidelines

- This attribute can be used to activate or deactivate reporting of job completion in the printer backend program or for the DFE DSS printer.
- If your physical printer has a time-out setting, make sure it is disabled when you specify **true** or **yes** for **wait-for-job-completion**.
- There is a performance trade-off when you use this attribute: if you choose **true**, your printer performance might be reduced slightly; and when you choose **false** , the job completion messages might be premature or inaccurate.

- For RAW Port 9100 printing using AIX, CUPS or PSF-Other Driver DSS, the **pioinfo** and **piorpdm** backend programs provide job completion status and job accounting information. For more information about these backend programs, see destination-command, p. 572.
- For AIX, CUPS or PSF-Other Driver DSS, the **pioinfo** and **piorpdm** backend programs obtain status from the printer through the **PJL** commands.
- For AIX, CUPS or PSF-Other Driver DSS, if your physical printer does not support nested PJL JOB commands, use the **pioinfo** backend and add these flags to the printer command: **'-w'** on AIX and **'enable-ustat-count'** on Linux.

  Using host name (recommended):

  – On AIX: `printer-command=/usr/lib/lpd/pio/etc/pioinfo example.domain.com -w`

  – On Linux: `printer-command=pioinfo://example.domain.com enable-ustat-count`

  Using IPv4:

  – On AIX: `printer-command=/usr/lib/lpd/pio/etc/pioinfo 9.99.99.51 -w`

  – On Linux: `printer-command=pioinfo://9.99.99.51 enable-ustat-count`

  Using IPv6:

  – On AIX: `printer-command=/usr/lib/lpd/pio/etc/pioinfo 2001:0ce8:58a3:0000:0000:6a2e:0370:3734 -w` or `printer-command=/usr/lib/lpd/pio/etc/pioinfo 2001:0ce8:58a3:0000:0000:6a2e:0370:3734 9100 -w`

  – On Linux: `printer-command=pioinfo://[2001:0ce8:58a3:0000:0000:6a2e:0370:3734] enable-ustat-count` or `printer-command=pioinfo://[2001:0ce8:58a3:0000:0000:6a2e:0370:3734]:9100 enable-ustat-count`
- For IPP printing using AIX DSS and PSF-Other DSS on AIX, the **pioipps** backend provides job completion status and job accounting. For more information about using the **pioipps** backend, see destination-command, p. 572.
- For IPP printing using AIX DSS and PSF-Other DSS on AIX, the **pioipps** backend obtains job status from the printer through the IPP attribute **job-state**.
- For IPP printing using CUPS or PSF-Other DSS on Linux, the **pioinfo** and the **piorpdm** backends provide job completion status and job accounting information. For example **`destination-command=pioinfo:`**`//ip_address` or **`destination-command=piorpdm:`**`//ip_address`, where *`ip_address`* is the ip address of the printer.
- For more information about using **wait-for-job-completion**, see "Accurate job completion in the AIX DSS" in the *RICOH InfoPrint Manager for AIX: Getting Started* guide.

wait-for-job-completion-snmp-timeout

Used with the **wait-for-job-completion** attribute and a destination command (backend) that is capable of using SNMP to monitor the job. The value specified tells the backend how long to wait after the printer has started accepting the job before giving up on finding an entry for the job in the printer's SNMP job MIB. The **wait-for-job-completion-snmp-timeout** attribute is used only when all of these events occur together:

- When the **wait-for-job-completion** attribute is true

GUI label

Report job completed when printed timeout (sec)

DSS

AIX, PSF Other-Driver on AIX

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 0 through 2147483647.

Default Value

300 seconds (5 minutes)

Usage Guidelines

- If one InfoPrint Manager server is not the only source of jobs for the printer, it might be necessary to increase this value.
- If jobs print but InfoPrint Manager indicates a failure, it might be necessary to increase this value.

warning-message

Provides information about printer device conditions that require attention but allow printing to continue, such as low printer supplies.

GUI label

Warning message

DSS

AIX, BSD, CUPS, PSF, IPP, Passthrough

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to a text string that contains the message information.

Default Value

No default value

Usage Guidelines

InfoPrint uses this attribute only when SNMP communication is active with the printer device.

x-image-shift-range-supported

Specifies, in millimeters, the lower and upper numeric boundaries for the X offset of a page. The X offset, along with the Y offset, sets the origin of the logical page on the physical page.

GUI label

Move image right (inches) or (mm)

DSS

DFE, Email, PSF

Type

Resettable, single-valued, complex

Syntax

lower-limit:upper-limit

Separate values with colons, for example,

```
1:10
```

Components

- **lower-limit**
  Defines the minimum amount of image shift that you can specify with the document or default document attribute **x-image-shift** or **x-image-shift-back**.
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a numeric value from -577.97 through 577.97 mm. The unit of measure is millimeters.
  - *Default Value*
    0
- **upper-limit**
  Defines the maximum amount of image shift that you can specify with the document or default document attribute **x-image-shift** or **x-image-shift-back**.
  - *Type*
    Single-valued
  - *Allowed Values*

You can enter a numeric value from -577.97 through 577.97 mm. The unit of measure is millimeters.

– *Default Value*

577.97 mm

Usage Guidelines

- InfoPrint Manager compares the document attributes **x-image-shift** and **x-image-shift-back** to this attribute for validation and scheduling.
- You can use this attribute to restrict use of this actual destination.

xsl-style-sheet

Identifies the file name of the XSL style sheet used for the XML document. This name can contain full path information, URL information, or just the file name. If you only specify the file name, InfoPrint Manager uses the path specified on the document's **resource-context** attribute to locate the file. When you specify a file name, the XSL style sheet must be located on the server where the **xml2afp** or **xml2pdf** transform runs.

GUI label

XSL style sheet

DSS

DFE, Email, PSF

Type

Settable, single-valued, per-document

Allowed Values

You can enter a text string of up to 4095 characters that contains the XSL style sheet information.

You can specify a value of **none** to indicate that a style sheet should be suppressed because it has been specified with XSL-FO data.

Default Value

No default value

Usage Guidelines

- If an XSL style sheet is specified on either the document or actual destination attribute, it is used to process the XML file that was submitted, even if the file was already XSL-FO.
- If you do not specify an XSL style sheet with the **xsl-style-sheet** document/default document attribute, InfoPrint Manager uses the XSL style sheet that you specify with the **xsl-style-sheet** actual destination attribute.
- InfoPrint Manager does not provide a default XSL style sheet.

y-image-shift-range-supported

Specifies, in millimeters, the lower and upper numeric boundaries for the Y offset of a page. The Y offset, along with the X offset, sets the origin of the logical page on the physical page.

GUI label

Move image down (inches) or (mm)

DSS

DFE, Email, PSF

Type

Resettable, single-valued, complex

Syntax

lower-limit:upper-limit

Separate values with colons, for example,

```
1:20
```

Components

- **lower-limit**
  Defines the minimum amount of image shift that you can specify with the document or default document attribute **y-image-shift** or **y-image-shift-back**.
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a numeric value from -577.97 through 577.97 mm. The unit of measure is millimeters.
  - *Default Value*
    0
- **upper-limit**
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a numeric value from -577.97 through 577.97 mm. The unit of measure is millimeters.
  - *Default Value*
    577.97 mm

Usage Guidelines

- InfoPrint Manager compares the document attributes **y-image-shift** and **y-image-shift-back** to this attribute for validation and scheduling.
- You can use this attribute to restrict use of this actual destination.

Attributes for auxiliary-sheet objects

An auxiliary-sheet object represents:

- An auxiliary sheet that prints with a job sent to a PSF actual destination
- An exit program that generates information about the job for printing on an auxiliary sheet or writing to an accounting log or an audit log

An auxiliary sheet is a sheet of paper that prints at the beginning or end of output, or separating different parts of the output. The auxiliary sheet can have information printed on it identifying the output or can be blank.

The PSF DSS uses the names of auxiliary-sheet objects as values for actual destination attributes, such as **accounting-exit**, **audit-exit**, **start-sheets-supported**, and **printer-start-sheet**. AIX actual destinations print start and end sheets, but they do not use auxiliary-sheet objects.

Initially settable attribute listing

There are no initially settable attributes for auxiliary-sheet objects.

Resettable attribute listing

You can set these attributes with the **pdcreate** command when you create an auxiliary-sheet object or you can modify them with the **pdset** command after you create the object.

- **descriptor**
- **psf-exit-form-definition**
- **psf-exit-page-mark**
- **psf-exit-program-name**
- **psf-post-print-accounting-program-name**

associated-server

Indicates the name of the server where this auxiliary sheet is located.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value when you create an auxiliary sheet for a given server. InfoPrint assigns the *ServerName* portion of the argument from the **pdcreate** command used to create this auxiliary sheet object.

Default Value

No default value

auxiliary-sheet-identifier

Identifies the auxiliary sheet ID.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value when you create an auxiliary sheet for a given server. InfoPrint sets this value to the *AuxiliarySheet* portion of the argument used with the **pdcreate** command when this auxiliary sheet object was created. The value of this attribute must be unique in the server.

Default Value

No default value

descriptor

Provides a description of this auxiliary sheet.

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 4095 characters that describes this auxiliary sheet.

Default Value

No default value

Usage Guidelines

The use of this attribute is optional. However, a detailed description of this auxiliary sheet might be useful to other users or to someone who needs to modify its contents.

object-class

Identifies the object class to which this object belongs.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to **auxiliary-sheet**.

Default Value

auxiliary-sheet

psf-exit-form-definition

Sets the form definition to use when printing this auxiliary sheet.

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 8 characters that contains the name of the form definition. See Form definitions and page definitions supplied with InfoPrint Manager, p. 1191 for a list of available form definitions.

Default Value

No default value

Usage Guidelines

A form definition defines the placement of the data on the auxiliary sheet and other formatting information, such as a printer device bin number. You can use the form definition to select a bin for the auxiliary sheet that is different from the bin used for jobs. For example, you can print auxiliary sheets on a different colored paper than used for the jobs.

psf-exit-page-mark

Specifies whether you want page marks (black marks at the extreme edge of the page used for sorting) to print on this auxiliary sheet.

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
false	**no**
true	**yes**

Default Value

No default value

Usage Guidelines

Page marks are useful for printer devices that cannot perform offset stacking, such as continuous form printers. The marks allow printer operators to see the boundaries of jobs.

psf-exit-program-name

Sets the name of the exit program used to generate this auxiliary sheet.

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 4095 characters that contains a name of a user exit program, an empty string, or no value.

Names of some user exit programs that you can use with AIX

- *Accounting*

  /usr/lpp/psf/bin/ainuxacc2

  Full style

  /usr/lpp/psf/bin/ainuxacc

  Brief style

  /usr/lpp/psf/bin/ainuxaccp

  Job ticket

  /usr/lpp/psf/bin/ainacclog

  Log
- *Auditing*

/usr/lpp/psf/bin/ainuxaud2

Full style

/usr/lpp/psf/bin/ainuxaud

Brief style

/usr/lpp/psf/bin/ainuxaudp

Job ticket

/usr/lpp/psf/bin/ainaudlog

Log

- *Start Sheets*

/usr/lpp/psf/bin/ainuxhdr2

Full style

/usr/lpp/psf/bin/ainuxhdr

Brief style

/usr/lpp/psf/bin/ainuxhdrp

Job ticket

/usr/lpp/psf/bin/ainuxhdrx

Start sheet without vertical lines for 64*xx* and 6500 printers

/usr/lpp/psf/bin/pduxblkh

Blank

- *Separator Sheets*

/usr/lpp/psf/bin/ainuxsep2

Full style

/usr/lpp/psf/bin/ainuxsep

Brief style

/usr/lpp/psf/bin/ainuxsepp

Job ticket

/usr/lpp/psf/bin/ainuxsepx

Separator sheet without vertical lines for 64*xx* and 6500 printers

/usr/lpp/psf/bin/pduxblks

Blank

- *End Sheets*

/usr/lpp/psf/bin/ainuxtlr2

Full style

/usr/lpp/psf/bin/ainuxtlr

Brief style

/usr/lpp/psf/bin/ainuxtlrp

Job ticket

/usr/lpp/psf/bin/ainuxtlrx

End sheet without vertical lines for 64*xx* and 6500 printers

/usr/lpp/psf/bin/pduxblkt

Blank

- *Input Data*

/usr/lpp/psf/bin/ainuxind

This example does not perform any tasks. Use it as a model for writing your own user exit program.

- *Output Data*

/usr/lpp/psf/bin/ainuxout

This example does not perform any tasks. Use it as a model for writing your own user exit program.

Names of some user exit programs that you can use with Windows: In these names, *install_path* indicates the path where you installed InfoPrint Manager for Windows:

- *Accounting*

*install_path***\bin\ainuxacc2**

Full style

*install_path***\bin\ainuxacc**

Brief style

*install_path***\bin\ainuxaccp**

Job ticket

*install_path***\bin\ainacclog**

Log

- *Auditing*

*install_path***\bin\ainuxaud2**

Full style

*install_path***\bin\ainuxaud**

Brief style

*install_path***\bin\ainuxaudp**

Job ticket

*install_path***\bin\ainaudlog**

Log

- *Start Sheets*

install_path\bin\ainuxhdr2

Full style

install_path\bin\ainuxhdr

Brief style

install_path\bin\ainuxhdrp

Job ticket

install_path\bin\ainuxhdrx

Start sheet without vertical lines

install_path\bin\pduxblkh

Blank

- *Separator Sheets*

install_path\bin\ainuxsep2

Full style

install_path\bin\ainuxsep

Brief style

install_path\bin\ainuxsepp

Job ticket

install_path\bin\ainuxsepx

Separator sheet without vertical lines

install_path\bin\pduxblks

Blank

- *End Sheets*

install_path\bin\ainuxtlr2

Full style

install_path\bin\ainuxtlr

Brief style

install_path\bin\ainuxtlrp

Job ticket

install_path\bin\ainuxtlrx

End sheet without vertical lines

install_path\bin\pduxblkt

Blank

- *Input Data*

install_path\bin\ainuxind

This example does not perform any tasks. Use it as a model for writing your own user exit program.

- *Output Data*

  install_path\bin\ainuxout

  This example does not perform any tasks. Use it as a model for writing your own user exit program.

Default Value

No default value

Usage Guidelines

- If the attribute has:

  No value

  The auxiliary sheet does not print.

  An empty string (")

  InfoPrint uses the default user exit program:

  Accounting

  For AIX, **/usr/lpp/psf/bin/ainacclog**; for Windows, *install_path*\bin\ainacclog

  Audit

  No default program

  Start sheet

  For AIX, **/usr/lpp/psf/bin/ainuxhdr**; for Windows, *install_path*\bin\ainuxhdr

  Separator sheet

  No default program

  End sheet

  No default program

  Input data

  No default program

  Output data

  No default program

  Any other value

  InfoPrint uses the specified user exit program to generate auxiliary sheets.

- While you can specify only one user exit program as a value for this attribute, the default auxiliary-sheet objects can invoke any of a set of user exit programs. For example with AIX, the **brief** default auxiliary-sheet object invokes **/usr/lpp/psf/bin/ainuxacc** for accounting exits, **/usr/lpp/psf/bin/ainuxaud** for audit exits, **/usr/lpp/psf/bin/ainuxhdr** for start sheets, **/usr/lpp/psf/bin/ainuxsep** for separator sheets, and **/usr/lpp/psf/bin/ainuxtlr** for end sheets. For example with Windows, the **brief** default auxiliary-sheet object invokes *install_path*\bin\ainuxacc for accounting exits, *install_path*\bin\ainuxaud for audit exits, \bin\ainuxhdr for start sheets, *install_path*\bin\ainuxsep for separator sheets, and *install_path*\bin\ainuxtlr for end sheets.

- You can use the **psf-exit-program-name** auxiliary sheet attribute and the **psf-post-print-accounting-program-name** auxiliary sheet attribute together, but InfoPrint Manager for AIX and InfoPrint Manager for Windows come with **psf-post-print-accounting-program-name** set to the allowed value for the **psf-post-print-accounting-program-name** auxiliary sheet attribute.

psf-post-print-accounting-program-name

Specifies the name of the **psf-post-print-accounting-program-name** accounting exit that is invoked after each job has completed. InfoPrint Manager calls this accounting exit when a PSF IPDS printer reports that all of the pages sent for a job have been stacked. This includes a partial job and also any extra pages produced as a result of a backspace or other recovery. One and only one record is written for each job submission. If InfoPrint Manager does not get positive feedback from the printer that all pages have stacked, no record is written.

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 255 characters that contains the name of the **psf-post-print-accounting-program-name** accounting exit that is invoked after each job has completed.

InfoPrint Manager supplies this sample **psf-post-print-accounting-program-name** accounting exit:

AIX

/usr/lpp/psf/bin/ainuxjobcompletion

Windows

***install_path*\bin\ainuxjobcompletion**, where *install_path* indicates the path where you installed InfoPrint Manager for Windows

Default Value

No default value

Usage Guidelines

- You can use the **psf-post-print-accounting-program-name** auxiliary sheet attribute and the **psf-exit-program-name** auxiliary sheet attribute, but InfoPrint Manager for AIX and InfoPrint Manager for Windows come with **psf-post-print-accounting-program-name** set to the allowed value for the **psf-post-print-accounting-program-name** auxiliary sheet attribute.
- InfoPrint Manager supplies one sample **psf-post-print-accounting-program-name** program:

  AIX

  ```
  /usr/lpp/psf/bin/ainuxjobcompletion
  ```

  Windows

  ```
  install_path\bin\ainuxjobcompletion
  ```

Attributes for documents and default documents

This section contains the attributes for both documents and default documents.

Document

An InfoPrint document represents a grouping of data in a job. A job can contain one or more documents. The documents in a job can differ from each other in some ways. For example, they can contain different data. A document in a job can contain printable data or a resource that is not printable by itself.

Default document

Use default documents to set default values for document attributes.

Default documents contain two types of attributes:

- Attributes that describe the default document itself
- Attributes that you can set as default values for document attributes

Attributes not displayed in the InfoPrint Manager Administration GUI

While all document and default document attributes and attribute values are supported for both standard and basic InfoPrint installations, neither InfoPrint Manager Administration GUI displays a complete set.

- The standard InfoPrint Manager Administration GUI displays most attributes and attribute values of greatest interest to Data Center (Production Printing) InfoPrint administrators, but omits a few that are used primarily in basic InfoPrint installations.
- The basicInfoPrint Manager Administration GUI displays only the attributes of greatest interest to Print on Demand (Commercial Printing) InfoPrint administrators.

You can list the values of attributes not displayed in the InfoPrint Manager Administration GUI using the **pdls** command or the **pdq** command. You can set the values of initially settable and resettable attributes using the **pdcreate** command or the **pdpr** command. You can change the values of resettable attributes using the **pdmod** command or the **pdset** command.

Initially settable attribute listing

You can set these attributes with the **pdpr** command when you create a document.

- **document-file-name**
- **document-type**
- **initial-value-document**

- **transfer-method**

There are no initially settable attributes for default documents.

Resettable attribute listing

You can set these attributes with the **pdpr** command when you create a document or with the **pdcreate** command when you create a default document. You can modify them with the **pdset** command after you create the document or the default document. You can also modify them for the document using the **pdmod** command.

- **account-text**
- **address1-text**
- **address2-text**
- **address3-text**
- **address4-text**
- **base-printer**
- **building-text**
- **carriage-control-type**
- **chars**
- **class**
- **color-bits-per-plane**
- **color-mapping-table**
- **color-profile**
- **color-rendering-intent**
- **color-toner-saver**
- **content-orientation**
- **convert-to-ebcdic**
- **copy-count**
- **data-fidelity-problem-reported**
- **default-character-mapping**
- **default-input-tray**
- **default-medium**
- **default-printer-resolution**
- **department-text**
- **descriptor** (default document only)
- **destination-pass-through**
- **document-comment**
- **document-finishing**
- **document-format**
- **document-pdf-processor**
- **email-from-address**
- **email-to-address**

- **fax-number**
- **fax-to-name**
- **fax-to-email-domain**
- **font-fidelity-action**
- **font-processing-messages**
- **font-resolution**
- **form-definition**
- **form-length**
- **halftone**
- **image-fit**
- **image-length**
- **image-out-format**
- **image-width**
- **input-color-management-resources**
- **input-exit**
- **input-tray-select**
- **interchange-set-version**
- **jde-jdl**
- **job-terminate-message-count**
- **list-of-managers** (default document only)
- **maintain-original-filename**
- **maximum-messages-printed**
- **maximum-transform-pages-ahead**
- **message** (default document only)
- **mvs-destination**
- **mvs-forms**
- **mvs-segment-id**
- **name-text**
- **new-line-option**
- **new-line-option-data-encoding**
- **node-id-text**
- **number-up**
- **other-transform-options**
- **output-appearance**
- **output-bin**
- **output-color-management-resource**
- **output-color-management-resource-inline**
- **output-color-management-resource-tag**
- **output-format**
- **overlay**
- **overlay-back**
- **overlay-front**

- **page-count** (document only)
- **page-definition**
- **page-media-select**
- **page-select** (document only)
- **plex**
- **print-quality**
- **programmer-text**
- **resource-context**
- **resource-context-font**
- **resource-context-form-definition**
- **resource-context-overlay**
- **resource-context-page-definition**
- **resource-context-page-segment**
- **resource-context-presentation-object-container**
- **resource-context-user**
- **resource-exit**
- **reverse-page-order**
- **room-text**
- **scanner-correction**
- **screen-frequency**
- **segment-file-size**
- **shared-formdef**
- **shift-out-shift-in**
- **sides**
- **start-on-new-sheet**
- **subject-text**
- **table-reference-characters**
- **title-text**
- **transform-message-file-name**
- **transform-output-file-name**
- **user-id-text**
- **x-image-shift**
- **x-image-shift-back**
- **y-image-shift**
- **y-image-shift-back**

Per-document attribute listing

These attributes can have a different value for each document in a job. For initially settable and resettable per-document attributes, you can specify a different value for each document in a job using the **pdpr** command. Specify **-x "***AttributeName***=***value***"** before the name of each file.

For example, to print a job consisting of two documents, one with an estimated size of 10 pages and the other with an estimated size of 15 pages, enter:

```
pdpr -x "page-count=10" -f File1 -x "page-count=15" File2
```

Note

All documents in a job must have the same value for all initially settable and resettable attributes if the documents are in ASCII format.

Initially Settable	*Resettable*	*Non-Settable*
document-type	**carriage-control-type**	**document-content**
	chars	**document-content-list**
	content-orientation	**document-sequence-number**
	convert-to-ebcdic	**initial-value-document**
	copy-count	**octet-count**
	default-input-tray	
	default-medium	
	document-finishing	
	document-format	
	document-pdf-processor	
	explicit-page-placement	
	form-length	
	image-fit	
	image-length	
	image-out-format	
	image-width	
	input-exit	
	jde-jdl	
	medium-map-name	
	new-line-option	
	new-line-option-data-encoding	
	other-transform-options	
	output-appearance	
	output-bin	
	page-count	

Initially Settable	*Resettable*	*Non-Settable*
	page-definition	
	page-select	
	plex	
	print-quality	
	resource-context-page-definition	
	resource-context-presentation-object-containers	
	resource-context-user	
	resource-exit	
	sides	
	scanner-correction	
	screen-frequency	
	shift-out-shift-in	
	start-on-new-sheet	
	table-reference-characters	
	transform-message-file-name	
	transform-output-file-name	
	x-image-shift	
	x-image-shift-back	
	y-image-shift	
	y-image-shift-back	

All other document attributes are per-job attributes. They must have the same value for each document in the job.

account-text

Specifies account information that InfoPrint prints in the **ACCOUNT:** field of an auxiliary sheet if the job uses the **full** auxiliary-sheet object.

GUI label

Account

DSS

PSF, Email

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a text string of up to 4095 characters that contains the account information.

Default Value

No default value

Usage Guidelines

- While you can specify more characters, you should limit the text string you supply to 20 characters or less to make sure that there is enough room available on the printed page for all of the account information.
- If the text string you specify contains blank spaces, enclose the text string in single quotation marks.

address1-text

Specifies address information that InfoPrint prints on the first line of the **ADDRESS:** field of an auxiliary sheet if the job uses the **full** auxiliary-sheet object.

GUI label

Address line 1

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a text string of up to 4095 characters that contains the address information.

Default Value

No default value

Usage Guidelines

- While you can specify more characters, you should limit the value you supply to 57 characters or less to make sure that there is enough room available on the printed page for all address information.
- If the text string you specify contains blank spaces, enclose the text string in single quotation marks.

address2-text

Specifies address information that InfoPrint prints on the second line of the **ADDRESS:** field of an auxiliary sheet if the job uses the **full** auxiliary-sheet object.

GUI label

Address line 2

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a text string of up to 4095 characters that contains the address information.

Default Value

No default value

Usage Guidelines

- While you can specify more characters, you should limit the value you supply to 57 characters or less to make sure that there is enough room available on the printed page for all address information.
- If the text string you specify contains blank spaces, enclose the text string in single quotation marks.

address3-text

Specifies address information that InfoPrint prints on the third line of the **ADDRESS:** field of an auxiliary sheet if the job uses the **full** auxiliary-sheet object.

GUI label

Address line 3

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a text string of up to 4095 characters that contains the address information.

Default Value

No default value

Usage Guidelines

- While you can specify more characters, you should limit the value you supply to 57 characters or less to make sure that there is enough room available on the printed page for all address information.
- If the text string you specify contains blank spaces, enclose the text string in single quotation marks.

address4-text

Specifies address information that InfoPrint prints on the fourth line of the **ADDRESS:** field of an auxiliary sheet if the job uses the **full** auxiliary-sheet object.

GUI label

Address line 4

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a text string of up to 4095 characters that contains the address information.

Default Value

No default value

Usage Guidelines

- While you can specify more characters, you should limit the value you supply to 57 characters or less to make sure that there is enough room available on the printed page for all address information.
- If the text string you specify contains blank spaces, enclose the text string in single quotation marks.

associated-server (Default Document Only)

Indicates the name of the server in which this default document is located.

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to the *ServerName:* portion of the argument used with the **pdcreate** command when this default document is created.

Default Value

No default value

base-printer

Indicates the printer model you want to RIP the document for.

GUI label

RIP for

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter one of these fixed values:

- **InfoPrint 4000**
- **InfoPrint 4000-ID5-ID6**

- **InfoPrint 4000-IR3-IR4**
- **InfoPrint 4100-HD1-HD2**
- **InfoPrint 4100-HD3-HD4**
- **InfoPrint 4100-HD5-HD6**
- **InfoPrint 4100-HS1**
- **InfoPrint 4100-HS2**
- **InfoPrint 4100-HS3**
- **InfoPrint 4100-MD1/2**
- **InfoPrint 4100-MS1**
- **InfoPrint 4100-PD1-PD2**
- **InfoPrint 4100-PS1**
- **InfoPrint4100-TS1**
- **InfoPrint4100-TS2**
- **InfoPrint4100-TS3**
- **InfoPrint4100-TD1-2**
- **InfoPrint4100-TD3-4**
- **InfoPrint4100-TD5-6**
- **InfoPrint 5000-AD1-AD2**
- **InfoPrint 5000-AD3-AD4**
- **InfoPrint 5000-AD3-AD4-XR3**
- **InfoPrint 5000-AS1**
- **InfoPrint 5000-AS3**
- **InfoPrint 5000-MP-MC1-MC2**
- **InfoPrint 5000-MP-MD3-MD4**

Default Value

The value of the **printer-model** attribute for the actual destination where the document prints.

Usage Guidelines

You can RIP a document for a different printer than you actually print it on. This is useful for printing proof documents.

When using the **pdset** command, delete the spaces between the values. For example, "InfoPrint 4000" becomes "InfoPrint4000".

building-text

Specifies the physical building information that InfoPrint prints in the **BUILDING:** field of an auxiliary sheet if the job uses the **full** auxiliary-sheet object.

GUI label

Building

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a text string of up to 4095 characters that contains the building information.

Default Value

No default value

Usage Guidelines

- While you can specify more characters, you should limit the value you supply to 24 characters or less to make sure that there is enough room available on the printed page for all building information.
- If the text string you specify contains blank spaces, enclose the text string in single quotation marks.

carriage-control-type

Identifies the type of carriage control characters that the printer device uses when interpreting and printing this document.

GUI label

Type of carriage control characters

DSS

PSF, Email

Type

Resettable, single-valued, per-document

Allowed Values

You can enter one of these fixed values:

- **ansi-ascii**
- **ansi-ebcdic**
- **machine**
- **none**

Default Value

none

Usage Guidelines

- InfoPrint validates and schedules jobs using this attribute against the destination attribute **carriage-control-types-supported**.
- This attribute is valid only for line-data documents.

chars

Identifies from zero to four coded fonts used to print line-data and SAP ABAP data documents.

Coded fonts are character set and code page pairs. Coded font names begin with a two-character prefix (X0 or XZ), followed by up to four alphanumeric characters. `X042B2` is an example of a coded font name.

GUI label

Fonts

DSS

PSF, Email

Type

Resettable, multi-valued, per-document

Allowed Values

You can enter a text string that contains the name or global ID of the fonts. The name of each font can be one to four characters long. Omit the two-character prefix from the coded font name or the alternate coded font name.

For the names of coded fonts, see *Font Summary*.

If you specify more than one coded font on the command line, separate the font names by spaces and surround the attribute and value with double quotation marks, for example:

```
"chars=GT10 GT12"
```

If you specify more than one coded font in the InfoPrint Manager Administration GUI, separate the font names by commas, for example:

```
GT10,GT12
```

Default Value

No default value

Usage Guidelines

- This attribute is valid only for line-data and SAP ABAP data documents.
- This attribute ignores the SAP OTF document format.
- This attribute is not valid for any other document format.

- If the page definition does not identify fonts, you must specify fonts with this attribute to print in more than one font.
- If you specify more than one coded font with the **chars** attribute, the file must contain table reference characters and you must specify the **table-reference-characters** attribute value as **true**.
- InfoPrint uses this attribute only if the page definition specifies no coded fonts. If you specify fonts with this attribute and the page definition also specifies fonts, InfoPrint uses the fonts named in the page definition.

class

For jobs originating on host systems and directed to InfoPrint through the OS/390 Download program or the DPF function of InfoPrint Manager for Windows, this attribute contains the value specified for the **class** parameter. The **class** attribute can also be used directly with non-host jobs. InfoPrint can print the class information on an auxiliary sheet if the job uses the **full** auxiliary-sheet object.

GUI label

Class

DSS

All

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a single alphanumeric character. This character is a customer-defined character that represents a set of job/printer configurations to be set up.

Input Synonym

You can use the synonym **mvs-class**.

Default Value

If you do not specify a class value when you submit the job from the host system, the host system defaults the value of the **class** parameter to **A**. However, InfoPrint sets no default for the **class** parameter.

Usage Guidelines

- See the *Print Services Facility for OS/390: OS/390 Download Guide* for further information, including restrictions, on the **class** parameter.
- You can use this attribute in a shell script used with OS/390 Download.
- InfoPrint compares the **class** document attribute with the **classes-ready** actual destination attribute for validation and scheduling.

color-bits-per-plane

For PSF, specifies whether the transform is to produce monochrome (fs10) or color images (fs42 or fs45).

For CUPS destinations, specifies whether InfoPrint Manager passes to the underlying printing system the corresponding driver option which produces monochrome or color output. For more information, see "Mapping Attributes and Values to PPD Options" in the *RICOH InfoPrint Manager for Linux: Getting Started*.

For DFE destinations, specifies whether InfoPrint Manager passes to the DFE the corresponding DFE option that controls the CMYK or the Grayscale color mode.

For IPP destinations, specifies whether InfoPrint Manager passes to the IPP device the option for setting the color or the monochrome print mode.

GUI label

Color bits per plane

DSS

CUPS, DFE, Email, IPP, PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

- **0-bits** (monochrome FS10)
- **1-bit** (color FS42, PSF and Email only)
- **8-bits** (color FS45)

Default Value

There is no default value.

Usage Guidelines

For PSF, if a document is already ripped, changing this attribute at the printer does not effect the document. To change a ripped document, modify the job and document properties to specify the new value. When released, the document is re-ripped automatically.

For the Email DSS, PSF-Command DSS, and PSF-Other DSS, this attribute is only supported for PCL, PDF, or PostScript document formats.

For CUPS and DFE, InfoPrint Manager does not transform the data, it passes the corresponding driver option to the underlying printing system.

For IPP, InfoPrint Manager does not transform the data, it passes the print color mode to the IPP device.

color-mapping-table

Identifies the color mapping table (CMT) to be used when printing this document.

GUI label

Color mapping table

DSS

PSF

Type

Resettable, single-valued, per-job attribute.

Allowed Values

You can enter a text string of up to 8 characters that contains the identification for this resource.

Default Value

There is no default value. If you omit this attribute or it contains no value, InfoPrint uses the color mapping table defined by the actual destination **color-mapping-table** attribute, if any.

color-profile

Specifies that color profile, if any, is to be used by the PostScript transform (**ps2afp**) and the PDF transform (pdf2afp).

GUI label

Color profile

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

SWOP

Specifications for Web Offset Publications (SWOP) standard in the United States used for tuning Cyan-Magenta-Yellow-Black (CMYK) color.

Euroscale

European standard used for tuning Cyan-Magenta-Yellow-Black (CMYK) color.

none

No color profile.

Default Value

There is no default value.

Usage Guidelines

If a document is already ripped, changing this attribute at the printer will not effect the document. To change a ripped document, modify the job and document properties to specify the new value. When released, the document will be re-ripped automatically.

color-rendering-intent

Identifies which color rendering dictionary (CRD) can be used by the PostScript RIP and which lookup table (LUT) can be used by the TIFF RIP.

GUI label

Color rendering intent

DSS

PSF

Type

Resettable, single-valued, non-varying

Allowed Values

You can enter one of these fixed values:

Fixed Value	Explanation
relative	When you specify **relative**, InfoPrint Manager maps in-gamut colors exactly and maps out-of-gamut colors to the closest in-gamut color.
perceptual	When you specify **perceptual**, InfoPrint Manager maps all colors in such a way as to provide subjectively more pleasing hardcopy output.

Input Synonym

You can use the synonym **color-rendering-intent-colormetrics**.

Default Value

No default value. If you do not specify a value for this attribute, InfoPrint uses the value of the actual destination attribute **color-renderings-intent**.

Usage Guidelines

- For the vast number of colors possible with 32–bit color, an actual destination can only physically render a subset of the possible range of colors, and this range is referred to as the color gamut for the actual destination. When a color is specified in PostScript or TIFF and is then transformed into AFP, the transform needs to map the colors that fall outside of the color gamut for the actual destination into a color in the gamut, so it can be printed with fidelity. The **color rendering intent** attribute specifies which Color Rendering Dictionary (CRD) to use for the PostScript mapping and which Lookup Table (LUT) to use for the TIFF mapping.
- For PostScript, the CRD depends on the value of the **color-toner-saver** attribute.
- For TIFF, the LUT depends on the value of the **color-profile** and **color-toner-saver** attributes.
- This attribute only applies to attachment types of TCP/IP and Upload TCP/IP attachment types.
- The color PostScript RIP must be installed to make use of this attribute.
- If this attribute is specified and a pragma setting for the transform is specified through **other-transform-options**, the value in **other-transform-options** takes effect.
- If **color rendering intent** is specified inside the PostScript data stream, that value takes effect regardless of any attribute setting.
- Color rendering intent cannot be specified inside the TIFF/GIF/JPEG data stream.

color-toner-saver

For PSF, when cyan, magenta, and yellow (cmyk) are combined in a certain proportion, the result approximates black. When the **color-toner-saver** attribute is used, the proportion of cyan, magenta, and yellow are reduced and substituted with black toner, which reduces the amount of color toner used. This option only applies to non-cmyk PostScript (for example, RGB) for which a color rendering dictionary (CRD) is used to determine the cmyk values to use.

For CUPS destinations, enable this setting to pass to the underlying printing system the corresponding driver option which prints using a reduced amount of toner when printing out copies. Print results are lighter in density than normal. For more information, see "Mapping Attributes and Values to PPD Options" in the *RICOH InfoPrint Manager for Linux: Getting Started*.

GUI label

Color toner saver

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	Input Synonym
true	**yes**
false	**no**

For PSF, with the **color-toner-saver** attribute, a value of **true** or **yes** substitutes black for common cyan, magenta, and yellow components to reduce consumption of toner and to reduce the cost per page; while a value of **false** or **no** uses the cmyk proportions specified.

For CUPS, a value of **true** or **yes** maps the corresponding driver option which prints using a reduced amount of toner when printing out copies.

Default Value

There is no default value.

Usage Guidelines

- For PSF, if a document is already ripped, changing this attribute at the printer does not effect the document. To change a ripped document, modify the job and document properties to specify the new value. When released, the document is re-ripped automatically.
- Setting **color-toner-saver** to **True** or **Yes** results in less vibrant process colors.

content-orientation

Identifies the page presentation (the placement of data on a page) for the document.

GUI label

Orientation

DSS

AIX, CUPS, IPP

Type

Resettable, single-valued, per-document

Input Synonym

You can use the synonym **orientation**.

Allowed Values

You can enter one of these fixed values:

- **landscape**
- **portrait**

- **reverse-portrait**
- **reverse-landscape**

Default Value

AIX

The first value of the destination attribute **content-orientations-supported**

Usage Guidelines

InfoPrint validates and schedules jobs using this attribute against the destination attribute **content-orientations-supported**.

convert-to-ebcdic

Indicates whether to convert this file from ASCII to EBCDIC before the document prints.

GUI label

Convert to EBCDIC

DSS

PSF, Email

Type

Resettable, single-valued, per-document

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

No default value

Usage Guidelines

- InfoPrint validates and schedules jobs using this attribute against the destination attribute **convert-to-ebcdic-supported**.
- This attribute is valid only for line-data documents.

copies

See **copy-count**.

copy-count

Specifies the number of document copies printed per job copy.

GUI label

Copy count

DSS

All

Type

Resettable, single-valued, per-document

Input Synonym

You can use the synonym **copies**.

Allowed Values

You can enter an integer from 1 through 2147483647.

Default Value

1

Usage Guidelines

- InfoPrint validates and schedules jobs using this attribute against the destination attribute **maximum-copies-supported**.
- This attribute is not valid for AFP documents with inline resources. To print multiple copies of these documents, use the *job-copies* component of the **results-profile** job attribute.
- For BSD (by default), this document attribute maps to the **qprt -N** option.
- The **copy-count** document/default document attribute is ignored for **dpf-ipds** requests.
- The **copy-count** attribute prints uncollated copies for CUPS DSS. To print collated copies, use the **job-copies** component of the results-profile, p. 986 attribute.

data-fidelity-problem-reported

Indicates the type of data fidelity problems, print-positioning or invalid-character errors, that the destination reports while printing this document.

GUI label

Data fidelity problem reported

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Report*
all	Both print-positioning and invalid-character errors
character	Only invalid-character errors
none	No errors
position	Only print-positioning errors

Default Value

none

Usage Guidelines

InfoPrint validates and schedules jobs using this attribute against the destination attribute **data-fidelity-problem-reported-supported**.

de-identification-method-used (Document Only)

Defines the de-identification process used for this job.

GUI label

De-identification method used

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to:

Fixed Value	*Explanation*
job-data-de-identification	The server de-identified sensitive jobs and document information.

Default Value

No default value

Usage Guidelines

- When this attribute value is set to **job-data-de-identification**, InfoPrint Manager encoded the values of the following attributes: **job-name**, **document-file-name**, **title-text** and **formatted-job-ticket-content**.
- The job owner and the authenticated login user are able to list job attributes as if they are not de-identified. Also, they receive the re-identified data via the **select-email** notification.

default-character-mapping

Defines the character-mapping (codepage) used while printing an ASCII or double-byte character set (DBCS) ASCII document.

GUI label

Default character mapping

DSS

AIX, PSF, Email

Type

Resettable, single-valued, per-job

Allowed Values

You can enter one of these fixed values:

- **ibm-437**
- **ibm-850**
- **ibm-860**
- **ibm-863**
- **ibm-865**
- **ibm-932**
- **ibm-938** for InfoPrint Manager for AIX only
- **ibm-euccn**

- **ibm-eucjp**
- **ibm-euckr**
- **ibm-euctw**

Default Value

No default value

Usage Guidelines

InfoPrint validates and schedules jobs using this attribute against the destination attribute **character-mappings-supported**.

default-input-tray

Identifies an input-tray on the printer device that contains the medium that InfoPrint uses for normal document pages.

GUI label

Input tray requested

DSS

AIX, CUPS, DFE, PSF

Type

Resettable, single-valued, per-document

Allowed Values

For AIX and CUPS actual destinations, use one of these values:

auto-envelope-feed
automatic-tray
auxiliary-envelope
auxiliary-paper
bottom
capacity-2000-sheet
continuous-form-feed
current-selected-tray
envelope
extended-option-feed-tray
high-capacity-feeder
interposer-tray
interposer-lower-tray
interposer-upper-tray
large-capacity
manual
manual-envelope-feed
middle
perfect-binder-lower-interposer-tray
perfect-binder-upper-interposer-tray
top
tray-1
tray-2
tray-3
tray-4
tray-5
tray-6
tray-7
tray-8
tray-9
tray-10
tray-a
tray-t1
tray-t2

For PSF actual destinations, you can enter one of these values or any other value that maps to one of the actual destination **psf-tray-characteristics** attribute values.

Default Value

No default value

Usage Guidelines

- InfoPrint validates and schedules jobs using this attribute against the destination attribute **input-trays-supported**.
- For AIX and CUPS actual destinations, any input tray selection in the data stream or form definition overrides the value you specify for this attribute.
- For PSF actual destinations, the value you specify for this attribute overrides any input tray selection in the data stream or form definition, with one exception. If you specify different values for this attribute for each document in a job, and also specify a value for the document **form-definition** attribute, InfoPrint ignores the different values and uses the input tray selection in the form definition.
- If this attribute and the **default-medium** attribute have conflicting values, InfoPrint uses the value of the **default-medium** attribute.

default-medium

Identifies the medium for document pages on which this document prints.

GUI label

Medium requested

DSS

AIX, CUPS, Passthrough, IPP, PSF

Type

Resettable, single-valued, per-document

Allowed Values

AIX, CUPS, IPP

You can enter a text string of up to 255 characters that contains one of the values listed for the **medium-identifier** attribute for the medium object or a name of a medium you have created. See the medium object **medium-identifier** attribute.

PSF

You can specify any text string that is listed as a supported medium.

Passthrough

The Passthrough DSS uses this attribute for job validation and scheduling only. It does not affect print output.

Default Value

No default value

Usage Guidelines

- InfoPrint validates the document against the logical destination attribute **media-supported** and the actual destination attribute **media-supported**.
- InfoPrint schedules the document against the actual destination attributes **media-supported** and **media-ready**.
- For AIX, IPP, and CUPS actual destinations, any medium selection in the data stream or form definition overrides the value you specify for this attribute.
- For PSF actual destinations, the value you specify for this attribute overrides any medium selection in the data stream or form definition, with one exception. If you specify different values for this attribute for each document in a job, and also specify a value for the document **form-definition** attribute, InfoPrint ignores the different values and uses the medium selection in the form definition.
- If this attribute and the **default-input-tray** attribute have conflicting values, InfoPrint uses the value of this attribute.
- For CUPS, InfoPrint Manager maps the value to a medium using the corresponding driver option set in the printer model configuration file. For more information, see "Mapping Attributes and Values to PPD Options" in the *RICOH InfoPrint Manager for Linux: Getting Started*.

default-printer-resolution

For PSF, specifies the resolution, in pels, at which the printer device should print this document.

For CUPS, specifies the resolution, usually in dpi, at which the printer device should print this document. InfoPrint Manager does not transform the data, it passes the corresponding driver option to the underlying printing system. For more information, see "Mapping driver (PPD) print options using the configuration file" in the *RICOH InfoPrint Manager for Linux: Getting Started*.

GUI label

Printer resolution requested

DSS

CUPS, IPP, PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter one of these fixed values:

Fixed Value	*DSS*
240	PSF, CUPS, IPP
300	PSF, CUPS, IPP
360	PSF, CUPS, IPP
480	PSF, CUPS, IPP
600	PSF, CUPS, IPP
720	PSF, CUPS, IPP
1200	PSF, CUPS, IPP

Usage Guidelines

- **For Email and PSF**
  - This attribute is valid only for GIF, JPEG, PCL, PDF, PostScript, and TIFF documents.
  - This attribute applies only to image data. It has no effect on font resolutions.
  - The InfoPrint 5000 series printers only support 360 and 720 resolutions. All other printer models do not support these resolutions.
  - If a **default-printer-document** attribute is not set, the first value specified on the actual destination's **printer-resolution-ready** attribute will be used.
  - If the **printer-resolution-ready** attribute is not set, the image transform uses the value specified in the transform configuration file, while the other transforms use the 300 resolution.
- **For CUPS**
  - InfoPrint Manager maps the value to a resolution using the corresponding driver option set in the printer model configuration file. For more information, see "Mapping Attributes and Values to PPD Options" in *RICOH InfoPrint Manager for Linux: Getting Started*.
  - InfoPrint Manager does not transform the data, it passes the corresponding driver option to the underlying printing system.

department-text

Specifies department information that InfoPrint prints in the **DEPARTMENT:** field of an auxiliary sheet if the job uses the **full** auxiliary-sheet object.

GUI label

Department

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a text string of up to 4095 characters that contains the department information.

Default Value

No default value

Usage Guidelines

- While you can specify more characters, you should limit the value you supply to 24 characters or less to make sure that there is enough room available on the printed page for all department information.
- If the text string you specify contains blank spaces, enclose the text string in single quotation marks.

descriptor (Default Document Only)

Provides a description of this default document.

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 4095 characters that describes this default document.

Default Value

No default value

Usage Guidelines

The use of this attribute is optional. However, a detailed description helps job submitters to determine if this is the default document they want to use.

destination-initial-value-document (Document Only)

Identifies the default document associated with the logical destination to which you submitted the document and that InfoPrint used to create the document.

GUI label

Default document used

DSS

All

Type

Non-settable, single-valued, per-job

Input Synonym

You can use the synonym **printer-initial-value-document**.

Allowed Values

InfoPrint sets this value to the name of the default document used.

Default Value

No default value

destination-pass-through

Lets you submit specific DSS (print driver) information along with the document. InfoPrint does not process the information, but passes it directly to the DSS.

GUI label

Other options

DSS

AIX, BSD, CUPS, PSF

Type

Resettable, single-valued, per-job

Input Synonyms

You can use the synonym **printer-pass-through** or **other-options**.

Allowed Values

You can enter a text string of up to 4095 characters that contains the DSS information.

Default Value

No default value

Usage Guidelines

- For BSD, InfoPrint appends the contents of this attribute to the contents of the actual destination attribute **destination-command** after the mapped options.
- For CUPS, InfoPrint Manager passes the content of this attribute to the CUPS printing system.
- When sent to an actual destination with a transform sequence, the information you provide with the **destination-pass-through** attribute is always passed to the DSS, and this information should **not** be used to pass transform-unique data (that is, data that the DSS does not understand) to the transform sequence.
- If you use the **destination-pass-through** attribute when submitting a job to a PSF-other actual destination, you can either direct the options to the PSF DSS or to the backend specified in the value of the **destination-command** attribute. When you specify **-BE** in the value for the **destination-pass-through** attribute, InfoPrint passes all values preceding **-BE** to the PSF DSS. InfoPrint passes any values following **-BE** to the backend program.

document-comment

Provides information that InfoPrint associates with this document.

DSS

All

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a text string of up to 4095 characters that contains information about this document, such as the fonts it requires.

Default Value

No default value

document-content (Document Only)

Identifies the location of InfoPrint's copy of the file to print.

DSS

All

Type

Non-settable, single-valued, per-document

Allowed Values

InfoPrint sets this value to the location of its copy of the document file. For example, `/var/pd/`*`server name`*`/pdpr01jnduc`.

Default Value

No default value

Usage Guidelines

- The location of the file might or might not be in the same directory as the InfoPrint Manager for AIX server that contains the job that contains the document. The location of the file might not even be on the same machine running the InfoPrint Manager for AIX server that contains the job that contains the document.
- The value in this attribute is not returned unless explicitly requested on a **pdls** command.
- Removing or modifying the file indicated on this attribute can interfer with InfoPrint's ability to process the job.

document-content-list (Document Only)

Lists the files in a file-reference document.

DSS

All

Type

Non-settable, multi-valued, per-document

Allowed Values

InfoPrint sets this value to a list of file identifiers.

Default Value

No default value

Usage Guidelines

- A file-reference document is a list of similar printable documents. All the printable documents must have the same format, because InfoPrint processes them all the same way.
- The value in this attribute is not returned unless explicitly requested on a **pdls** command.

document-file-name (Document Only)

Provides the name you want to assign to the file (document).

GUI label

File names

DSS

All

Type

Initally-settable, single-valued, per-document

Input Synonym

You can use the synonym **file-name**.

Allowed Values

You can enter a text string of up to 4095 characters that contains the file name or source specified with the **pdpr** command.

Default Value

The file name of the first document in the job.

document-finishing

Identifies the finishing options for this document.

GUI label

Finishing options

DSS

PSF

Type

Resettable, multi-valued, per-document

Allowed Values

You can enter any of these fixed values:

- **double-gate-fold-in**
- **double-gate-fold-out**
- **double-parallel-fold-in**
- **double-parallel-fold-out**
- **z-fold**

Default Value

No default value

Usage Guidelines

- This attribute is not valid for ASCII documents.
- When you specify a value for **document-finishing**, InfoPrint creates an inline form definition. Do not use the **form-definition** attribute to specify another form definition.
- InfoPrint validates and schedules jobs using this attribute against the **document-finishings-supported** actual destination attribute.
- To drive UP³I devices with PSF, UP³I finishing must be specified in a form definition. For information about UP³I devices, see the *InfoPrint Page Printer Formatting Aid: User's Guide*.

document-format

Identifies the format (data type) of this document.

GUI label

Format

DSS

All

Type

Resettable, single-valued, per-document

Input Synonym

You can use the synonym **format**.

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*	*DSS*
ascii		AIX, BSD, CUPS, PSF (except upload printers), Passthrough, IPP
dbcs-ascii		AIX, BSD, PSF
ditroff		BSD, PSF DSS for AIX, email
dpf-ipds		PSF DSS for Windows
d630		AIX, BSD
epson		AIX
gif		BSD, PSF DSS for AIX, email
hpgl	**hp-gl**	AIX, BSD
iso-6429		AIX, BSD, Passthrough, IPP
jpeg		BSD, PSF DSS for AIX, email
kgl		BSD
line-data		BSD, PSF, email
modca-p	**afpds**	BSD, PSF, email
passthru		AIX, BSD
pcl	**hppcl, hp-pcl**	AIX, BSD, CUPS, PSF, email, Passthrough, IPP
pdf		BSD, CUPS, PSF, email
postscript	**ps**	All
ppds		BSD
sap		BSD, PSF DSS, email, Passthrough
sap-abap		BSD, PSF DSS, email, Passthrough
simple-text	**text**	BSD, Passthrough, IPP
tiff		BSD, PSF DSS for AIX, email
xml		PSF, email

Note

By default, BSD actual destinations support only a subset of the formats that the BSD DSS can print. You can update the destination attribute **document-format-supported** to include any or all of these values.

Default Value

The server identifies the document format. If the format cannot be determined, **ascii**

Usage Guidelines

- If you or a default document you specify do not provide a value for this attribute with the **pdpr** command, the server tries to determine the file format. If it cannot determine the format, InfoPrint uses the default.
- InfoPrint validates and schedules jobs using this attribute against the destination attribute **document-formats-supported**.
- You cannot print ASCII documents and documents with other formats in the same job, except for CUPS DSS.

document-number (Document Only)

See **document-sequence-number**.

document-pdf-processor

Identifies the PDF processor option for this document.

GUI label

PDF Processor

DSS

PSF, Email

Type

Resettable, single-valued, per-document

Allowed Values

You can enter any of these fixed values:

CPSI

APPE

AGSPDL

Default Value

CPSI

Usage Guidelines

- This attribute is valid only for PDF documents.

document-ps-processor

Identifies the PostScript processor option for this document.

GUI label

PS Processor

DSS

PSF, Email

Type

Resettable, single-valued, per-document

Allowed Values

You can enter any of these fixed values:

CPSI

AGSPDL

Default Value

CPSI

Usage Guidelines

- This attribute is valid only for PostScript documents.

document-sequence-number (Document Only)

Identifies this document in relation to the other documents of a multi-document job.

DSS

All

Type

Non-settable, single-valued, per-document

Input Synonyms

You can use the synonym **sequence-number** or **document-number**.

Allowed Values

An integer from 1 through 2147483647.

Default Value

No default value

Usage Guidelines

Use this number as part of the local ID or global ID to identify a given document in a job.

document-type (Document Only)

Indicates that the document is either a printable document, a group of printable documents, a font, or some other resource.

GUI label

Types

DSS

All

Type

Initially settable, single-valued, per-document

Input Synonym

You can use the synonym **type**.

Allowed Values

You can enter one of these fixed values:

Fixed Value	*DSS*
color-mapping-table	PSF
email-body	Email
email-signature	Email
file-reference	All
font	PSF, Email
form-definition	PSF, Email
formatted-job-ticket	PSF, Email
insert-sheet	PSF, Email
job-ticket	PSF, Email
overlay	PSF, Email
overlay-back	PSF, Email

Fixed Value	*DSS*
overlay-front	PSF, Email
page-definition	PSF, Email
page-segment	PSF, Email
page-shift-file	PSF, Email
printable	All
resource	PSF DSS for AIX, Email

Default Value

printable

Usage Guidelines

- A file-reference document is a list of similar printable documents. All the printable documents must have the same format, because InfoPrint processes them all the same way.
- Insert documents normally require media sheets from the **insert** input tray, which is on the finisher. This means that you cannot print an insert with the rest of the job. If you want printed inserts, preprint them and load the printed sheets into the **insert** tray.

  This does not mean that the insert document should not have any printable content. The insert document should be a MO:DCA-P, PostScript, or TIFF (not ASCII) file containing text like this:

```
This is an insert sheet.
```

  A MO:DCA-P insert document is supplied with InfoPrint Submit. If you submit jobs in other ways, create your own insert document.

  If the **insert** input tray is not available (for example, if you are proofing a job on a printer without a finisher), InfoPrint prints the insert document on a sheet from the default input bin, so that you can easily see where sheets from the insert tray will be inserted in the final job.
- To print a booklet with a cover, specify **insert** as the document format of the first document in the job.
- An email job must not include more than one **email-body** document or more than one **email-signature** document.
- InfoPrint validates and schedules jobs using this attribute against the destination attribute **document-types-supported**.

email-encoding

Specifies the electronic mailing character encoding for body file and signature file.

DSS

Email

Type

Resettable, single-valued, per-document

Allowed Values

You can enter a text string up to 25 characters long that contains the character encoding name.

Default Value

No default value

Usage Guidelines

- If the content of body and signature files is plain text (ASCII), the character encoding for email body is US-ASCII.
- If the content of body and signature files is not plain text (ASCII) and the attribute is not set, the character encoding is assumed ISO-8859-1 for AIX and Windows and UTF-8 for Linux. If the attribute is set, the content of body and signature files is assumed to have the specified character encoding.
- Not all character encodings can be used. Encodings such as: UTF-16, UCS-2, UTF-32, UCS-4, etc. or other character encodings that have a 00 (hex) in the binary representation for a character are not supported.

email-from-address

Specifies the electronic mailing address of the sender of this document.

DSS

Email

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a text string up to 4096 characters long that contains the electronic mailing address.

Default Value

No default value

Usage Guidelines

This value is required for documents submitted to email destinations.

email-to-address

Specifies the electronic mailing address(es) of the recipient(s) of this document.

DSS

Email

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a text string up to 4096 characters long that contains the electronic mailing address.

Default Value

No default value

Usage Guidelines

This value is required for documents submitted to email destinations.

You can specify multiple recipients using the **email-to-address** attribute, separated by commas. The documents submitted will be delivered to all recipients.

explicit-page-placement

Identifies the enhanced n-up function requested with this document. However, this function is only available on printers that support enhanced n-up. This attribute is ignored unless the **output-format** attribute is specified.

DSS

PSF, Email

Type

Resettable, single-valued, per-document

Allowed Values

This attribute uses a limited version of the **Place** subcommand from the Page Printer Formatting Aid (PPFA). Here is the syntax for the subcommand:

Place subcommand

```
Place {n {Front | Back} Offset [x-pos] [y-pos]
Rotation [0 | 90 | 180 | 270}
```

Place

Places a page of data or a constant modification relative to a partition. Each set of **Place** subcommands defines an enhanced partition. Each *n* partition can have its own **front**, **back**, **offset**, and **rotation** setting. You must specify the same number of **Place** subcommands as the number of partitions on the sheet. The number of **Place** subcommands should equal (number-up * sides). Failure to specify the proper number of **Place** subcommands results in an error. The sequence of the **Place** subcommand is the sequence in which the incoming pages will be placed in the partitions.

n {Front | Back}

- Specifies the numbered partition (1–4) into which the page of data is placed.

  Front Specifies that this partition is placed on the front side of the sheet. This is the default when a partition number is specified and neither **Front** nor **Back** are specified.

  Back Specifies that this partition is placed on the back side of the sheet.

- When you specify **Front** or **Back**, you must also specify a partition number with ***n***.

Offset *x-pos y-pos*

- *x-pos* specifies a positive or negative offset of the page horizontally.
  y-pos specifies a positive or negative offset of the page vertically.

  When you specify **Offset**, you must specify both the *x-pos* and *y-pos* values.

  If **Offset** is not specified, InfoPrint Manager uses the value of 0 (zero) for both the x- and y-offsets. The specified or default offset is used over any other image shifts specified with the **x-image-shift**, **y-image-shift**, **x-image-shift-back**, or **y-image-shift-back** attributes.

  You can specify the units in inches (in), millimeters (mm), centimeters (cm), or points. If you do not specify a unit of measure for **Offset**, InfoPrint Manager uses a default unit of measure value of inches.

Rotation {0 | 90 | 180 | 270}

Specifies the clockwise rotation of the page placed by this command. Rotation turns the page around its fixed origin points. If you rotate the page without moving its origin point, you might rotate it off the physical medium. To prevent this, always offset the origin to the place you want to be for the rotated page.

Examples

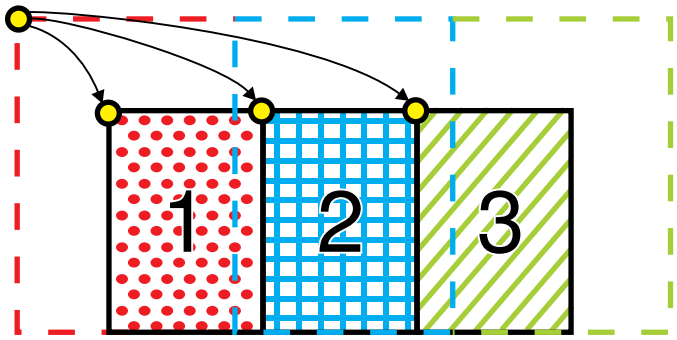
- *3–up example*

  This example is for 3–up duplex where the first and last pages are shifted in toward the center page. All placements are from partition 1:

```
explicit-page-placement='PLACE 1 OFFSET 1.0 1.0
                         PLACE 1 OFFSET 7.0 1.0
                         PLACE 1 OFFSET 13.0 1.0
                         PLACE 1 BACK OFFSET 1.0 1.0
                         PLACE 1 BACK OFFSET 7.0 1.0
                         PLACE 1 BACK OFFSET 13.0 1.0'
```

  Which results in a document with the front side that looks like:

Results of the explict-page-placement attribute showing a 3–up page offset from partition 1



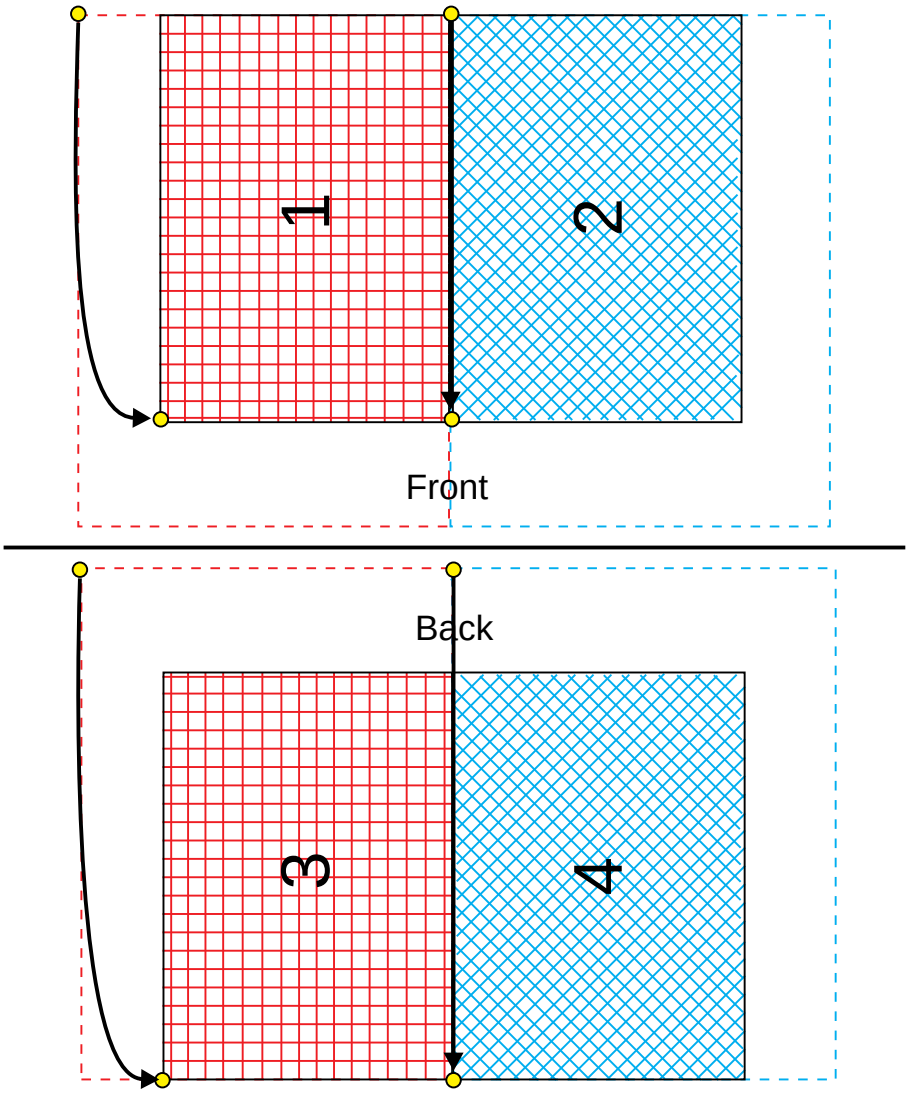
- *2-up example*

  This example is for printing 2-up tumble duplex with rotation:

```
explicit-page-placement='PLACE 1 OFFSET 1.500 IN 6.000 IN ROTATION 270
                         PLACE 2 OFFSET 0 IN 6.000 IN ROTATION 270
                         PLACE 1 BACK OFFSET 1.500 IN 8.500 IN ROTATION 270
                         PLACE 2 BACK OFFSET 0 IN 8.500 IN ROTATION 270'
```

  Which results in a document that looks like:

Results of the explict-page-placement attribute showing a 2–up tumble duplex with rotation



Default Value

No default value

Usage Guidelines

- The syntax of the data provided is not checked until the job is scheduled to print. Syntax errors detected at print time cause the job to abort.
- This attribute is ignored unless the **output-format** attribute is specified.
- When you use the **explicit-page-placement** attribute, page data that is outside of the partition prints as long as it fits on the media.
- This attribute is not valid for ASCII documents.
- This attribute is not valid for PSF-command or other-driver destinations.
- If you specify a value for the **form-definition** document attribute, InfoPrint ignores the **explicit-page-placement** attribute and uses the page placement information in the form definition.

fax-number

Specifies the fax number of the recipient of this document.

DSS

Email

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a text string up to 4096 characters long that contains the fax number.

Default Value

No default value

Usage Guidelines

This value is required for documents submitted to email destinations.

fax-to-email-domain

Specifies the email domain as user-defined customizable field, for a fax job to be sent as an email attachment.

DSS

Email

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a text string up to 4096 characters long that contains the telephone number.

Default Value

No default value

Usage guidelines

If job attribute **fax-number** is set, InfoPrint Manager forwards the fax document as an email attachment to an recipient with the **email-to-address** composed by as **fax-number@fax-to-email-domain**. This allows fax jobs to be submitted to InfoPrint Manager.

fax-to-name

Specifies the name of the person to whom this fax document is addressed that maps to a user-defined customizable field.

DSS

Email

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a text string up to 4096 characters long that contains the person's name.

Default Value

No default value

file-name (Document Only)

See **document-file-name**.

font-fidelity-action

Indicates what InfoPrint should do if a font required to print the document is not available in the resolution specified by the data stream, the **font-resolution** attribute, or the actual destination **default-font-resolution** attribute.

GUI label

Font fidelity action

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Explanation*
stop	Stop printing the job.
continue	Try to substitute a similar font at a different resolution.

Default Value

No default value. If you do not specify a value for this attribute, InfoPrint uses the value in the data stream, then the value of the actual destination attribute **default-font-fidelity-action**.

Usage Guidelines

The **font-fidelity-action** attribute does not apply to OpenType fonts.

font-processing-messages

Indicates whether InfoPrint should issue messages when it substitutes a font with a different resolution for a font with the resolution specified by the data stream, the **font-resolution** attribute, or the actual destination **default-font-resolution** attribute.

GUI label

Issue font processing messages

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

The **font-processing-messages** attribute does not apply to OpenType fonts.

font-resolution

Identifies the resolution of the fonts used to create this document.

GUI label

Font resolution

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter one of these fixed values:

- **240**
- **300**
- **open-type**
- **outline**

Default Value

No default value. If there is no font resolution specified in the data stream and you do not specify a value for this attribute, InfoPrint uses the value of the actual destination attribute **default-font-resolution**.

Usage Guidelines

- The font resolution specified in the data stream overrides this attribute.
- Usually the font resolution and the printer resolution match, but there are two cases when they do not:
  - Some printer devices, such as the InfoPrint 4000, can print fonts of any resolution, although the print head is always 600 pels.
  - It is possible to print a document created with fonts of one resolution on a printer with a different resolution by substituting fonts. Depending on the document, the output might or might not be acceptable.
- InfoPrint validates and schedules jobs using this attribute against the destination attribute **font-resolutions-supported**.
- The **open-type** value is only valid for printers that support TrueType or OpenType fonts. When you enter the **open-type** value for this attribute, the **-truetype** parameter is passed to the **sap2afp** command and is valid only for SAP datastreams. For more information about **sap2afp** command, see sap2afp command: transforms SAP OTF or ABAP data to AFP, p. 459. For more information about TrueType or OpenType fonts, see *Using OpenType Fonts in an AFP System*.

form-definition

Identifies the form definition used when printing this document.

GUI label

Form definition

DSS

PSF, Email

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a text string of up to 8 characters that contains the identification for this resource.

Default Value

No default value. If you omit this attribute or if it contains no value, and if InfoPrint does not create a form definition using the values of other document and job attributes, InfoPrint uses the form definition defined by the actual destination attribute **form-definition**.

Usage Guidelines

- For PSF, if you specify a value for the **document-finishing** or **job-finishing** attribute, InfoPrint creates its own form definition. Do not specify a value for this attribute.
- does not support inline form definitions in multi-document jobs. To print more than one PostScript document in a single job, configure the **/usr/lpp/psf/ps2afp/ps2afpd.cfg** file to include this line:

```
device_controls = any
```

  and use this attribute to specify a form definition when you submit the job to print.
- To drive UP³I devices with PSF, UP³Ii finishing must be specified in a form definition. For information about UP³I devices, see the *InfoPrint Page Printer Formatting Aid: User's Guide*.

form-length

Specifies the length of the form in a continuous-forms printer that supports the IPDS SMS (Set Media Size) command.

If you do not specify the **form-length** attribute, InfoPrint looks in the input file for an inline form definition. If the input file does not contain a form definition, InfoPrint uses the default form definition for that InfoPrint actual destination. If the form definition does not specify the form length, InfoPrint uses the printer default value.

GUI label

Form length

DSS

PSF TCP/IP

Type

Resettable, single-valued, per-job

Allowed Values

A numeric value from 0 to 3467.9 mm. The value you specify is in the form *nnnn.nnn*, which is a number that can optionally contain a decimal point. Millimeters is the unit of measure for the value that you specify.

Note

The actual destination can impose additional restrictions on the allowable range.

Default Value

No default value.

Usage guidelines

- The **form-length** attribute overrides any form length value specified in the form definition that InfoPrint uses for the job.
- If a value is not specified for **form-length** and there is no form length value specified in the form definition associated with the input file, the form length is defaulted to the printer console setting for form length.
- InfoPrint validates and schedules jobs using this attribute against the **form-length-range-supported** actual destination attribute.

format

See **document-format**.

halftone

Identifies the desired combination of screen name, output appearance, and optionally, calibration to use for printing halftones. The halftone values are used to prepare color and gray-scale documents for printing on bi-level, black and white printers.

GUI label

Halftone

DSS

PSF

Type

Resettable, single-valued, complex, per-document

Syntax

screen-name:output-appearance.saved-calibration

Separate the values with colons, for example:

```
ibm106lpi:dark
```

The *saved-calibration* value is used only for custom halftones.

Allowed Values

The value of a **halftone** attribute is a combination of screen name and output appearance in the format: *screen-name:output-appearance*. For custom halftones, the value can also be a combination of screen name, output appearance, and saved calibration in the format: *screen-name:output-appearance.saved-calibration*.

You can enter a customized value or any of the supported (default) values for a particular model. The supported values by models follow.

With the InfoPrint 4000 (IR1/IR2) or InfoPrint 4000-IR3-IR4 printer, you can enter one of these halftone values:

- **ibm71lpi:standard**
- **ibm71lpi:highlight-midtones**
- **ibm71lpi:dark**
- **ibm71lpi:standard.enhtoner**
- **ibm71lpi:highlight-midtones.enhtoner**
- **ibm71lpi:dark.enhtoner**
- **ibm85lpi:standard**
- **ibm85lpi:highlight-midtones**
- **ibm85lpi:dark**
- **ibm85lpi:standard.enhtoner**
- **ibm85lpi:highlight-midtones.enhtoner**
- **ibm85lpi:dark.enhtoner**
- **ibm106lpi:standard**
- **ibm106lpi:highlight-midtones**
- **ibm106lpi:dark**
- **ibm106lpi:standard.enhtoner**
- **ibm106lpi:highlight-midtones.enhtoner**
- **ibm106lpi:dark.enhtoner**
- **ibm141lpi:standard**
- **ibm141lpi:highlight-midtones**

- **ibm141lpi:dark**
- **ibm141lpi:standard.enhtoner**
- **ibm141lpi:highlight-midtones.enhtoner**
- **ibm141lpi:dark.enhtoner**

With the InfoPrint 4100-HD3-HD4, 4100-HD5-HD6, 4100-HS3, 4100-MD1-MD2, 4100-MS1, 4100-PD1-PD2, 4100-PS1, 4100-TS1, 4100-TS2, 4100-TS3, 4100-TD1-TD2, 4100-TD2-TD3, 4100-TD3-TD4, 4100-TD5-TD6, 5000–AS1, 5000–AD1–AD2, 5000–AS3, 5000–AD3–AD4, 5000–AD3–AD4–XR3, 5000–MP-MD3–MD4, 5000–MP-MC1–MC2, 5000–KM3, 5000–KM3–MD4 printers, you can enter one of these halftone values:

- **ibm71lpi:standard**
- **ibm71lpi:highlight-midtones**
- **ibm71lpi:dark**
- **ibm71lpi:dark2**
- **ibm71lpi:accutone**
- **ibm71lpiRot90:standard**
- **ibm71lpiRot90:highlight-midtones**
- **ibm71lpiRot90:dark**
- **ibm71lpiRot90:dark2**
- **ibm71lpiRot90:accutone**
- **ibm85lpi:standard**
- **ibm85lpi:highlight-midtones**
- **ibm85lpi:dark**
- **ibm85lpi:dark2**
- **ibm85lpi:accutone**
- **ibm85lpiRot90:standard**
- **ibm85lpiRot90:highlight-midtones**
- **ibm85lpiRot90:dark**
- **ibm85lpiRot90:dark2**
- **ibm85lpiRot90:accutone**
- **ibm106lpi:standard**
- **ibm106lpi:highlight-midtones**
- **ibm106lpi:dark**
- **ibm106lpi:dark2**
- **ibm106lpi:accutone**
- **ibm106lpiRot90:standard**
- **ibm1061lpiRot90:highlight-midtones**
- **ibm106lpiRot90:dark**
- **ibm106lpiRot90:dark2**
- **ibm106lpiRot90:accutone**
- **ibm141lpi:standard**
- **ibm141lpi:highlight-midtones**
- **ibm141lpi:dark**

- **ibm141lpi:dark2**
- **ibm141lpi:accutone**
- **ibm141lpiRot90:standard**
- **ibm141lpiRot90:highlight-midtones**
- **ibm141lpiRot90:dark**
- **ibm141lpiRot90:dark2**
- **ibm141lpiRot90:accutone**

With the InfoPrint 4100 printers, you can enter one of these halftone values:

- **ibm71lpi:standard**
- **ibm71lpi:highlight-midtones**
- **ibm71lpi:dark**
- **ibm71lpiRot90:standard**
- **ibm71lpiRot90:highlight-midtones**
- **ibm71lpiRot90:dark**
- **ibm85lpi:standard**
- **ibm85lpi:highlight-midtones**
- **ibm85lpi:dark**
- **ibm85lpiRot90:standard**
- **ibm85lpiRot90:highlight-midtones**
- **ibm85lpiRot90:dark**
- **ibm106lpi:standard**
- **ibm106lpi:highlight-midtones**
- **ibm106lpi:dark**
- **ibm106lpiRot90:standard**
- **ibm1061lpiRot90:highlight-midtones**
- **ibm106lpiRot90:dark**
- **ibm141lpi:standard**
- **ibm141lpi:highlight-midtones**
- **ibm141lpi:dark**
- **ibm141lpiRot90:standard**
- **ibm141lpiRot90:highlight-midtones**
- **ibm141lpiRot90:dark**

For all other base-printer models, you can enter one of these halftone values:

- **ibm71lpi:standard**
- **ibm71lpi:highlight-midtones**
- **ibm71lpi:dark**
- **ibm85lpi:standard**
- **ibm85lpi:highlight-midtones**
- **ibm85lpi:dark**
- **ibm106lpi:standard**
- **ibm106lpi:highlight-midtones**

- **ibm106lpi:dark**
- **ibm141lpi:standard**
- **ibm141lpi:highlight-midtones**
- **ibm141lpi:dark**

Default Value

No default value; however there is a default behavior based on printer model.

Usage Guidelines

- InfoPrint validates and schedules jobs using this attribute against the actual destination attribute **halftones-supported**.
- This document attribute is used only for GIF, JPEG, PDF, PostScript, and TIFF documents.
- This document attribute works with the actual destination **toner-version** attribute, which specifies the version of the printer toner that you want to use.
- This attribute works only with the document attribute **document-ps-processor** set to CPSI or with the document attribute **document-pdf-processor** set to APPE or CPSI.

image-fit

Specifies how InfoPrint adjusts an image to fit on the printed page.

GUI label

Image fit

DSS

PSF, Email

Type

Resettable, single-valued, per-document

Allowed Values

You can specify one of these fixed values:

Value	Image formats
position-and-trim	All image formats
scale-to-fit	TIFF, GIF, and JPEG image formats

Default Value

No default value

Usage Guidelines

- When the value of **image-fit** is **position-and-trim**, images larger than the page size are trimmed to fit on any sides that extend beyond the page boundary. For example, if the top left corner of the image is aligned with the top left corner of the logical page, the right side and bottom of the image are trimmed off.

  Use the **x-image-shift**, **x-image-shift-back**, **y-image-shift**, and **y-image-shift-back** attributes to adjust the positioning of the image on the page.

  Images smaller than the page size are not changed.
- Images larger than the page size are reduced proportionately in both dimensions to fit. The whole image is preserved, but it is smaller than the original.

  Images smaller than the page size are not changed.
- InfoPrint validates and schedules jobs using this attribute against the destination attribute **image-fit-supported**.

image-length

Specifies the length of a page of PostScript, PCL, TIFF, GIF, JPEG, or PDF data after it has been transformed for InfoPrint printing.

GUI label

Finished page length (inches) or (mm)

DSS

PSF, Email

Type

Resettable, single-valued, per-document

Allowed Values

The value you specify is in the form *nnnn.nnnu*

nnnn.nnn	is a number that can optionally contain a decimal point.
u	is the units in inches (**i**) or millimeters (**m**). If you do not specify a unit, the default unit is pels. You cannot use a decimal point when the unit is pels.

For 240-pel resolution printers, valid values are:

16 - 5280	pels
0.067 - 22.000	inches
1.701 - 588.852	millimeters

For 300-pel resolution printers, valid values are:

16 - 6600	pels
0.053 - 22.000	inches
1.346 - 558.852	millimeters

For 480-pel resolution printers, valid values are:

16 - 10560	pels
0.067 - 22.000	inches
0.838 - 558.852	millimeters

For 600-pel resolution printers, valid values are:

16 - 20400	pels
0.267 - 34.000	inches
1.346 - 863.6	millimeters

Default Value

No default value

Usage Guidelines

- This attribute is valid only for GIF, JPEG, PCL, PDF, PostScript, and TIFF documents.
- This attribute is not valid for ASCII documents.
- If a text margin is already built into the file, try **image-length=11i** to set the length to 11 inches.

image-out-format

Indicates which type of image data InfoPrint produces.

GUI label

Image out format

DSS

PSF

Type

Resettable, single-valued, per-document

Allowed Values

For PSF, you can enter one of these fixed values:

Fixed Value	*Explanation*
ioca-uncompressed	InfoPrint produces all image data in the Image Object Content Architecture (IOCA) uncompressed format.
im1	InfoPrint produces all image data in IBM's IM uncompressed format. This image format prints on all InfoPrint printers.
io1	InfoPrint produces all image data in the Image Object Content Architecture uncompressed format.
io1-g4	InfoPrint produces all image data in the Image Object Content Architecture compressed G4 Modified Modified Read (MMR) format.
io1-mmr	InfoPrint produces all image data in the Image Object Content Architecture compressed Modified Modified Read (MMR) format.
asis	InfoPrint produces all image data in the same format as it is in the input file.

Default Value

io1-g4

Usage Guidelines

- This attribute is valid only for GIF, JPEG, line-data, PCL, PDF, PostScript, and TIFF documents.
- For the GIF, JPEG, PCL, PDF, PostScript, and TIFF document formats, the value derived from the **color-bits-per-plane** attribute overwrites the value of the **image-out-format** attribute.
- InfoPrint validates and schedules jobs using this attribute against the destination attribute **image-out-formats-supported**.
- If the **image-out-format** attribute is not specified for a document, the **io1-g4** value is used for the transform when the **io1-g4** value is found in the **image-out-formats-supported** actual destination attribute. If the **io1-g4** value is **not** found in the **image-out-formats-supported** actual destination attribute, InfoPrint uses **im1** for the transform output format.

image-small-threshold

Indicates the threshold when the transforms should use the single cell halftones.

GUI label

Halftone threshold for images (inches) or (mm)

Type

Resettable, single-valued

Allowed Values

The value you specify is in the form *nnnn.nnnu*.

nnnn.nnn is a number that can optionally contain a decimal point.

u is the units in inches (**i**) or millimeters (**m**). If you do not specify a unit, the default unit is pels. You cannot use a decimal point when the unit is pels.

For 240-pel resolution printers, valid values are:

- 120 - 1200 pels
- 0.5 - 5 inches
- 12.7-127 millimeters

For 300-pel resolution printers, valid values are:

- 150 - 1500 pels
- 0.5 - 5 inches
- 12.7-127 millimeters

For 480-pel resolution printers, valid values are:

- 240 - 2400 pels
- 0.5 - 5 inches
- 12.7-127 millimeters

For 600-pel resolution printers, valid values are:

- 300 - 3000 pels
- 0.5 - 5 inches
- 12.7-127 millimeters

For 720-pel resolution printers, valid values are:

- 360 - 3600 pels
- 0.5 - 5 inches
- 12.7-127 millimeters

For 1200-pel resolution printers, valid values are:

- 600 - 6000 pels
- 0.5 - 5 inches
- 12.7-127 millimeters

If you specify 0, the transform will not use the image threshold.

Default value

None

Usage Guidelines

- Use this attribute to set the single cell threshold for images.
- An out-of-range nonzero value causes an error at rip time, and the job is not processed.
- This only applies to InfoPrint 4100 model printers. If this attribute is set on a different printer model, the job fails at rip time.

image-width

Specifies the width of a page of PostScript, PCL, TIFF, GIF, JPEG, or PDF data after it has been transformed for InfoPrint printing.

GUI label

Finished page width (inches) or (mm)

DSS

PSF, Email

Type

Resettable, single-valued, per-document

Allowed Values

The value you specify is in the form *nnnn.nnnu*

nnnn.nnn	is a number that can optionally contain a decimal point.
u	is the units in inches (**i**) or millimeters (**m**). If you do not specify a unit, the default unit is pels. You cannot use a decimal point when the unit is pels.

For 240-pel resolution printers, valid values are:

16 - 5280	pels
0.067 - 17.000	inches
1.701 - 431.852	millimeters

For 300-pel resolution printers, valid values are:

16 - 6600	pels
0.053 - 17.000	inches
1.346 - 558.852	millimeters

For 480-pel resolution printers, valid values are:

16 - 10560	pels
0.033 - 17.000	inches
0.838 - 558.852	millimeters

For 600-pel resolution printers, valid values are:

16 - 20400	pels
0.267 - 34.000	inches
1.346 - 863.6	millimeters

Default Value

No default value

Usage Guidelines

- This attribute is valid only for GIF, JPEG, PCL, PDF, PostScript, and TIFF documents.
- If a text margin is already built into the file, try **image-width=8.5i** to set the width to 8.5 inches.

initial-value-document (Document Only)

Identifies a default document (in a given server) that InfoPrint uses to create this document.

DSS

All

Type

Initially settable, single-valued, per-document

Allowed Values

You can enter a text string of up to 255 characters that contains the name of the desired default document.

Default Value

No default value

Usage Guidelines

If you specify this attribute, InfoPrint uses the attribute values from the default document to set the document attribute values, unless you override the default document attribute values by supplying attribute values at the command line.

initial-value-document-identifier (Default Document Only)

Identifies this default document.

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to the *DefaultDocumentName* portion of the argument used with the **pdcreate** command when this default document is created.

Default Value

No default value

Usage Guidelines

The value for this attribute must be unique in the server.

input-color-management-resources

Specifies the information for the input (audit) color resource.

GUI label

Input color management resources

Type

Resettable, multi-valued, per-document

Allowed Values

You can enter any valid input color resource values, including ICC Profiles, ICC Profile file names, Color Management Resource (CMR) short names, CMR file names, and CMR long names.

Default Value

No default value

Usage Guidelines

- This attribute is used to support color resource management.
- Use this attribute together with the **color-rendering-intent**, **destination-model**, and **resource-context** attributes.
- In normal processing, specify an **input-color-management-resources** attribute along with an associated **output-color-management-resources** attribute. If one is specified without the other, there will not be any error and InfoPrint will use the internal default values as the not specified attribute values at the transform level.
- If you do not specify the **input-color-management-resources** document/default document attribute and the **output-color-management-resource** attribute, and you specify the **output-color-management-resource-inline** document/default document attribute, InfoPrint ignores the specified **output-colormanagement-resource-inline attribute**.
- This attribute works only with the document attribute **document-ps-processor** set to CPSI or with the document attribute **document-pdf-processor** set to APPE or CPSI.

input-exit

Specifies the name or the full path name of the input record exit program that InfoPrint uses to process this line-data document. With InfoPrint Manager for AIX, if you specify the file name without a path, InfoPrint searches for the exit program in the paths specified by the **PATH** environment variable. With InfoPrint Manager for Windows, you must specify a fully qualified path name for the exit program. If you do not specify this option, InfoPrint does not use an input record exit program.

GUI label

Input exit program

DSS

PSF, Email

Type

Resettable, single-valued, per-document

Allowed Values

You can enter any valid input record exit program name. The exit program name is case-sensitive.

Default Value

No default value

Usage Guidelines

- This attribute is valid only for line-data documents.

- If the input file is unformatted ASCII, but the fonts you are using contain EBCDIC, not ASCII, code points (you specify **convert-to-ebcdic=yes**), you can specify:
  - For InfoPrint Manager for AIX:

    /usr/lpp/psf/bin/apka2e

    Converts ASCII stream data to EBCDIC stream data.

    /usr/lpp/psf/bin/asciinpe

    Converts unformatted ASCII data into a record format and then converts the ASCII stream data to EBCDIC stream data.
  - For InfoPrint Manager for Windows

    install_path\bin\apka2e

    Converts ASCII stream data to EBCDIC stream data.

    install_path\bin\asciinpe

    Converts unformatted ASCII data into a record format and then converts the ASCII stream data to EBCDIC stream data.
- If your input file uses fonts that have ASCII code points (you specify **convert-to-ebcdic=no**), you should *not* use the **apka2e** or **asciinpe** exit programs. However, if your unformatted ASCII file contains carriage returns and form feeds, you might want to specify this exit program supplied with InfoPrint:
  - For InfoPrint Manager for AIX:

    /usr/lpp/psf/bin/asciinp

    Converts unformatted ASCII data that contains carriage returns and form feeds into a record format that contains an American National Standards Institute (ANSI) carriage control character. This exit encodes the ANSI carriage control character in byte 0 of every record.
  - For InfoPrint Manager for Windows:

    install_path\bin\asciinp

    Converts unformatted ASCII data that contains carriage returns and form feeds into a record format that contains an American National Standards Institute (ANSI) carriage control character. This exit encodes the ANSI carriage control character in byte 0 of every record.

input-tray-select

Use the **default-input-tray** attribute or default to the input tray specified in the data stream or form definition.

DSS

PSF

interchange-set-version

This attribute indicates the interchange set version for the resulting AFP data stream.

GUI label

Interchange set version

DSS

PSF TCP/IP

Type

Resettable, single-valued

Allowed values

You can enter one of these fixed values:

- IS1
- IS3

Default value

IS1

Usage Guidelines

- The **interchange-set-version** attribute can be used with only these transform commands: ps/pdf2afp, pcl2afp, sap2afp, gif2afp, tiff2afp, and jpeg2afp.
- When using the sap2afp transform command to convert an ABAP file by specifying 3 as a value for the -is flag, it does not create IS/3 compliant AFP output. The sap2afp transform command creates IS/3 compliant AFP output only when the input file is an OTF file.

jde-jdl

Specifies the input for the submitted file as JDE (Job Descriptor Entry) and JDL (Job Descriptor Library) separated by a comma.

GUI label

JDE,JDL

DSS

Metacode

Type

Resettable, single-valued, per-document in a job

Allowed Values

A text string for JDE and JDL that is up to six digit strings separated by a comma. The text string can contain A-Z, 0—9, ?, and $.

Default Value

No default value.

job-terminate-message-count

Specifies the number of messages that can be issued for a document in the job before the job is terminated. InfoPrint Manager counts datastream-type error messages, such as undefined character messages or off logical page errors toward the **job-terminate-message-count**. Messages issued because of an operator action (such as, pausing a job) or messages that require operator intervention (such as, a paper jam) are not counted in the **job-terminate-message-count**.

GUI label

Terminate message count

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter an integer from 0 through 9999.

Default Value

No default value.

Usage Guidelines

- If the specified limit is reached while processing a document in the job, the messages print with one more message stating that the job is being terminated because the **job-terminate-message-count** has been reached.
- If the messages are directed to a file instead of being printed, the **dss-job-message-disposition** actual destination attribute specifies where the messages are written, and if the **job-terminate-message-count** is reached, the job still terminates.
- Some errors generate groups of messages, and InfoPrint Manager counts this group as one toward the **job-terminate-message-count**.

- When the value is 0, the job should not be terminated because of the number of messages. This is also the behavior when no value is specified.

jog-between-job-copies

Indicates whether to jog stacked output between job copies.

GUI label

Jog between copies

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

No default value. If you omit this attribute or it contains no value, output is jogged between job copies on printers that support jog.

Usage Guidelines

This attribute controls whether stacked output is jogged (offset) between job copies. When used on printers that do not support jogging output, the value of this attribute is ignored. When used on printers that do support jogging output, if the value of this attribute is **true** or **yes**, the stacked output is jogged. If the value is **false** or **no**, the output is not jogged.

line-small-threshold

Indicates the threshold for line art when the transforms should use the single cell halftones.

GUI label

Halftone threshold for line art (inches) or (mm)

Type

Resettable, single-valued

Allowed Values

The value you specify is in the form *nnnn.nnnu*.

nnnn.nnn is a number that can optionally contain a decimal point.

u is the units in inches (i) or millimeters (m). If you do not specify a unit, the default unit is pels. You cannot use a decimal point when the unit is pels.

For 240-pel resolution printers, valid values are:

- 120 - 1200 pels
- 0.5 - 5 inches
- 12.7-127 millimeters

For 300-pel resolution printers, valid values are:

- 150 - 1500 pels
- 0.5 - 5 inches
- 12.7-127 millimeters

For 480-pel resolution printers, valid values are:

- 240 - 2400 pels
- 0.5 - 5 inches
- 12.7-127 millimeters

For 600-pel resolution printers, valid values are:

- 300 - 3000 pels
- 0.5 - 5 inches
- 12.7-127 millimeters

For 720-pel resolution printers, valid values are:

- 360 - 3600 pels
- 0.5 - 5 inches
- 12.7-127 millimeters

For 1200-pel resolution printers, valid values are:

- 600 - 6000 pels
- 0.5 - 5 inches
- 12.7-127 millimeters

If you specify 0, the transform will not use the line-small-threshold.

Default value

None

Usage Guidelines

- Use this attribute to set the single cell threshold for images.
- An out-of-range nonzero value causes an error at rip time, and the job is not processed.
- This only applies to InfoPrint 4100 model printers. If this attribute is set on a different printer model, the job fails at rip time.

list-of-managers (Default Document Only)

Lists the people responsible for this default document.

DSS

All

Type

Resettable, multi-valued

Input Synonym

You can use the synonym **managers**.

Allowed Values

You can enter a text string up to 255 characters long, per value, that contains the name or user ID of the person responsible for this default document.

Default Value

No default value

Usage Guidelines

This attribute is useful if a user needs to contact someone to report a problem or to request a change.

logical-destinations-ready (Default Document Only)

Lists the enabled logical destinations that reference this default document.

DSS

All

Type

Non-settable, multi-valued

Input Synonym

You can use the synonym **logical-printers-ready**.

Allowed Values

InfoPrint sets and updates this value with the destination names of the enabled logical destinations that reference this object.

Default Value

No default value

Usage Guidelines

- InfoPrint sets this attribute when the destination attribute **destination-initial-value-document** of an enabled logical destination references this default document.
- InfoPrint removes the destination identification from the list if the destination is disabled.
- You cannot delete this default document while any of the logical destinations identified in this list are enabled.

logical-printers-ready (Default Document Only)

See **logical-destinations-ready**.

managers (Default Document Only)

See **list-of-managers**.

maximum-messages-printed

Specifies the maximum number of error messages InfoPrint prints with the job.

GUI label

Maximum messages printed

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter an integer from 0 through 9999.

Default Value

None.

Usage Guidelines

- This attribute Identifies how many error messages InfoPrint prints, not how many messages InfoPrint generates.
- If the value is:

  0

  No messages print

  9999

  All messages print
- While **maximum-messages-printed** has no default value, if you do not specify this attribute, it is like specifying **9999** because all messages print.
- If the value specified for **job-terminate-message-count** is less than the value for **maximum-messages-printed**, the **maximum-messages-printed** value will never be reached.

maximum-transform-pages-ahead

Specifies the maximum number of pages by which the InfoPrint transform programs can get ahead of the printing process.

GUI label

Maximum pages to transform ahead

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter an integer from 500 through 2147483647.

Default Value

No default value

Usage Guidelines

- Pages that have been transformed but not printed are stored in a print buffer. Set a value for this attribute to keep the print buffer from overflowing.
- This attribute is not valid for ASCII documents.

message (Default Document Only)

Provides a message associated with this default document.

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 4095 characters that contains information about this default document.

Default Value

No default value

mvs-class

See **class**.

mvs-destination

For jobs originating on MVS systems and directed to InfoPrint, this attribute can be used to contain the value specified for the MVS **dest** parameter. InfoPrint can print the destination information on an auxiliary sheet if the job uses the **full** auxiliary-sheet object.

GUI label

Destination

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a one-to-eight character destination name.

Default Value

No default value

Usage Guidelines

- See the *PSF/MVS: MVS Download Guide* for further information, including restrictions, on the MVS **dest** parameter.
- You can use this attribute in a shell script used with MVS Download.

mvs-forms

For jobs originating on MVS systems and directed to InfoPrint, this attribute can be used to contain the value specified for the MVS **forms** parameter. InfoPrint can print the forms information on an auxiliary sheet if the job uses the **full** auxiliary-sheet object.

GUI label

Forms

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a one-to-eight character form name.

Default Value

If you do not specify a forms value when you submit the job from the MVS system, MVS defaults the value of the **forms** parameter to an installation-defined default.

Usage Guidelines

- See the *PSF/MVS: MVS Download Guide* for further information about the MVS **forms** parameter.
- You can use this attribute in a shell script used with MVS Download Receiver.

mvs-segment-id

For line-mode data jobs originating on MVS systems and directed to InfoPrint, this attribute can be used to contain the value specified for the MVS **segment** parameter. The **segment** parameter specifies that output data is segmented into separate data sets consisting of the number of pages specified by the parameter value.

GUI label

Segment ID

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a one-to-ten character segment identifier representing the page count.

Default Value

No default value

Usage Guidelines

- See the *PSF/MVS: MVS Download Guide* for further information, including restrictions, on the MVS **segment** parameter.
- You can use this attribute in a shell script used with MVS Download Receiver.

name-text

Specifies name information that InfoPrint prints in the **NAME:** field of an auxiliary sheet if the job uses the **full** auxiliary-sheet object.

GUI label

Name

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a text string of up to 4095 characters that contains the name information.

Default Value

No default value

Usage Guidelines

- While you can specify more characters, you should limit the value you supply to 24 characters or less to make sure that there is enough room available on the printed page for all name information.
- If the text string you specify contains blank spaces, enclose the text string in single quotation marks.

new-line-option

Identifies how the document input data delimits lines.

GUI label

New line option

DSS

PSF, Email

Type

Resettable, single-valued, per-document

Allowed Values

You can enter one of these fixed values:

Fixed Value	***FILEFORMAT***
counted-4-octet-aligned	**RECORD** (S/370 format record)
cr-and-lf	**STREAM,(NEWLINE=CRLF)**
lf	**STREAM,(NEWLINE=LF)**
record,*n*	**RECORD,***n* (S/370 format record data where each line is *n* bytes long) *n* is an integer from 1 to 32767

Default Value

lf

Usage Guidelines

- This attribute is valid only for line-data documents.
- This attribute corresponds to the **fileformat** print submission parameter information for the **line2afp** transform.

new-line-option-data-encoding

Identifies the encoding for the input data line delimiters.

GUI label

New line option data encoding

DSS

PSF, Email

Type

Resettable, single-valued, per-document

Allowed Values

You can enter one of these fixed values:

Fixed Value	*FILEFORMAT*
utf-8	,UTF8
utf-16	,UTF16
ebcdic	,EBCDIC
ascii	,ASCII

Default Value

The default is determined by the type of data; that is, with ASCII data, the default is ASCII, and with EBCDIC data, the default is EBCDIC.

Usage Guidelines

- This attribute is ignored unless the value specified with **new-line-option** is **lf** or **cr-and-lf**.
- This attribute is valid only for line-data documents.
- This attribute corresponds to the **fileformat** print submission parameter information for the **line2afp** transform.

node-id-text

Specifies node-identification information that InfoPrint prints in the **NODEID:** field of an auxiliary sheet.

GUI label

Node ID

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a text string of up to 4095 characters that contains the node-identification information.

Default Value

No default value

Usage Guidelines

- While you can specify more characters, you should limit the value you supply to 10 characters or less to make sure that there is enough room available on the printed page for all node-identification information.
- If the text string you specify contains blank spaces, enclose the text string in single quotation marks.

number-up

Specifies the number of pages to print on a single side of the paper when the value of the **output-format** attribute is **side-by-side-copies** or **simple-n-up**.

GUI label

Number up

DSS

CUPS, IPP, PSF, Email

Type

Resettable, single-valued, per-job

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
imposition-simple-1-up	**1up**
imposition-simple-2-up	**2up**
imposition-simple-3-up	**3up**
imposition-simple-4-up	**4up**

Default Value

No default value

Usage Guidelines

- In two-sided jobs, the number of pages printed on each sheet is twice the **number-up** value.
- This attribute is not valid for ASCII documents, except for CUPS destinations.
- This attribute is not valid for psf-command or other-driver destinations.
- If you specify a value for the document **form-definition** attribute, InfoPrint ignores the **number-up** attribute and uses the number-up value in the form definition.
- InfoPrint validates and schedules jobs using this attribute against the destination attribute **number-up-supported**.
- For CUPS DSS destinations, the ability to generate **number-up** pages depends on the printer driver file (PPD) associated with the **printer-model**.

object-class

Identifies the object class to which this object belongs.

DSS

All

Type

Non-settable, single-valued, per-job

Allowed Values

InfoPrint sets this value to **document** for a document or to **initial-value-document** for a default document.

Default Value

Document

document

Default document

initial-value-document

octet-count (Document Only)

Specifies the document size in octets (bytes).

GUI label

Size (Bytes)

DSS

All

Type

Non-settable, single-valued, per-document

Allowed Values

InfoPrint computes this value when it creates the document. The value can be an integer from 0 to 9223372036854775800.

Default Value

The size of the document in bytes (octets).

Usage Guidelines

- InfoPrint uses this attribute to compute total octet count for a job and to provide information about this document.
- InfoPrint compares the **file-size-range-supported** actual destination attribute to this attribute for validation and scheduling.
- For jobs consisting of two or more documents, you can query for the octet count of each document in the job by specifying **-r octet-count** with the **pdls** command.

offset-stacking-between-job-copies

See **jog-between-job-copies**.

orientation

See **content-orientation**.

other-options

See **destination-pass-through**.

other-transform-options

Lets you submit options for the transform that converts this document to the AFP data stream.

GUI label

Transform options

DSS

PSF, Email

Type

Resettable, single-valued, per-document

Allowed Values

You can enter a text string of up to 4095 characters that contains the transform options.

Default Value

No default value

Usage Guidelines

See InfoPrint Manager transform commands, p. 285 for information about transform options.

output-appearance

Use the **halftones** attribute to specify the **output-appearance** attribute values. (See halftone, p. 832 for more information.) The **output-appearance** attribute is supported to maintain downward compatibility, but it is not the recommended attribute for specifying the desired style of the printed document.

Identifies the desired style of the printed document.

DSS

PSF

Type

Resettable, single-valued, per-document

Allowed Values

You can enter a customized value or one of these fixed values:

- **standard**
- **accutone**
- **highlight-midtones**
- **dark**
- **dark2**

Default Value

No default value

Usage Guidelines

- This attribute is valid only for GIF, JPEG, PDF, PostScript, and TIFF documents.
- This attribute works only with the document attribute **document-ps-processor** set to CPSI or with the document attribute **document-pdf-processor** set to APPE or CPSI.
- InfoPrint validates and schedules jobs using this attribute against the destination attribute **output-appearances-supported**.

output-bin

Specifies the name of the output bin to which you want InfoPrint Manager to direct the output from your job.

GUI label

Output bin requested

DSS

CUPS, IPP, PSF

Type

Resettable, single-valued, per-document

Allowed Values

You can enter an output bin name of up to 255 characters that contains the name of an output bin, such as `top` or `staple`.

Default Value

No default value

Usage Guidelines

- **For PSF**
  - The value you specify for the **output-bin** attribute overrides any output bin specified in the form definition InfoPrint Manager uses to process the job.
  - If you specify different values for this attribute for each document in a job, and also specify a value for the document form-definition, InfoPrint Manager ignores this attribute and uses the **output-bin** value in the form definition.
  - This attribute is valid for ASCII documents in a job only if it is not changed between documents in the job.
  - For PSF, InfoPrint Manager validates and schedules jobs using this attribute against the **output-bins-supported** actual destination attribute, which InfoPrint Manager sets according to the values supplied for the **output-bin-numbers** PSF actual destination attribute.
  - For PSF, InfoPrint Manager maps the value to an actual bin number using the actual destination attribute **output-bin-numbers**.
- **For CUPS**
  - InfoPrint Manager maps the value to an output bin using the corresponding driver option set in the printer model configuration file. For more information, see "Mapping Attributes and Values to PPD Options" in the *RICOH InfoPrint Manager for Linux: Getting Started* guide.

output-color-management-resource

Specifies the information for the output (instruction) color resource.

GUI label

Output color management resource

DSS

PSF

Type

Resettable, single-valued, per-document

Allowed Values

You can enter any valid output color resource values, including ICC Profiles, ICC Profile file names, Color Management Resource (CMR) short names, CMR file names, and CMR long names.

Default Value

No default value

Usage Guidelines

- This attribute is used to support color resource management.
- Use this attribute together with the **color-rendering-intent**, **destination-model**, and **resource-context** attributes.
- In normal processing, specify an **input-color-management-resources** attribute along with an associated **output-color-management-resources** attribute. If one is specified without the other, there will not be any error and InfoPrint will use the internal default values as the not specified attribute values at the transform level.
- If you do not specify the **input-color-management-resources** document/default document attribute and the **output-color-management-resource** attribute, and you specify the **output-color-management-resource-inline** document/default document attribute, InfoPrint ignores the specified **output-colormanagement-resource-inline attribute**.
- If you specify the **output-color-management-resource** as an ICC Profile instead of an AFP CMR, InfoPrint will ignore the **output-color-management-resource-tag** and **output-color-management-resource-inline** attributes at the transform level.
- This attribute works only with the document attribute **document-ps-processor** set to CPSI or with the document attribute **document-pdf-processor** set to APPE or CPSI.

output-color-management-resource-inline

Specifies whether the output Color Management Resource (CMR) will be placed inline with the data stream.

GUI label

Place CMR inline

Type

Resettable, single-valued, per-document

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

- This attribute is used to support color resource management.
- Use this attribute together with the **color-rendering-intent**, **destination-model**, and **resource-context** attributes.

- If you specify the **output-color-management-resource-inline** attribute but do not specify the **output-color-management-resource-tag** attribute, InfoPrint will ignore the **output-color-management-resource-inline** attribute at the transform level.
- If you specify the **output-color-management-resource** as an ICC Profile instead of an AFP CMR, InfoPrint will ignore the **output-color-management-resource-tag** and **output-color-management-resource-inline** attributes at the transform level.
- This attribute works only with the document attribute **document-ps-processor** set to CPSI or with the document attribute **document-pdf-processor** set to APPE or CPSI.

output-color-management-resource-tag

Specifies how the output AFP will be tagged with color information.

GUI label

Tag output CMR

Type

Resettable, single-valued, per-document

Allowed Values

You can enter one of these fixed values:

none

There will be no tagging in the output AFP.

normal

InfoPrint will tag the output AFP as an input (audit) Color Management Resource (CMR).

passthru

InfoPrint will tag the output AFP as both an input (audit) CMR and an output (instruction) CMR.

Default Value

None

Usage Guidelines

- This attribute is used to support color resource management.
- Use this attribute together with the **color-rendering-intent**, **destination-model**, and **resource-context** attributes.
- If you do not specify the **output-color-management-resource-tag** attribute or its value is **none**, and if you specify the **output-color-management-resource-inline** attribute, InfoPrint ignores the specified **output-color-management-resource-inline** attribute.
- If you specify the **output-color-management-resource-inline** attribute but do not specify the **output-color-management-resource-tag** attribute, InfoPrint will ignore the **output-color-management-resource-inline** attribute at the transform level.

- If you specify the **output-color-management-resource** as an ICC Profile instead of an AFP CMR, InfoPrint will ignore the **output-color-management-resource-tag** and **output-color-management-resource-inline** attributes at the transform level.
- This attribute works only with the document attribute **document-ps-processor** set to CPSI or with the document attribute **document-pdf-processor** set to APPE or CPSI.

output-format

Used to specify how pages should be imposed on a sheet of paper.

GUI label

Layout format

DSS

CUPS, PSF

Type

Resettable, single-valued, per-job

Allowed Values

For Email and PSF you can specify one of these fixed values:

- **side-by-side-copies**
- **simple-n-up**
- **booklet-print**
- **booklet-print-with-integrated-cover**
- **slit-and-merge**

For CUPS you can specify one of these fixed values:

- **booklet-print**

Default Value

No default value

Usage Guidelines

- **For Email and PSF**
  - If the **output-format** attribute is specified for a certain document, do not mix this document with any other documents.
  - **side-by-side-copies** and **simple-n-up** both print as many pages on one sheet as the **number-up** value allows.
    - **side-by-side-copies** prints multiple copies of one page on the sheet.
    - **simple-n-up** prints multiple pages on the sheet in numerical order.

– **booklet-print** and **booklet-print-with-integrated-cover** arrange pages like this:

Page 2 backed by Page 1	Page n-1 backed by Page n

so that when the sheet is folded in half and collated with the rest of the booklet, the pages appear in sequence.

To print a booklet with a pre-printed cover, specify **insert** as the document format of the first document in the job. The first document in the job must contain at least one page, but no more than four pages.

Note

When the InfoPrint server adds blank pages to the job to make it a multiple of four with **booklet-print-with-integrated-cover**, InfoPrint adds the blank pages inside of the back cover.

For PSF, to saddle-stitch the booklet, specify a value of **saddle-stitch** for the **job-finishing** job attribute.

booklet-print does not require a value for **number-up**.

– For **booklet-print-with-integrated-cover**, any blank page that needs to be added to get a multiple of four will be placed before the last two pages of the job.

– **slit-and-merge** arranges pages like this:

Page 1 backed by Page 2	Page 3 backed by Page 4

so that when the sheet is cut in half and the left half is stacked on top of the right half, the pages appear in sequence.

slit-and-merge does not require a value for **number-up**.

– You can specify one-sided or two-sided printing and simplex or tumble with any of these formats except **booklet-print**.

– This attribute is not valid for ASCII or KGL documents, or any combination of these documents.

– If you specify a value for the document **form-definition** attribute, InfoPrint ignores the **output-format** attribute and uses the value in the form definition.

– InfoPrint validates and schedules jobs using this attribute against the destination attribute **output-format-supported**.

– Do not use **booklet-print** or **booklet-print-with-integrated-cover** with a job ticket. The other output formats listed with **output-format** should be used with caution with job tickets, because the other output formats apply to signatures and not individual pages.

– The value specified with the **output-format** attribute is the starting output format; values specified with the **explicit-page-placement** attribute can change the output-format.

• **For CUPS**

- InfoPrint Manager maps the value to the corresponding driver option set in the printer model configuration file. For more information, see "Mapping Attributes and Values to PPD Options" in the *RICOH InfoPrint Manager for Linux: Getting Started* guide.
- InfoPrint Manager does not support specifying a **n-up** layout with the **booklet-print** value.
- InfoPrint Manager does not transform the data, it passes the corresponding driver option to the underlying printing system.

overlay

Specifies the name of an overlay that InfoPrint uses for each sheet-side in the document.

GUI label

Medium overlay

DSS

PSF, Email

Type

Resettable, single-valued, per-job

Allowed Values

You can enter an overlay name up to 8 characters.

Default Value

No default value

Usage Guidelines

- For PSF actual destinations, the value you specify for this attribute overrides any overlay selection in the data stream or form definition, with one exception. If you specify different values for this attribute for each document in a job and an explicit medium selection in the data stream or using the document **form-definition** attribute, InfoPrint ignores the different values and uses the explicit medium selection.
- This overlay prints in addition to any overlay specified by the form definition for the job.
- When a form definition is not specified for the job, this overlay prints in addition to the overlays specified in the **overlay-front** and **overlay-back** attributes.
- This attribute is valid for ASCII documents in a job only if it is not changed between documents in the job.

overlay-back

Specifies the name of an overlay that InfoPrint uses for the back of each sheet in the document.

GUI label

Medium overlay for back side

DSS

PSF, Email

Type

Resettable, single-valued, per-job

Allowed Values

You can enter an overlay name up to 8 characters.

Default Value

No default value

Usage Guidelines

- For PSF actual destinations, the value you specify for this attribute overrides any overlay selection in the data stream or form definition, with one exception. If you specify different values for this attribute for each document in a job and an explicit medium selection in the data stream or using the document **form-definition** attribute, InfoPrint ignores the different values and uses the explicit medium selection.
- This overlay prints in addition to any overlay specified by the form definition for the job.
- When a form definition is not specified for the job, this overlay prints in addition to the overlays specified in the **overlay** and **overlay-front** attributes.
- This attribute is valid for ASCII documents in a job only if it is not changed between documents in the job.

overlay-front

Specifies the name of an overlay that InfoPrint uses for the front of each sheet in the document.

GUI label

Medium overlay for front side

DSS

PSF, Email

Type

Resettable, single-valued, per-job

Allowed Values

You can enter an overlay name up to 8 characters.

Default Value

No default value

Usage Guidelines

- For PSF actual destinations, the value you specify for this attribute overrides any overlay selection in the data stream or form definition, with one exception. If you specify different values for this attribute for each document in a job, and an explicit medium selection in the data stream or using the document **form-definition** attribute, InfoPrint ignores the different values and uses the explicit medium selection.
- This overlay prints in addition to any overlay specified by the form definition for the job.
- When a form definition is not specified for the job, this overlay prints in addition to the overlays specified in the **overlay** and **overlay-back** attributes.
- This attribute is valid for ASCII documents in a job only if it is not changed between documents in the job.

page-count (Document Only)

Specifies the length of the document in pages. The page count might not be accurate for PDF documents that are not properly structured.

GUI label

Page count

DSS

All

Type

Resettable, single-valued, per-document

Allowed Values

You can enter an integer from 1 through 2147483647.

Default Value

When InfoPrint can determine a page count from the PDF, PCL, or PostScript input, InfoPrint sets the page count in this attribute.

Usage Guidelines

- InfoPrint determines the size of a job based on the total number of octets (bytes) in the job. For operator job-management purposes, you can find that job size based on pages is easier.

- InfoPrint uses the value specified with the **page-count** attribute and the value specified with the **copy-count** document attribute (and the **job-copies** component in the **results-profile**) to calculate the value for the **job-page-count** attribute.
- Transforms called by transform objects can change the page count of a document. For more information, see "Using the transform_update utility" in the appropriate InfoPrint Manager procedures manual.
- InfoPrint Manager updates the page count of a document with the page count function that is enabled with the **count-job-pages** server attribute.
- The **page-count** attribute includes the separator pages only when the separator page support is enabled.
- InfoPrint server extracts the page count of the PDF document when the PDF document is correctly structured.
- When a job contains PDF documents, the **document-format** attribute is ignored.

page-definition

Identifies the page definition used when printing a line-data and SAP ABAP data documents.

GUI label

Page definition

DSS

PSF, Email

Type

Resettable, single-valued, per-document

Allowed Values

You can enter a text string of up to 8 characters that contains the name of the desired page-definition resource.

Default Value

No default value

Usage Guidelines

You must supply a value for this attribute for line-data and SAP ABAP document formats. It ignores the SAP OTF document formats. It is not valid for any other document format.

page-media-select

Use the **default-medium** attribute or default to the medium specified in the data stream or form definition.

DSS

PSF

page-select (Document Only)

Specifies the first and last page of a document that InfoPrint prints.

GUI label

Pages to process

DSS

AIX, CUPS, IPP, PSF, Email, Passthrough

Type

Resettable, multi-valued, complex, per-document

Syntax

first-page:last-page

Separate the values with a colon, for example:

```
25:48
-x "page-select=25:48"
```

or

```
 1:3 9:13
-x "page-select=1:4 9:13"
```

Except for IPP, you can omit the first-page value or the last-page value, for example:

```
:6
10:
```

See "Usage Guidelines".

Components

- **first-page:** Specifies the number of the page where printing starts.

  #### GUI label

  Lower limit

  #### Type

  Multi-valued

  #### Allowed Values

  You can enter a value of 1 through 2147483647.

  #### Default Value

No default value

- **last-page:** Specifies the number of the page where printing ends.

  GUI label

  Upper limit

  Type

  Multi-valued

  Allowed Values

  You can enter a value of 1 through 2147483647.

  Default Value

  No default value

Usage Guidelines

- You can specify up to 10 page ranges to be printed. If you specify more than 10 page ranges, no pages print and an error is displayed.
- Page numbering always starts at one (**1**) even if the job you print uses an alternate numbering system, such as roman numerals or folio-by-chapter (1-1, 1-2, and so on) numbering. You cannot request a range of pages using page numbers from an alternate numbering system.
- This attribute is not valid for ASCII or KGL documents.
- For AIX, CUPS, and Passthrough, this attribute works only when using InfoPrint Manager **pioinfo** and **piorpdm** CUPS backends.
- For AIX, CUPS, IPP, and Passthrough this attribute doesn't support multiple values.
- For AIX, CUPS, and Passthrough DSSs, this attribute works only for PCL, PDF, and PS.
- If you omit the first-page value, for example **:6**, InfoPrint prints from the first page of the job through page 6.
- If you omit the last-page value, for example **6:**, InfoPrint prints from page 6 through the last page of the job.
- Entering a combination of first-page last-page values where the first-page value is greater than the last-page value is an error.
- If InfoPrint cannot find the first-page value in the document, no pages print and InfoPrint issues an error.
- If InfoPrint cannot find the last-page value in the document, it prints pages from first-page value to the end of the document. InfoPrint does not issue an error.
- For jobs with **document-format=dpf-ipds**, the **first-page** value is only applied to the *first copy*, and all following copies start at page 1.
- For jobs with **document-format=dpf-ipds**, the **last-page** value is always ignored.
- For jobs with **document-format=dpf-ipds**, only the first range is processed, the remaining ranges are always ignored.
- When you specify the **force-cse-sheet-eject** attribute as **true** and you use the **page-select** attribute to specify a page range, you can get more sheets than specified with **page-select** attribute alone.
- If blank pages are inserted into the job by formdef settings or because the **force-cse-sheet-eject** attribute is set to **true**, the pages are inserted in addition to the page range specified with this attribute.

- For PSF, the first and last pages of each range depend on the *formdef* or medium maps specified.
- For PSF, if the inline form definition or the form definition specified externally is for duplex printing, an extra page might be printed. If the first page specified is even, then the page before the first page specified is printed as an extra page. Similarly, if the last page specified is odd, then the page after the last page specified is printed as an extra page.

  Moreover, if the form definition specifies n-up printing to place pages side by side on a single sheet (front and back if duplex printing is also requested), the printed output displays the complete content of the sheets that include the selected pages. For instance, if the **page-select** is 2:7 and the form definition requires duplex 4-up, one sheet is printed with the pages 1-4 on the front side and pages 5-8 on the back side.

plex

Indicates whether InfoPrint conditions the page images of this document for one-sided or two-sided printing and the relative orientation of consecutive pages.

GUI label

Plex to print

DSS

AIX, BSD, CUPS, PSF

Type

Resettable, single-valued, per-document

Allowed Values

You can enter one of these fixed values:

- **simplex**
- **tumble**

Default Value

AIX, CUPS

The first value listed in the destination attribute **plexes-supported**

BSD

No default value

PSF

simplex

Usage Guidelines

- InfoPrint validates and schedules jobs using this attribute against the destination attribute **plexes-supported**.

- This attribute is valid for ASCII documents in a job only if it is not changed between documents in the job, except for CUPS actual destinations.
- InfoPrint uses this attribute in combination with the **sides** attribute. The results are:

plex ***Value***	**sides** ***Value***	***Output***
simplex	**1**	Simplex
simplex	**2**	Duplex
tumble	**1**	Not valid
tumble	**2**	Tumble duplex

- InfoPrint uses plex specifications in this order:
  1. The **plex** document attribute unless you specify different values for this attribute for each document in a job, and also specify a value for the document **form-definition** attribute. In that case, InfoPrint ignores the **plex** document attribute.
  2. The plex specification in the document or default document form definition.
  3. The plex specification in the actual destination form definition.
  4. **plex** actual destination attribute.

print-quality

Specifies the desired output quality of the printed document.

GUI label

Print quality

DSS

AIX, BSD, IPP

Type

Resettable, single-valued, per-document

Allowed Values

You can enter one of these fixed values:

- **draft**
- **high**
- **normal**

Default Value

normal

Usage Guidelines

InfoPrint validates and schedules jobs using this attribute against the destination attribute **print-qualities-supported**.

printer-initial-value-document (Document Only)

See **destination-initial-value-document**.

printer-pass-through

See **destination-pass-through**.

programmer-text

Specifies programmer information that InfoPrint prints in the **PROGRAMMER:** field of an auxiliary sheet if the job uses the **full** auxiliary-sheet object.

GUI label

Programmer

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a text string of up to 4095 characters that contains the programmer information.

Default Value

No default value

Usage Guidelines

- While you can specify more characters, you should limit the value you specify to 24 characters or less to make sure that there is enough room available on the printed page for all programmer information.
- If the text string you specify contains blank spaces, enclose the text string in single quotation marks.

resource-context

Defines the directory path location for all document-specific resources: fonts, form definitions, overlays, page definitions, page segments, color management resources (CMRs), and presentation object containers.

GUI label

Location of resources

DSS

PSF, Email

Type

Resettable, single-valued, per-job

Allowed Values

You can enter the name of a resource-context object, a CMR, or a text string of up to 4095 characters that contains a specific directory path name for resources.

For more information about how InfoPrint searches file extensions for resources, see "Creating and Managing Resource-Context Objects" in *RICOH InfoPrint Manager for AIX: Procedures*, *RICOH InfoPrint Manager for Linux: Procedures*, or *RICOH InfoPrint Manager for Windows: Procedures*.

Syntax

path:path `on AIX`
path:path `on Linux`
path;path `on Windows`

Separate multiple paths with a colon on AIX and Linux or a semicolon on Windows, for example with AIX or Linux:

```
/res:/dept123/res
```

Default Value

With AIX or Linux, no default values, but InfoPrint always searches **/usr/lpp/psf/reslib**.

With Windows, no default values, but InfoPrint always searches *install_path***reslib**.

Usage Guidelines

- Because InfoPrint searches the path specified by this attribute *after* the individual paths for different types of resources, you can use this attribute to locate default resources.
- You can use this attribute instead of specifying individual values for:
  - **resource-context-font**
  - **resource-context-form-definition**
  - **resource-context-overlay**

  - **resource-context-page-definition**
  - **resource-context-page-segment**
  - **resource-context-presentation-object-container**
- The path length is limited to 4095 characters. Moreover, the total combined length of all paths specified by the following attributes must not exceed 7700 characters:
  - **resource-context**
  - **resource-context-font**
  - **resource-context-form-definition**
  - **resource-context-overlay**
  - **resource-context-page-segment**
- InfoPrint searches paths in this order:
  1. **resource-context-user** document attribute
  2. **resource-context-font**, **resource-context-form-definition**, **resource-context-overlay**, **resource-context-page-definition**, **resource-context-page-segment**, or **resource-context-presentation-object- container** document attribute, as appropriate for the type of resource
  3. **resource-context** document attribute
  4. **PSFPATH** environment variable
  5. **resource-context-font**, **resource-context-form-definition**, **resource-context-overlay**, **resource-context-page-definition**, **resource-context-page-segment**, or **resource-context-presentation-object- container** actual destination attribute, as appropriate for the type of resource
  6. With AIX or Linux:
     1) **/usr/lpp/psf/reslib**
     2) **/usr/lpp/ipfonts**
     3) **/usr/lpp/afpfonts**
     4) **/usr/lpp/psf/fontlib**
     5) **/usr/lpp/psf/afp2pdf/reslib;/usr/lpp/psf/reslib** (Email only)
  7. With Windows, where *install_path* indicates the path where you installed InfoPrint Manager for Windows:
     1) *install_path***\reslib**
     2) *install_path***\fontlib**
     3) *install_path***\afp2pdf\reslib;install_path\reslib** (Email only)

Note

InfoPrint Email DSS searches resource paths in the mentioned order during processing. At print time, InfoPrint Email DSS uses the resource-context document/default document/destination attribute.

If InfoPrint cannot find the resource because none of the paths contain the resource, it still processes the job and prints error messages at the end of the job. InfoPrint reports the job as completed.

- When using Color Mapping Tables with InfoPrint Manager, you must identify the path for your table explicitly. There is no default path for Color Mapping Tables.

resource-context-font

Defines the directory path location of the document-specific fonts.

GUI label

Location of fonts

DSS

PSF, Email

Type

Resettable, single-valued, per-job

Allowed Values

You can enter the name of a resource-context object or a text string of up to 1023 characters that contains a specific directory path name for fonts.

Syntax

path:path `on AIX`
path:path `on Linux`
path;path `on Windows`

Separate multiple paths with a colon on AIX and Linux or a semicolon on Windows, for example with AIX or Linux:

```
/fonts:/dept123/fonts
```

Default Value

With AIX or Linux, no default values, but InfoPrint always searches **/usr/lpp/psf/reslib**.

With Windows, no default values, but InfoPrint always searches *install_path***reslib**.

Usage Guidelines

- You can specify fonts either in the job or in a page definition for the job.
- The path length is limited to 1023 characters. Moreover, the total combined length of all paths specified by the following attributes must not exceed 7700 characters:
  - **resource-context**
  - **resource-context-font**
  - **resource-context-form-definition**
  - **resource-context-overlay**
  - **resource-context-page-segment**
- InfoPrint searches paths in this order:

1. **resource-context-user** document attribute
2. **resource-context-font** document attribute
3. **resource-context** document attribute
4. **PSFPATH** environment variable
5. **resource-context-font** actual destination attribute
6. With AIX or Linux:
    1) **/usr/lpp/psf/reslib**
    2) **/usr/lpp/ipfonts**
    3) **/usr/lpp/afpfonts**
    4) **/usr/lpp/psf/fontlib**
7. With Windows, where *install_path* indicates the path where you installed InfoPrint Manager for Windows:
    1) *install_path***\reslib**
    2) *install_path***\fontlib**

- If InfoPrint cannot find the resource because none of the paths contain the resource, it still processes the job and prints error messages at the end of the job. InfoPrint reports the job as completed.

resource-context-form-definition

Defines the directory path location of the document-specific form definitions.

GUI label

Location of form definitions

DSS

PSF, Email

Type

Resettable, single-valued, per-job

Allowed Values

You can enter the name of a resource-context object or a text string of up to 1023 characters that contains a specific directory path name for form definitions.

Syntax

path:path `on AIX`
path:path `on Linux`
path;path `on Windows`

Separate multiple paths with a colon on AIX and Linux or a semicolon on Windows, for example with AIX or Linux:

```
/form_definition:/dept123/form_definition
```

Default Value

With AIX or Linux, no default values, but InfoPrint always searches **/usr/lpp/psf/reslib**.

With Windows, no default values, but InfoPrint always searches *install_path***reslib**.

Usage Guidelines

- You can use either the document or the actual destination **form-definition** attribute to specify the form definition.
- The path length is limited to 1023 characters. Moreover, the total combined length of all paths specified by the following attributes must not exceed 7700 characters:
  - **resource-context**
  - **resource-context-font**
  - **resource-context-form-definition**
  - **resource-context-overlay**
  - **resource-context-page-segment**
- InfoPrint searches paths in this order:
  1. **resource-context-user** document attribute
  2. **resource-context-form-definition** document attribute
  3. **resource-context** document attribute
  4. **PSFPATH** environment variable
  5. **resource-context-form-definition** actual destination attribute
  6. For InfoPrint Manager for AIX or InfoPrint manager for Linux, **/usr/lpp/psf/reslib**; for InfoPrint Manager for Windows, *install_path***reslib**.
- If InfoPrint cannot find the resource because none of the paths contain the resource, it still processes the job and prints error messages at the end of the job. InfoPrint reports the job as completed.

resource-context-overlay

Defines the directory path location of the document-specific overlays.

GUI label

Location of overlays

DSS

PSF, Email

Type

Resettable, single-valued, per-job

Allowed Values

You can enter the name of a resource-context object or a text string of up to 1023 characters that contains a specific directory path name for overlays.

Syntax

path:path `on AIX`
path:path `for Linux`
path;path `on Windows`

Separate multiple paths with a colon on AIX and Linux or a semicolon on Windows, for example with AIX or Linux:


```
/overlay:/dept123/overlay
```

Default Value

With AIX or Linux, no default values, but InfoPrint always searches **/usr/lpp/psf/reslib**.

With Windows, no default values, but InfoPrint always searches *install_path***reslib**.

Usage Guidelines

- You use a form definition for the job to specify the overlay.
- The path length is limited to 1023 characters. Moreover, the total combined length of all paths specified by the following attributes must not exceed 7700 characters:
  - **resource-context**
  - **resource-context-font**
  - **resource-context-form-definition**
  - **resource-context-overlay**
  - **resource-context-page-segment**
- InfoPrint searches paths in this order:
  1. **resource-context-user** document attribute
  2. **resource-context-overlay** document attribute
  3. **resource-context** document attribute
  4. **PSFPATH** environment variable
  5. **resource-context-overlay** actual destination attribute
  6. For InfoPrint Manager for AIX or InfoPrint Manager for Linux, **/usr/lpp/psf/reslib**; for InfoPrint Manager for Windows, *install_path***reslib**.
- If InfoPrint cannot find the resource because none of the paths contain the resource, it still processes the job and prints error messages at the end of the job. InfoPrint reports the job as completed.

resource-context-page-definition

Defines the directory path location for the document-specific page definitions.

GUI label

Location of page definitions

DSS

PSF, Email

Type

Resettable, single-valued, per-document

Allowed Values

You can enter the name of a resource-context object or a text string of up to 4095 characters that contains a specific directory path name for page definitions.

Syntax

path:path `on AIX`
path:path `for Linux`
path;path `on  Windows`

Separate multiple paths with a colon on AIX and Linux or a semicolon on Windows, for example with AIX or Linux:

```
/page_definition:/dept123/page_definition
```

Default Value

With AIX or Linux, no default values, but InfoPrint always searches **/usr/lpp/psf/reslib**.

With Windows, no default values, but InfoPrint always searches *install_path***reslib**.

Usage Guidelines

- This attribute is valid only for line-data documents.
- You use the **page-definition** document attribute to specify the page definition for the job.
- InfoPrint searches paths in this order:
  1. **resource-context-user** document attribute
  2. **resource-context-page-definition** document attribute
  3. **resource-context** document attribute
  4. **PSFPATH** environment variable
  5. **resource-context-page-definition** actual destination attribute
  6. For InfoPrint Manager for AIX or InfoPrint Manager for Linux, **/usr/lpp/psf/reslib**; for InfoPrint Manager for Windows, *install_path***reslib**.
- If InfoPrint cannot find the resource because none of the paths contain the resource, it still processes the job and prints error messages at the end of the job. InfoPrint reports the job as completed.

resource-context-page-segment

Defines the directory path location of the document-specific page segments.

GUI label

Location of page segments

DSS

PSF, Email

Type

Resettable, single-valued, per-job

Allowed Values

You can enter the name of a resource-context object or a text string of up to 1023 characters that contains a specific directory path name for page segments.

Syntax

path:path `for AIX`
path:path `for Linux`
path;path `for Windows`

Separate multiple paths with a colon on AIX and Linux or a semicolon on Windows, for example with AIX or Linux:

```
/page_segment:/dept123/page_segment
```

Default Value

With AIX or Linux, no default values, but InfoPrint always searches **/usr/lpp/psf/reslib**.

With Windows, no default values, but InfoPrint always searches *install_path***reslib**.

Usage Guidelines

- You specify the page segments in the job.
- The path length is limited to 1023 characters. Moreover, the total combined length of all paths specified by the following attributes must not exceed 7700 characters:
  - **resource-context**
  - **resource-context-font**
  - **resource-context-form-definition**
  - **resource-context-overlay**
  - **resource-context-page-segment**
- InfoPrint searches paths in this order:

1. **resource-context-user** document attribute
2. **resource-context-page-segment** document attribute
3. **resource-context** document attribute
4. **PSFPATH** environment variable
5. **resource-context-page-segment** actual destination attribute
6. For InfoPrint Manager for AIX or InfoPrint Manager for Linux, **/usr/lpp/psf/reslib**; for InfoPrint Manager for Windows, *install_path***\reslib**.

- If InfoPrint cannot find the resource because none of the paths contain the resource, it still processes the job and prints error messages at the end of the job. InfoPrint reports the job as completed.

resource-context-presentation-object-container

Defines the directory paths that InfoPrint searches for color management resources (CMRs) and presentation object containers (called data object resources in the *IPDS Reference*, such as EPS, IOCA images, or PDF pages) for the document.

GUI label

Location of presentation object containers

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter the name of a resource-context-presentation object or a CMR, or enter a text string up to 1023 characters long that defines the directory path to the resource-context-presentation object.

Syntax

path:path `for AIX`
path:path `for Linux`
path;path `for Windows`

Separate path names with colons on AIX or Linux, for examples:

```
/dor:/dept123/presentation-object-container
```

```
/cmr:/dept321/color-management-resource
```

Separate path names with semicolons on Windows, for examples:

```
d:\dor;d:\dept123\presentation-object-container
```

```
d:\cmr;d:\dept321\color-management-resource
```

Default Value

With AIX or Linux, no default values, but InfoPrint always searches **/usr/lpp/psf/reslib**.

With Windows, no default values, but InfoPrint always searches *install_path***reslib**.

Usage Guidelines

- You specify the presentation objects the in the job.
- InfoPrint searches paths in this order:
  1. **resource-context-user** document attribute
  2. **resource-context-presentation-object-container** document attribute
  3. **resource-context** document attribute
  4. **PSFPATH** environment variable
  5. **resource-context-presentation-object-container** actual destination attribute
  6. For AIX or Linux, **/usr/lpp/psf/reslib**
  7. For Windows, *install_path***reslib**
- If InfoPrint cannot find the resource because none of the paths contain the resource, it still processes the job and prints error messages at the end of the job. InfoPrint reports the job as completed.

resource-context-user

Defines the directory path location for all document-specific resources: color management resources (CMRs), fonts, form definitions, overlays, page definitions, page segments, and presentation object containers.

GUI label

Location of document resources

DSS

PSF, Email

Type

Resettable, single-valued, per-document

Allowed Values

You can enter the name of a resource-context object, a CMR, or a text string of up to 4095 characters that contains a specific directory path name for resources.

Syntax

path:path `for AIX`
path:path `for Linux`
path;path `for Windows`

Separate multiple paths with a colon on AIX and Linux or a semicolon on Windows, for example with AIX or Linux:

```
/res:/dept123/res
```

Default Value

With AIX or Linux no default values, but InfoPrint always searches **/usr/lpp/psf/reslib**.

With Windows, no default values, but InfoPrint always searches *install_path***reslib**.

Usage Guidelines

- This attribute is valid only for line-data documents.
- InfoPrint searches paths in this order:
  1. **resource-context-user** document attribute
  2. **resource-context-font**, **resource-context-form-definition**, **resource-context-overlay**, **resource-context-page-definition**, or **resource-context-page-segment** document attribute, as appropriate for the type of resource
  3. **resource-context** document attribute
  4. **PSFPATH** environment variable
  5. **resource-context-font**, **resource-context-form-definition**, **resource-context-overlay**, **resource-context-page-definition**, or **resource-context-page-segment** actual destination attribute, as appropriate for the type of resource
  6. With AIX or Linux:
     1) **/usr/lpp/psf/reslib**
     2) **/usr/lpp/afpfonts**
     3) **/usr/lpp/psf/fontlib**
  7. With Windows, where *install_path* indicates the path where you installed InfoPrint Manager for Windows:
     1) *install_path***reslib**
     2) *install_path***fontlib**
- If InfoPrint cannot find the resource because none of the paths contain the resource, it still processes the job and prints error messages at the end of the job. InfoPrint reports the job as completed.

resource-exit

Specifies the name or the full path name of the resource exit program that InfoPrint uses to retrieve resources for this line-data document. If you specify the file name without a path, InfoPrint searches for the exit program in the paths specified by the **PATH** environment variable. If you do not specify this option, the InfoPrint does not use a resource exit program.

GUI label

Resource exit program

DSS

PSF

Type

Resettable, single-valued, per-document

Allowed Values

You can enter any valid input record exit program name. The exit program name is case-sensitive.

Default Value

No default value

Usage Guidelines

This attribute is valid only for line-data documents.

reverse-page-order

Indicates whether this document should print the pages in reverse order, that is, last page first.

GUI label

Reverse page order

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

- When you use **reverse-page-order**, there will be a delay before a document begins printing because the entire document must rip before the pages can be printed in reverse order.
- When you use **reverse-page-order**, the **explicit-page-placement** attribute and the form definition can be affected. While the **reverse-page-order** attribute reverses the order of the pages in the job, it does not alter the layout that InfoPrint uses for the job. This can result in the pages of the job appearing in different positions on the sheet than if **reverse-page-order** were not used. For example, with a two page job, if the form definition has the front page offset by a certain amount, but not the back page, then after reversing the job, page 2, which is now first to be output will be offset instead of page 1, which is now on the back of the sheet. To fix this, the form definition, **explicit-page-placement** attribute, and other attributes (such as, **overlay**, **overlay-front**, **overlay-back**, **x-image shift**, **x-image-shift-back**, **y-image-shift**, and **y-image-shift-back**) should be modified to get the correct placement of the pages on the output sheets. This modification needs to be done by the user or system administrator.
- The **reverse-page-order** attribute does not apply to ASCII or booklet jobs.
- When using **reverse-page-order** with simplex jobs, a blank page might be added at the front of the document if the document has an odd number of pages.
- When using **reverse-page-order** with **slit-and-merge** value on the **output-format** attribute, a blank sheet might be added if more than one blank page would be needed to make the document a multiple of 4 pages. For instance, if the document has 1 or 2 pages, 5 or 6 pages, 9 or 10 pages, then a blank sheet will be added to the end of the reversed job, after the first page from the input file. This would mean when flipping the output over, the blank sheet is in front of page 1. For cases where no pages need to be added, or only one page needs to be added, as in the case of a 7 or 8 page document, the output will not contain any blank sheets.

room-text

Specifies room information that InfoPrint prints in the **ROOM:** field of an auxiliary sheet if the job uses the **full** auxiliary-sheet object.

GUI label

Room

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a text string of up to 4095 characters that contains the room information.

Default Value

No default value

Usage Guidelines

- While you can specify more characters, you should limit the value you supply to 24 characters or less to make sure that there is enough room available on the printed page for all room information.
- If the text string you specify contains blank spaces, enclose the text string in single quotation marks.

scanner-correction

Indicates how you calibrated the scanner used to scan input images so that InfoPrint can make the appropriate modifications to halftones.

GUI label

Scanner correction

DSS

PSF

Type

Resettable, single-valued, per-document

Allowed Values

You can enter one of these fixed values:

- **Ricoh420**
- **XeroxDocuimage620S**
- **none**

Default Value

No default value

Usage Guidelines

- This attribute is valid only for GIF, JPEG, PDF, PostScript, and TIFF documents.
- InfoPrint validates and schedules jobs using this attribute against the destination attribute **scanner-corrections-supported**.

screen-frequency

Use the **halftones** attribute to specify the **screen-frequency** attribute values. (See halftone, p. 832 for more information.) The **screen-frequency** attribute is supported to maintain downward compatibility, but it is not the recommended attribute for specifying the screen frequency to use for printing halftones.

Indicates the screen frequency, in lines per inch, to use for printing halftones.

DSS

PSF

Type

Resettable, single-valued, per-document

Allowed Values

You can enter one of these fixed values:

- **71**
- **85**
- **106**
- **141**

Default Value

85

Usage Guidelines

- This attribute is valid only for GIF, JPEG, PDF, PostScript, and TIFF documents.
- This attribute works only with the document attribute **document-ps-processor** set to CPSI or with the document attribute **document-pdf-processor** set to APPE or CPSI.
- Change the screen frequency if you see moire or two-dimensional repeating patterns in halftone images.
- Set the screen frequency to **106** if you see dark and light bands in printed output, with halftone images possibly showing a herringbone pattern under magnification.
- InfoPrint validates and schedules jobs using this attribute against the destination attribute **screen-frequencies-supported**.

segment-file-size

Specifies the minimum size in kilobytes of the segment files into which InfoPrint breaks jobs for processing.

GUI label

Size of segment file (KBytes)

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter an integer from 1 to 102400.

Default Value

100

Usage Guidelines

- Small values can adversely affect performance; large numbers can detract from InfoPrint's ability to send the beginning of a job to a destination while still processing the remainder of the job.
- This attribute is not valid for ASCII documents.

sequence-number (Document Only)

See **document-sequence-number**.

setup-name

Specifies a setup name that includes a group of settings to use for printing. The setup is created by a user of the printer. Depending on the printer vendor, the setup name might be referred to as "printer setup", "printer snapshot" or "printer profile".

GUI label

Setup name

DSS

PSF TCP/IP

Type

Resettable, single-valued, per-job

Allowed Values

Any string text up to 100 bytes.

Default Value

No default value

Usage Guidelines

- The value you specify for this attribute overrides any selection in the form definition.
- If the setup name is not already the active setup on the printer, the start auxiliary sheet does not print using the requested setup name for the job.

- If the setup name requested for a job is not already the active setup name on the printer, the printer ejects to a new sheet and stacks all received pages. This can result in a blank sheet while printing in cut sheet emulation (CSE) mode, a blank side if duplex is used, or a blank partition if N-up is being used.
- The **setup-name** attribute is used together with the **setup-names-ready** actual destination attribute.

shared-formdef

For MO:DCA-P documents originating on MVS systems and directed to InfoPrint through the Download for z/OS program, this attribute indicates whether the form definition used to print or send this document should be processed the same way as PSF/MVS would process it.

GUI label

Process form definitions same as MVS

DSS

PSF, Email

Type

Resettable, single-valued, per-job

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

Default Document

No default value

Document

false

Usage Guidelines

- A value of **true** ensures consistent page placement when multiple pages are printed or sent on a single side of the sheet.
- The value of **false** is provided only for backwards compatibility with some applications designed for the PSF for AIX product, which is no longer marketed or supported.

shift-out-shift-in

Specifies the printer scanning modes used when processing EBCDIC line-data that prints with either a single-byte or a double-byte font.

GUI label

Shift-out shift-in processing

DSS

PSF, Email

Type

Resettable, single-valued, per-document

Allowed Values

You can enter an 8-character alphanumeric string, which is passed to all ACIF user exits, or one of these fixed values:

Fixed Value	*Explanation*
one	The **line2afp** transform uses a value of **SOSI1** for the **prmode=** parameter. It converts each shift-out, shift-in code to a blank and a Set Coded Font Local text control.
two	The **line2afp** transform uses a value of **SOSI2** for the **prmode=** parameter. It converts each shift-out, shift-in code to a Set Coded Font Local text control.

See line2afp command: transforms traditional line data and ASCII data to AFP, p. 360 for more information about the **prmode=** parameter of the **line2afp** transform. See *AFP Conversion and Indexing Facility: User's Guide* for information about ACIF user exits.

Default Value

No default value

Usage Guidelines

- This attribute is valid only for line-data documents.
- For the shift-in, shift-out process to work correctly, two coded fonts must be specified by the **chars** attribute or the page definition. The first must be a single-byte font and the second must be a double-byte font.

sides

Specifies the number of media sides on which this document prints.

GUI label

Sides to print

DSS

AIX, BSD, CUPS, IPP, PSF

Type

Resettable, single-valued, per-document

Allowed Values

You can enter an integer value of **1** or **2**.

Default Value

AIX

1

BSD

No value; the printer device defaults the value

CUPS

1

IPP

1, **2**

PSF

The value in the form definition

Usage Guidelines

- InfoPrint validates and schedules jobs using this attribute against the destination attribute **sides-supported**.
- This attribute is valid for ASCII documents in a job only if it is not changed between documents in the job.
- InfoPrint uses this attribute in combination with the **plex** attribute. The results are:

sides ***Value***	**plex** ***Value***	***Output***
1	**simplex**	Simplex
2	**simplex**	Duplex
1	**tumble**	Not valid
2	**tumble**	Tumble duplex

- InfoPrint uses sides specifications in this order:

1. The **sides** document attribute, unless you specify different values for this attribute for each document in a job and also specify a value for the **form-definition** document attribute. In that case, InfoPrint ignores the **sides** document attribute.
2. The sides specification in the document or default document form definition.
3. The **sides** actual destination attribute.

start-on-new-sheet

Indicates whether to start printing this document on a new sheet of paper.

GUI label

Start on new sheet

DSS

PSF

Type

Resettable, single-valued, per-document

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

true

Usage Guidelines

- This attribute is not valid for ASCII documents.
- When you print multiple-document jobs and do not want blank pages between the end of one document and the beginning of the next, set this attribute to **false**.
- If you specify a form definition, it takes priority over the **start-on-new-sheet** attribute, and any value you specify with **start-on-new-sheet** is ignored. InfoPrint ignores the **start-on-new-sheet** attribute and uses the value in the form definition.

subject-text

Specifiesthe subject line of electronic mail jobs maps to a user-defined customizable field.

DSS

Email

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a text string up to 4095 characters long that contains the subject.

Default Value

No default value

Usage Guidelines

To use this attribute value as the file name of the email attachment, configure the Email DSS actual destination attribute **maintain-original-filename** to false.

table-reference-characters

Specifies whether the first character of each line in the document (or second character, if carriage control characters are used) is a table reference character. A table reference character selects a font character set named by the **chars** attribute or in the page definition used to print the job.

GUI label

Table reference characters

DSS

PSF, Email

Type

Resettable, single-valued, per-document

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

No default value

Usage Guidelines

- This attribute is valid only for line-data documents.
- InfoPrint validates and schedules jobs using this attribute against the destination attribute **table-reference-characters-supported**.
- If the value of this attribute is **true** and the page definition does not identify fonts, you must specify fonts with the **chars** attribute.
- To pass all the other values supported by the TRC parameter of ACIF, make sure you use the **other-transform-options** attribute.
- If the line data contains TRCs and you do not specify this attribute, your printed output will not be correct. InfoPrint interprets the TRCs as text characters instead of font identifiers.

text-small-threshold

Indicates the threshold for text when the transforms should use the single cell halftones.

GUI label

Halftone threshold for text

Type

Resettable, single-valued

Allowed Values

The value you specify is in the form *nnnn.nnnu*.

nnnn.nnn is a number that can optionally contain a decimal point.

u is the units in inches (**i**) or millimeters (**m**) or points (**p**). If you do not specify a unit, the default unit is pels. You cannot use a decimal point when the unit is pels or points.

For 240-pel resolution printers, valid values are:

- 120 - 1200 pels
- 0.5 - 5 inches
- 12.7-127 millimeters
- 36-360 points

For 300-pel resolution printers, valid values are:

- 150 - 1500 pels
- 0.5 - 5 inches
- 12.7-127 millimeters
- 36-360 points

For 480-pel resolution printers, valid values are:

- 240 - 2400 pels
- 0.5 - 5 inches

- 12.7-127 millimeters
- 36-360 points

For 600-pel resolution printers, valid values are:

- 300 - 3000 pels
- 0.5 - 5 inches
- 12.7-127 millimeters
- 36-360 points

For 720-pel resolution printers, valid values are:

- 360 - 3600 pels
- 0.5 - 5 inches
- 12.7-127 millimeters
- 36-360 points

For 1200-pel resolution printers, valid values are:

- 600 - 6000 pels
- 0.5 - 5 inches
- 12.7-127 millimeters
- 36-360 points

If you specify 0, the transform will not use the text threshold.

Default value

None

Usage Guidelines

- Use this attribute to set the single cell threshold for images.
- An out-of-range nonzero value causes an error at rip time, and the job is not processed.
- This only applies to InfoPrint 4100 model printers. If this attribute is set on a different printer model, the job fails at rip time.

title-text

Specifies title information that InfoPrint prints in the **TITLE:** field of an auxiliary sheet if the job uses the **full** auxiliary-sheet object.

GUI label

Title

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a text string of up to 4095 characters that contains the title information.

Default Value

No default value

Usage Guidelines

- While you can specify more characters, you should limit the value you supply to 55 characters or less to make sure that there is enough room available on the printed page for all title information.
- If the text string you specify contains blank spaces, enclose the text string in single quotation marks.

transfer-method (Document Only)

Identifies the method by which InfoPrint transfers the document to the print server.

GUI label

Transferred to server

DSS

All

Type

Initially settable, single-valued, per-job

Allowed Values

You can enter one of these fixed values:

- **pipe-pull**
- **with-request**

Default Value

pipe-pull

Usage Guidelines

InfoPrint validates jobs using this attribute against the server attribute **transfer-methods-supported**.

transform-message-file-name

Specifies the file name where the transform that InfoPrint uses to process this document writes messages.

GUI label

Transform message file

DSS

PSF, Email

Type

Resettable, single-valued, per-document

Allowed Values

You can enter a text string of up to 4095 characters that contains the file name.

Default Value

No default value. If you do not specify this attribute or if it has no value, the transform writes messages to **$PDBASE/***servername***/error.log** for InfoPrint Manager for AIX and *workspace path**servername* **\error.log** for InfoPrint Manager for Windows.

Usage Guidelines

- This attribute is valid only for line-data documents.
- This attribute is not valid for ASCII documents.

transform-output-file-name

Specifies the file name of the output file produced by the InfoPrint transform that converts this document to the AFP data stream.

GUI label

Transform output file name

DSS

PSF, Email

Type

Resettable, single-valued, per-document

Allowed Values

You can enter a text string of up to 4095 characters that contains the file name.

Default Value

No default value unless the output format is **side-by-side-copies** or **booklet-print**. In that case, InfoPrint saves the transformed file in the directory specified by the **PDBASE** environment variable or in one of its subdirectories.

Usage Guidelines

- Use this attribute to save transformed files.
- Transform programs write output to a temporary file in the directory specified by the **PDBASE** environment variable or in one of its subdirectories. No single user can create a file larger than the amount of free space in the file system containing this directory. If many users are submitting print jobs that invoke transform programs, the directory might fill up and prevent all users from successfully running the transform programs.

type (Document Only)

See **document-type**.

use-non-unicode-environment

Specifies whether the SAP document requires the actual destination to print in ASCII mode.

GUI label

Use non-unicode environment

DSS

PSF TCP/IP, PSF Command and PSF Other

Type

Resettable, single-valued, per-job

Allowed Values

Fixed Value	Input Synonym
true	yes
false	no

Default Value

No

Usage Guidelines

When referring to SAP streams, it is only valid for SAPGOF OTF files, and not SAPGOFU files. If the value is **yes**, then the **-useascii** flag is sent to the **sap2afp** transform.

user-id-text

Specifies user-identification information that InfoPrint prints at the top of the page and in the **USERID:** field of an auxiliary sheet.

GUI label

User ID

DSS

PSF

Type

Resettable, single-valued, per-job

Allowed Values

You can enter a text string of up to 4095 characters that contains the user-identification information.

Default Value

No default value

Usage Guidelines

- While you can specify more characters, you should limit the value you supply to 10 characters or less to make sure that there is enough room available on the printed page for all user-identification information.
- If the text string you specify contains blank spaces, enclose the text string in single quotation marks.

x-image-shift

Specifies the X offset, in millimeters, of the logical page origin to the right of the physical page origin.

GUI label

Move image right (inches) or (mm)

DSS

PSF, Email

Type

Resettable, single-valued, per-document

Allowed Values

You can enter a numeric value from -577.97 to 577.97 mm.

The value you specify is in the form *nnnn.nnn*, which is a number that can optionally contain a decimal point. Millimeters is the unit of measure for the value you specify.

Default Value

No default value

Usage Guidelines

- This attribute overrides any X-offset value in the form definition InfoPrint uses for the job, with one exception. If you specify different values for this attribute for each document in a job, and also specify a value for the document **form-definition** attribute, InfoPrint ignores the **x-image-shift** attribute and uses the X-offset value in the form definition.
- This attribute is valid for ASCII documents in a job only if it is not changed between documents in the job.
- InfoPrint validates and schedules jobs using this attribute against the **x-image-shift-range-supported** actual destination attribute.
- This attribute is ignored if the **explicit-page-placement** and **output-format** attributes are specified.

x-image-shift-back

Specifies the X offset, in millimeters, of the logical page origin to the right of the physical page origin on the back side of a double-sided sheet.

GUI label

Move image right on back side (inches) or (mm)

DSS

PSF

Type

Resettable, single-valued, per-document

Allowed Values

You can enter a numeric value from -577.97 to 577.97 mm.

The value you specify is in the form *nnnn.nnn*, which is a number that can optionally contain a decimal point. Millimeters is the unit of measure for the value you specify.

Default Value

No default value

Usage Guidelines

- This attribute is not valid for ASCII documents.
- If you specify a value for the document **form-definition** attribute, InfoPrint ignores the **x-image-shift-back** attribute and uses the X-offset value in the form definition. This attribute overrides the X-offset value in any other form definition.
- InfoPrint validates and schedules jobs using this attribute against the **x-image-shift-range-supported** actual destination attribute.
- This attribute is ignored if the **explicit-page-placement** and **output-format** attributes are specified.

xsl-style-sheet

Identifies the file name of the XSL style sheet used for the XML document. This name can contain full path information, URL information, or just the file name. If you only specify the file name, InfoPrint Manager uses the path specified on the document's **resource-context** attribute to locate the file. When you specify a file name, the XSL style sheet must be located on the server where the **xml2afp** or **xml2pdf** transform runs.

GUI label

XSL style sheet

DSS

PSF, Email

Type

Settable, single-valued, per-document

Allowed Values

You can enter a text string of up to 4095 characters that contains the XSL style sheet information.

You can specify a value of **none** to indicate that a style sheet should be suppressed because it has been specified with XSL-FO data.

Default Value

No default value

Usage Guidelines

- If an XSL style sheet is specified on either the document or actual destination, it is used to process the XML file that was submitted, even if the file was already XSL-FO.

- If no style sheet is to be used, you should specify **none** for the **xsl-style-sheet** document or default document attribute.
- If you do not specify an XSL style sheet with the **xsl-style-sheet** document/default document attribute, InfoPrint Manager uses the XSL style sheet that you specify with the **xsl-style-sheet** actual destination attribute.
- InfoPrint Manager does not provide a default XSL style sheet.

y-image-shift

Specifies the Y offset, in millimeters, of the logical page origin below the physical page origin.

GUI label

Move image down (inches) or (mm)

DSS

PSF, Email

Type

Resettable, single-valued, per-document

Allowed Values

You can enter a numeric value from -577.97 to 577.97 mm.

The value you specify is in the form *nnnn.nnn*, which is a number that can optionally contain a decimal point. Millimeters is the unit of measure for the value you specify.

Default Value

No default value

Usage Guidelines

- This attribute overrides any Y-offset value in the form definition InfoPrint uses for the job, with one exception. If you specify different values for this attribute for each document in a job, and also specify a value for the document **form-definition** attribute, InfoPrint ignores the **y-image-shift** attribute and uses the Y-offset value in the form definition.
- This attribute is valid for ASCII documents in a job only if it is not changed between documents in the job.
- InfoPrint validates and schedules jobs using this attribute against the **y-image-shift-range-supported** actual destination attribute.
- This attribute is ignored if the **explicit-page-placement** and **output-format** attributes are specified.

y-image-shift-back

Specifies the Y offset, in millimeters, of the logical page origin below the physical page origin on the back side of a double-sided sheet.

GUI label

Move image down on back side (inches) or (mm)

DSS

PSF

Type

Resettable, single-valued, per-document

Allowed Values

You can enter a numeric value from -577.97 to 577.97 mm.

The value you specify is in the form *nnnn.nnn*, which is a number that can optionally contain a decimal point. Millimeters is the unit of measure for the value you specify.

Default Value

No default value

Usage Guidelines

- This attribute is not valid for ASCII documents.
- If you specify a value for the document **form-definition** attribute, InfoPrint ignores the **y-image-shift-back** attribute and uses the Y-offset value in the form definition. This attribute overrides the Y-offset value in any other form definition.
- InfoPrint validates and schedules jobs using this attribute against the **y-image-shift-range-supported** actual destination attribute.
- This attribute is ignored if the **explicit-page-placement** and **output-format** attributes are specified.

Attributes for jobs and default jobs

This section contains the attributes for default jobs and jobs.

Default job

Use default jobs to set default values for job attributes.

Default jobs contain two types of attributes:

- Attributes that describe the default job itself
- Attributes that you can set as default values for job attributes

Job

A job is an InfoPrint object that represents a request to print or send one or more documents in a single session.

Attributes not displayed in the InfoPrint Manager Administration GUI

While all job and default job attributes and attribute values are supported for both standard and basic InfoPrint installations, neither InfoPrint Manager Administration GUI displays a complete set.

- The standard InfoPrint Manager Administration GUI displays most attributes and attribute values of greatest interest to Data Center (Production Printing) InfoPrint administrators, but omits a few that are used primarily in basic InfoPrint installations.
- The basic InfoPrint Manager Administration GUI displays only the attributes of greatest interest to InfoPrint administrators.

You can list the values of attributes not displayed in the InfoPrint Manager Administration GUI using the **pdls** command or the **pdq** command. You can set the values of initially settable and resettable attributes using the **pdcreate** command or the **pdpr** command. You can change the values of resettable attributes using the **pdmod** command or the **pdset** command.

Initially settable attribute listing

You can set these attributes with the **pdpr** command when you submit the job:

- **destination-name-requested**
- **initial-value-job**
- **job-originator**
- **job-owner**

Note

There are no initially settable attributes for a default job.

Resettable attribute listing

You can set these attributes with the **pdpr** command when you submit a job or with the **pdcreate** command when you create a default job. You can modify them with the **pdset** command after InfoPrint Manager has accepted the job or after you create the default job. You can also use the **pdmod** command to modify a job after InfoPrint accepts it.

- **accounting1-text**
- **accounting2-text**
- **accounting3-text**
- **actual-destinations-requested**
- **auxiliary-sheet-selection**
- **delete-segment-list**
- **descriptor** (default job only)
- **destination-locations-requested**
- **destination-models-requested**
- **dss-requested**
- **encrypt-inline-resources**
- **estimated-processing-time** (job only)
- **forms**
- **job-batch**
- **job-client-id** (job only)
- **job-comment**
- **job-complexity** (job only)
- **job-deadline-time** (job only)
- **job-discard-time** (job only)
- **job-end-message**
- **job-finishing**
- **job-hold**
- **job-media-sheet-count** (job only)
- **job-message-from-administrator** (job only)
- **job-message-to-operator**
- **job-name**
- **job-page-count** (job only)
- **job-print-after** (job only)
- **job-priority**
- **job-retain-until** (job only)
- **job-retention-period**
- **job-rip-action**
- **job-ripped-by-server**
- **job-scheduling**
- **job-start-message**
- **job-start-wait**
- **list-of-managers** (default job only)
- **message** (default job only)
- **notification-profile**
- **optimize-for-multiple-copies**
- **record-count**
- **results-profile**

- **retain-forever**
- **sheet-range**

accounting1-text

Contains user-defined information.

GUI label

Accounting 1 text

DSS

All

Type

Resettable, single-valued

Allowed Values

Any string text up to 4096 characters.

Default Value

none

Usage Guidelines

Add this information to the server accounting log for additional-accounting-log-attributes of an actual destination.

accounting2-text

Contains user-defined information.

GUI label

Accounting 2 text

DSS

All

Type

Resettable, single-valued

Allowed Values

Any string text up to 4096 characters.

Default Value

none

Usage Guidelines

Add this information to the server accounting log for additional-accounting-log-attributes of an actual destination

accounting3-text

Contains user-defined information.

GUI label

Accounting 3 text

DSS

All

Type

Resettable, single-valued

Allowed Values

Any string text up to 4096 characters.

Default Value

none

Usage Guidelines

Add this information to the server accounting log for additional-accounting-log-attributes of an actual destination.

actual-destinations-requested

Identifies a list of actual destinations, any one of which InfoPrint Manager can use to process the job.

GUI label

Actual destinations requested

DSS

All

Type

Resettable, multi-valued

Input Synonym

You can use the synonym **physical-printers-requested**.

Allowed Values

You can enter a text string of up to 255 characters, per value, that contains the name of an actual destination.

Default Value

No default value

Usage Guidelines

- InfoPrint Manager validates and schedules jobs using this attribute against the destination attribute **destination-name**.
- If you request more than one actual destination, the job will process on the first one that becomes available that can support the job.
- InfoPrint Manager resets the value of the **actual-destinations-requested** attribute when you move a retained job to a logical or actual destination for reprint.

associated-server (Default Job Only)

Indicates the name of the server in which this default job is located.

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to the *ServerName:* portion of the argument used with the **pdcreate** command when this default job is created.

Default Value

No default value

authenticated-login (Job Only)

Specifies the LDAP user ID if the job is LDAP authenticated.

GUI label

Authenticated login

DSS

All

Type

Non-settable, single-valued

Default Value

InfoPrint Manager sets this value to the LDAP user ID used when submitting the job.

Usage Guidelines

- If the job is submitted to a Pull Print actual destination or to an Anyplace Print queue then it is held until pulled from the printer.
- Jobs cannot be scheduled to a Pull Print actual destination or to an Anyplace Print queue without **authenticated-login** attribute.

auxiliary-sheet-selection

Identifies the combination of start, separator, and end sheets requested for this job. Whether InfoPrint prints the requested sheets depends on the actual destination.

GUI label

Auxiliary/Separator sheets

DSS

AIX, CUPS, PSF, Passthrough

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Start*	*Separator*	*End*
end	No	No	Yes
none	No	No	No
sep	No	Yes	No
sep-end	No	Yes	Yes
start	Yes	No	No
start-end	Yes	No	Yes
start-sep	Yes	Yes	No
start-sep-end	Yes	Yes	Yes

Default Value

Default job

No default value

Job

start-sep-end

Usage Guidelines

InfoPrint validates and schedules jobs using this attribute against the destination attribute **auxiliary-sheet-selections-supported**.

color-pages-completed

Specifies the number of pages in this job that have been printed in color mode.

GUI label

Color pages completed

DSS

DFE

Type

Non-settable, single-valued

Allowed Values

InfoPrint Manager sets this value using the DFE server information, if available when the **wait-for-job-completion** attribute is set to **true**.

Default Values

None

Usage Guidelines

- You can determine the number of pages that have been printed in the black and white mode by subtracting the **color-pages-completed** value from the **pages-completed** value.
- For DFE printers, the **color-pages-completed** attribute is added to the **additional-accounting-log-attributes** destination attribute.

comment

See **job-comment**.

completion-time (Job Only)

Identifies the time when the job completed printing or sending.

GUI label

Completed

DSS

All

Type

Non-settable, single-valued

Allowed Values

Info Print Manager sets the value for this attribute in the local time format. The USA format is "HH:MM:SS mm/dd/yy" on AIX and Windows and HH:MM:SS AM/PM mm/dd/YYYY on Linux. On Linux, use the formats specified by the `PD_TIME_FORMAT` and `PD_DATE_FORMAT` InfoPrint Manager environment variables. For more information on how to use these environment variables, go to InfoPrint Manager environment variables, p. 1149.

Default Value

No default value

Usage Guidelines

Provides status information.

confidential-job

Indicates whether the job can be viewed.

GUI label

Confidential

DSS

All

Type

Resettable, single-valued

Input Synonym

You can use the synonym **Confidential**.

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

No default value is set.

Usage Guidelines

- Use this attribute to disallow viewing a job.
- Only members of **JobViewer** group will be authorized to view job print files if the **confidential-job** attribute is set as **false** or **default value**.

creation-time (Job Only)

Identifies the time when the job was created. This value never changes even if the job is resubmitted to another server.

GUI label

Creation time

DSS

All

Type

Non-settable, single-valued

Allowed Values

Info Print Manager sets the value for this attribute in the local time format. The USA format is "HH:MM:SS mm/dd/yy" on AIX and Windows and HH:MM:SS AM/PM mm/dd/YYYY on Linux. On Linux, use the formats specified by the `PD_TIME_FORMAT` and `PD_DATE_FORMAT` InfoPrint Manager environment variables. For more information on how to use these environment variables, go to InfoPrint Manager environment variables, p. 1149.

Default Value

The time the job was created.

current-job-state (Job Only)

Identifies the current state of the job.

GUI label

State

DSS

All

Type

Non-settable, single-valued

Input Synonym

You can use the synonym **job-state**.

Allowed Values

InfoPrint sets and updates this value as the job processes. The value set at a given time is one of these fixed values:

Fixed Value	*Reason*
held	The job is in a queue and InfoPrint cannot schedule it. Either the **job-hold** job attribute is set to **true** or the job is held for some other reason, such as resources not ready. The **job-state-reasons** job attribute provides the reason.
imposing	InfoPrint is arranging the job's pages so that they will print on the press sheets in the right order for final cutting, folding, and binding.
paused	The job was paused with the **pdpause** command.
pending	The job is in a queue and is waiting for InfoPrint to schedule and send it to an actual destination.
pre-flight	InfoPrint is running a print rule sequence on the job. The user cannot modify the job in this state.
pre-processing	InfoPrint is creating the job.
printing	The job is printing on a PSF actual destination. The **printing** state is not supported by the AIX, BSD, CUPSEmail, or Email DSS. Jobs printing on AIX, BSD, or CUPS actual destinations, or sending on email destinations, are in the **processing** state.
processing	InfoPrint has sent the job to an actual destination. The job is processing and printing on an AIX, BSD, or CUPS DSS actual destination, processing and sending on an email destination, or processing on a PSF actual destination. Depending on the output device, this can indicate that InfoPrint has sent at least one document in the job to the output device.
retained	InfoPrint has retained the job in the server after it finished printing or sending or after it was cancelled. Either the value of the **job-retention-period** job attribute for the job is greater than zero, or the value of the **job-retain-until** job attribute for the job is a future time.
ripping	InfoPrint is converting the job to raster image patterns for printing. The **ripping** state is supported only by the PSF and email DSSs.
terminating	The job is terminating, either because it has finished processing or because it was aborted. The **job-state-reasons** job attribute provides the reason.
unknown	The server does not know the state of the job because it lost communication with the actual destination to which InfoPrint sent the job.

Default Value

No default value

Usage Guidelines

Jobs are in the job state **cancelled**, **pre-processing**, and **terminating** for only a very short time. You might never see them as values for this attribute; however, you might see them as values for the **previous-job-state** job attribute.

current-page-printing (Job Only)

Reports the page number of the currently printing or sending page.

GUI label

Page currently printing

DSS

PSF

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets and updates this value to an integer from 0 through 2147483647.

Default Value

No default value

Usage Guidelines

The differences between this attribute and **pages-completed** are:

- **current-page-printing** is the number of the page being printed or sent, while **pages-completed** is the number of pages placed in the stacker. For example, when page 12 of the first copy of a double-sided job is printing, the value of **current-page-printing** is 12 and the value of **pages-completed** is 10.
- **current-page-printing** is reset with every job copy, while **pages-completed** is cumulative in a job. For example, when page 6 of the second copy of a 10-page job is printing, the value of **current-page-printing** is 6. When the same page is stacked, the value of **pages-completed** is 16.

d-s-s-requested

See **dss-requested**.

de-identification-method-used (Job Only)

Defines the de-identification process used for this job.

GUI label

De-identification method used

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to:

Fixed Value	*Explanation*
job-data-de-identification	The server de-identified sensitive jobs and document information.

Default Value

No default value

Usage Guidelines

- When this attribute value is set to **job-data-de-identification**, InfoPrint Manager encoded the values of the following attributes: **job-name**, **document-file-name**, **title-text** and **formatted-job-ticket-content**.
- The job owner and the authenticated login user are able to list job attributes as if they are not de-identified. Also, they receive the re-identified data via the **select-email** notification.

deadline-in-jeopardy (Job Only)

Indicates whether the job is in danger of not completing before the time specified by the **job-deadline-time** attribute.

GUI label

Deadline in jeopardy

DSS

PSF, Email

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to one of these fixed values:

- **true**
- **false**

Default Value

No default value

Usage Guidelines

InfoPrint sets **deadline-in-jeopardy** to **true** under these conditions:

- If the queue attribute **assign-to-destination=true**, when the value of the **estimated-completion-time** attribute is later than the value of the **job-deadline-time** attribute.
- If the queue attribute **assign-to-destination=false**, when the current time is later than the value of the **job-deadline-time** attribute. InfoPrint cannot calculate a value for the **estimated-completion-time** attribute if **assign-to-destination=false**.

delete-segment-list

Indicates whether to delete the segment list file and all associated segments after the job is complete. The default behavior deletes the segment list file and all associated segments. You can use this attribute when you want to save the segment list and all associated segments.

GUI label

Delete segment list

DSS

PSF, Email

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

No default value

Usage Guidelines

- If **delete-segment-list** is **false**, the **optimze-for-multiple-copies** actual destination attribute is **true**, and the actual destination is in save pages mode, the job stays on the job queue and can be reprinted at a later time. However, when a retained job is on a printer that supports color management resources (CMRs), InfoPrint Manager issues message `0424-517 Printer color`

`setup may have changed from when pages were saved` that states color fidelity on the retained job cannot be guaranteed, processing continues, and the printed output should be verified.

descriptor (Default Job Only)

Provides a description of this default job.

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 4095 characters that describes this default job.

Default Value

No default value

Usage Guidelines

The use of this attribute is optional. However, a detailed description helps job submitters to determine if this default job is the one they want to use.

destination-initial-value-job (Job Only)

Identifies the default job associated with the logical destination to which you submitted the job and used to create the job.

GUI label

Default job used

DSS

All

Type

Non-settable, single-valued

Input Synonym

You can use the synonym **printer-initial-value-job**.

Allowed Values

InfoPrint sets this value to the name of the default job used.

Default Value

No default value

destination-locations-requested

Identifies a list of destination locations. InfoPrint can use a destination at any of these locations to process the job.

GUI label

Actual destination locations requested

DSS

All

Type

Resettable, multi-valued

Input Synonyms

You can use the synonym **printer-locations-requested** or **locations-requested**.

Allowed Values

You can enter a text string of up to 4095 characters, per value, that contains the actual location of each destination requested. InfoPrint will process the job on a destination at one of the locations if the validation is successful.

Default Value

No default value

Usage Guidelines

- InfoPrint validates jobs using this attribute against the logical and actual destination attribute **destination-locations**.
- InfoPrint schedules the job against the actual destination attribute **destination-locations**.
- Any individual value specified for this attribute can select more than one actual destination. For example, the output devices could all be in the same location, such as a printer room.
- The values for both the job and destination attributes are text strings that can include blanks. They must match exactly for validation to occur.

destination-models-requested

Identifies a list of destination make and model IDs. InfoPrint can use any one of these destinations to process the job.

GUI label

Actual destination models requested

DSS

All

Type

Resettable, multi-valued

Input Synonyms

You can use the synonym **printer-models-requested** or **models-requested**.

Allowed Values

You can enter a text string of up to 4095 characters, per value, that identifies the destination model.

Default Value

No default value

Usage Guidelines

- InfoPrint validates jobs using this attribute against the logical and actual destination attribute **destination-model**. Only one value must match for InfoPrint to validate the job.
- InfoPrint schedules the job against the actual destination attribute **destination-model**. Only one value must match for InfoPrint to schedule the job.
- This attribute is multi-valued whereas the destination attributes are single-valued.
- Any individual value specified for this attribute can select more than one actual destination.
- The value for this attribute and the values for the destination attributes for the BSD, PSF, and email actual destinations are text strings that can include blanks. (The values for the AIX and CUPS actual destination attribute almost never contain blanks.)
- The value for this attribute and the value for the destination attribute must match exactly for validation to occur.

destination-name-requested (Job Only)

Identifies the logical destination to which you submitted this job.

GUI label

Submitted to

DSS

All

Type

Initially settable, single-valued

Input Synonyms

You can use the synonym **printer-name-requested**, **printer-requested**, or **logical-printer-requested**.

Allowed Values

You can enter a text string of up to 255 characters that contains the name of the logical destination.

Default Value

No default value

Usage Guidelines

If you do not specify a value for this attribute, InfoPrint uses the **-p** or **-d** value on the **pdpr** command, or the **PDPRINTER** environment variable of the job submitter.

To move the job to a different logical destination, use the **pdresubmit** command.

destinations-assigned (Job Only)

Identifies the actual destination to which InfoPrint assigned the job for processing.

GUI label

Destination

DSS

All

Type

Non-settable, single-valued

Input Synonym

You can use the synonym **printers-assigned**.

Allowed Values

InfoPrint sets this value to the name of the actual destination where it sent the job.

Default Value

No default value

Usage Guidelines

If the value for this attribute is blank, the job is still waiting for InfoPrint to assign it to an actual destination.

destinations-used (Job Only)

Identifies the actual destination that printed or sent this job.

GUI label

Destinations used

DSS

All

Type

Non-settable, multi-valued

Input Synonym

You can use the synonym **printers-used**.

Allowed Values

InfoPrint sets this value to the names of the actual destinations where it sent the job.

Default Value

No default value

Usage Guidelines

Normally this value only contains one actual destination name. However, if InfoPrint restarted the job on another actual destination because the first actual destination failed for some reason, this value could contain more than one actual destination name.

device-support-system-requested

See **dss-requested**.

dfe-job-identifier

Specifies the DFE-assigned ID information for a DFE job.

GUI label

DFE ID

DSS

DFE

Type

Non-settable, single-valued

Allowed Values

InfoPrint Manager sets this value.

Default Values

None

dfe-preset-requested

Identifies the job presets requested for a job.

GUI label

DFE preset requested

DSS

DFE

Type

Resettable, single-valued

Allowed Values

You can enter a text string that identifies the name of the preset to use.

Default Values

None

Usage Guidelines

- The **dfe-preset-requested** attribute is used with the **dfe-presets-ready** actual destination attribute.

discard-time (Job Only)

See **job-discard-time**.

dss-requested

Identifies the destination support system (DSS) requested for the job.

GUI label

Actual destination type requested

DSS

All

Type

Resettable, single-valued

Input Synonyms

You can use the synonyms **destination-support-system-requested**, **device-support-system-requested**, or **d-s-s-requested**.

Allowed Values

For AIX:

Fixed Value	*Input Synonym*
aix	**piobe**
anyplace	
bsd	
dfe	
email	
ipp	
psf	

For Linux:

Fixed Value	*Input Synonym*
anyplace	
bsd	
cups	
dfe	
email	
ipp	
psf	

For Windows:

Fixed Value	*Input Synonym*
anyplace	
bsd	
dfe	
email	
ipp	
psf	
windows	**passthrough**

Default Value

No default value

Usage Guidelines

- InfoPrint Manager validates jobs using this attribute against the actual destination attribute **device-support-system**.
- InfoPrint Manager schedules the job against the actual destination attribute **device-support-system**.

encrypt-inline-resources

Indicates whether to encrypt the first segment **xxx.seg0**. The default behavior keeps the first segment **xxx.seg0** unencrypted. If the job contains inline resources, you can use this attribute when you want to encrypt the inline resources group **xxx.seg0**.

GUI label

Encrypt inline resources

DSS

PSF, Email

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

No default value

Usage Guidelines

- Use **encrypt-inline-resources** only if the inline resources contain sensitive information; otherwise, it will have a severe impact on printing performance.
- This attribute is used only when encryption at rest is enabled. For more information, see the *RICOH InfoPrint Manager: Procedures* guide for your operating system.

end-message

See **job-end-message**.

estimated-completion-time (Job Only)

Indicates the time when InfoPrint expects the job to finish printing or sending.

GUI label

Estimated completion time

DSS

All

Type

Non-settable, single-valued

Allowed Values

Info Print Manager sets the value for this attribute in the local time format. The USA format is "HH:MM:SS mm/dd/yy" on AIX and Windows and HH:MM:SS AM/PM mm/dd/YYYY on Linux. On Linux, use the formats specified by the `PD_TIME_FORMAT` and `PD_DATE_FORMAT` InfoPrint Manager environment variables. For more information on how to use these environment variables, go to InfoPrint Manager environment variables, p. 1149.

Default Value

No default value

Usage Guidelines

- InfoPrint uses the values it calculated for the **estimated-processing-time** attribute of this job and the jobs ahead of it in the queue to estimate the job's completion time.
- InfoPrint can calculate a value for this attribute only when the queue attribute **assign-to-destination** is set to **true**.

estimated-processing-time (Job Only)

Indicates how long the job should take to process.

GUI label

Estimated processing time

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter a value using [HH:]MM. The unit is minutes or hours and minutes, separated by a colon.

Default Value

No default value

Usage Guidelines

- InfoPrint uses the values of the **total-job-octets** and **job-complexity** attributes to estimate the job's processing time. You can change this value.
- InfoPrint can calculate a value for this attribute only when the queue attribute **assign-to-destination** is set to **true**.

forms

Specifies a user-defined string for a particular set of printer configurations that need to be set up for this job. The printer configurations can include, but are not limited to, such things as paper/tray set up, post-processing requirements, and so forth.

GUI label

Forms

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter a text string.

Default Value

No default value

Usage Guidelines

- The **forms** attribute is used with the **forms-ready** actual destination attribute and the **forms-available** server attribute.
- A job submitted with forms specified that are not in the forms-available list cause the specified forms to be added to the available-list automatically.
- The **forms** attribute does not affect input bin selection. It is used for job scheduling only.

formatted-job-ticket-content (Job Only)

Contains the job ticket document for the job in human-readable format.

DSS

PSF, Email

Type

Non-settable, single-valued

Input Synonyms

You can use the synonym **job-ticket-content** or **ticket-content**.

Allowed Values

InfoPrint sets the value of this attribute to the contents of the formatted job ticket document.

Default Value

No default value

global-id (Job Only)

See **job-identifier**.

hold

See **job-hold**.

initial-value-job (Job Only)

Identifies the default job (in a given server) that InfoPrint uses to create this job.

DSS

All

Type

Initially settable, single-valued

Allowed Values

You can enter the name of an existing default job.

Default Value

No default value

Usage Guidelines

If you specify a value for this attribute, the job uses the attributes and values from the specified object unless you override those with attribute values supplied at the command line.

initial-value-job-identifier (Default Job Only)

Identifies this default job in the server.

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to the *DefaultJobName* value of the **pdcreate** command argument *ServerName:DefaultName* when this default job is created.

Default Value

No default value

Usage Guidelines

The value for this attribute must be unique in a server.

intervening-jobs (Job Only)

Indicates the number of jobs in the queue before this job.

GUI label

Position in queue

DSS

All

Type

Non-settable, single-valued

Input Synonyms

You can use the synonym **position-in-queue** or **queue-position**.

Allowed Values

InfoPrint sets and updates this value to an integer from 0 through 2147483647.

Default Value

No default value

Usage Guidelines

- This attribute provides status information.

- A value of zero (**0**) means that the job is currently printing or sending.

job-batch

Specifies that you have marked the job you are submitting as a specific type of job. InfoPrint processes this job only on an actual destination that is ready to print or send that specified job-batch type.

GUI label

Batch

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 4095 characters that contains the job-batch name.

Default Value

No default value

Usage Guidelines

InfoPrint schedules jobs using this attribute against the **job-batches-ready** actual destination attribute.

job-client-id (Job Only)

Identifies the local job identifier number for the job.

GUI label

ID

DSS

All

Type

Resettable, single-valued

Allowed Values

InfoPrint sets this value by default from 1 through 100. The **PDIDTABLE** environment variable can be used to change the upper value or to disable the mapping altogether.

Default Value

No default value

job-comment

Provides information associated with this job.

GUI label

Description

DSS

All

Type

Resettable, single-valued

Input Synonym

You can use the synonym **comment**.

Allowed Values

You can enter a text string of up to 4095 characters that contains information associated with this job.

Default Value

No default value

job-complexity

Indicates the relative complexity of the job, based on the contents of the documents in the job. For example, a job with many graphics is more complex than a job that is mostly text.

GUI label

Complexity (1–10)

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter an integer from **1** to **10**.

Default Value

3

Usage Guidelines

- The default value, **3**, represents an average job. A job with complexity **1** is one-third as complex as the average job; a job with complexity **9** is three times as complex as average.
- InfoPrint uses this value and the size of the job to estimate the job processing time.
- InfoPrint uses this attribute only when the queue attribute **assign-to-destination** is set to **true**.

job-copies-completed (Job Only)

Indicates the total number of copies of the job that have finished printing or sending.

GUI label

Copies completed

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets and updates this value to an integer from 0 through 2147483647 when:

AIX, CUPS

Each job copy completes.

BSD

Each result-set completes.

PSF

Each job copy completes.

Passthrough

Each result-set completes.

IPP

Each result-set completes.

Default Value

No default value

job-deadline-time (Job Only)

Specifies the time or time and calendar date by which you want the job to complete.

GUI label

Deadline time

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter a value using the local time and date format. The USA format is HH:MM:SS, "HH:MM:SS mm/dd/yy" on AIX and Windows, or HH:MM:SS AM/PM mm/dd/YYYY on Linux. On Linux, use the formats specified by the `PD_TIME_FORMAT` and `PD_DATE_FORMAT` InfoPrint Manager environment variables. For more information on how to use these environment variables, go to InfoPrint Manager environment variables, p. 1149. You must delimit the string with quotation marks if you specify a date. If you specify a time but no date, the date defaults to today.

Default Value

No default value

job-discard-time (Job Only)

Specifies the time or time and calendar date when InfoPrint discards the job. If the job is scheduled for printing when the discard expires, the job is discarded after it finishes printing.

GUI label

Discard time

DSS

All

Type

Resettable, single-valued

Input Synonym

You can use the synonym **discard-time**.

Allowed Values

You can enter a value using the local time and date format. The USA format is HH:MM:SS, "HH:MM:SS mm/dd/yy" on AIX and Windows, or HH:MM:SS AM/PM mm/dd/YYYY on Linux. On Linux, use the formats specified by the `PD_TIME_FORMAT` and `PD_DATE_FORMAT` InfoPrint Manager environment variables. For more information on how to use these environment variables, go to InfoPrint Manager environment variables, p. 1149. You must delimit the string with quotation marks if you specify a date. If you specify a time but no date, the date defaults to today.

Default Value

No default value

Usage Guidelines

- If the **job-discard-time** and one of the **job-retain-until** or **job-retention-period** attributes are set, InfoPrint Manager discards the job at the earliest time specified by one of these attributes.
- If the **job-discard-time** and the **retain-forever** attributes are set, InfoPrint Manager discards the job at the time specified by the **job-discard-time**.

job-end-message

Provides a message conveying information about output handling when the job is complete.

GUI label

End message

DSS

All

Type

Resettable, single-valued

Input Synonym

You can use the synonym **end-message**.

Allowed Values

You can enter a text string of up to 4095 characters that contains instructions to an operator, such as special output delivery instructions.

Default Value

No default value

Usage Guidelines

- InfoPrint validates and schedules jobs using this attribute against the destination attribute **end-message-supported**.
- InfoPrint sends this message if the attribute **end-message-supported** value is **true** for the actual destination to which InfoPrint submitted the job.
- The destination attribute **notify-operator** identifies the operators that are to receive the message.

job-finishing

Identifies the finishing options for this job.

GUI label

Finishing options

DSS

CUPS, IPP, PSF

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values for printers that use the CUPS DSS:

- **the values for PSF-supported printers**
- **staple-2-top**
- **staple-2-left**
- **staple-2-right**
- **staple-2-center**

You can enter any of these fixed values for printers that use the IPP DSS:

- **edge-stitch**
- **edge-stitch-bottom**
- **edge-stitch-left**
- **edge-stitch-right**
- **edge-stitch-top**
- **saddle-stitch**
- **staple-bottom-left**
- **staple-bottom-right**
- **staple-top-left**

- **staple-top-right**

You can enter any of these fixed values for PSF-supported printers, that is printers that use the PSF DSS:

- **accordion-fold-in**
- **accordion-fold-out**
- **c-fold-in**
- **c-fold-out**
- **center-fold-out**
- **edge-stitch**
- **edge-stitch-2**
- **edge-stitch-3**
- **edge-stitch-bottom**
- **edge-stitch-left**
- **edge-stitch-right**
- **edge-stitch-top**
- **perfect-bind-left**
- **perfect-bind-right**
- **perfect-bind-top**
- **punch-2**
- **punch-3**
- **punch-4**
- **punch-2-bottom**
- **punch-2-left**
- **punch-2-right**
- **punch-2-top**
- **punch-3-bottom**
- **punch-3-left**
- **punch-3-right**
- **punch-3-top**
- **punch-4-bottom**
- **punch-4-left**
- **punch-4-right**
- **punch-4-top**
- **ring-bind-left**
- **ring-bind-right**
- **ring-bind-top**
- **saddle-fold**
- **saddle-stitch**
- **saddle-stitch-in**
- **single-gate-fold-in**
- **single-gate-fold-out**
- **staple-bottom-left**

- **staple-bottom-right**
- **staple-top-left**
- **staple-top-right**

Default Value

No default value

Usage Guidelines

- **edge-stitch-2**, **edge-stitch-3**, and **edge-stitch** all staple one edge of the job. The difference is the number of staples: 2, 3, or the finisher default.
- This attribute is not valid for ASCII documents.
- The placement of staples in relation to the data depends on the image orientation and the way the paper is loaded in the printer. Letter and A4 paper are normally loaded long edge first, but are loaded short edge first when rotated. Long media sheets, like legal paper, are always loaded short edge first.
- While the PSF DSS supports the job-finishing values listed, the way these values are implemented by the different printers can vary. Therefore, you might need to experiment. For specific details on finishing options with printers, see your printer documentation.
- For PSF DSS, **saddle-stitch** is valid only for these medium sizes, all loaded short edge first:
  - **A3**
  - **A4** (rotated)
  - **ledger**
  - **legal**
  - **letter** (rotated)
- For PSF DSS, when you specify a value for **job-finishing**, InfoPrint creates an inline form definition. Do not use the document attribute **form-definition** to specify another form definition.
- For CUPS, InfoPrint Manager maps the value to the corresponding driver option set in the printer model configuration file. For more information, see "Mapping Attributes and Values to PPD Options" in the *RICOH InfoPrint Manager for Linux: Getting Started* guide.
- InfoPrint validates and schedules jobs using this attribute against the **job-finishings-supported** actual destination attribute.
- InfoPrint validates and schedules jobs using this attribute against the **job-finishings-supported** actual destination attribute.
- The **job-finishing** attribute is not applicable to UP³I devices. For information about UP³I devices, see the *InfoPrint Page Printer Formatting Aid: User's Guide*.

job-hold

Indicates whether InfoPrint can schedule the job for printing or transmission.

GUI label

Hold

DSS

All

Type

Resettable, single-valued

Input Synonym

You can use the synonym **hold**.

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

Default job	No default value
Job	**false**

Usage Guidelines

- If **job-hold** is **true**, the **job-state** changes to **held** and InfoPrint sets the **job-state-reasons** to **job-hold-set**.
- A held job remains in the queue until:
  - **job-hold** is set to **false** and the job is printed or sent.
  - The time set in the **job-discard-time** attribute is reached and the job is discarded.
  - The time set in the **pull-print-timeout** attribute expired and the job is discarded.
- When a job with **job-rip-action=rip-and-print-ignore-ready** is placed in the **held** state after RIPping because a required resource is not ready, the value of **job-hold** remains **false**. The job is automatically released when all required resources become ready.

job-identifier (Job Only)

Identifies the global job identifier. The global job ID uniquely identifies the job in the server.

GUI label

Global ID

DSS

All

Type

Non-settable, single-valued

Input Synonym

You can use the synonym **global-id**.

Allowed Values

InfoPrint sets this value.

Default Value

No default value

job-log (Job Only)

Contains messages that InfoPrint issues as this job is processed.

DSS

All

Type

Non-settable, multi-valued

Allowed Values

InfoPrint sets the value of this attribute to the messages issued as the job is processed.

Default Value

No default value

Usage Guidelines

InfoPrint creates this attribute when the value of the **delivery-method** component of the **notification-profile** attribute is **job-log**.

job-media-sheet-count (Job Only)

Identifies the estimated total number of sheets used to print the job.

GUI label

Number of media sheets

DSS

All

Type

Resettable, single-valued

Input Synonym

You can use the synonym **media-sheet-count**.

Allowed Values

You can enter an integer from 1 through 2147483647.

Default Value

No default value

job-message-from-administrator (Job Only)

Describes the reasons that you are changing or have changed the job.

GUI label

Message from administrator

DSS

All

Type

Resettable, single-valued

Input Synonym

You can use the synonym **message-from-administrator**.

Allowed Values

The administrator can enter a text string up to 4095 characters long that provides information concerning why a given action was taken. The administrator uses the **-m** flag or the command attribute **message** of certain InfoPrint commands. See "Usage Guidelines" for how you can set the value.

Default Value

No default value

Usage Guidelines

Set this attribute by specifying a value with the **-m** flag or the **message** command attribute of these commands:

- **pdmod**
- **pdpause**
- **pdpromote**
- **pdresume**
- **pdrm**
- **pdset**

job-message-to-operator

Provides a message that InfoPrint can send to an operator when it adds the job to the queue.

GUI label

Message to operator

DSS

All

Type

Resettable, single-valued

Input Synonym

You can use the synonym **message-to-operator**.

Allowed Values

You can enter a text string of up to 4095 characters that contains information about job processing requirements, such as some type of special handling.

Default Value

No default value

Usage Guidelines

The queue attribute **notify-operator** identifies the operator who receives the message.

job-name

Specifies the name of the job.

GUI label

Name

DSS

All

Type

Resettable, single-valued

Input Synonym

You can use the synonym **name**.

Allowed Values

You can enter a text string of up to 255 characters that contains the job name.

Default Value

Default job

No default value

Job

The file name of the first document in the job

Usage Guidelines

For PSF, this identification can print on the start sheet in the **JOB NAME** field.

job-originator (Job Only)

Identifies the person who submitted the job or the program that initiated the job.

DSS

All

Type

Initially settable, single-valued

Input Synonym

You can use the synonym **originator**.

Allowed Values

You can enter a text string up to 255 characters long that contains the name, login ID, login ID and node of the person submitting the job, the name of the program initiating the job.

Default Value

- If you are logged in with your LDAP or Active Directory credentials, the **job-originator** attribute value is set to the LDAP or Active Directory user ID.
- If you are logged in with your local account, the **job-originator** attribute value is set to *username*@node of the user that submitted the job.
- If you are logged in using federated authentication, the **job-originator** attribute value is set to the federated authentication user ID.

Usage Guidelines

- You can use this attribute to identify yourself by name or to identify the program that initiated the job.

job-owner (Job Only)

Identifies the person responsible for the job by name or login ID.

GUI label

Sent by

DSS

All

Type

Initially settable, single-valued

Input Synonym

You can use the synonym **owner**.

Allowed Values

You can enter a text string of up to 255 characters. Normally the string contains the *username@node* of the person that is responsible for this job.

Default Value

The value of the job attribute **job-originator**.

Usage Guidelines

- You can use this attribute to specify a person other than yourself who is responsible for the job.
- For BSD, InfoPrint maps this attribute value to the **qprt -D** option.
- For PSF, this identification can print on the start sheet in the **USERID** field.

job-page-count (Job Only)

Identifies the estimated total number of pages in the job.

GUI label

Number of pages

DSS

All

Type

Resettable, single-valued

Allowed Values

An integer from 1 through 2147483647.

Default Value

The total of the values of the **page-count** attribute for all documents multiplied times the value in the **copy-count** attribute (and the **job-copies** component in the **results-profile**) for all the documents in the job.

Usage Guidelines

- InfoPrint calculates the value for **job-page-count** as follows:
  1. Multiplies the value of each printable document's **page-count** attribute times the value of its **copy-count**.
  2. InfoPrint then multiplies the value from step 1 times the **job-copies** component of the **results-profile** job attribute.
  3. InfoPrint then totals the values for all printable documents and inserts the result in the **job-page-count** attribute.
- If you choose to specify a value for the **job-page-count** attribute, the value should closely represent the total number of pages expected for the complete job.
- The **job-page-count** value is recalculated by the InfoPrint Manager server if any transform object modifies (and informs InfoPrint Manager) any document's page count when processing a job.
- InfoPrint Manager can modify the page count of a document with the page count function that is enabled with the **count-job-pages** server attribute.
- If the **count-job-pages** server attribute is set, the **job-page-count** value is recalculated when all documents in the job have been ripped and held and requested copies have been made.

job-print-after

Specifies the time or time and calendar date after which InfoPrint can schedule the job for printing or transmission.

GUI label

Print after

DSS

All

Type

Resettable, single-valued

Input Synonym

You can use the synonym **print-after**.

Allowed Values

You can enter a value using the local time and date format. The USA format is HH:MM:SS, "HH:MM:SS mm/dd/yy" on AIX and Windows, or HH:MM:SS AM/PM mm/dd/YYYY on Linux. On Linux, use the formats specified by the `PD_TIME_FORMAT` and `PD_DATE_FORMAT` InfoPrint Manager environment variables. For more information on how to use these environment variables, go to InfoPrint Manager environment variables, p. 1149. You must delimit the string with quotation marks if you specify a date. If you specify a time but no date, the date defaults to today.

Default Value

No default value

Usage Guidelines

- If you submit the job before the specified time, InfoPrint sets the **job-state** to **held** and the **job-state-reasons** attribute value for the job is **job-print-after-specified**.
- If you submit the job after the specified time, the job is printed or sent as soon as possible.

job-priority

Specifies a number representing the scheduling priority for the job. Actual destinations that employ a priority-based scheduler use this attribute. A larger value specifies a higher priority.

GUI label

Priority (1–100)

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 1 to 100.

Default Value

Default job

No default value

Job

50

Usage Guidelines

- A job submitter cannot set this value higher than 50 unless the job submitter is an administrator. If the job submitter specifies a value greater than 50, InfoPrint Manager sets the value to 50.
- An administrator can set the value to any valid value.
- Make sure that the actual destination is disabled at the time the schedule is made. Otherwise, the jobs are not printed in the order specified by the user.

job-retain-until (Job Only)

Specifies the time or time and calendar date until which InfoPrint retains the completed job before the server discards it. The job has to be in the retained state before **job-retain-until** starts. The job can be a job that has completed or a job that has been canceled.

GUI label

Retain until

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter a value using the local time and date format. The USA format is HH:MM:SS, "HH:MM:SS mm/dd/yy" on AIX and Windows, or HH:MM:SS AM/PM mm/dd/YYYY on Linux. On Linux, use the formats specified by the `PD_TIME_FORMAT` and `PD_DATE_FORMAT` InfoPrint Manager environment

variables. For more information on how to use these environment variables, go to InfoPrint Manager environment variables, p. 1149. You must delimit the string with quotation marks if you specify a date. If you specify a time but no date, the date defaults to today.

Default Value

No default value

Usage Guidelines

- If the **job-discard-time** and one of the **job-retain-until** or **job-retention-period** attributes are set, InfoPrint Manager discards the job at the earliest time specified by one of these attributes.
- If the **job-discard-time** and the **retain-forever** attributes are set, InfoPrint Manager discards the job at the time specified by the **job-discard-time**.
- You can only specify one retention period attribute for each job. If you set a different retention period attribute, that attribute takes effect, and this one is cleared. The retention period attributes are **job-retain-until (Job only)**, **job-retention-period**, and **retain-forever**.
- You can specify a value for either **job-retain-until** or **job-retention-period**, but not both.

job-retention-period

Specifies the period of time from when the job enters the retained state that InfoPrint retains the job. If the job is still in the retained state when that period of time has passed, the InfoPrint server discards the job.

Note

The **retained-time** Job attribute can be queried to see the time a job entered the retained state.

GUI label

Retain for

DSS

All

Type

Resettable, single-valued

Input Synonym

You can use the synonym **retention-period**.

Allowed Values

You can enter a value using [HH:]MM. The unit is minutes or hours and minutes, separated by a colon.

Default Value

No default value

Usage Guidelines

- If the **job-discard-time** and one of the **job-retain-until** or **job-retention-period** attributes are set, InfoPrint Manager discards the job at the earliest time specified by one of these attributes.
- If the **job-discard-time** and the **retain-forever** attributes are set, InfoPrint Manager discards the job at the time specified by the **job-discard-time**.
- You can specify a value for either **job-retain-until** or **job-retention-period**, but not both.
- The retention period starts when the job enters the **retained** state.
- You can only specify one retention period attribute for each job. If you set a different retention period attribute, that attribute takes effect, and this one is cleared. The retention period attributes are **job-retain-until (Job only)**, **job-retention-period**, and **retain-forever**.

job-rip-action

Indicates that InfoPrint should convert the job to raster image patterns and whether to hold the RIPped job, print or send it, or neither.

GUI label

RIP option

DSS

PSF, Email

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Explanation*
rip-and-hold,	If all required resources are ready, InfoPrint RIPs the job and returns it to the scheduler in the **held** state. The value of the **job-state-reasons** attribute is **rip-and-hold-completed**. Otherwise, if the required resources are not ready, InfoPrint holds the job. The value of the **job-state-reasons** attribute is **required-resources-not-ready**. When the required resources become ready, InfoPrint automatically RIPs the job and returns it to the scheduler in the **held** state.
rip-and-hold-ignore-ready	InfoPrint RIPs the job and returns it to the scheduler in the **held** state. The value of the **job-state-reasons** attribute is **rip-and-hold-completed**. If the required resources are not ready, InfoPrint adds **required-resource-not-ready** to **job-state-reason** attribute. InfoPrint automatically updates the **job-state-reason** when all required resources become ready.
rip-and-print	If all required resources are ready on an actual destination, InfoPrint RIPs and prints the job. Otherwise, InfoPrint returns the job to the scheduler in the

Fixed Value	*Explanation*
	held state, without RIPping it. The value of the **job-state-reasons** attribute is **required-resource-not-ready**.
rip-and-print-ignore-ready	If all required resources are ready, InfoPrint RIPs and prints the job. Otherwise, InfoPrint RIPs the job and returns it to the scheduler in the **held** state. The value of the **job-state-reasons** attribute is **rip-completed**. When the required resources become ready, InfoPrint automatically releases the job to print.
rip-only, **rip-only-ignore-ready**	InfoPrint RIPs the job and discards or retains it according to the values of the **job-retain-until** and **job-retention-period** attributes. For a retained job, the value of the **job-state-reasons** attribute is **completed**, **completed successfully**, or **completed with errors**.

Default Value

No default value

Usage Guidelines

- Use the **rip-only** and **rip-only-ignore-ready** values to test for RIPping errors.
- The **rip-and-hold** and **rip-and-hold-ignore-ready** values override a value of **false** for the server **save-rip-files** attribute.
- InfoPrint validates and schedules jobs using this attribute against the destination attribute **job-rip-actions-supported**.

Note

You can set the **count-job-pages** server attribute to enable the job page count function. When enabled, the server can calculate job page count for jobs with **rip-and-hold** or **rip-and-hold-ignore-ready** values of the **job-rip-actions** attribute.

job-ripped-by-server

Indicates whether InfoPrint Manager should convert the job to MOD:CA-P and send it as email. If this attribute is **true**, the server converts the job into MOD:CA-P. If this attribute is **false**, the server determines if the job can be sent directly as email without converting to MOD:CA-P. When a job cannot be handled directly without conversion, the job is requeued on the spooler.

GUI label

Override RIP at destination

DSS

Email

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

No default value

Usage Guidelines

- When a job that is submitted to Email DSS contains a document whose **document-format** is not **ascii**, **pdf**, **gif**, **jpeg**, or **tiff**.
- When a job requires special processing of its input files, the server transforms the job into MOD:CA-P regardless of the **job-ripped-by-server** job attribute or the document formats listed in the **document-formats-ripped-at-destination** actual destination attribute.
- This document formats cannot be converted to MOD:CA-P:
  - ASCII
  - KGL

  InfoPrint sends these document formats in passthru mode. For documents to print successfully in passthru mode, the **job-finishing** job attribute and these document attributes must not be specified:

  - **account-text**
  - **base-printer**
  - **carriage-control-type**
  - **chars**
  - **convert-to-ebcdic**
  - **default-character-mapping**
  - **default-medium**
  - **default-font-fidelity-action**
  - **form-definition**
  - **halftone**
  - **image-fit**
  - **image-length**
  - **image-width**
  - **input-exit**
  - **new-line-option**
  - **number-up**
  - **other-transform-options**
  - **output-bin**

- **output-format**
- **overlay**
- **page-definition**
- **page-select**
- **plex**
- **printer-pass-through**
- **resource-context**
- **resource-context-font**
- **resource-context-form-definition**
- **resource-context-page-definition**
- **resource-context-page-segment**
- **resource-context-overlay**
- **resource-context-user**
- **shift-out-shift-in**
- **sides**
- **start-on-new-sheet**
- **subject-text**
- **table-reference-characters**
- **transform-message-file-name**
- **transform-output-file-name**
- **x-image-shift**
- **x-image-shift-back**
- **y-image-shift**
- **y-image-shift-back**

  Note

  If any of these attributes are specified, InfoPrint converts the job to MOD:CA-P.

- When the **job-finishing** job attribute and these document attributes are specified for an email with color, InfoPrint converts the job into MOD:CA-P and presents the email in black and white:

  - **account-text**
  - **address1-text**
  - **address2-text**
  - **address3-text**
  - **address4-text**
  - **carriage-control-type**
  - **chars**
  - **convert-to-ebcdic**
  - **default-character-mapping**
  - **font-fidelity-action**
  - **font-resolution**
  - **form-definition**
  - **image-fit**

- **image-length**
- **image-width**
- **input-exit**
- **new-line-option**
- **number-up**
- **other-transform-options**
- **output-bin**
- **output-format**
- **overlay**
- **page-definition**
- **page-select**
- **plex**
- **resource-context**
- **resource-context-font**
- **resource-context-form-definition**
- **resource-context-page-definition**
- **resource-context-page-segment**
- **resource-context-overlay**
- **resource-context-user**
- **shared-formdef**
- **shift-out-shift-in**
- **sides**
- **table-reference-characters**
- **transform-message-file-name**
- **transform-output-file-name**
- **x-image-shift**
- **y-image-shift**

Note

If any of these attributes are specified, InfoPrint converts the job to MOD:CA-P.

In addition to the listed attributes, any of these job characteristics also require that InfoPrint converts the job into MOD:CA-P:

- Job contains more than one printable document.
- Job contains an insert sheet.
- Job contains a file-reference document.
- Job contains a document whose document-format is MOD:CA-P.
- Job requests **job-rip-action=rip-and-hold**, **rip-only**, **rip-only-ignore-ready**, or **rip-and-hold-ignore-ready**.
- Job requests more than one copy with the **copy-count** attribute.
- Job contains a resource document.
- Job contains a document-definition document.

job-scheduling

Indicates how the associated job is to be scheduled.

GUI label

Job scheduling

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
normal	Specifies normal InfoPrint scheduling methods.
retain-immediately	Specifies that the job goes into retained state immediately after being received by the InfoPrint server, which means that the job is not put on the queue or scheduled. The job is processed according to the values of its retention period attributes.

Note

When you specify **retain-immediately** with the **job-scheduling** job/default job attribute, make sure that a retention-period has been set for the job with either the **job-retain-until** job attribute, the **job-retention-period** job/default job attribute, or the **retain-forever** job/default job attribute.

Default Value

No default value

Usage Guidelines

If **retain-immediately** is specified with no other retention attributes, the job defaults to **retain-forever** as **true** to prevent accidental loss of a retained job.

job-size (Job Only)

See **total-job-octets**.

job-start-message

Provides a message that InfoPrint can send to an operator when the job starts printing or sending. This message can alert the operator to something special about the job, for example, that the job contains confidential information.

GUI label

Start message

DSS

All

Type

Resettable, single-valued

Input Synonym

You can use the synonym **start-message**.

Allowed Values

You can enter a text string of up to 4095 characters that contains information about the job such as:

```
"This job is very important; call me if there is a problem."
```

Default Value

No default value

Usage Guidelines

- InfoPrint validates and schedules jobs using this attribute against the destination attribute **start-message-supported**.
- InfoPrint sends a message if the actual destination attribute **start-message-supported** value is **true** for the actual destination to which InfoPrint submitted the job.
- The destination attribute **notify-operator** contains the identity of the operators that are to receive the message.
- Sending the start message does not stop the job; normally the job is printed or sent without operator intervention.
- Sending a start message is particularly useful for AIX printer devices that have manual forms feed capabilities. You can send a message alerting the operator to load a special type of paper before starting the job.
- Use this attribute with the **job-start-wait** attribute for jobs that require operator intervention, for example, loading special forms in the printer device. If the values of the **job-start-message** and **job-start-wait** are true, when the job is about to be printed or sent, InfoPrint pauses the actual destination and the person specified by the actual destination **notify-operator** attribute receives the message specified by the **job-start-message** attribute. When the operator resumes the actual destination, the job is printed or sent.

job-start-wait

Pauses the actual destination just before the job is printed or sent.

GUI label

Wait to start job

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

Default job

No default value

Job

false

Usage Guidelines

- Use this attribute with the **job-start-message** attribute for jobs that require operator intervention, for example, loading special forms in the printer device. If the values of the **job-start-wait** and **job-start-message** are true, when the job is about to be printed or sent, InfoPrint pauses the actual destination and the person specified by the actual destination **notify-operator** attribute receives the message specified by the **job-start-message** attribute. When the operator resumes the actual destination, the job is printed or sent.
- InfoPrint validates and schedules jobs using this attribute against the destination attribute **job-start-wait-supported**.

job-state (Job Only)

See **current-job-state**.

job-state-reasons (Job Only)

Identifies the reasons that a job is in the **held**, **terminating**, or **retained** state. If this attribute value is blank, the job is not in one of these states.

GUI label

Reasons

DSS

All

Type

Non-settable, multi-valued

Input Synonyms

You can use the synonym **state-reasons** or **reasons**.

Allowed Values

InfoPrint sets this value to any of these fixed values:

Fixed Value	*Explanation*
aborted-by-system	The server aborted the job.
cancelled-by-operator	An operator or system administrator cancelled the job.
cancelled-by-user	The person who submitted the job cancelled the job.
completed	The job completed without any errors or warnings that InfoPrint could detect. This does not guarantee that there were no errors of any kind.
completed-successfully	The job completed without any errors or warnings.
completed-with-errors	The job completed with errors. Based on the **dss-job-message-disposition** actual destination attribute, the messages associated with the errors either print at the end of the job or in a message log. See dss-job-message-disposition, p. 618.
deadline-in-jeopardy	The value of the **estimated-completion-time** attribute for the job is later than the time specified by the **job-deadline-time** attribute; or the time specified by the **job-deadline-time** attribute is past.
job-hold-set	The job is in a queue and the **job-hold** job attribute of the job has a **true** value.
job-print-after-specified	The job is in a queue and the time specified by the **job-print-after** job attribute has not yet occurred.

Fixed Value	*Explanation*
pull-print	The job is in a queue destined for an actual destination with **pull-print-printer** set to **true** or in an Anyplace queue and the time period specified by the **pull-print-job-timeout** server attribute has not yet past.
required-resource-not-ready	The job is in a queue but InfoPrint cannot schedule it because one or more of the resources required by the job (such as media, fonts, and so on) are not ready on any of the actual destinations that can accept the job. The job's **required-resource-not-ready** attribute identifies the resources that need to be made ready.
required-resource-not-supported	The job is in a queue but InfoPrint cannot schedule it because none of the actual destinations that can accept the job support one or more of the resources required by the job (such as media, fonts, and so on). The job's **required-resource-not-supported** attribute identifies the resources that are not supported.
retained-immediately	The job is not put on a queue or scheduled when it is received by the InfoPrint server. The job is immediately processed according to the values of its retention period attributes.
rip-and-hold-completed	The RIP has successfully converted the job. The job has not been scheduled because the value of the **job-rip-action** attribute is **rip-and-hold** or is **rip-and-hold-ignore-ready**.
rip-completed	A job with **job-rip-action=rip-and-print-ignore-ready** has been RIPped, but InfoPrint cannot schedule it because one or more of the resources required by the job are not ready on any of the actual destinations that can accept the job. Jobs held for this reason are released automatically when the required resources become ready.
rip-failed	The RIP failed to convert the job. Note You will see this reason only if the job is retained or if the value of the **requeue-failed-jobs** queue attribute is **true**. When neither of these conditions is true, jobs that fail to rip are discarded.

Default Value

No default value

job-submission-complete (Job Only)

Indicates whether the server has received all documents of the job.

GUI label

Submission complete

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to one of these fixed values:

- **true**
- **false**

Default Value

No default value

job-ticket-content

See **formatted-job-ticket-content**.

last-accessor (Job Only)

See **name-of-last-accessor**.

last-modifier (Job Only)

See **name-of-last-accessor**.

list-of-managers (Default Job Only)

Identifies the persons responsible for the maintenance of this default job.

DSS

All

Type

Resettable, multi-valued

Input Synonym

You can use the synonym **managers**.

Allowed Values

You can enter a text string up to 255 characters long, per value, that contains the name or user ID of the person responsible for this default job.

Default Value

No default value

Usage Guidelines

This attribute is useful if a user needs to contact someone to report a problem or to request a change.

locations-requested

See **destination-locations-requested**.

logical-destinations-ready (Default Job Only)

Lists the enabled logical destinations that reference this default job.

DSS

All

Type

Non-settable, multi-valued

Allowed Values

InfoPrint sets or deletes a text string containing the global ID of any logical destination that references this default job when the logical destination is enabled or disabled.

Input Synonym

You can use the synonym **logical-printers-ready**.

Default Value

No default value

Usage Guidelines

- InfoPrint adds a value when a logical destination that references this default job through its **destination-initial-value-job** attribute is enabled.

- InfoPrint removes a value when a logical destination that references this default job is disabled.
- You cannot delete this default job until InfoPrint has removed all logical destinations from this list.

logical-printer-requested

See **destination-name-requested**.

logical-printers-ready (Default Job Only)

See **logical-destinations-ready**.

managers (Default Job Only)

See **list-of-managers**.

media-sheet-count (Job Only)

See **job-media-sheet-count**.

media-sheets-completed (Job Only)

Reports the number of sheets that have been used to print this job.

GUI label

Media sheets completed

DSS

PSF, Passthrough

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets and updates this value to an integer from 0 through 2147483647 at the completion of each result-set.

Default Value

No default value

Usage Guidelines

How this value relates to the value of **pages-completed** depends on the values of the **output-format**, **number-up**, and **sides** document attributes.

- For a single-sided, 1-up job, **pages-completed** is equal to **media-sheets-completed**.
- For a single-sided, slit-and-merge (2-up) job, **pages-completed** is twice as large as **media-sheets-completed**.
- For a double-sided, 3-up job, **pages-completed** is six times as large as **media-sheets-completed**.

message (Default Job Only)

Provides a message associated with the default job.

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 4095 characters that provides information about this object.

Default Value

No default value

message-from-administrator (Job Only)

See **job-message-from-administrator**.

message-to-operator

See **job-message-to-operator**.

models-requested

See **destination-models-requested**.

modification-time (Job Only)

Identifies the time when the last modification to this job occurred.

GUI label

Last modified

DSS

All

Type

Non-settable, single-valued

Allowed Values

Info Print Manager sets the value for this attribute in the local time format. The USA format is "HH:MM:SS mm/dd/yy" on AIX and Windows and HH:MM:SS AM/PM mm/dd/YYYY on Linux. On Linux, use the formats specified by the `PD_TIME_FORMAT` and `PD_DATE_FORMAT` InfoPrint Manager environment variables. For more information on how to use these environment variables, go to InfoPrint Manager environment variables, p. 1149.

Default Value

No default value

name

See **job-name**.

name-of-last-accessor (Job Only)

Identifies the person or program that submitted the job, or most recently modified the job.

GUI label

Last modified by

DSS

All

Type

Non-settable, single-valued

Input Synonyms

You can use the synonym **last-accessor** or **last-modifier**.

Allowed Values

InfoPrint sets this value to the login ID of the person or the name of the program that submitted or most recently modified the job.

Default Value

The login ID of the person or the name of the program that submitted or most recently modified the job.

new-job-identifier (Job Only)

Identifies the global job identifier for a job resubmitted to a logical destination on a different server than where you first submitted the job.

GUI label

New ID

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to the correct values for *ServerName:JobIdentifier*

Default Value

No default value

Usage Guidelines

If you resubmit the job to a logical destination on the same server, the job identifier remains the same.

notification-profile

Designates the people that InfoPrint notifies when specified events relating to this job occur and how InfoPrint notifies the people.

GUI label

Notification profile

DSS

All

Type

Resettable, multi-valued, complex

Syntax

-x "notification-profile={event-identifiers=*event* **...**
delivery-address=*name@node* **delivery-method=***value*
event-comment='*some text***' locale=***locale***}"**

For example,

```
-x "notification-profile={event-identifiers=class-state-changed
    job-completed delivery-address=joe@newhope delivery-method=message
    locale=En_US.IBM-850}"
```

You can omit any of these components.

Components

- **event-identifiers**
  Specifies the events for which the addressee receives notification that something has taken place.
  - *GUI label*
    Events
  - *Type*
    Multi-valued
  - *Allowed Values*
    The values can be any of the job events or classes of job events listed for the server. See the **events-supported** attribute for the server for more information.
  - *Default Value*
    - For default jobs, this component has no default values.
    - For jobs, the default values are **document-aborted-by-destination**, **document-aborted-by-server**, **document-cancelled-at-destination**, **job-aborted-by-server**, **job-cancelled-by-operator**, **job-cannot-be-scheduled**, **job-completed**, **past-discard-time**,

destination-needs-attention, **destination-needs-operator**, **destinations-not-ready-for-job**

- **delivery-address**
  Specifies the address of the person that receives the event messages or the directory and file name where InfoPrint sends the message.
  - *GUI label*
    Address
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a text string that contains the user name and node (optional) of the person that receives the information or the path to the directory and file name.
  - *Default Value*
    - For default jobs, this component has no default value.
    - For jobs, the default value is the login ID of the person who submitted the job.
  - *Usage Guidelines*
    You must specify a value for **delivery-address** if you specify a value of **file**, **file-add-to**, **exit**, or **wireless** for the **delivery-method** component.
- **delivery-method**
  Specifies how the user or file receives event messages.
  - *GUI label*
    Method
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter one of these fixed values:

Fixed Value	*Input Synonym*
electronic-mail	**e-mail**
file	
file-add-to	
job-log	
message	
sapcb	
exit	
none	
wireless	

– *Default Value*

message

– *Usage Guidelines*

- If you specify a value of **file**, **file-add-to**, **exit**, or **wireless**, you must specify a value for the **delivery-address** component.
- If you specify a value of **job-log**, you cannot specify a value for the **delivery-address** component.
- The **sapcb** notification method causes the SAP callback daemon to return messages about job events to the SAP system. The SAP print command sets this value; you should never have to specify it.

- **event-comment**

  Provides information that InfoPrint appends to the event message.

  – *GUI label*

  Comment

  – *Type*

  Single-valued

  – *Allowed Values*

  You can enter a text string of up to 4095 characters that supplies additional information.

  – *Default Value*

  No default value

- **locale**

  – *Type*

  Single-valued

  – *Allowed Values*

  You can enter the name of any locale for which the InfoPrint messages in the corresponding language are installed.

  – *Default Value*

  - For default jobs, this component has no default value.
  - For jobs, the default value is the locale of the user who submitted the job.

Usage Guidelines

A default job can have a notification profile that only has one or two components set. When you request this default job for a job, InfoPrint fills the remaining components with default values for that job.

number-of-documents (Job Only)

Identifies the number of documents in the job, including resource documents such as fonts.

GUI label

Number of documents in job

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to an integer from 1 through 2147483647.

Default Value

No default value

object-class

Identifies the object class to which this object belongs.

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to **job** for a job or to **initial-value-job** for a default job.

Default Value

Job	**job**
Default job	**initial-value-job**

octets-completed (Job Only)

Reports the number of octets (bytes) in this job that have been printed or sent.

GUI label

KBytes completed

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets and updates this value to an integer from 0 to 9223372036854775800 when:

AIX

You query the job after each document copy completes.

BSD

Each result-set completes.

PSF

Each result-set completes.

Passthrough

Each result-set completes.

IPP

Each result-set completes.

Default Value

No default value

optimize-for-multiple-copies

Used with the **optimize-for-multiple-copies** actual destination attribute to indicate whether the destination should save pages to print multiple copies of the job faster.

GUI label

Optimize for copies

DSS

PSF

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

No default value

Usage Guidelines

- Do not use this attribute for any MO:DCA file that the **Include Saved Page** structured field is specified.
- Do not use this attribute for any document that you created using the **output-format** attribute.
- This attribute is used in combination with the **optimize-for-multiple-copies** actual destination attribute:

Job Attribute	*Destination Attribute*	*Results*
true	**true**	Pages are saved
true	**false**	Pages are not saved
false	**true**	Pages are not saved
false	**false**	Pages are not saved
No value	**true**	Pages are saved
No value	**false**	Pages are not saved

- If the actual destination cannot save pages, the job is printed and this attribute is ignored.
- When **optimize-for-multiple-copies** is set to **true** or **yes**, the job does not print until all the pages in the job are loaded on the printer.

originating-host

Identifies the host name of the device used to submit the job when the submitter uses LDAP authentication.

DSS

All

Type

Non-settable, single-valued

Allowed Values

If the job was submitted using an LDAP enabled client, InfoPrint Manager sets this value to the host name of the originating device for the job. Otherwise, InfoPrint Manager does not set any value.

originating-job-identification (Job only)

Identifies the Pull Print Feature information for an Anyplace job.

GUI label

Anyplace ID

DSS

All

Type

Non-settable, single-valued

Input Synonym

You can use the synonym **anyplace-id**.

Allowed Values

InfoPrint Manager sets this value.

Default value

None

Usage Guidelines

- InfoPrint Manager Pull Print Feature sets this value prior to submitting the job to the logical destination identified by the **processing-logical-destination-requested** job or default job attribute.
- The value set for this attribute consists of the following components: Global ID, Pull Print Feature Job Processing Timeout, Pull Print Feature Job Completion Timeout, Submitted To and Inter-Server Communication Host and Port.

originator (Job Only)

See **job-originator**.

owner (Job Only)

See **job-owner**.

pages-completed (Job Only)

Reports the number of pages in this job that have been printed, and if you are using the PSF DSS, stacked.

GUI label

Pages completed

DSS

AIX, CUPS, Email, IPP, PSF, Passthrough with InfoPrint TCP/IP Network Port Monitor

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets and updates this value to an integer from 0 through 2147483647 when:

AIX, CUPS

You query the job or after each document copy completes.

IPP and Passthrough with TCP/IP Port Monitor

As defined by the **destination-poll-interval** actual destination attribute, which defaults to 2 seconds.

PSF

The number of pages specified by the **ack-interval** actual destination attribute have printed at the completion of each result-set.

Default Value

No default value

Usage Guidelines

AIX DSS, CUPS

The AIX DSS determines **pages-completed** in this order:

1. If the page count presented by the backend is not zero, InfoPrint uses that page count.
2. If you specified a page count with the **page-count** document attribute, InfoPrint uses that page count.
3. When InfoPrint can determine a page count for the PDF, PostScript or PCL input, InfoPrint uses that page count.

PSF DSS

The differences between this attribute and **current-page-printing** are:

- **current-page-printing** is the number of the page being printed or sent, while **pages-completed** is the number of pages placed in the stacker. For example, when page 12 of the first copy of a double-sided job is printing, the value of **current-page-printing** is 12 and the value of **pages-completed** is 10.
- **current-page-printing** is reset with every job copy, while **pages-completed** is cumulative in a job. For example, when page 6 of the second copy of a 10-page job is printing, the value of **current-page-printing** is 6. When the same page is stacked, the value of **pages-completed** is 16.

  Note

  Stacking is applicable only with the PSF DSS.

Email DSS

InfoPrint uses the number of pages completed when the email is successful.

Note

InfoPrint does not count unsuccessful emails.

physical-printers-requested

See **actual-destinations-requested**.

position-in-queue (Job Only)

See **intervening-jobs**.

previous-job-state (Job Only)

Identifies the state of the job before the last job-state change.

GUI label

Previous state

DSS

All

Type

Non-settable, single-valued

Input Synonym

You can use the synonym **previous-state**.

Allowed Values

InfoPrint sets and updates this value to one of these fixed values:

Fixed Value	*Reason*
cancelled	The job submitter or an operator cancelled the job. The **job-state-reasons** job attribute provides the reason.
held	The job is in a queue and InfoPrint cannot schedule it. Either the **job-hold** job attribute is set to **true** or the job is held for some other reason, such as resources not ready. The **job-state-reasons** job attribute provides the reason.
imposing	InfoPrint is arranging the job's pages so that they will print on the press sheets in the right order for final cutting, folding, and binding.
paused	The job was paused with the **pdpause** command.
pending	The job is in a queue and is waiting for InfoPrint to schedule and send it to an actual destination.
pre-processing	InfoPrint is creating the job.
printing	The job is printing on a PSF actual destination. The **printing** state is not supported by the AIX, BSD, or email DSS. Jobs printing on AIX or BSD actual destinations, or sending on email destinations, are in the **processing** state.
processing	InfoPrint has sent the job to an actual destination. The job is processing and printing on an AIX or BSD DSS actual destination, processing and sending on an email destination, or processing on a PSF actual destination. Depending on the output device, this can indicate that InfoPrint has sent at least one document in the job to the output device.
retained	InfoPrint has retained the job in the server after it finished printing or sending or after it was cancelled. Either the value of the **job-retention-period** job attribute for the job is greater than zero, or the value of the **job-retain-until** job attribute for the job is a future time.
ripping	InfoPrint is converting the job to raster image patterns for printing. The **ripping** state is supported only by the PSF and the email DSS.
terminating	The job is terminating, either because it has finished processing or because it was aborted. The **job-state-reasons** job attribute provides the reason.
unknown	The server does not know the state of the job because it lost communication with the actual destination to which InfoPrint sent the job.

Default Value

No default value

previous-state (Job Only)

See **previous-job-state**.

print-after (Job Only)

See **job-print-after**.

printer-initial-value-job (Job Only)

See **destination-initial-value-job**.

printer-locations-requested

See **destination-locations-requested**.

printer-models-requested

See **destination-models-requested**.

printer-name-requested

See **destination-name-requested**.

printer-requested

See **destination-name-requested**.

printers-assigned (Job Only)

See **destinations-assigned**.

printers-used (Job Only)

See **destinations-used**.

processing-logical-destination-requested

Identifies a logical destination in a standard queue that InfoPrint Manager will use to process jobs when they are requested to print using the Pull Print Feature.

GUI label

Processing logical destination requested

DSS

All

Type

Resettable, single-valued

Input Synonym

You can use the synonym **processing-logical-printer-requested**.

Allowed Values

You can enter a text string of up to 255 characters, per value, that contains the name of a logical destination in a standard queue.

Default value

None

Usage Guidelines

- This attribute only applies to logical destinations associated to Anyplace queues.
- The processing logical destination identified by this attribute must be associated with Anyplace DSS actual destinations.
- To manage your Pull Print environment efficiently, we recommend organizing your processing logical destinations using the pool configuration model which has a one-to-many relationship between a logical destination and two or more actual destinations. For more information refer to the “Planning for configuration” chapter in the Planning Guide.

processing-time (Job Only)

Reports the amount of time that the job has been printing or sending on the output device. If processing has completed, this value is the total amount of time needed to process the job.

GUI label

Processing time

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets and updates this value using [HH:]MM. The unit is minutes or hours and minutes, separated by a colon.

Default Value

No default value

Usage Guidelines

InfoPrint updates this attribute when a user queries the job with the **pdls** command. InfoPrint calculates the value by comparing the value of the **started-printing-time** job-attribute value with the current time.

promotion-time

Specifies the time the job was last promoted.

GUI label

Promotion time

DSS

Not applicable

Type

Non-settable, single-value

Allowed Values

Info Print Manager sets the value for this attribute in the local time format. The USA format is "HH:MM:SS mm/dd/yy" on AIX and Windows and HH:MM:SS AM/PM mm/dd/YYYY on Linux. On Linux, use the formats specified by the `PD_TIME_FORMAT` and `PD_DATE_FORMAT` InfoPrint Manager environment variables. For more information on how to use these environment variables, go to InfoPrint Manager environment variables, p. 1149.

Default Value

No default value

pull-print-job-details (Job Only)

Specifies job detail information for Pull Print jobs.

GUI label

Pull Print details

Type

Non-settable, single-valued

Allowed Values

InfoPrint Manager sets this value to specify Pull Print job information.

Default value

None

Usage Guidelines

This attribute is specific for Pull Print jobs, and it is supported only when the Pull Print feature is installed.

queue-assigned (Job Only)

Identifies the queue to which InfoPrint assigned the job.

GUI label

Queue

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to the name of the queue assigned.

Default Value

No default value

Usage Guidelines

If this attribute is blank, the job is currently in a queue (it can be in the **retained** state).

queue-position (Job Only)

See **intervening-jobs**.

reasons (Job Only)

See **job-state-reasons**.

record-count

Specifies how many records this document contains. This can be set by the job submitter, such as Download for z/OS, or whoever issues the **pdpr** command. This attribute is not used for accounting purposes.

GUI label

Record count

DSS

All

Type

Resettable

Allowed Values

An integer from 0 to 9223372036854775800.

Default Value

No default value

Usage Guidelines

The **record-count** attribute does not affect any job processing, but it can be displayed in the InfoPrint Manager Administration or Operation GUI, so that the operator can use it to schedule jobs.

released-for-pull-print (Job only)

InfoPrint Manager server sets this attribute to **true** when you request the job from a pull print enabled printer. When the job cannot be released for various reasons, InfoPrint Manager server deletes this attribute by setting it to **false**.

GUI label

Released for Pull Print

Type

Non-settable, single-valued

Allowed Values

InfoPrint Manager server sets this value to one of these fixed values:

- **true**
- **false**

Default Value

false

Usage Guidelines

For more information, see *Secure Print: Installing and Configuring*.

required-resources-not-ready (Job Only)

Lists attribute values that this job requires, but that are not ready on the actual destination to which this job is assigned, or if the job is not assigned, on the most suitable actual destination.

GUI label

Resources not ready

DSS

All

Type

Non-settable, multi-valued

Allowed Values

InfoPrint sets this attribute to the names of the resources that are not ready.

Default Value

No default value

Usage Guidelines

- When the value of the actual destination attribute **force-destination-setup** is **true**, InfoPrint can assign a job to an actual destination even if the required resources are not ready. When the job is about to be printed or sent, InfoPrint disables the actual destination and sends a message to the operator to make the destination ready. When the operator enables the destination, the job is processed.
- When the value of the actual destination attribute **force-destination-setup** is **false** for all suitable actual destinations, InfoPrint holds jobs that require resources that are not ready and sets **required-resources-not-ready** to a list of those resources.

required-resources-not-supported (Job Only)

Lists attribute values that this job requires, but that are not supported by the actual destination to which this job is assigned, or if the job is not assigned, by the most suitable actual destination.

GUI label

Resources not supported

DSS

All

Type

Non-settable, multi-valued

Allowed Values

InfoPrint sets this attribute to the names of the unsupported resources.

Default Value

No default value

Usage Guidelines

- Jobs that require unsupported attribute values can be found in the queue under either of these conditions:

  - The value of the server attribute **accept-unsupported-jobs** is **true**.
  - Job, document, or actual destination attributes change after the job has been accepted.
- When the value of the actual destination attribute **force-destination-setup** is **true**, InfoPrint can assign a job to an actual destination even if the required resources are not supported. When the job is about to be printed or sent, InfoPrint disables the actual destination and sends a message to the operator to make the destination ready. When the operator enables the destination, the job is printed or sent.
- When the value of the actual destination attribute **force-destination-setup** is **false** for all suitable destinations, InfoPrint holds jobs that require resources that are not supported and sets **required-resources-not-ready** to a list of those resources.

results-profile

Specifies the delivery method for the output, and designates who receives output and the number of copies for the recipient.

GUI label

Copies

DSS

All

Type

AIX, BSD, CUPS, PSF, IPP, Passthrough

Resettable, multi-valued, complex

Syntax

-x "results-profile=*name@node:method:number:'some text':bin***"**

For example:

```
-x "results-profile=nr6445@bld25:pickup:2:'Please read'"
```

Components

- **delivery-address**
  Specifies the address of the person who receives the job output.
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a text string that contains the address.

    AIX, CUPS

    Prints the first 42 characters of the address.

PSF

Prints the first 8 characters of the address.

– *Default Value*

- If you are logged in with your LDAP or Active Directory credentials, the **delivery-address** value is set to the LDAP or Active Directory user ID.
- If you are logged in with your local account, the **delivery-address** value is the address of the user that submitted the job.
- If you are logged in using federated authentication, the **delivery-address** value is set to the federated authentication user ID.

- **delivery-method**

  – *Type*
  Single-valued

  – *Allowed Values*
  You can enter one of these fixed values:

Value	DSS
pickup	All other DSSs

  – *Default Value*
  pickup

- **job-copies**

  – *Type*
  Single-valued

  – *Allowed Values*
  You can enter an integer identifying the number of copies. A value of **0** is an error.

  – *Default Value*
  1

- **results-set-comment**
  Supplies a text string that describes the results-set value. This information can print on start sheets.

  – *Type*
  Single-valued

  – *Allowed Values*
  You can enter a text string of up to 4095 characters that provides information such as "`Please staple this document`" for the operator, or information such as "`Please read before meeting tomorrow`" for the person who receives the document.

  – *Default Value*
  No default value

- **output-bin**

The server does not support this component.

Usage Guidelines

- The only component that the BSD DSS uses from this complex attribute is the *job-copies* component.
- InfoPrint checks the information specified with the **results-profile** attribute for the job against the **job-result-set-delivery-methods-supported** actual destination attribute.
- The **job-copies** component of this attribute prints collated copies for CUPS DSS. To print uncollated copies, use the **copy-count** document attribute.

retained-time (Job Only)

Identifies the time that the job entered the retained state.

GUI label

Became retained

DSS

All

Type

Non-settable, single-valued

Allowed Values

Info Print Manager sets the value for this attribute in the local time format. The USA format is "HH:MM:SS mm/dd/yy" on AIX and Windows and HH:MM:SS AM/PM mm/dd/YYYY on Linux. On Linux, use the formats specified by the `PD_TIME_FORMAT` and `PD_DATE_FORMAT` InfoPrint Manager environment variables. For more information on how to use these environment variables, go to InfoPrint Manager environment variables, p. 1149.

Default Value

No default value

Usage Guidelines

Provides status information.

retain-forever

Indicates that the associated job is to be retained *forever*, which means that the job will be retained until it is manually deleted with a **pdrm** command with a retention period of 0.

GUI label

Retain forever

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

No default value

Usage Guidelines

- If the **job-discard-time** and one of the **job-retain-until** or **job-retention-period** attributes are set, InfoPrint Manager discards the job at the earliest time specified by one of these attributes.
- If the **job-discard-time** and the **retain-forever** attributes are set, InfoPrint Manager discards the job at the time specified by the **job-discard-time**.
- When the **retain-forever** attribute is not specified or is set to **false**, the other retention period attributes function normally.
- When the **retain-forever** attribute is set to **true**, the job is retained until it is manually deleted with a **pdrm** command.
- You can only specify one retention period attribute for each job. If you set a different retention period attribute, that attribute takes effect, and this one is cleared. The retention period attributes are **job-retain-until (Job only)**, **job-retention-period**, and **retain-forever**.

retention-period

See **job-retention-period**.

sheet-range (Job Only)

Specifies the first and last sheet of a document that InfoPrint prints.

GUI label

Sheet range

DSS

PSF

Type

Resettable, multi-valued, complex, per-job

Syntax

first-sheet:last-sheet

Separate the values with a colon, for example:

```
25:48
```

You can omit the first-sheet value or the last-sheet value, for example:

```
:6
10:
```

See “Usage Guidelines”.

Components

- **first-sheet:** Specifies the number of the sheet where printing starts.

  GUI label

  First sheet

  Type

  Single-valued

  Allowed Values

  You can enter a value of 1 through 2147483647.

  Default Value

  none
- **last-sheet:** Specifies the number of the sheet where printing ends.

  GUI label

  Last sheet

  Type

  Single-valued

  Allowed Values

  You can enter a value of 1 through 2147483647.

  Default Value

  none

Usage Guidelines

- You can specify up to 10 sheet-ranges to be printed. If you specify more than 10 sheet-ranges, no sheets print and InfoPrint issues an error.
- Sheet ranges must not overlap. If the sheet ranges overlap, InfoPrint issues an error.
- The **sheet-range** attribute is not valid for ASCII and DPF IPDS jobs and is not supported in Submit Express.
- When the **sheet-range** attribute is used with the **results-profile** attribute, the necessary sheet range is sent to the printer and then multiplied, as specified in the **job-copies** field from the **results-profile** attribute. Therefore the sheet range is applied to each copy.
- When the **sheet-range** attribute is used with the **copy-count** attribute, the data stream is first multiplied and then the sheet range is applied to the already multiplied stream. Therefore the sheet range is applied only to the first copy.
- If you omit the first-sheet value, for example **:6**, InfoPrint prints from the first sheet of the job through sheet 6.
- If you omit the last-sheet value, for example **6:**, InfoPrint prints from sheet 6 through the last sheet of the job.
- Entering a combination of first-sheet last-sheet values where the first-sheet value is greater than the last-sheet value is an error.
- If InfoPrint cannot find the first-sheet value in the document, no sheets print. InfoPrint does not issue an error.
- If InfoPrint cannot find the last-sheet value in the document, it prints the sheets from the first-sheet value to the end of the job. InfoPrint does not issue an error.

setup-name

Specifies a setup name that includes a group of settings to use for printing. The setup is created by a user of the printer. Depending on the printer vendor, the setup name might be referred to as "printer setup", "printer snapshot" or "printer profile".

GUI label

Setup name

DSS

PSF TCP/IP

Type

Resettable, single-valued, per-job

Allowed Values

Any string text up to 100 bytes.

Default Value

No default value

Usage Guidelines

- The value you specify for this attribute overrides any selection in the form definition.
- If the setup name is not already the active setup on the printer, the start auxiliary sheet does not print using the requested setup name for the job.
- If the setup name requested for a job is not already the active setup name on the printer, the printer ejects to a new sheet and stacks all received pages. This can result in a blank sheet while printing in cut sheet emulation (CSE) mode, a blank side if duplex is used, or a blank partition if N-up is being used.
- The **setup-name** attribute is used together with the **setup-names-ready** actual destination attribute.

start-message

See **job-start-message**.

started-printing-time (Job Only)

Identifies the time when InfoPrint sent the job to the output device.

GUI label

Started printing

DSS

All

Type

Non-settable, single-valued

Allowed Values

Info Print Manager sets the value for this attribute in the local time format. The USA format is "HH:MM:SS mm/dd/yy" on AIX and Windows and HH:MM:SS AM/PM mm/dd/YYYY on Linux. On Linux, use the formats specified by the `PD_TIME_FORMAT` and `PD_DATE_FORMAT` InfoPrint Manager environment variables. For more information on how to use these environment variables, go to InfoPrint Manager environment variables, p. 1149.

Default Value

No default value

state-reasons (Job Only)

See **job-state-reasons**.

submission-time (Job Only)

Identifies the time that InfoPrint added the job to the queue.

GUI label

Submit time

DSS

All

Type

Non-settable, single-valued

Allowed Values

Info Print Manager sets the value for this attribute in the local time format. The USA format is "HH:MM:SS mm/dd/yy" on AIX and Windows and HH:MM:SS AM/PM mm/dd/YYYY on Linux. On Linux, use the formats specified by the `PD_TIME_FORMAT` and `PD_DATE_FORMAT` InfoPrint Manager environment variables. For more information on how to use these environment variables, go to InfoPrint Manager environment variables, p. 1149.

Default Value

No default value

Usage Guidelines

The AIX DSS prints this information on the start sheet.

submitter-ip-address (Job Only)

Identifies the IP address of the remote client submitting jobs to InfoPrint Manager. Jobs that are submitted through local receiver/gateways (such as IPP, lpd, or Download for z/OS) are not considered remote.

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value.

Default Value

No default value

Usage Guidelines

- InfoPrint Manager uses this attribute to hold the IP address of a client or receiver process submitting jobs to InfoPrint Manager.
- The **submitter-ip-address** attribute never appears unless the **PD_SUBMITTER_IP_ADDRESS_FORMAT=*IPADDR*** environment variable has been set.

ticket-content

See **formatted-job-tickect-content**.

total-job-octets (Job Only)

Identifies the size of the job, which is the sum of all printable octets (bytes) in the job.

GUI label

Size (Bytes)

DSS

All

Type

Non-settable, single-valued

Input Synonym

You can use the synonym **job-size**.

Allowed Values

InfoPrint sets this value to an integer from 0 to 9223372036854775800.

Default Value

No default value

Usage Guidelines

- The server computes this value by totaling the size of all printable documents, using this algorithm:
  1. For each printable document in the job, multiply the value of **octet-count** by the value of **copy-count**.
  2. Total the values from Step 1.
  3. Multiply the total by the value of **job-copies** component of the **results-profile** job attribute.
- InfoPrint validates jobs using this attribute against the actual destination attribute **job-size-range-supported**.
- InfoPrint schedules the job against the **job-size-range-ready** actual destination attribute and the **job-size-range-supported** actual destination attribute.

user-locale (Job Only)

Identifies the locale of the job submitter.

GUI label

Submitter locale

DSS

All

Type

Non-settable, single-valued

Allowed Values

The locale of the job submitter.

Default Value

InfoPrint Manager sets this value to the locale of the job submitter.

user-name (Job Only)

Identifies the login ID of the job submitter.

GUI label

Submitter ID

DSS

All

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to the login ID of the job submitter: *username@node*.

Default Value

- If you are logged in with your LDAP or Active Directory credentials, the **user-name** attribute value is set to the LDAP or Active Directory user ID.
- If you are logged in with your local account, the **user-name** attribute value is set to the ID of the job submitter.
- If you are logged in using federated authentication, the **user-name** attribute value is set to the federated authentication user ID.

Attributes for logs

InfoPrint automatically creates logs when a server initializes. These logs contain and keep track of such things as error messages and trace messages for the server and objects contained in the server. You cannot create or delete these logs, but you can enable or disable them. InfoPrint uses a configuration file to set the initial values of attributes for error and trace logs when servers start.

These restrictions apply to log attributes:

- The **log-severity** attribute applies only to error logs.
- The **log-trace-groups** attribute applies only to trace logs.
- You cannot set the values for these attributes with the **pdset** command for trace logs. You can specify values using configuration files that InfoPrint uses during server initialization.
  - **log-address**
  - **log-backup-number**

Initially settable attribute listing

You set this attribute based on the object type: **log-type**.

Resettable attribute listing

You can set these attributes with the **pdset** command after InfoPrint creates the log.

- **descriptor**
- **log-severity**
- **log-trace-groups**
- **log-size**

- **log-wrap**

associated-server

Indicates the name of the server where this log is located.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to the name of the server when it creates the log.

Default Value

No default value

descriptor

Provides a description of this log.

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 4095 characters that describes this log.

Default Value

If you do not enter a value, InfoPrint sets the value to:

Log Type	***Value***
Error	**'This is the standard error log.'**
Trace	**'This is the standard trace log.'**

Usage Guidelines

The use of this attribute is optional. However, a detailed description of the way you set up this log is useful to someone who wants to obtain information from the log.

enabled

Indicates if the log is enabled. An enabled log writes messages to a log file.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to one of these fixed values:

- **true**
- **false**

InfoPrint implicitly sets this value through the **pdenable** and **pddisable** commands.

Default Value

The default values are:

Log Type	*Value*
Error	**true**
Trace	**false**

log-address

Specifies the pathname where the log is located in.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to the pathname.

Default Value

The path defined by the **PDBASE** environment variable plus the ServerName (**$PDBASE/***ServerName*).

log-backup-number

Specifies the number of backup logs to save.

Type

Settable, single-valued

Allowed Values

You can enter an integer from 1 through 999.

Default Value

Log Type	Value
Error	**10**
Trace	**1**

Usage Guidelines

When you specify a value for **log-backup-number** in the configuration file, you need to consider:

- If you specify **log-backup-number=10**, only ten backup logs will be saved over time.
- If you specify **log-backup-number=1**, only one backup log is saved.
- When the value for **log-backup-number** is less than the current number of backup log files, any logs beyond the specified **log-backup-number** are erased.
- The value specified in the configuration file, if one is specified, overrides the default value for this attribute when InfoPrint creates the server.

log-identifier

Uniquely identifies this log.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to the name of the log.

Default Value

Log Type	*Value*
Error	**default_error**
Trace	**default_trace**

log-messages

Contains error messages that InfoPrint can return to you on a query.

Type

Non-settable, multi-valued

Allowed Values

InfoPrint stores error log information as the value of this attribute.

Default Values

No default values

Usage Guidelines

Use this attribute with the **pdls** command and its **message-count** attribute to query for error log information.

log-severity

Identifies the severity level of the messages that InfoPrint Manager logs in this error log.

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Explanation*
error	This setting produces a minimum of logging. InfoPrint Manager only logs error messages. The letter **E** precedes each message. An error referencing a job signals a condition that might prevent the job from completing successfully, depending on the setting of other parameters.
warning	InfoPrint Manager logs both error and warning messages. The letter **W** precedes each warning message. A warning referencing a job signals a condition that will not prevent completion of the job, but might require some action on the part of the user or operator.
audit	This is the default log severity setting. InfoPrint Manager logs error, warning, and audit messages. The letter **A** precedes each audit message.

Fixed Value	*Explanation*
debug	This setting logs error, warning, audit, and debug messages. Servers generate debug messages when they begin processing each command and when they communicate with other servers. Debug messages are useful for helping to track what command a server was processing when an error occurred. The letter **D** precedes each debug messages.
info	This setting logs error, warning, audit, debug, and informational messages. Servers generate informational messages when potentially abnormal situations occur, such as when a server cannot deliver a notification message to a user because the user is logged off. The letter **I** precedes each informational message.

Default Value

For AIX and Linux:

audit

When you do not use the **.cfg** files; otherwise, it is what is specified in the **spl_error.cfg**, **notifyd_error.cfg**, or **sap_error.cfg** file that you have moved to `/var/pd` after installation.

For Windows:

debug

Usage Guidelines

This attribute is only for error logs.

log-size

Specifies how large, in kilobytes, a log file can get before the file wraps, or InfoPrint stops logging events. The attribute **log-wrap** determines whether a log file wraps or stops logging.

Type

Resettable, single-valued

Allowed Values

For an error log, you can enter an integer from 1 through 2147483647 (value represents kilobytes)

Default Value

Log Type	*Value*
Error	**16384**
Trace	**131072**

Usage Guidelines

- The value specified in the configuration file, if one is specified, overrides the default value when InfoPrint creates the server.
- If you change the value for this attribute, InfoPrint renames the current log file from *errorlogname* to *errorlogname***.BAK** or from *tracelogname* to *tracelogname***.BAK**, and creates a new log file.

log-trace-groups

Specifies the active trace groups for the selective tracing of InfoPrint component groups.

Type

Resettable, multi-valued

Allowed Values

You can enter a text string of up to 4095 characters that contains trace group IDs that InfoPrint traces. You should enter a value only at the request of an Service Representative.

Default Value

???? -1 (All trace groups)

Usage Guidelines

This attribute is only for trace logs. You should use it only at the request of an Service Representative.

log-type

Identifies the type of log.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to one of these fixed values:

- **errorlog**
- **tracelog**

Default Value

No default value

Usage Guidelines

Setting this attribute to **tracelog** might impact the server performance. Use it only at the request of a Service Representative.

log-wrap

Specifies whether the log file should wrap when it reaches the specified value in the **log-size** attribute.

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

true

Usage Guidelines

The value specified in the configuration file overrides the default value when InfoPrint Manager creates the server.

For the error log, if this attribute is set to **false**, when the log has reached the **log-size** specified value, InfoPrint Manager copies the error log file to a backup file and logging continues in a new empty log file.

object-class

Identifies the object class to which this object belongs.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to **log**.

Default Value

log

Attributes for logical destinations

InfoPrint uses logical destinations for job routing, defaulting, and job validation. Some logical destination attributes specify the values that the logical destination supports for the corresponding job and document attributes. Before accepting a job, InfoPrint verifies that the logical destination supports the values of these job and document attributes.

Note

1. If a logical destination attribute has no value, the logical destination supports all valid values for the corresponding job or document attribute.
2. If the value of the server attribute **accept-unsupported-jobs** is **false**, InfoPrint also verifies that at least one actual destination supports the job and document attribute values before accepting the job.
3. See Job validation and scheduling, p. 1187 for tables showing the attributes used for job validation.

Attributes not displayed in the InfoPrint Manager Administration GUI

While all logical destination attributes and attribute values are supported for both standard and basic InfoPrint installations, neither InfoPrint Manager Administration GUI displays a complete set.

- The standard InfoPrint Manager Administration GUI displays most attributes and attribute values, but omits a few that are used primarily in basic InfoPrint installations.
- The basic InfoPrint Manager Administration GUI displays only the attributes of greatest interest to InfoPrint administrators.

You can list the values of attributes not displayed in the InfoPrint Manager Administration GUI using the **pdls** command. You can set the values of initially settable and resettable attributes using the **pdcreate** command. You can change the values of resettable attributes using the **pdset** command.

Initially settable attribute listing

You can set this attribute with the **pdcreate** command when you create a logical destination: **destination-realization**.

Resettable attribute listing

You can set these attributes with the **pdcreate** command when you create a logical destination or modify them with the **pdset** command after you create the logical destination.

- **associated-queue**
- **authorize-jobs**
- **auxiliary-sheet-selections-supported**
- **carriage-control-types-supported**
- **character-mappings-supported**

- **client-driver-names**
- **content-orientations-supported**
- **convert-to-ebcdic-supported**
- **data-fidelity-problem-reported-supported**
- **descriptor**
- **destination-initial-value-document**
- **destination-initial-value-job**
- **destination-locations**
- **destination-model**
- **destination-support-system**
- **document-formats-supported**
- **document-types-supported**
- **end-message-supported**
- **form-length-range-supported**
- **hot-folder-directory**
- **hot-folder-polling-interval**
- **hot-folder-polling-method**
- **image-out-formats-supported**
- **input-trays-supported**
- **job-size-range-supported**
- **list-of-managers**
- **maximum-copies-supported**
- **media-supported**
- **message**
- **notification-profile**
- **page-select-supported**
- **plexes-supported**
- **print-qualities-supported**
- **sides-supported**
- **start-message-supported**
- **table-reference-characters-supported**
- **x-image-shift-range-supported**
- **y-image-shift-range-supported**

associated-queue

Identifies the queue associated with this destination. Whenever InfoPrint accepts a job submitted to this logical destination, it sends the job to the queue specified by this attribute.

GUI label

Queue fed

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 255 characters that contains the name of the queue.

Default Value

No default value

associated-server

Indicates the name of the server where this logical destination is located.

Server

Type

Non-settable, single-valued

Allowed Values

InfoPrint Manager sets this value to the *DestinationName* portion of the argument when this logical destination was created or when the associated queue is transferred to a different server.

Default Value

The name of the server on which the logical destination was created.

authorize-jobs

Indicates whether the person submitting the job requires authorization to submit a job to this logical destination.

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	***Input Synonym***
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

When the server security level is **low**, these rules apply when the value for this attribute is:

true

InfoPrint uses the login ID of the job submitter to check if the person has **read** authority for this destination. If the person does have **read** authority, InfoPrint authorizes the job.

false

InfoPrint automatically authorizes the job.

auxiliary-sheet-selections-supported

Identifies the combination of start, separator, and end sheets that this logical destination supports for jobs.

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

- **end**
- **none**
- **sep**
- **sep-end**
- **start**
- **start-end**
- **start-sep**
- **start-sep-end**

Default Values

No default values (all valid values supported).

Usage Guidelines

- If you do not specify a value, the corresponding actual destination attribute controls which auxiliary sheets a user can request. The default values for the actual destination attribute are all of the supported values.
- InfoPrint compares the job attribute **auxiliary-sheet-selection** to this attribute for validation.
- You can use this attribute to restrict use of this logical destination.

carriage-control-types-supported

Identifies the types of carriage controls that this logical destination supports.

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

- **ansi-ascii**
- **ansi-ebcdic**
- **machine**
- **none**

Default Values

No default values (all valid values supported).

Usage Guidelines

- InfoPrint compares the document attribute **carriage-control-type** to this attribute for job validation.
- You can use this attribute to restrict use of this logical destination.

character-mappings-supported

Identifies the character mappings (code pages) that this logical destination supports.

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

- **ibm-437**
- **ibm-850**
- **ibm-860**
- **ibm-863**
- **ibm-865**
- **ibm-932**
- **ibm-938** with InfoPrint Manager for AIX only
- **ibm-euccn**
- **ibm-eucjp**

- **ibm-euckr**
- **ibm-euctw**

Default Value

No default values (all valid values supported).

Usage Guidelines

- InfoPrint compares the document attribute **default-character-mappings** to this attribute for job validation.
- You can use this attribute to restrict use of this logical destination.

client-driver-names

Identifies the client print drivers that can submit a data stream to this logical destination. Setting this attribute makes the logical destination usable from InfoPrint Manager Select.

GUI label

Client drivers

Type

Resettable, multi-valued

Input Synonyms

You can use the synonym **windows-nt-driver-names**.

Allowed Values

You can enter a text string that contains the string form of the client print driver for each permitted client print driver. Begin and end the string with single quotation marks.

Default Values

No default values

Usage Guidelines

- Perform this procedure to determine the valid client driver names:
  1. Click **My Computer** from the desktop.
  2. Click **Control Panel**.
  3. Click **Printers**.
  4. Click**Add Printer**.
  5. The values listed in the **Printer:** list box in the **Add Printer Wizard** are the names of the Windows destination drivers that you can install on the workstation; for example, **4039 LaserPrinter PS**.

Note

1. Other destination drivers are available and might not display in the list for a particular workstation.
2. If you will be submitting jobs from the Windows client to a PSF actual destination, you should select a generic destination driver, such as a PostScript driver, instead of one for a specific type of destination. Otherwise, the driver might generate device-specific data streams that InfoPrint cannot transform correctly.

- You can use this attribute to restrict the use of this logical destination.

content-orientations-supported

Identifies the page presentations that this logical destination supports.

Type

Resettable, multi-valued

Input Synonym

You can use the synonym **orientations-supported**.

Allowed Values

You can enter any of these fixed values:

- **landscape**
- **portrait**
- **reverse-landscape**
- **reverse-portrait**

Default Values

No default values (all valid values supported).

Usage Guidelines

- InfoPrint compares the document attribute **content-orientation** to this attribute for job validation.
- If you do not specify a value for this attribute, the corresponding actual destination attribute controls orientations. The default for the actual destination attribute is **portrait**.
- InfoPrint supplies attribute files that specify the values that a particular destination model supports.
- You can use this attribute to restrict use of this logical destination.

convert-to-ebcdic-supported

Indicates whether this logical destination supports converting document data from ASCII to EBCDIC.

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

No default value (all valid values supported).

Usage Guidelines

- Use this attribute to request conversion for line-data jobs sent to a PSF actual destination.
- If you do not specify a value for this attribute, the corresponding actual destination attribute controls conversion. The default value for the actual destination attribute is **true**.

  Note

  The corresponding document attribute, **convert-to-ebcdic**, defaults to no value. Specify **true** only if you want to convert the content of the document from ASCII to EBCDIC. Validation only fails if you set **convert-to-ebcdic** to **true** and either this logical destination value or the actual destination attribute value is **false**.
- InfoPrint compares the document attribute **convert-to-ebcdic** to this attribute for job validation.
- You can use this attribute to restrict use of this logical destination.

data-fidelity-problem-reported-supported

Indicates which type of data fidelity errors this logical destination can report.

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

- **all**
- **character**
- **none**
- **position**

Default Values

No default values (all valid values supported).

Usage Guidelines

- Use this attribute to specify whether InfoPrint issues error messages for print-positioning and invalid-character errors that occur for TCP/IP-attached printer devices.

  Print positioning errors occur when the print position for the data is beyond the valid printable areas as defined by the intersection of the physical and logical pages. (A logical page identifies the printing boundaries of a physical page.)

  Invalid-character errors occur when the code point does not map to a character in a font.
- InfoPrint compares the document attribute **data-fidelity-problem-reported** to this attribute for validation.
- You can use this attribute to restrict use of this logical destination.

descriptor

Provides a textual description of this logical destination.

GUI label

Description

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 4095 characters that contains a description of this logical destination. You might want to include such information as:

- The name of the department or the account number of the users who use this logical destination.
- Usage information, such as whether the logical destination provides default values for jobs or restricts use of actual destination capabilities.

Default Value

No default value

Usage Guidelines

The use of this attribute is optional. However, a detailed description is useful if you have several logical destinations or have set up restriction for this logical destination.

destination-associated-destinations

Identifies the actual destinations that receive jobs from the queue associated with this logical destination.

Type

Non-settable, multi-valued

Input Synonym

You can use the synonym **printer-associated-printers**.

Allowed Values

InfoPrint sets this value, and the queue attribute **actual-destinations-assigned** of the queue associated with this logical destination, when the actual destination registers.

Default Values

No default value

destination-initial-value-document

Associates a default document with this logical destination.

GUI label

Default document

Type

Resettable, single-valued

Input Synonym

You can use the synonym **printer-initial-value-document**.

Allowed Values

You can enter a text string of up to 255 characters that contains the name of the default document.

Default Value

No default value

Usage Guidelines

The default document supplies values for attributes for documents submitted to this logical destination. These values override server defaults but are overridden by document attribute values specified on the command line.

destination-initial-value-job

Associates a default job with this logical destination.

GUI label

Default job

Type

Resettable, single-valued

Input Synonym

You can use the synonym **printer-initial-value-job**.

Allowed Values

You can enter a text string of up to 255 characters that contains the name of the default job.

Default Value

No default value

Usage Guidelines

The associated default job supplies values for attributes of jobs submitted to this logical destination. These values override server defaults but are overridden by job attribute values specified on the command line.

destination-locations

Identifies the locations of output devices, or the areas they service, that this logical destination allows for jobs.

GUI label

Actual destination locations

Type

Resettable, multi-valued

Input Synonyms

You can use the synonym **printer-locations** or **locations**.

Allowed Values

You can enter a text string of up to 4095 characters, per value, that contains the locations of the output devices associated with this logical destination.

Default Values

No default values (all valid values supported).

Usage Guidelines

- InfoPrint compares the job attribute **destination-locations-requested** to this attribute for validation.
- You can use this attribute to restrict use of this logical destination.
- You can query this attribute to find where destinations are located.

destination-model

Identifies the make and model ID of an output device that can accept jobs submitted through this logical destination.

Type

Resettable, single-valued

Input Synonyms

You can use the synonym **printer-model** or **model**.

Allowed Values

You can enter a text string of up to 4095 characters, per value, that contains the make and model of an output device.

Default Value

No default value (all valid values supported).

destination-name

Identifies this logical destination.

Type

Non-settable, single-valued

Input Synonyms

You can use the synonym **printer-name**, **printer**, or **logical-printer**.

Allowed Values

InfoPrint sets this value to the *DestinationName* portion of the argument specified by the **pdcreate** command used to create this logical destination.

Default Value

No default value

Usage Guidelines

- The logical destination name must be unique in the namespace.
- InfoPrint compares the job attribute **actual-destination-requested** to this attribute for validation.

destination-realization

Indicates whether the destination is an actual destination or a logical destination.

Type

Initially settable, single-valued

Input Synonym

You can use the synonym **printer-realization**.

Allowed Values

You can enter **logical** as the value for the **destination-realization** attribute for a logical destination.

Default Value

There is no default value.

destinations-ready

Identifies the actual destinations associated with this logical destination that are ready to process a job.

Type

Non-settable, multi-valued

Input Synonym

You can use the synonym **printers-ready**.

Allowed Values

InfoPrint sets this value with the name of an actual destination when a registered actual destination is ready.

A ready actual destination is one that is enabled and whose state is **idle**, **connecting-to-printer**, or **printing**.

Default Values

No default value

device-support-system

See **destination-support-system**.

document-formats-supported

Identifies the document formats that this logical destination supports.

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

Fixed Value	*Input Synonym*
ascii	
dbcs-ascii	
ditroff	
dpf-ipds	
d630	
epson	
gif	
hpgl	**hp-gl**
iso-6429	
jpeg	
kgl	
line-data	
modca-p	**afpds**
passthru	
pcl	**hppcl, hp-pcl**

Fixed Value	*Input Synonym*
pdf	
postscript	**ps**
ppds	
sap	
sap-abap	
simple-text	**text**
tiff	
xml	

Default Values

No default values (all valid values supported).

Usage Guidelines

- InfoPrint compares the document attribute **document-format** to this attribute for job validation.
- All documents in a job must have the same format.
- You can use this attribute to restrict use of this logical destination.

document-types-supported

Identifies the types of documents that this logical destination supports.

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

Fixed Value	*DSS*
color-mapping-table	PSF
email-body	Email
email-signature	Email
file-reference	All
font	PSF, Email
form-definition	PSF, Email
formatted-job-ticket	PSF, Email

Fixed Value	*DSS*
insert-sheet	PSF, Email
job-ticket	PSF, Email
overlay	PSF, Email
page-definition	PSF, Email
page-segment	PSF, Email
page-shift-file	PSF, Email
printable	All
resource	PSF DSS for AIX, PSF DSS for LINUX, Email

Default Value

No default values (all valid values supported).

Usage Guidelines

- InfoPrint compares the document attribute **document-type** to this attribute for job validation.
- You can use this attribute to restrict use of this logical destination.

enabled

Indicates whether this logical destination is enabled and can accept jobs.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets and resets this value to one of these fixed values:

- **true**
- **false**

InfoPrint sets and resets this value based on the **pdenable** and **pddisable** commands.

Default Value

false

end-message-supported

Indicates whether this logical destination supports the job attribute **job-end-message**.

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

No default value (all valid values supported).

Usage Guidelines

- When you set this attribute value to **true**, operators can receive messages that users specify with the **job-end-message** job attribute when they submit the job. InfoPrint sends the message to the operators specified by the **notify-operator** attribute for this actual destination when the job finishes printing.
- InfoPrint compares the job attribute **job-end-message** to this attribute for validation.
- You can use this attribute to restrict use of this logical destination.

form-length-range-supported

Specifies, in millimeters, the lower and upper numeric boundaries for the **form-length** document attribute that lets you specify the length of the form on the logical printer.

GUI label

Form length range supported

Type

Resettable, single-valued, complex

Syntax

lower-limit:upper-limit

Separate values with colons, for example,

0:0

To turn off the **form-length** attribute specification for the destination (because a value of 0 for **form-length** has no effect).

0:609.6

To enforce the maximum value for **form-length**, which is 609.6 mm (24.0 inches).

Components

- **lower-limit**
  Defines the minimum length that you can specify with the **form-length** document or default document attribute.
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a numeric value from 0 mm through 3467.9 mm. The unit of measure is millimeters.
- **upper-limit**
  Defines the maximum length that you can specify with the **form-length** document or default document attribute.
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a numeric value from 0 mm through 3467.9 mm. The unit of measure is millimeters.

Usage Guidelines

- InfoPrint compares the **form-length** document attribute to this attribute for validation.
- You can use this attribute to restrict use of this logical destination.

hot-folder-directory

Specifies the name of the hot folder associated with this logical destination. When a hot-folder directory is specified with this attribute and the associated logical destination is enabled, the InfoPrint server starts monitoring the named directory and automatically submits files that are placed in it to the associated logical destination.

GUI label

Hot folder location

Type

Resettable

Allowed Values

You can enter a text string up to 255 characters long that identifies the hot folder directory.

Default Values

No default values

Usage Guidelines

- This attribute must specify the name of the hot folder that is recognized by the InfoPrint server. For example, a client can access the hot folder as `K:\hotfolder`, while the server accesses it as `/var/pd/hotfolder`; the name specified with the **hot-folder-directory** attribute must be `/var/pd/hotfolder`.
- It is strongly recommended that you create your hot folder on the same system where your InfoPrint Manager server is installed. The polling traffic created by the InfoPrint Manager server process when it is looking for new files might cause performance degradation of the remote server hosting the directory, the InfoPrint Manager system, or the network connection between them.

hot-folder-polling-interval

Specifies the time interval in seconds that passes between two hot folder polls.

GUI label

Hot folder poll interval

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 1 to 9999.

Note

1. The unit is seconds.
2. When you specify the attribute value as 9999, the time interval is 9999 seconds but not indefinite.

Default Values

30

Usage Guidelines

- To use this attribute, the **hot-folder-polling-method** attribute must be specified as **File size monitoring**.
- If you have the problem the files are submitted before they finish copying, it is recommend that you increase the poll interval.

hot-folder-polling-method

Specifies the method that InfoPrint Manager uses when polling for hot folder files.

GUI label

Hot folder poll method

Type

Single-valued

Allowed Values

You can select one of these fixed values:

File size monitoring
File access monitoring

Default Values

File access monitoring

Usage Guidelines

- If you are using Network File System (NFS), it is recommended that you specify this attribute value as **File size monitoring**.
- When the **hot-folder-polling-method** attribute is specified as **File size monitoring**, you can use the **hot-folder-polling-method** attribute to specifies the time interval in seconds that should pass between two hot folder polls.

image-out-formats-supported

Specifies the formats of the image data, produced by the program that converts line data to AFP data, that this logical destination supports.

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

- **ioca-uncompressed**
- **im1**
- **io1**
- **io1-g4**
- **io1-mmr**
- **asis**

Default Values

No default values (all valid values supported).

Usage Guidelines

- InfoPrint compares the document attribute **image-out-format** to this attribute for job validation. You should use the document attribute when you print line-data documents.
- The value **io1-g4** applies only to the destination. You cannot request this value with the document attribute **image-out-format**. If the document format is **postscript** and the value **io1-g4** for this attribute is:

  Present

  The PostScript transform produces IO1-G4 images.

  Not present

  The PostScript transform produces IM1 images instead of IO1-G4 images, which the printer device associated with an actual destination that receives jobs from the queue associated with this logical destination cannot print.

input-trays-supported

Specifies the types of input trays that this logical destination supports.

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

auto-envelope-feed
automatic-tray
auxiliary-envelope
auxiliary-paper
bottom
capacity-2000-sheet
continuous-form-feed
current-selected-tray
envelope
extended-option-feed-tray
high-capacity-feeder
interposer-tray
interposer-lower-tray
interposer-upper-tray
large-capacity
manual
manual-envelope-feed
middle
perfect-binder-lower-interposer-tray
perfect-binder-upper-interposer-tray
top
tray-1
tray-2
tray-3
tray-4
tray-5
tray-6
tray-7
tray-8
tray-9
tray-10
tray-a
tray-t1
tray-t2

or any input tray name, for example:

- **alternate**

- **auto-envelope-feed**
- **bottom**
- **continuous-form-feed**
- **envelope**
- **insert**
- **large-capacity**
- **manual**
- **manual-envelope-feed**
- **middle**
- **top**

Default Values

No default values (all valid values supported).

Usage Guidelines

- You can use this attribute to restrict the use of this logical destination.
- If you do not specify a value for this attribute, the corresponding actual destination attribute determines which input trays the actual destination supports and users can request.
- InfoPrint compares the document attribute **default-input-trays** or **input-tray-select** to this attribute for job validation.

job-size-range-supported

Defines the range of job sizes in bytes (octets) that this logical destination will accept.

Type

Resettable, single-value, complex

Syntax

lower-limit:upper-limit

Separate the limits by a colon (**:**), for example:

```
0:1000000000
```

You can omit either value, for example:

```
0:
:1000000000
```

Note

If you enter a single value without a colon (*integer*), it is considered the lower limit.

Components

- **lower-limit**

Provides the lower limit of the job size range.

- *Type*
  Single-valued
- *Allowed Values*
  You can enter an integer from 0 to 9223372036854775800. The lower limit must be less than or equal to the upper limit. The unit value is bytes (octets).
- *Default Value*
  No default value

- **upper-limit**
  Provides the upper limit of the job size range.
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter an integer from 0 to 9223372036854775800. The upper limit must be greater than or equal to the lower limit. The unit value is bytes (octets).
  - *Default Value*
    9223372036854775800

Usage Guidelines

- InfoPrint compares the job attribute **total-job-octets** to this attribute for validation.
- You can use this attribute to restrict the use of this logical destination.

list-of-managers

Lists the people responsible for the configuration and operation of this logical destination.

GUI label

Managers

Type

Resettable, multi-valued

Input Synonym

You can use the synonym **managers**.

Allowed Values

You can enter a text string up to 255 characters long, per value, that contains the name or user ID of the person responsible for this logical destination.

Default Values

No default values

Usage Guidelines

This attribute is useful if a user needs to contact someone to report a problem or to request a change.

locations

See **destination-locations**.

logical-printer

See **destination-name**.

managers

See **list-of-managers**.

maximum-copies-supported

Indicates the number of document copies, in a single job, that this logical destination allows.

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 1 through 2147483647.

Default Value

No default value (all valid values supported).

Usage Guidelines

- You can use this attribute to restrict the use of this logical destination by limiting the number of document copies that a user can request for jobs submitted to this logical destination.
- If you do not specify a value for this attribute, the corresponding actual destination attribute controls the number of copies allowed.
- InfoPrint compares the document attribute **copy-count** to this attribute for job validation.

media-supported

Identifies the types of media that this logical destination supports.

Type

Resettable, multi-valued

Allowed Values

You can enter a text string that contains the names of the media. These can be:

- The medium identifiers of medium objects created by the **pdcrmed** utility. For these fixed values, see the medium **medium-identifier** attribute.
- The medium identifiers of medium objects you created yourself.
- Any names that describe the media, even if no medium objects with those names exist.

Default Values

No default values (all valid values supported).

Usage Guidelines

- You can restrict the use of this logical destination by limiting the type of media that a user can request for jobs submitted to actual destinations.
- If you do not specify a value for this attribute, the corresponding actual destination attribute determines which media the actual destination supports and users can request.
- InfoPrint compares the document attribute **default-medium** or **page-media-select** to this attribute for job validation.

message

Provides information associated with this logical destination.

GUI label

Message

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 4095 characters that contains information about this logical destination.

Default Value

No default value

Usage Guidelines

Use of this descriptive attribute is optional.

model

See **destination-model**.

notification-profile

Designates which persons InfoPrint notifies of specific events related to this logical destination, and how InfoPrint notifies them.

GUI label

Notification profile

Type

Resettable, multi-valued, complex

Syntax

-x "notification-profile={event-identifiers=*event* **...**
delivery-address=*name@node* **delivery-method=***value*
event-comment='*some text***' locale=***locale***}"**

For example:

```
-x "notification-profile={event-identifiers=class-logical-destination-status
   delivery-address=jim@staff delivery-method=e-mail
   event-comment='everything ok' locale=En_US.IBM-850}"
```

You can omit any of these components.

Components

- **event-identifiers**
  Specifies the events for which InfoPrint issues notification messages.
  - *Type*
    Multi-valued

– *Allowed Values*
  You can enter any of the values listed for the server **events-supported** attribute.

– *Default Values*
  object-deleted, **object-cleaned**

- **delivery-address**
  Identifies the address of the person who receives event messages or the directory and file name where InfoPrint stores messages.

  – *Type*
    Single-valued

  – *Allowed Values*
    You can enter a text string that contains the user name and node (optional) of the person that receives the information or the path to the directory and file name.

  – *Default Value*
    The login ID of the user who created this logical destination.

  – *Usage Guidelines*
    You must specify a value for **delivery-address** if you specify a value of **file**, **file-add-to**, **exit**, or **wireless** for the **delivery-method** component.

- **delivery-method**
  Specifies how event messages are received.

  – *Type*
    Single-valued

  – *Allowed Values*
    You can enter one of these fixed values:

Fixed Value	Input Synonym
electronic-mail	**e-mail**, **email**
file	
file-add-to	
message	
exit	
none	
wireless	

  – *Default Value*
    message

  – *Usage Guidelines*
    If you specify a value of **file**, **file-add-to**, **exit**, or **wireless** for this component, you must specify a value for the **delivery-address** component.

- **event-comment**

Provides a comment that InfoPrint appends to the event message.

- *Type*
  Single-valued
- *Allowed Values*
  You can enter a text string of up to 4095 characters that contains the comment.
- *Default Value*
  No default value

- **locale**
  Defines the language and code page of notification messages.
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter any locale for which the InfoPrint messages in the corresponding language are installed.
  - *Default Value*
    The locale of the person who created this logical destination.

object-class

Identifies the object class to which this object belongs.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to **destination**.

Default Value

destination

orientations-supported

See **content-orientations-supported**.

page-select-supported

Specifies the type of page number that this logical destination supports.

Type

Resettable, multi-valued

Allowed Values

You can enter a fixed value of **numeric**. This means that the value for the document attribute **page-select** can only be numeric.

Default Value

numeric

Usage Guidelines

InfoPrint compares the document attribute **page-select** against this attribute for job validation and scheduling.

plexes-supported

Identifies the plexes that this destination supports. Plex indicates whether the page images of the output document are conditioned for eventual one-sided or two-sided printing, and the relative orientation of consecutive pages.

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

- **simplex**
- **tumble**

Default Values

No default values (all valid values supported).

Usage Guidelines

InfoPrint compares the document attribute **plex** to this attribute for job validation.

print-qualities-supported

Identifies the levels of print quality that this logical destination supports.

Type

Resettable, multi-valued

Input Synonym

You can use the synonym **qualities-supported**.

Allowed Values

You can enter any of these fixed values:

- **draft**x
- **high**
- **normal**

Default Value

No default value (all valid values supported).

Usage Guidelines

- InfoPrint compares the document attribute **print-quality** to this attribute for job validation.
- You can use this attribute to restrict use of this logical destination.

print-rules-sequence

Specifies the order of actions in a print rule sequence for a specific logical destination.

GUI label

Print Rule Sequence

Type

Settable, multi-valued

Allowed Values

Names of the print rules objects

Default Value

No default value

printer

See **destination-name**.

printer-associated-printers

See **destination-associated-destinations**.

printer-initial-value-document

See **destination-initial-value-document**.

printer-initial-value-job

See **destination-initial-value-job**.

printer-locations

See **destination-locations**.

printer-model

See **destination-model**.

printer-name

See **destination-name**.

printer-realization

See **destination-realization**.

printers-ready

See **destinations-ready**.

qualities-supported

See **print-qualities-supported**.

sides-supported

Identifies whether this logical destination supports printing on one or both sides of the media.

Type

Resettable, multi-valued

Allowed Values

You can enter an value of **1**, **2**, or both.

Default Value

No default value (all valid values supported).

Usage Guidelines

- You can use this attribute to restrict use of this logical destination.
- If you do not specify a value for this attribute, the corresponding actual destination attribute controls the printable sides that users can request.
- InfoPrint compares the document attribute **sides** to this attribute for job validation.

start-message-supported

Indicates whether this logical destination supports the job attribute **job-start-message**.

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

No default value (all valid values supported).

Usage Guidelines

- When you set this attribute value to **true**, operators can receive messages that users specify with the **job-start-message** job attribute when they submit the job. InfoPrint sends the message to the operators specified by the **notify-operator** attribute for this actual destination when the job starts printing. Sending a start message does not stop the job from printing; normally the job prints without operator intervention.
- InfoPrint compares the job attribute **job-start-message** to this attribute for validation.
- You can use this attribute to restrict use of this logical destination.

table-reference-characters-supported

Identifies whether this logical destination supports table-reference characters. Some line-data applications produce table-reference characters to specify font changes.

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

No default value (all valid values supported).

Usage Guidelines

- If you do not specify a value for this attribute, the corresponding actual destination attribute determines whether the actual destination can process table reference characters.

  The corresponding document attribute, **table-reference-characters**, defaults to no value. Specifies **true** only if the line data contains table reference characters that should be processed. Validation fails only if you set **table-reference-characters** to **true** and either this logical destination value or the actual destination attribute value is **false**.
- InfoPrint compares the document attribute **table-reference-characters-supported** to this attribute for job validation.
- You can use this attribute to restrict use of this logical destination.

x-image-shift-range-supported

Specifies, in millimeters, the lower and upper numeric boundaries for the X offset of a page. The X offset, along with the Y offset, sets the origin of the logical page on the physical page.

Type

Resettable, single-valued, complex

Syntax

lower-limit:upper-limit

Each value uses a format of *nnnn.nnn* where *nnnn.nnn* is the decimal millimeter value. Separate the values with a colon, for example:

```
1:10
```

Components

- **lower-limit**
  Defines the minimum amount of image shift that the document or default document attribute **x-image-shift** or **x-image-shift-back** can specify.
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a numeric value from -577.97 through 577.97 mm.
  - *Default Value*
    No default value
- **upper-limit**
  Defines the maximum amount of image shift that the document or default document attribute **x-image-shift** or **x-image-shift-back** can specify.
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a numeric value from -577.97 through 577.97 mm.
  - *Default Value*
    No default value

Usage Guidelines

You can use this attribute to restrict use of this logical destination.

y-image-shift-range-supported

Specifies, in millimeters, the lower and upper numeric boundaries for the Y offset of a page. The Y offset, along with the X offset, sets the origin of the logical page on the physical page.

Type

Resettable, single-valued, complex

Syntax

lower-limit:upper-limit

Each value uses a format of *nnnn.nnn* where *nnnn.nnn* is the decimal millimeter value. Separate the values with a colon, for example:

```
1:20
```

Components

- **lower-limit**
  Defines the minimum amount of image shift that the document or default document attribute **y-image-shift** or **y-image-shift-back** can specify.
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a numeric value from -577.97 through 577.97 mm.
  - *Default Value*
    No default value
- **upper-limit**
  Defines the maximum amount of image shift that the document or default document attribute **y-image-shift** or **y-image-shift-back** can specify.
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a numeric value from -577.97 through 577.97 mm.
  - *Default Value*
    No default value

Usage Guidelines

You can use this attribute to restrict use of this logical destination.

Attributes for media

A medium represents the type of media, that is, paper, envelopes, transparencies, or multi-part forms, on which a printer device prints.

InfoPrint uses the names of media as values for actual destination attributes, such as **media-supported**. Actual destination attributes that reference media can use any name as long as the name is in syntax limits. The AIX DSS validates any actual destination attribute that references a medium to make sure that the object exists. The BSD and PSF DSSs accept values that are not the names of existing media.

You must create at least the default medium objects. The **startsrv** utility normally creates the default medium objects. If it fails to do so, use the **pdcrdflt** utility to create the default medium and auxiliary sheet objects.

Attributes not displayed in the InfoPrint Manager Administration GUI

While all medium attributes are supported for both standard and basic InfoPrint installations, the standard InfoPrint Manager Administration GUI does not display media. The basic InfoPrint Manager Administration GUI displays only the medium attributes of greatest interest to InfoPrint administrators.

You can list the values of attributes not displayed in the InfoPrint Manager Administration GUI using the the **pdls** command. You can set the values of initially settable and resettable attributes using the **pdcreate** command. You can change the values of resettable attributes using the **pdset** command.

Initially settable attribute listing

There are no initially settable attributes for a medium.

Resettable attribute listing

You can set these attributes with the **pdcreate** command when you create a medium or modify them with the **pdset** command after you create the medium.

- **descriptor**
- **medium-color**
- **medium-dimensions**
- **medium-form-parts**
- **medium-holes-count**
- **medium-sides**
- **medium-size**
- **medium-type**
- **medium-weight**
- **message**

associated-server

Indicates the name of the server where this medium is located.

GUI label

Server

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to the value of the *ServerName* portion of the argument when you create the medium using the **pdcreate** command.

Default Value

No default value

descriptor

Provides a description of the medium.

GUI label

Description

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 4095 characters long that describes this medium.

Default Value

No default value

Usage Guidelines

The use of this attribute is optional. However, a detailed description of this medium and its use is helpful to users who want to determine if this is the medium that they want to use.

medium-color

Indicates the color of this medium.

GUI label

Color

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values or some other color:
Fixed Value

blue

buff

goldenrod

green

pink

transparent-untinted

white

yellow

Default Value

No default value

Usage Guidelines

Specifying the color can be useful if you have configured a large number of AIX actual destinations and have used the **media-supported** and **input-trays-medium** attributes to identify the different types of media that the actual destination supports and the media currently loaded in the input trays of each printer device. This allows a user to query and filter for the colors of various medium objects to determine the medium to use for a job.

medium-dimensions

Specifies the physical size (width and length), in millimeters, of the medium.

GUI label

Untrimmed width and length (*inches or mm*)

Type

Resettable, single-valued, complex

Syntax

You can enter two positive real numbers separated by a colon.

x-dimension:y-dimension

For example:

```
100.8:200.4
```

3

Components

- **x-dimension**
  Specifies the width of the medium, which is usually the shorter dimension in respect to how the medium is loaded into the printer device.
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a positive real number, which can optionally contain a decimal point. The unit is millimeters.
  - *Default Value*
    No default value
- **y-dimension**
  Specifies the height of the medium, which is usually the longer dimension in respect to how the medium is loaded into the printer device.
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a positive real number, which can optionally contain a decimal point. The unit is millimeters.
  - *Default Value*
    No default value

Usage Guidelines

- The medium must contain this value if AIX actual destinations use the medium.
- The **piobe** backend uses the value of this attribute to determine the printable area of the medium.
- How you specify the dimensions depends on the printer model and how the medium is loaded. If you get unexpected output from a printer device, try reversing the order in which you specify the dimensions for a medium that the actual destination references.

medium-form-parts

Indicates the number of form parts for this multi-part form medium.

GUI label

Number of form parts

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 1 through 2147483647.

Default Value

No default value

Usage Guidelines

This attribute only applies to media whose **medium-type** is **multi-part-forms**.

medium-holes-count

Indicates the number of holes (if any), pre-punched in the medium.

GUI label

Number of holes

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 0 through 2147483647.

Default Value

No default value

medium-identifier

Uniquely identifies a particular medium in a server.

Type

Non-settable, single-valued

Allowed Values

InfoPrint Manager sets this value to the *MediumName* portion of the argument when you create this medium. The value is either a text string up to **255** characters that you enter or one of these fixed values:

A0	hagaki
A1	index
A2	invoice
A3	jis-b0-white
A3-colored	jis-b1-white
A4	jis-b2-white
A4-colored	jis-b3-white
A4-transparent	jis-b4-colored
A5	jis-b4-white
A5-colored	jis-b5-colored
A6	jis-b5-white
A7	jis-b6-white
A8	jis-b7-white
A9	jis-b8-white
A10	jis-b9-white
B0	jis-b10-white
B1	JPOSTD
B2	kiku-4-sai
B3	ledger
B4	legal
B4-colored	legal-tab
B4-envelope	letter
B5	letter-tab
B5-colored	manual
B5-envelope	monarch-envelope
B6	na-legal-colored
B7	na-letter-colored
B8	na-letter-transparent
B9	na-number-9-envelope
B10	na-number-10-envelope
C4-envelope	na-6x9-envelope
C5-envelope	tabloid
C6-envelope	universal-paper
a	universal-envelope
a3-extended	7.75x4-envelope
a4-tab	8Kai
b	16Kai
c	8x10
d	8x10.5
d-postcard	8x13
designated-long-envelope	8.25x13
e	8.25x14
executive	8.5x10
f4a	8.5x12.4
folio	9x11
foolscap	10x14
na-7x9-envelope	11x14
na-9x11-envelope	11x15
na-9x12-envelope	12x18
na-10x13-envelope	12.6x18.5
na-10x14-envelope	12.6x19.2

na-10x15-envelope	**13x18**
newsprint	**13x19**
oficio	**13x19.2**
postcard	**14x17**
postcard-4.2x5.5	**14x18**
pott	**170x210**
quarto	**182x210**
RA3	**226x310**
RA4	**310x432**
SRA4	**340x210**
sra3	
statement	

Default Value

No default value

Usage Guidelines

- Some restrictions apply to the text string used for *MediumName*, so it does not conflict with already existing fixed values.

medium-sides

Indicates the number of printable sides for the medium.

GUI label

Number of sides

Type

Resettable, single-valued

Allowed Values

You can enter an integer of **1** or **2**.

Default Value

No default value

medium-size

Specifies the size of the medium by means of a predefined name for the size. Examples of values include **invoice**, which specifies a medium of 5.5 inches by 8.5 inches, and **ledger**, which specifies a size of 11 inches by 17 inches.

GUI label

Size

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

iso-a0
iso-a1
iso-a2
iso-a3
iso-a4
iso-a5
iso-a6
iso-a7
iso-a8
iso-a9
iso-a10
iso-b0
iso-b1
iso-b2
iso-b3
iso-b4
iso-b5
iso-b6
iso-b7
iso-b8
iso-b9
iso-b10
iso-c3
iso-c4
iso-c5
iso-c6
a
b
c
d
iso-designated-long
e
executive
folio
invoice
jis-b0
jis-b1
jis-b2
jis-b3
jis-b4
jis-b5
jis-b6
jis-b7
jis-b8
jis-b9
jis-b10
ledger
monarch-envelope
na-legal
na-letter
na-number-9-envelope
na-number-10-envelope
na-6x9-envelope
na-7x9-envelope
na-9x11-envelope
na-9x12-envelope
na-10x13-envelope
na-10x14-envelope
na-10x15-envelope
pott
quarto

Default Value

No default value

medium-type

Identifies the medium type.

GUI label

Type

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Description*
bond	Bond paper
card-stock	Card stock paper
color	Colored paper
continuous-long	Continuous-forms paper with the forms connecting along the long edge of the form.
continuous-short	Continuous-forms paper with the forms connecting along the short edge of the form.
cover	Paper designed to be used as a cover sheet
envelope	Standard envelopes that might or might not have preprinted information and that do not have windows.
envelope-plain	Envelopes without preprinted information or a window
envelope-window	Envelopes with a window
insert	Paper to be used as an insert between other sheets
labels	Any type of label.
letterhead	Paper with a preprinted letterhead
multi-layer	Sheet that has multiple layers of some sort
multi-part-form	Forms containing multiple layers that are not attached to one another.
plain	Separately cut sheets of paper
preprinted	Paper that has some sort of preprinted information
prepunched	Paper that has already been punched in some fashion
recycled	Paper made from recycled materials
stationery	Separately cut sheets of paper
tab-stock	Paper that has tabs.
transparency	Separate sheets of a transparent material.

Default Value

No default value

medium-weight

Identifies the medium weight.

GUI label

Weight (grams)

Type

Resettable, single-valued

Allowed Values

You can enter a positive real number.

Default Value

No default value

message

Provides a message associated with this medium object.

GUI label

Details

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 4095 characters long that contains information about this medium object.

Default Value

No default value

object-class

Identifies the object class to which this object belongs.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to **medium**.

Default Value

medium

Attributes for print rules

Print rules are InfoPrint Manager objects that are applied to jobs if certain criteria are met.

actual-destinations-requested

Identifies a list of actual destinations, any one of which InfoPrint Manager can use to process the job.

GUI label

Actual Destinations Requested

Type

Settable, multi-valued

Input Synonym

You can use the synonym **physical-printers-requested**.

Allowed Values

You can enter a text string of up to 255 characters, per value, that contains the name of an actual destination.

Default Value

No default value

Usage Guidelines

- You can use the following supported substitution control sequences in **actual-destinations-requested**:

  %%J`job_attribute`

  Passes the job attribute value from the job containing the document being processed.

  %%D`doc_attribute`

  Passes the document attribute value from the document being processed.
- If the attribute specified with **%%J** or **%%D** is multi-valued, only the first value of the attribute is used.

associated-server

Indicates the name of the server where this print rule is located.

GUI label

Server

Type

Non-settable, single-valued

Allowed Values

InfoPrint Manager sets this value when you create a print rule for a given server. InfoPrint Manager assigns the *ServerName* portion of the argument from the **pdcreate** command used to create this print rule object.

Default Value

No default value

conditional-run

Specifies that the rule becomes active if some conditions are evaluated as true.

Type

Settable, single-valued

Allowed Values

The total combined length of the text string that describes the attributes and values used as conditions for a print rule is limited to 4095 characters.

Default Value

No default value

Usage Guidelines

This attribute is used in conjunction with the **match-conditions** attribute to determine a logic between its values (all or any).

descriptor

Provides a description of this print rule.

GUI label

Description

Type

Settable, single-valued

Allowed Values

You can enter a text string up to 4095 characters long that describes this print rule.

Default Value

No default value

Usage Guidelines

The use of this attribute is optional. However, a detailed description of the print rule that this references can be helpful to users who need to determine which print rule to use.

email-to-address

Specifies the electronic mailing address(es) of the recipient(s) to which notifications are sent when a print rule has failed or succeeded.

GUI label

Send email

Type

Settable, single-valued

Allowed Values

You can enter a text string up to 4096 characters long that contains the electronic mailing address.

Default Value

No default value

Usage Guidelines

You can specify multiple recipients using the **email-to-address** attribute, separated by commas.

job-hold

Indicates whether the state of the job can be changed to held when the defined logical conditions are met.

GUI label

Hold job

Type

Settable, single-valued

Input Synonym

You can use the synonym **hold**.

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

No default value

match-conditions

Specifies how the **conditional-run** values are evaluated so as the print rule is activated.

GUI label

Match conditions

Type

Settable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Explanation*
match-any	At least one **conditional-run** value must be true so that the rule is activated.
match-all	All **conditional-run** values must be true so that the rule is activated.

Default Value

match-all

object-class

Identifies the object class to which this object belongs.

Type

Non-settable, single-valued

Allowed Values

InfoPrint Manager sets this value to **print-rule**.

Default Value

print-rule

other-transform-options

Specifies the command line that executes when a print rule is matched.

GUI label

Other image transform options

Type

Settable, single-valued

Allowed Values

You can enter a text string of up to 4095 characters that contains the command line for this print rule.

Default Value

No default value

Usage Guidelines

- You can use various predefined parameters, job or document attributes in the command line. For more information about this attribute, see the "Running a script in print rules" topic in *RICOH InfoPrint Manager for AIX: Procedures, RICOH InfoPrint Manager for Linux: Procedures*, or *RICOH InfoPrint Manager for Windows: Procedures*.

print-rule-identifier

Specifies the name of the print rule.

GUI label

Print Rule Identifier

Type

Non-settable, single-valued

Allowed Values

InfoPrint Manager sets this value to a text string that represents the name of the print rule object.

Default Value

No default value

send-email-criteria

Specifies when an email is sent after a print rule has been run.

GUI label

Send email criteria

Type

Settable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Explanation*
send-on-error	The email is sent only if the print rule has failed.
send-always	The email is sent after the print rule has finished running regardless of its success or failure.

Default Value

send-on-error

set-attributes

Specifies the list of attributes and values that a print rule applies to the job.

GUI label

Set attribute

Type

Settable, multi-valued

Allowed Values

The total combined length of the text string that describes the attributes and values a print rule sets on the job is limited to 4095 characters.

Default Value

No default value

Usage Guidelines

- You can use the following supported substitution control sequences in **set-attributes**:

  %%J`job_attribute`

  Passes the job attribute value from the job containing the document being processed.

  %%D`doc_attribute`

  Passes the document attribute value from the document being processed.
- If the attribute specified with **%%J** or **%%D** is multi-valued, only the first value of the attribute is used.

split-job

Specifies that a split job action should be carried out on the job.

GUI label

Split job

Type

Settable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

- In order to specify this attribute you also need to specify **true** for **terminating-print-rule**.
- InfoPrint Manager does not support the split job action on multi-document jobs.
- The split job action is not supported on **dpf-ipds** requests.

terminating-print-rule

Indicates whether a rule is the last one in a sequence.

GUI label

Terminating Print Rule

Type

Settable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

This attribute is added automatically after the **Split job** and **Route job** actions, since no other rules in the sequence can be executed afterward.

The **terminating-print-rule** attribute affects only the current print rule sequence. If a rule moves the job to a different logical destination, any existing print rule sequence assigned to that logical destination will still be run.

Attributes for queues

A queue is an InfoPrint object that manages a collection of jobs that are waiting to print. A queue receives jobs from one or more logical destinations and sends jobs to one or more actual destinations.

Some attributes for queues can only be used for standard queues.

Initially settable attribute listing

You can set the **queue-type** attribute with the **pdcreate** command when you create a queue.

Resettable attribute listing

You can set these attributes with the **pdcreate** command when you create the queue or modify them with the **pdset** command after you create the queue.

- **assign-to-destination**
- **backlog-lower-bound**
- **backlog-update-interval**
- **backlog-upper-bound**
- **descriptor**
- **list-of-managers**
- **message**
- **notification-profile**
- **notify-operator**
- **requeue-failed-jobs**

actual-destinations-assigned

Lists the actual destinations that receive jobs from this queue.

GUI label

Actual destinations assigned

Type

Non-settable, multi-valued

Input Synonym

You can use the synonym **physical-printers-assigned**.

Allowed Values

InfoPrint adds the actual destination name to this value when each actual destination registers and its **associated-queue** attribute value is the name of this queue.

Default Value

No default value

Usage Guidelines

This attribute is only valid when the **queue-type** attribute is set to **standard-queue**.

actual-destinations-ready

Lists the ready actual destinations that can receive jobs from this queue.

GUI label

Actual destinations ready

Type

Non-settable, multi-valued

Input Synonym

You can use the synonym **physical-printers-ready**.

Allowed Values

InfoPrint adds an actual destination name to this value for each actual destination that can receive a job from this queue. An actual destination becomes ready when it is enabled and the state is either **idle**, **connecting-to-destination**, or **printing**.

Default Value

No default value

Usage Guidelines

This attribute is only valid when the **queue-type** attribute is set to **standard-queue**.

assign-to-destination

Indicates whether the queue assigns jobs to actual destinations as soon as they are accepted or waits until an actual destination is available.

GUI label

Preassign jobs to actual destination

Type

Resettable, single-valued

Input Synonym

You can use the synonym **assign-to-printer**.

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

Basic

true

Advanced

false

Usage Guidelines

- This attribute is only valid when the **queue-type** attribute is set to **standard-queue**.
- When the value of **assign-to-destination** is **true**, the queue assigns jobs to an actual destination as soon as the server accepts them (early binding), unless no actual destination supports a job's required attribute values. If something prevents the assigned actual destination from printing the job, or if another actual destination becomes available first, you must reassign the job using the InfoPrint Manager Administration GUI.

  Early binding is the defining characteristic of a basic InfoPrint installation.
- When the value of **assign-to-destination** is **false**, the queue waits until a job is next to be scheduled to print, then assigns it to the first suitable actual destination to become available (late binding).

  Late binding is the defining characteristic of a standard InfoPrint installation.
- A job must be assigned to an actual destination before InfoPrint can calculate the estimated completion time for the job.
- The server accepts the job even when the **actual-destinations-requested** specifies a non-existent actual destination **only when accept-unsupported-jobs** is **true and** the print queue has **assign-to-printer** as **false**.
- The use of early binding has performance considerations, and early binding is not intended for use in distributed environments or when many actual destinations are associated with the same queue. Therefore, if **assign-to-destination** is set to **true** and many actual destinations are associated with the same queue, job submission performance will likely suffer. In this situation, set **assign-to-destination** to **false**.

  Note

  When changing **assign-to-destination** from **true** to **false**, a performance improvement might not be seen until the InfoPrint Manager is shut down and restarted.

associated-server

Indicates the name of the server where this queue is located.

GUI label

Server

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 255 characters that contains the name of a valid InfoPrint Manager server.

Default Value

The name of the server on which the queue was created.

Usage Guidelines

- You can set this attribute using the **pdset** command to transfer the queue to a different server.
- When you change this attribute value, InfoPrint Manager removes the queue and all its dependent objects from the current server and recreates them on the specified target server.
- All attribute values and object states are preserved during the transfer.
- If the transfer fails, the operation is rolled back and all objects are restored on the source server.
- Both the source and target servers must be running and accessible for the transfer to succeed.

backlog

See **queue-backlog**.

backlog-lower-bound

Identifies the limit (time to print jobs in the queue) below which you do not consider the queue backlogged. InfoPrint resets a backlogged condition when the **queue-backlog** value is less than this value, if you enable backlog computing.

GUI label

Backlog lower bound

Type

Resettable, single-valued

Allowed Values

You can enter a value using [HH:]MM. The unit is minutes or hours and minutes, separated by a colon.

Syntax

backlog-lower-bound=[HH:]MM

For example:

```
backlog-lower-bound=70
backlog-lower-bound=1:10
```

Default Value

No default value

Usage Guidelines

- This attribute is only valid when the **queue-type** attribute is set to **standard-queue**.
- You must set the value for this attribute to less than or equal to the value you specify for the **backlog-upper-bound** attribute.
- InfoPrint sets the value for the attribute **backlogged** to **false** when the value for the **queue-backlog** attribute becomes less than this value if you enable backlog computing (**backlog-update-interval** value not equal to 0).

backlog-update-interval

Specifies how often InfoPrint computes the queue backlog.

GUI label

Backlog update interval

Type

Resettable, single-valued

Allowed Values

You can enter a value using [HH:]MM. The unit is minutes or hours and minutes, separated by a colon.

Setting this value to 0 disables backlog computing.

Default Value

The greater value of:

- 1 minute
- The value of the **backlog-upper-bound** attribute divided by 30.

Usage Guidelines

- This attribute is only valid when the **queue-type** attribute is set to **standard-queue**.
- You must set the value for this attribute to be less than or equal to the value you specify for the **backlog-upper-bound** attribute.
- InfoPrint sets this default value when you create the queue. If you change the value for the **backlog-upper-bound** attribute later with the **pdset** command, InfoPrint does not change the value for this attribute.

backlog-upper-bound

Identifies the limit (time to print the jobs in the queue) above which you consider the queue backlogged.

GUI label

Backlog upper bound

Type

Resettable, single-valued

Allowed Values

You can enter a value using [HH:]MM. The unit is minutes or hours and minutes, separated by a colon.

Default Value

No default value

Usage Guidelines

- This attribute is only valid when the **queue-type** attribute is set to **standard-queue**.
- You must set the value for this attribute to be greater than or equal to the value you specify for the **backlog-lower-bound** attribute.
- InfoPrint sets the value for the attribute **backlogged** to **true** when the value for the **queue-backlog** attribute exceeds this value if you enable backlog computing.

backlogged

Identifies whether the queue is backlogged

GUI label

Backlogged

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to one of these fixed values:

- **true**
- **false**

Default Value

false

Usage Guidelines

- This attribute is only valid when the **queue-type** attribute is set to **standard-queue**.
- InfoPrint sets this attribute value to **true** when you enable backlog computing (**backlog-update-interval** not equal to 0) and the **queue-backlog** value exceeds the **backlog-upper-bound** value.
- InfoPrint sets this attribute value to **false** when the **queue-backlog value** falls below the **backlog-lower-bound** value.

current-backlog

See **queue-backlog**.

descriptor

Provides a description of this queue.

GUI label

Descriptor

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 4095 characters that describes this queue. You might want to specify such things as:

- The name of the department or the account number for the users of this queue.
- Any other information that is unique to your company or organization.

Default Value

No default value

Usage Guidelines

The use of this attribute is optional. However, a detailed description of this queue is helpful to users who want to determine where to submit a given job or administrators who want to determine which queue to associate with a logical destination.

list-of-managers

Lists the people responsible for the configuration and operation of this queue.

Type

Resettable, multi-valued

Input Synonym

You can use this synonym **managers**.

Allowed Values

You can enter a text string up to 255 characters long, per value, that contains the name or ID of the person responsible for this queue.

Default Value

No default value

Usage Guidelines

This attribute is useful if a user needs to contact someone to report a problem or to request a change.

logical-destinations-assigned

Lists the logical destinations associated with this queue.

GUI label

Logical destinations assigned

Type

Non-settable, multi-valued

Input Synonym

You can use the synonym **logical-printers-assigned**.

Allowed Values

InfoPrint adds to this value the logical destination name of a newly created logical destination if the **associated-queue** attribute value for that logical destination identifies this queue.

Default Value

No default value

logical-destinations-ready

Lists the enabled logical destinations that can send jobs to this queue. x

GUI label

Logical destinations ready

Type

Non-settable, multi-valued

Input Synonym

You can use the synonym **logical-printers-ready**.

Allowed Values

InfoPrint adds a logical destination name to this value for each logical destination that is assigned to the queue and that is enabled.

Default Value

No default value

Usage Guidelines

InfoPrint changes this value as you enable or disable logical destinations.

logical-printers-assigned

See **logical-destinations-assigned**.

logical-printers-ready

See **logical-destinations-ready**.

managers

See **list-of-managers**.

message

Provides a message associated with this queue.

GUI label

Message

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 4095 characters that contains information about this queue.

Default Value

No default value

notification-profile

Designates which persons InfoPrint notifies of specific events related to this queue, and how InfoPrint notifies them.

GUI label

Notification profile

Type

Resettable, multi-valued, complex

Syntax

-x "notification-profile={event-identifiers=*event* **...**
delivery-address=*name@node* **delivery-method=***value*
event-comment='*some text***' locale=***locale***}"**

For example:

```
-x "notification-profile={event-identifiers=queue-state-changed
   object-cleaned delivery-address=Kathy@test delivery-method=message
   event-comment='Better check' locale=En_US.IBM-850}"
```

You can omit any of these components.

Components

- **event-identifiers**
  Specifies the events for which the person receives messages.

- *GUI label*
  Events
- *Type*
  Multi-valued
- *Allowed Values*
  You can enter queue events listed for the server **events-supported** attribute.
- *Default Value*
  object-cleaned, **object-deleted**, **queue-backlogged**

- **delivery-address**
  Specifies the address of the person who receives the event messages or the directory location and file name where InfoPrint stores the message.
  - *GUI label*
    Address
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a text string that contains the user name and node (optional) of the person that receives the information or the path to the directory and file name.
  - *Default Value*
    The login ID of the person who created this queue.
  - *Usage Guidelines*
    You must specify a value for **delivery-address** if you specify a value of **file**, **file-add-to**, **exit**, or **wireless** for the **delivery-method** component.
- **delivery-method**
  Specifies how the user receives the event messages.
  - *GUI label*
    Method
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter one of these fixed values:

Fixed Value	*Input Synonym*
electronic-mail	**e-mail**, **email**
file	
file-add-to	
message	
exit	

Fixed Value	*Input Synonym*
none	
wireless	

  - *Default Value*
    message
  - *Usage Guidelines*
    If you specify a value of **file**, **file-add-to**, **exit**, or **wireless** for this component, you must specify a value for the **delivery-address** component.

- **event-comment**
  Provides textual information that InfoPrint appends to the event message.
  - *GUI label*
    Comment
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a text string of up to 4095 characters that contains the information about the event.
  - *Default Value*
    No default value
- **locale**
  Defines the language and code page of notification messages.
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter any locale for which the InfoPrint messages in the corresponding language are installed.
  - *Default Value*
    The locale of the person who created this queue.

notify-operator

Identifies people who are to receive the message defined by the job attribute **job-message-to-operator**.

GUI label

Operators to notify

Type

Resettable, multi-valued, complex

Input Synonym

You can use the synonym **operators**.

Syntax

delivery-method:delivery-address

Separate the components with a colon, for example:

```
message:op3@fastpr
```

Components

- **delivery-method**
  Specifies how the person is to receive the messages.
  - *GUI label*
    Method
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter one of these fixed values:

Fixed Value
Input Synonym

electronic-mail

e-mail, **email**

exit

message

wireless

none

  - *Default Value*
    message
  - *Usage Guidelines*
    - If you specify a value of **wireless** for the **delivery-method** component, you must specify a value for the **delivery-address** component of the **notify-operator** queue attribute.
    - If you specify a value of **exit** for the delivery-method component, you must specify the name of the exit program to execute in the **delivery-address** component of the **notify-operator** queue attribute.
- **delivery-address**
  Specifies the address of the person who receives the message.

- *GUI label*
  Address
- *Type*
  Single-valued
- *Allowed Values*
  You can enter a text string that contains the login ID and node of the person who receives the message.
- *Default Value*
  The login ID of the person who created this queue.
- *Usage Guidelines*
  - If you specify a value of **wireless** for the **delivery-method** component, you must specify a value for the **delivery-address** component of the **notify-operator** queue attribute.
  - If you specify a value of **exit** for the delivery-method component, you must specify the name of the exit program to execute in the **delivery-address** component of the **notify-operator** queue attribute.

object-class

Identifies the object class to which this object belongs.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to **queue**.

Default Value

queue

operators

See **notify-operator**.

physical-printers-assigned

See **actual-destinations-assigned**.

physical-printers-ready

See **actual-destinations-ready**.

protected-attributes

Specifies one or more queue attributes that InfoPrint Manager operators cannot modify.

GUI label

Protected attributes

Type

Resettable, multi-valued

Allowed Values

You can enter one or more queue attribute names.

Default Value

This attribute always specifies itself, **protected-attributes**, as a value.

Usage Guidelines

Anyone with **write** permission for queues can set values for queue attributes. By default, the **admin** and **oper** groups both have **write** permission. Once you define a queue attribute as a protected attribute, you must have queue **delete** permission to modify the attribute. Members of the **oper** group do not have queue **delete** permission unless the administrator modifies the default permissions for that group.

queue-backlog

Specifies the amount of time that this queue might be backlogged. This is a computed estimate of time it takes to print all of the jobs currently in the queue.

GUI label

Current backlog

Type

Non-settable, single-valued

Input Synonyms

You can use the synonyms **backlog** or **current-backlog**.

Allowed Values

InfoPrint sets this value to [HH:]MM. The unit is minutes or hours and minutes, separated by a colon.

Default Value

No default value

Usage Guidelines

This attribute is only valid when the **queue-type** attribute is set to **standard-queue**.

queue-name

Uniquely identifies this queue object.

GUI label

Queue

Type

Non-settable, single-valued

Allowed Values

InfoPrint set this value to the *QueueName* portion of the argument from the **pdcreate** command when this queue is created.

Default Value

No default value

Usage Guidelines

This queue name must be unique in the namespace.

queue-state

Identifies the current state of the queue.

GUI label

State

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to one of these fixed values:

Fixed Value	*Explanation*
paused	InfoPrint will not schedule jobs in the queue to the actual destinations associated with this queue. The queue will still receive jobs from its associated logical destinations if they are enabled.
ready	InfoPrint can schedule jobs in the queue to the actual destinations associated with this queue.

Default Value

No default value

queue-type

Indicates if the queue is a standard or an Anyplace queue.

GUI label

Type

Type

Initially settable, single-valued

Allowed Values

standard-queue

anyplace-queue

Default Value

standard-queue

Usage Guidelines

- Anyplace queues are used only with the Pull Print Feature. For more information, see *Secure Print: Installing and Configuring*.
- You cannot associate actual destinations to an Anyplace queue. Jobs are pulled from the device to a queue associated with a **pull-print-printer** actual destination that is printing to the device.
- Jobs submitted to logical destinations associated with an Anyplace queue are deleted if they are not pulled to a Pull Print device in the time specified in the **pull-print-job-timeout** server attribute.

requeue-failed-jobs

Indicates whether jobs that fail to RIP, impose, or print should be replaced in the queue.

GUI label

Keep failed jobs

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

true

Usage Guidelines

- This attribute is only valid when the **queue-type** attribute is set to **standard-queue**.
- When the value of **requeue-failed-jobs** is **true**, jobs that fail to print for any of these reasons:
  - The server cancels the job.
  - InfoPrint fails to RIP the job.
  - InfoPrint fails to impose the job.

  are replaced in the queue in the **held** state.
- When the value of **requeue-failed-jobs** defaults to **true**, jobs can start accumulating in the Server's queues, and these jobs will require manual intervention. If you do not want jobs to accumulate in the Server's queues, you might want to change **requeue-failed-jobs** to **false**.
- When the value of **requeue-failed-jobs** is **false**, jobs that fail to print for these reasons are retained if there is a value for the **job-retain-until** or **job-retention-period** job attribute. Otherwise, these jobs are discarded.
- For any value of **requeue-failed-jobs**, jobs that fail to print because of actual destination problems are replaced in the queue in the **pending** state. If another actual destination is available, these jobs are rescheduled.

Attributes for resource contexts

InfoPrint Manager uses resource contexts to determine the location of PSF resources. Actual destination attributes, such as **resource-context**, **resource-context-font**, or **resource-context-overlay**, reference the names of resource contexts.

The different types of AFP resources are:

Data object font resources

A data object font resource can be an OpenType font collection, an OpenType set of linked fonts, or OpenType fonts that are installed in one or more directories on your InfoPrint Manager server. Data object font resources are the only fonts registered through a Resource Allocation Table that is located in the same directory as the fonts. For more information about using data object font resources with InfoPrint Manager, see "Creating and managing resource-context objects" in *RICOH InfoPrint Manager for Windows: Procedures* .

Data object resources

Data object resources are a type of AFP resource; they can be an IOCA file or a type of file natively supported by a particular model of printer. In addition, if you use the transforms that come with InfoPrint Manager to convert objects into AFP first, these non-native types of files can be used as data object resources as well. In InfoPrint Manager, data object resources are grouped with BCOCA and GOCA objects, and they are collectively known as presentation object containers.

Fonts

A font is a single size and typeface in a particular type family including letters, numerals, punctuation marks, special characters, and ligatures.

Form definitions

Form definitions provide instructions on how output devices position data on the page. Form definitions can specify overlays, a paper source for cut-sheet printer devices, duplexing, text suppression, data position, and the number and modifications of pages.

Overlays

Overlays are collections of predefined data such as lines, shading, text boxes, or logos that an output device can merge with variable data on a page or a form.

Page definitions

Page definitions contain the formatting controls for line data. Page definitions can include controls for the number of lines per logical page, font selection, print direction, and the mapping of individual fields to positions on the logical page.

Page segments

Page segments contain text and images that an output device can include at any addressable point on a page or an electronic overlay.

The resource context attribute **context-address** identifies the path name of the directory that contains the corresponding PSF resource. Instead of entering the full path name as the value of an actual destination attribute, you can reference the resource context. You can also reference resource contexts during print submission using certain document attributes.

Only PSF and email actual destinations use resource contexts.

Initially settable attribute listing

There are no initially settable attributes for a resource context.

Resettable attribute listing

You can set these attributes with the **pdcreate** command when you create a resource context or modify them with the **pdset** command after you create the resource context.

- **context-address**
- **descriptor**

associated-server

Indicates the server in which this resource context is located.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to the *ServerName* portion of the argument specified with the **pdcreate** command when this resource context is created.

Default Value

No default value

context-address

Defines the path for the location of this PSF resource.

Type

Resettable, single-valued

Allowed Values

You enter a text string up to 4095 characters long that contains the path name. Separate multiple path names with colons.

Syntax

path:path

For example:

```
/fonts:/dept123/fonts
```

Default Value

No default value

descriptor

Provides a description of this resource context.

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 4095 characters long that describes this resource context.

Default Value

No default value

Usage Guidelines

The use of this attribute is optional. However, a detailed description of the resource that this resource context references can be helpful to a users who need to determine which resource context to use.

object-class

Identifies the object class to which this object belongs.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to **resource-context**.

Default Value

resource-context

resource-context-identifier

Uniquely identifies this resource context in a server.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to the *ResourceContextName* portion of the argument specified with the **pdcreate** command when this resource context is created.

Default Value

No default value

Attributes for servers

An InfoPrint server is an object that represents the server that manages the validation, routing, and scheduling of jobs.

Initially settable attribute listing

There are no specifiable attributes for a server.

Resettable attribute listing

You can modify these attributes with the **pdset** command after you create a server.

- **accept-unsupported-jobs**
- **additional-accounting-log-attributes**
- **auto-create-shared-printers** (Windows only)
- **client-driver-names** (Windows only)
- **count-job-pages**
- **descriptor**
- **disallowed-list-object-classes** (AIX only)
- **forms-available**
- **ignore-ivo-values**
- **job-submission-timer**
- **list-of-managers**
- **log-accounting-data**
- **lower-memory-usage-exit** (AIX only)
- **lower-memory-usage-threshold** (AIX only)
- **maximum-non-raster-rips**
- **maximum-raster-rips**
- **message**
- **notification-profile**

- **pull-print-job-timeout**
- **save-rip-files**
- **security-level**
- **smtp-server-host**
- **smtp-server-port**
- **snmp-discovery-during-startup**
- **snmp-normal-poll-interval**
- **snmp-problem-poll-interval**
- **transform-manager-host**
- **transform-manager-port**
- **upper-memory-usage-exit** (AIX only)
- **upper-memory-usage-threshold** (AIX only)
- **web-server-host**
- **web-server-port**

accept-unsupported-jobs

Indicates whether the server accepts jobs even when no actual destination supports the required attribute values.

GUI label

Accept unsupported jobs

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

- When the value of the **accept-unsupported-jobs** is **true**, the server accepts jobs even when no actual destination supports the required attribute values. InfoPrint holds these jobs and sets the **required-resources-not-supported** job attribute to a list of the unsupported values.

The server accepts the job even when the **actual-destinations-requested** specifies a non-existent actual destination **only when accept-unsupported-jobs** is **true** and the print queue has **assign-to-printer** as **false**.

- When the value of **accept-unsupported-jobs** is **true**, the actual destination **accept-job** attribute is ignored.
- When the value of **accept-unsupported-jobs** is **false**:
  - The server rejects jobs that require unsupported attribute values.
  - The **accept-job** actual destination attribute is honored if the **assign-to-printer** queue attribute is **true**.
- If changes to job or actual destination attributes after the job has been accepted produce unsupported attribute values, InfoPrint holds the job and sets the **required-resources-not-supported** job attribute to the list of unsupported values.

accounting-log-version

Contains user-defined information.

GUI label

Accounting Log Version

Type

Resettable, single-valued

Allowed Values

Any string text up to 4096 characters

Default value

Empty

Usage notes

- The value of this attribute containing user-defined information will be added to the server's actual destination accounting log if the attribute is added to the **additional-accounting-log-attributes** and the actual destionation **accounting-log-version** attribute is not set.
- The order of information in the existing accounting logs if you use the **additional-accounting-log-attributes** attribute is shifted if the **accounting-log-version** attribute is used.

actual-destinations-ready

Identifies the supported actual destinations that are ready to receive jobs from queues in this server.

Type

Non-settable, multi-valued

Input Synonym

You can use the synonym **physical-printers-ready**.

Allowed Values

InfoPrint sets this value to the names of the actual destinations that are ready to accept jobs. A actual destination name is:

- Added when actual destinations associated with queues in this server are enabled and are in the **idle**, **connecting-to-printer**, or **printing** state.
- Removed when you disable or pause an actual destination and one of these destination states (**timed-out**, **needs-attention**, or **needs-key-operator**) exists.

Default Value

No default value

actual-destinations-supported

Identifies the actual destinations that this server supports.

Type

Non-settable, multi-valued

Input Synonym

You can use the synonym **physical-printers-supported**.

Allowed Values

InfoPrint sets this value to the names of the actual destinations associated with the queues contained in this server. InfoPrint adds the destination name when an actual destination associated with queues in this server registers with this server.

Default Value

No default value

additional-accounting-log-attributes

Allows the selection of additional job and document attributes to be added to the server accounting log.

GUI label

Additional Accounting Information

DSS

All

Type

Resettable, multi-valued

Allowed Values

- **accounting1-text**
- **accounting2-text**
- **accounting3-text**
- **account-text**
- **actual-destinations-requested**
- **address1-text**
- **address2-text**
- **address3-text**
- **address4-text**
- **auxiliary-sheet-selection**
- **base-printer**
- **building-text**
- **chars**
- **color-bits-per-plane**
- **color-mapping-table**
- **color-profile**
- **color-rendering-intent**
- **color-toner-saver**
- **copy-count**
- **creation-time**
- **default-input-tray**
- **default-medium**
- **department-text**
- **destination-locations-requested**
- **destination-models-requested**
- **destination-name-requested**
- **destination-pass-through**
- **destinations-used**
- **document-comment**
- **document-content**
- **document-file-name**
- **document-finishing**

- document-type
- email-from-address
- email-to-address
- fax-number
- fax-to-email-domain
- fax-to-name
- font-resolution
- form-definition
- halftone input-tray-select
- job-batch
- job-client-id
- job-comment
- job-copies-completed
- job-deadline-time
- job-discard-time
- job-finishing
- job-media-sheet-count
- job-originator
- job-page-count
- job-priority
- job-retain-until
- job-retention-period
- maintain-original-filename
- media-sheets-completed
- modification-time
- mvs-destination
- mvs-forms
- mvs-segment-id
- name-of-last-accessor
- name-text
- node-id-text
- number-of-documents
- number-up
- octet-count
- output-format
- page-count
- page-definition
- page-select
- plex
- print-quality
- processing-time
- programmer-text

- **promotion-time**
- **queue-assigned**
- **record-count**
- **resource-context**
- **results-profile**
- **room-text**
- **sheet-range**
- **sides**
- **started-printing-time**
- **subject-text**
- **title-text**
- **user-id-text**
- **user-locale**
- **user-name**
- **x-image-shift**
- **x-image-shift-back**
- **y-image-shift**
- **y-image-shift-back**

Default Value

none

Usage Guidelines

- When using the **default-medium** attribute for medium information, there is a limitation relative to accuracy. This situation occurs when the number of copies of each medium or sheet to be presented and the modifications that apply to each copy are specified in the AFP data stream or in the form definition, using the medium copy count and medium modification controls.

auto-create-shared-printers (Windows Only)

Indicates whether destinations created in this server that can be print submission targets should automatically create a corresponding InfoPrint gateway shared printer.

GUI label

Automatically create gateway printer

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

False

Usage Guidelines

- When the value of the **auto-create-shared-printers** is **true**, InfoPrint automatically creates a corresponding InfoPrint gateway printer with:
  - A Windows print driver with the first value in the server's **client-driver-names** attribute
  - A polling interval of 0

  Note

  The server accepts the job even when the **actual-destinations-requested** specifies a non-existent actual destination **only when accept-unsupported-jobs** is **true and** the print queue has **assign-to-printer** as **false**.

additional-accounting-log-attributes-supported

Contains the full list of possible job and document attributes that can be added to the server accounting log.

GUI label

Additional Accounting Attributes Supported

DSS

All

Type

Non-settable, multi-valued

Allowed Values

- **accounting1-text**
- **accounting2-text**
- **accounting3-text**
- **account-text**
- **actual-destinations-requested**
- **address1-text**
- **address2-text**
- **address3-text**
- **address4-text**

- authenticated-login
- auxiliary-sheet-selection
- base-printer
- building-text
- chars
- color-bits-per-plane
- color-mapping-table
- color-profile
- color-rendering-intent
- color-toner-saver
- copy-count
- creation-time
- default-input-tray
- default-medium
- department-text
- destination-accounting1-text
- destination-accounting2-text
- destination-accounting3-text
- destination-locations-requested
- destination-models-requested
- destination-name-requested
- destination-pass-through
- destinations-used
- document-comment
- document-content
- document-file-name
- document-finishing
- document-type
- email-from-address
- email-to-address
- fax-number
- fax-to-email-domain
- fax-to-name
- font-resolution
- form-definition
- halftone input-tray-select
- job-batch
- job-client-id
- job-comment
- job-copies-completed
- job-deadline-time
- job-discard-time

- job-finishing
- job-media-sheet-count
- job-originator
- job-page-count
- job-priority
- job-retain-until
- job-retention-period
- maintain-original-filename
- media-sheets-completed
- modification-time
- mvs-destination
- mvs-forms
- mvs-segment-id
- name-of-last-accessor
- name-text
- node-id-text
- number-of-documents
- number-up
- octet-count
- output-format
- page-count
- page-definition
- page-select
- plex
- print-quality
- processing-time
- programmer-text
- promotion-time
- queue-assigned
- record-count
- resource-context
- results-profile
- room-text
- sheet-range
- sides
- started-printing-time
- subject-text
- title-text
- user-id-text
- user-locale
- user-name
- x-image-shift

- x-image-shift-back
- y-image-shift
- y-image-shift-back

Default Value

- accounting1-text
- accounting2-text
- accounting3-text
- account-text
- actual-destinations-requested
- address1-text
- address2-text
- address3-text
- address4-text
- auxiliary-sheet-selection
- base-printer
- building-text
- chars
- color-bits-per-plane
- color-mapping-table
- color-profile
- color-rendering-intent
- color-toner-saver
- copy-count
- creation-time
- default-input-tray
- default-medium
- department-text
- destination-locations-requested
- destination-models-requested
- destination-name-requested
- destination-pass-through
- destinations-used
- document-comment
- document-content
- document-file-name
- document-finishing
- document-type
- email-from-address
- email-to-address
- fax-number
- fax-to-email-domain

- fax-to-name
- font-resolution
- form-definition
- halftone input-tray-select
- job-batch
- job-client-id
- job-comment
- job-copies-completed
- job-deadline-time
- job-discard-time
- job-finishing
- job-media-sheet-count
- job-originator
- job-page-count
- job-priority
- job-retain-until
- job-retention-period
- maintain-original-filename
- media-sheets-completed
- modification-time
- mvs-destination
- mvs-forms
- mvs-segment-id
- name-of-last-accessor
- name-text
- node-id-text
- number-of-documents
- number-up
- octet-count
- output-format
- page-count
- page-definition
- page-select
- plex
- print-quality
- processing-time
- programmer-text
- promotion-time
- queue-assigned
- record-count
- resource-context
- results-profile

- **room-text**
- **sheet-range**
- **sides**
- **started-printing-time**
- **subject-text**
- **title-text**
- **user-id-text**
- **user-locale**
- **user-name**
- **x-image-shift**
- **x-image-shift-back**
- **y-image-shift**
- **y-image-shift-back**

aix-destination-models

See **dynamic-destination-models**.

cancel-individual-document-supported

Indicates whether the server is capable of cancelling individual documents in a multi-document job.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to **false**.

Default Value

false

client-driver-names (Windows only)

Identifies the Windows print driver that can be used as the device driver for automatically created gateway shared printers on this server.

GUI label

Client drivers

Type

Resettable, single-valued

Input Synonyms

You can use the synonym **windows-nt-driver-names** or **nt-drivers**.

Allowed Values

You can enter a text string that contains the string form of the Windows print driver.

Default Value

No default value

Usage Guidelines

Perform this procedure to determine the valid Windows driver names:

1. Click **My Computer** from the desktop.
2. Click **Control Panel**.
3. Click **Printers**.
4. Click **Add Printer**.
5. The values listed in the **Printer:** list box in the **Add Printer Wizard** are the names of the Windows destination drivers that you can install on the workstation; for example, **4039 LaserPrinter PS**.

Note

Other destination drivers are available and might not display in the list for a particular workstation.

count-job-pages

Specifies whether the server performs job page count for every job with **rip-and-hold** or **rip-and-hold-ignore-ready** values of the **job-rip-action** job attribute on every PSF actual destination, for every incoming AFP printable job, for both, or for none. If the job page count function is enabled by specifying the **rip-and-hold** value for **count-job-pages**, InfoPrint Manager updates the **page-count** document attribute and the **job-page-count** job attribute after it rips the job.

GUI label

Count job pages

Type

Resettable, single-valued

Input Synonyms

None

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Explanation*
afp-input	Do the page count for jobs that have AFP input files.
rip-and-hold	Do the page count for jobs that are assigned to a PSF actual destination in this server.
all	Do the page count for both AFP jobs and rip and hold jobs.
never	Do not do the page count.

Default Value

All

Usage Guidelines

This attribute affects the **job-page-count** and **page-count** attributes.

- When the job page count function is enabled, InfoPrint Manager updates the values for the **job-page-count** job attribute and the **page-count** document attribute after it rips the job.
- For AFP jobs, the job page count function does not change the **job-page-count** job attribute or the **page-count** document attribute.
- When the job page count function is enabled, the **pdpr** command that submits an AFP printable file will not return until the page count is calculated.
- The result of the page count function might not be 100% accurate, because only the begin page group (BPG) and end page group (EPG) pages are counted. For example, if you have a formdef that has multiple copy counts and uses constant back, front, or both, the page count calculated will not reflect the actual number of the printed pages.

de-identification-method

Defines if the **de-identification** process is enabled for this server. When this process is enabled, InfoPrint Manager de-identifies the job and document attributes considered to provide sensitive information about the job content. InfoPrint Manager re-identifies the data for the job owner or for the authenticated user.

GUI label

De-identification method

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Explanation*
none	The de-identification procedure is disabled.
job-data-de-identification	The server de-identifies sensitive job information.

Default Value

none

Usage Guidelines

- Use this attribute to enable or disable the **de-identification** process.
- When the **de-identification** procedure is enabled, InfoPrint Manager encodes the values of these attributes: **job-name**, **document-file-name**, **title-text** and **formatted-job-ticket-content**.
- The job owner and the authenticated login user are able to list job attributes as if they are not de-identified. Also, they receive the re-identified data via the **select-email** notification.
- The de-identification procedure does not apply to SAP jobs.
- When the de-identification procedure is enabled do not ask InfoPrint Manger to create symbolic links to the job files (using the pdpr command with the -l flag) as this provides access to the data you are trying to protect.
- When the de-identification procedure is enabled and the job is processing on an Email DSS actual destination with the attribute **maintain-original-filename** set to true then the de-identified value of the original submitted file name is used for the file name email of the attachment.
- The **de-identification** procedure applies to MVS jobs, but the MVS Download Receiver daemon can list identified document file names in the server error.log.
- When the **de-identification** procedure is enabled and the job is processing on a PSF actual destination with the separator sheets set to job-ticket, the job ticket information is shown on the separator sheet.

descriptor

Provides a description of this server.

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 4095 characters long that contains a description of this server. You might want to specify things such as:

- The purpose of the server; which users, user groups, or departments will use the objects contained in this server.
- Any other information that is unique to your company or organization.

Default Value

No default value

Usage Guidelines

The use of this attribute is optional. However, a detailed description is useful if you have a large number of servers or if you have many people managing your network printing system.

destination-states-supported

Identifies the destination states that this server supports.

Type

Non-settable, multi-valued

Input Synonym

You can use the synonym **printer-states-supported**.

Allowed Values

InfoPrint sets this value to any of these fixed values:

Fixed Value	*Explanation*
connecting-to-printer	The actual destination has received a job and is trying to connect to its printer device. After it connects to the device, the actual destination locks the printer device until it finishes processing the job so that another print system cannot use the device. Note This state applies only to AIX actual destinations and PSF other-driver attached actual destinations on InfoPrint Manager for AIX.
idle	The actual destination is waiting for a job. An actual destination can be idle even if its output device is printing a job from some other AIX process or from the AIX print-spooling subsystem; or from some other Windows application or the Windows spooler.
needs-attention	The actual destination can connect to the output device, but for some reason the output device cannot print.
needs-key-operator	This state occurs when there is a serious problem with the output device. Either the actual destination cannot connect to the output device or there is some other problem. For example, a printer device might be out of printer supplies. InfoPrint automatically disables the actual destination when the actual destination enters this state. If the actual destination uses SNMP, InfoPrint automatically re-enables it when the problem is corrected. To prevent automatic re-enabling, manually disable the actual destination.

Fixed Value	*Explanation*
paused	The actual destination was paused with the **pdpause** command or by a job with **job-start-wait=true**.
printing	The actual destination is processing a job.
shutdown	The actual destination was shut down with the **pdshutdown** command. Note This state applies only to PSF actual destinations.
timed-out	The actual destination received a job, but the actual destination could not connect to the printer device in the time specified by the **printer-timeout-period** actual destination attribute. Note This state applies only to AIX actual destinations and PSF other-driver attached actual destinations.

Default Value

No default value

destination-support-systems-supported

Identifies the DSSs that this server supports.

Type

Non-settable, multi-valued

Allowed Values

InfoPrint Manager sets the values to identify the DSSs that are installed. The values are dynamic; InfoPrint Manager adds and removes values based on the DSSs that are installed.

Default Value

For AIX:

Fixed Value	*Input Synonym*
aix	**piobe**
anyplace	
bsd	
dfe	
email	

Fixed Value	*Input Synonym*
ipp	
psf	

For Linux:

Fixed Value	*Input Synonym*
anyplace	
bsd	
cups	
dfe	
email	
ipp	
psf	

For Windows:

Fixed Value	*Input Synonym*
anyplace	
bsd	
dfe	
email	
ipp	
psf	
windows	passthrough

disallowed-list-object-classes

Contains object classes that cannot be listed at this time. The main purpose of this attribute is to prevent querying of jobs when a memory constrained situation exists. When a memory constrained situation exists, it is often caused by a large backlog of jobs and querying all of them can make the memory problem much worse and could possibly cause the server to crash if there is not enough memory to bring all the jobs into memory and build the query response.

GUI label

Queries to prevent

Type

Resettable, multi-valued

Allowed Values

Object classes that can be specified on this attribute are restricted to the fixed values associated with the **object-classes-supported** server attribute as follows:

- **auxiliary-sheet**
- **destination**
- **document**
- **initial-value-document**
- **initial-value-job**
- **job**
- **log**
- **medium**
- **queue**
- **resource-context**
- **server**

Default Value

No default value

Usage Guidelines

You usually use the **disallowed-list-object-classes** attribute to disallow listing jobs (by adding the job value) by the upper-memory-usage-exit script, and then allow it again (by removing the job value) by the lower-memory-usage-exit script.

document-attributes-supported

Identifies the document attributes that the server supports.

Type

Non-settable, multi-valued

Allowed Values

InfoPrint sets these values to include all the document attributes supported by any actual destination registered with the server. These values are dynamic; InfoPrint adds and removes values based on the values of registered actual destinations.

Default Value

- **class**
- **copy-count**
- **destination-initial-value-document**
- **document-comment**
- **document-content**

- **document-content_list**
- **document-file-name**
- **document-format**
- **document-sequence-number**
- **document-type**
- **initial-value-document**
- **object-class**
- **octet-count**
- **page-count**
- **transfer-method**

document-varying-attributes-supported

Identifies the document-varying attributes that this server supports

DSS

All

Type

Non-settable, multi-valued

Allowed Values

InfoPrint sets these values to include a list of varying document attributes that this server supports.

Note

This list includes only document attributes that directly affect the actual destination. Documents with attributes that affect the server, for example, **initial-value-document**, can be printed even though those attributes are not on this list.

Default Value

- **document-content**
- **document-content-list**
- **document-file-name**
- **document-sequence-number**
- **document-type**
- **initial-value-document**
- **octet-count**
- **page-count**
- **transfer-method**

dynamic-destination-models (AIX or Linux only)

Identifies the descriptive printer model names that the AIX DSS (AIX) or CUPS DSS (Linux) dynamically recognizes by parsing the printer driver.

GUI label

Dynamic destination models

Type

Non-settable, multi-valued

Allowed Values

InfoPrint Manager sets this attribute to a list of recognized AIX DSS or CUPS DSS printer models.

Default value

None

Usage Guidelines

InfoPrint Manager dynamically adds the descriptive destination model name retrieved from the colon file on AIX or PPD file on Linux each time a new model of AIX DSS or CUPS DSS destination is added to InfoPrint Manager.

This descriptive name can be used when creating additional actual destinations that use the same driver. The values are added to the drop-down list of the Add Printer Wizard for AIX DSS or CUPS DSS.

This attribute replaces on AIX the **aix-destination-models** attribute.

eoj-cse-sheet-eject

Indicates whether InfoPrint Manager should force eject to a new sheet at the end of each job while printing in cut sheet emulation (CSE) mode

GUI label

End of job CSE sheet eject

DSS

PSF TCP/IP

Type

Settable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default value

False

Usage Guidelines

- When the value of **eoj-cse-sheet-eject** is **true** and the job is printing in CSE mode, at the end of each job the last sheet is completed regardless of whether the sheet is full or not. This forces each job to start on a new sheet of paper.
- For printers that cannot stop paper movement immediately on a sheet boundary and emit blank sheets when the paper is stopped, specifying **true** for **eoj-cse-sheet-eject** forces the last sheet of the last job in the queue to print.
- Forcing the last sheet of the last job to print causes the last sheet to print together with the rest of the job without being separated by blank sheets.
- When **eoj-cse-sheet-eject** is **false**, normal CSE mode is used, which means if one job ends in the middle of a sheet, the next job starts on the other half of the same sheet.
- If the last job in the queue ends in the middle of a sheet and the printer cannot stop the paper movement immediately on a sheet boundary, the printer ejects blank sheets to separate the last job from the next job.

events-supported

Lists the events that the server or the objects in the server support.

Type

Non-settable, multi-valued

Allowed Values

InfoPrint sets these values to these events:

- **checkpoint-taken**
- **class-aborted**
- **class-actual-destination-attention**
- **class-actual-destination-configuration**
- **class-actual-destination-default**
- **class-actual-destination-status**
- **class-error**
- **class-job-attention**

- class-job-default
- class-job-problem
- class-job-status
- class-logical-destination-attention
- class-logical-destination-configuration
- class-logical-destination-default
- class-logical-destination-status
- class-queue-attention
- class-queue-configuration
- class-queue-default
- class-queue-status
- class-report
- class-server-attention
- class-server-configuration
- class-server-default
- class-server-status
- class-state-changed
- class-warning
- close-to-discard-time
- destination-disabled
- destination-enabled
- destination-function-unavailable
- destination-needs-administrator
- destination-needs-attention
- destination-needs-operator
- destination-registered
- destination-shutdown-job-requeued
- destination-state-changed
- destination-timed-out
- destination-unregistered
- destinations-not-ready-for-job
- detailed-messages
- destination-timed-out
- disk-space-low
- document-aborted-by-destination
- document-aborted-by-server
- document-cancelled-at-destination
- document-content
- file-transferred
- internal-server-error
- job-aborted-by-server
- job-assigned-to-destination

- job-assigned-to-destination-at-end
- job-assigned-to-queue
- job-cancelled-by-operator
- job-cancelled-by-user
- job-cannot-be-scheduled
- job-discarded
- job-modified
- job-paused
- job-promoted
- job-reordered
- job-requeued
- job-rerouted
- job-resubmitted
- job-resumed
- job-retained
- job-state-changed
- job-submission-not-complete
- job-unassigned
- low-on-memory
- memory-exhausted
- no-document
- no-resource
- object-cleaned
- object-created
- object-deleted
- object-modified
- object-paused
- object-resumed
- other-error
- other-warning
- out-of-disk-space
- out-of-dpf-haids
- out-of-dpf-job-numbers
- out-of-dpf-raids
- past-discard-time
- processing-started
- queue-backlogged
- queue-no-longer-backlogged
- queue-state-changed
- resource-needs-attention
- resource-needs-operator
- sapcbd-down

- **server-shutdown-complete**
- **server-shutdown-started**
- **server-startup-complete**
- **server-state-changed**
- **unable-to-register**
- **unrecognized-resource**

Default Value

See “Allowed Values”.

forms-available

Indicates the forms that this server can process. This list is automatically extended as jobs with new forms are received.

GUI label

Forms available

Type

Resettable

Allowed Values

You can enter a text string with a list of the available forms.

Default Value

No default value

hostname

See **server-hostname**.

i-p-address

See **server-ip-address**.

ignore-ivo-values

Specifies if the server ignores the default jobs and the default jobs document values when using the **pdmod** or **pdset** commands to reset an attribute or to delete a value from an attribute, and there are no more values left for that attribute.

GUI label

Ignore Default Object Values

DSS

All

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

False

Usage Guidelines

If **ignore-ivo-values** is set to **true** and all values from a job are set to the default ones or deleted, InfoPrint Manager ignores the value of the job or document default attribute when setting its value.

ip-address

See **server-ip-address**.

job-attributes-supported

Identifies the job attributes that this server supports.

Type

Non-settable, multi-valued

Allowed Values

InfoPrint sets these values to include all the job attributes supported by any actual destination registered with the server. These values are dynamic; InfoPrint adds and removes values based on the values of registered actual destinations.

Default Value

- **completion-time**
- **creation-time**
- **current-job-state**
- **current-page-printing**
- **deadline-in-jeopardy**
- **dss-requested**
- **estimated-completion-time**
- **estimated-processing-time**
- **forms**
- **job-client-id**
- **job-comment**
- **job-complexity**
- **job-copies-completed**
- **job-deadline-time**
- **job-discard-time**
- **job-end-message**
- **job-estimated-processing-time-factor**
- **job-finishing**
- **job-hold**
- **job-media-sheet-count**
- **job-message-from-administrator**
- **job-identifier**
- **job-log**
- **job-message-to-operator**
- **job-name**
- **job-originator**
- **job-owner**
- **job-page-count**
- **job-position-fixed**
- **job-print-after**
- **job-priority**
- **job-retain-until**
- **job-retention-period**
- **job-scheduling**
- **job-start-message**
- **job-state-reasons**

- **job-submission-complete**
- **initial-value-job**
- **intervening-jobs**
- **modification-time**
- **name-of-last-accessor**
- **new-job-identifier**
- **number-of-documents**
- **octets-completed**
- **on-request-resources-required**
- **pages-completed**
- **physical-printers-requested**
- **previous-job-state**
- **print-checkpoint**
- **printer-initial-value-job**
- **printer-locations-requested**
- **printer-models-requested**
- **printer-name-requested**
- **printers-assigned**
- **processing-time**
- **promotion-time**
- **queue-assigned**
- **record-count**
- **results-profile**
- **required-resources-not-ready**
- **required-resources-not-supported**
- **released-for-pull-print**
- **retain-forever**
- **started-printed-time**
- **submission-time**
- **submitter-ip-address**
- **total-job-octets**
- **user-locale**
- **user-name**

job-state-reasons-supported

Type

Non-settable, multi-valued

Allowed Values

InfoPrint sets the value of this attribute to these fixed values:

Fixed Value	*Explanation*
aborted-by-system	The server aborted the job.
cancelled-by-operator	An operator or system administrator cancelled the job.
cancelled-by-user	The person who submitted the job cancelled the job.
completed	The job completed without any errors or warnings that InfoPrint could detect. This does not guarantee that there were no errors of any kind.
completed-successfully	The job completed without any errors or warnings.
completed-with-errors	The job completed with errors. Based on the **dss-job-message-disposition** actual destination attribute, the messages associated with the errors either print at the end of the job or in a message log. See dss-job-message-disposition, p. 618.
deadline-in-jeopardy	The value of the **estimated-completion-time** attribute for the job is later than the time specified by the **job-deadline-time** attribute; or the time specified by the **job-deadline-time** attribute is past.
job-hold-set	The job is in a queue and the **job-hold** job attribute of the job has a **true** value.
job-print-after-specified	The job is in a queue and the time specified by the **job-print-after** job attribute has not yet occurred.
pull-print	The job is in a Pull Print or in an Anyplace Print queue, and the time period specified by the **pull-print-job-timeout** server attribute has not yet past.
required-resource-not-ready	The job is in a queue but InfoPrint cannot schedule it because one or more of the resources required by the job (such as media, fonts, and so on) are not ready on any of the actual destinations that can accept the job. The job's **required-resource-not-ready** attribute identifies the resources that need to be made ready.
required-resource-not-supported	The job is in a queue but InfoPrint cannot schedule it because none of the actual destinations that can accept the job support one or more of the resources required by the job (such as media, fonts, and so on). The job's **required-resource-not-supported** attribute identifies the resources that are not supported.
retained-immediately	The job is not put on a queue or scheduled when it is received by the InfoPrint server. The job is immediately processed according to the values of its retention period attributes.
rip-and-hold-completed	The RIP has successfully converted the job. The job has not been scheduled because the value of the **job-rip-action** attribute is **rip-and-hold** or is **rip-and-hold-ignore-ready**.

Fixed Value	*Explanation*
rip-completed	A job with **job-rip-action=rip-and-print-ignore-ready** has been RIPped, but InfoPrint cannot schedule it because one or more of the resources required by the job are not ready on any of the actual destinations that can accept the job. Jobs held for this reason are released automatically when the required resources become ready.
rip-failed	The RIP failed to convert the job. Note You will see this reason only if the job is retained or if the value of the **requeue-failed-jobs** queue attribute is **true**. When neither of these conditions is true, jobs that fail to rip are discarded.

Default Value

See "Allowed Values".

job-states-supported

Identifies the job states that this server supports.

Type

Non-settable, multi-valued

Allowed Values

InfoPrint sets the value of this attribute to these fixed values:

Fixed Value	*Reason*
cancelled	The job submitter or an operator cancelled the job. The **job-state-reasons** job attribute provides the reason.
held	The job is in a queue and InfoPrint cannot schedule it. Either the **job-hold** job attribute is set to **true** or the job is held for some other reason, such as resources not ready. The **job-state-reasons** job attribute provides the reason.
imposing	InfoPrint is arranging the job's pages so that they will print on the press sheets in the right order for final cutting, folding, and binding.
paused	The job was paused with the **pdpause** command.
pending	The job is in a queue and is waiting for InfoPrint to schedule and send it to an actual destination.
pre-processing	InfoPrint is creating the job.
printing	The job is printing on a PSF actual destination. The **printing** state is not supported by the AIX, BSD, or email DSS. Jobs printing on AIX or BSD

Fixed Value	*Reason*
	actual destinations, or sending on email destinations, are in the **processing** state.
processing	InfoPrint has sent the job to an actual destination. The job is processing and printing on an AIX or BSD DSS actual destination, processing and sending on an email destination, or processing on a PSF actual destination. Depending on the output device, this can indicate that InfoPrint has sent at least one document in the job to the output device.
retained	InfoPrint has retained the job in the server after it finished printing or sending or after it was cancelled. Either the value of the **job-retention-period** job attribute for the job is greater than zero, or the value of the **job-retain-until** job attribute for the job is a future time.
ripping	InfoPrint is converting the job to raster image patterns for printing. The **ripping** state is supported only by the PSF and email DSS.
terminating	The job is terminating, either because it has finished processing or because it was aborted. The **job-state-reasons** job attribute provides the reason.
unknown	The server does not know the state of the job because it lost communication with the actual destination to which InfoPrint sent the job.

Default Value

See “Allowed Values”.

job-submission-timer

Specifies the maximum time that the server will try to assemble a job before it will time out if it has not assembled all the documents.

GUI label

Job submission timeout

Type

Resettable, single-valued

Allowed Values

You can enter a value using [HH:]MM. The unit is minutes or hours and minutes, separated by a colon.

Default Value

30

Usage Guidelines

If the server has not completed the assembly of a job in the specified time, it identifies the job submission as complete and sends the job to the queue.

list-of-managers

Lists the people that are responsible for the configuration and operation of this server.

Type

Resettable, multi-valued

Input Synonym

You can use the synonym **managers**.

Allowed Values

You can enter a text string up 255 characters long, per value, that contains the name or user ID of the person responsible for this server. You might also want to include the telephone number and office location of the person.

Default Value

No default value

Usage Guidelines

This attribute is useful if a user needs to contact someone to report a problem or to request a change.

locale

Identifies the locale for this server.

GUI label

Locale

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value based on the environment variables for this server at startup time. The priority sequence to obtain the language for the locale from the environment variables is:

1. **LC_ALL**
2. **LC_MESSAGES**

3. **LANG**

Possible values: en_US, fr_FR, de_DE, it_IT, es_ES or ja_JP.

Default Value

No default value

log-accounting-data

Defines whether the accounting logs for all associated actual destinations are activated or deactivated by default. The actual destination attribute **log-accounting-data** setting if one overrides the setting of this value for that actual destination.

GUI label

Log accounting data

Type

Resettable, single-valued

Allowed Values

You can enter one of these values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

If the value for any actual destination associated with this server is set to the default attribute value (no value), the value set for this server attribute sets the condition for that actual destination.

The accounting log for each actual destination contains these job attributes and values for each job submitted to that actual destination separated by commas:

- **actual destination name** (up to 255 characters)
- **job owner** (up to 255 characters)
- **global job-id** without *ServerName*
- **submission-time** (GMT format)
- **submission-time** (date in server's displayable locale and time zone)
- **submission-time** (time in server's displayable locale and time zone)
- **completion-time** (GMT format)

- **completion-time** (date in server's displayable locale and time zone)
- **completion-time** (time in server's displayable locale and time zone)
- **pages-completed**
- **octets-completed**
- **data stream** (first document only)
- **job name** (up to 255 characters)

logical-destinations-ready

Identifies which logical destinations in this server are ready to accept jobs.

Type

Non-settable, multi-valued

Input Synonym

You can use the synonym **logical-printers-ready**.

Allowed Values

InfoPrint sets and resets this value as administrators enable or disable logical destinations in this server.

Default Value

No default value

logical-destinations-supported

Identifies the logical destinations that this server supports.

Type

Non-settable, multi-valued

Input Synonym

You can use the synonym **logical-printers-supported**.

Allowed Values

InfoPrint sets and resets this value as administrators create or delete logical destinations in this server.

Default Value

No default value

logical-printers-ready

See **logical-destinations-ready**.

logical-printers-supported

See **logical-destinations-supported**.

lower-memory-usage-exit (AIX only)

Identifies the exit program/script to run when the server memory usage drops below the percentage defined in the **lower-memory-usage-threshold** server attribute. This program/script defines the action to take when the server recovers from a memory constrained situation.

GUI label

Lower memory usage exit

Type

Resettable, single-valued

Allowed Values

The path and name of the exit program/script to run when the server memory usage drops below the value defined with the **lower-memory-usage-threshold** server attribute.

Note

You do not need to specify the path if the program/script is located in a directory in the system's default path.

Default Value

No default value

Usage Guidelines

- The **lower-memory-usage-exit** server attribute values allow substitution of various things in the generated command to run the exit program. This way the exit program can be more sophisticated, and it can include conditional logic based on the values of passed arguments. If any of these strings are found in the exit attribute value, the specified data is substituted for it in the general command:

  %s

  Server name

  %t

Threshold value (value of **lower-memory-usage-threshold** attribute)

For example, if the exit attribute has a value of `memprob %s` in server `pumbaa`, when the server invokes the memory usage exit, it passes `pumbaa` as the first argument.

- If either **lower-memory-usage-exit** or **lower-memory-usage-threshold** are empty, no lower-memory-usage-exit processing is done.

lower-memory-usage-threshold (AIX only)

Specifies the percentage of the total allowed process memory that causes the exit program identified in the **lower-memory-usage-exit** server attribute to be run. When the server memory usage drops below the percentage you specify with this attribute, the program/script identified with in the **lower-memory-usage-exit** server attribute runs.

GUI label

Lower memory usage threshold

Type

Resettable, single-valued

Allowed Values

You can enter a percentage between from 0 to 90, but this value must be less than the value specified for the **upper-memory-usage-threshold** server attribute if it is specified.

Default Value

No default value

Usage Guidelines

If either **lower-memory-usage-exit** or **lower-memory-usage-threshold** are empty, no lower-memory-usage-exit processing is done.

managers

See **list-of-managers**.

maximum-non-raster-rips

Indicates the maximum number of jobs other than TIFF, GIF, or JPEG jobs that InfoPrint can RIP at one time for printing on a PSF actual destination.

GUI label

Maximum nonraster RIPs

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 0 through 2147483647.

Default Value

No default value

Usage Guidelines

- You can limit the number of concurrent RIPs to improve performance.
- InfoPrint reads this value the first time that a job is RIPped after the server is started. Therefore, whenever you change this value, you must restart the server.

maximum-raster-rips

Indicates the maximum number of TIFF, GIF, and JPEG jobs that InfoPrint can RIP at one time for printing on a PSF actual destination.

GUI label

Maximum raster RIPs

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 0 through 2147483647.

Default Value

No default value

Usage Guidelines

- You can limit the number of concurrent RIPs to improve performance.
- InfoPrint reads this value the first time that a job is RIPped after the server is started. Therefore, whenever you change this value, you must restart the server.

message

Provides information associated with this server.

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 4095 characters long that contains information about this server.

Default Value

No default value

modify-individual-document-supported

Indicates whether this server is capable of modifying individual documents in a multiple document job.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to **true**.

Default Value

true

multiple-documents-supported

Indicates whether this server supports multiple documents in a single job.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to **true**.

Default Value

true

notification-profile

Designates which users InfoPrint notifies of specific events related to this server, and how InfoPrint notifies them.

GUI label

Notification profile

Type

Resettable, multi-valued, complex

Syntax

-x "notification-profile={event-identifiers=*event* **...**
delivery-address=*name@node* **delivery-method=***value*
event-comment='*some text***' locale=***locale***}"**

For example:

```
-x "notification-profile={events-identifiers=class-server-status
   delivery-address=Tom@master delivery-method=message
   event-comment='Too much data' locale=En_US.IBM-850}"
```

You can omit any of these values.

Components

- **event-identifiers**
  Specifies the events for which the person receives messages.
  - *Type*
    Multi-valued
  - *Allowed Values*
    You can enter any of the values listed for the **events-supported** attribute.
  - *Default Value*
    internal-server-error, **object-cleaned**, **object-deleted**, **server-shutdown-complete**, **sapcbd-down**, **low-on-memory**, **memory-exhausted**, **out-of-disk-space**, **out-of-dpf-haids**, **out-of-dpf-raids**, **out-of-dpf-job-numbers**
- **delivery-address**
  Specifies the address of the person who receives event messages concerning this server or the directory location and file name where InfoPrint stores messages.
  - *Type*
    Single-valued
  - *Allowed Values*
    You can enter a text string that contains the user name and node (optional) of the person that receives the information or the path to the directory and file name.

– *Default Value*
The login ID of the user who created this server.

– *Usage Guidelines*
You must specify a value for **delivery-address** if you specify a value of **file**, **file-add-to**, **exit**, or **wireless** for the **delivery-method** component.

- **delivery-method**
Specifies how the user receives the event messages.

– *Type*
Single-valued

– *Allowed Values*
You can enter one of these fixed values:

Fixed Value	*Input Synonym*
electronic-mail	**e-mail**, **email**
file	
file-add-to	
message	
exit	
none	
wireless	

– *Default Value*
message

– *Usage Guidelines*
If you specify a value of **file**, **file-add-to**, **exit**, or **wireless** for this component, you must specify a value for the **delivery-address** component.

- **event-comment**
Provides information that InfoPrint prepends to the event message.

– *Type*
Single-valued

– *Allowed Values*
You can enter a text string up to 4095 characters long that contains the comment.

– *Default Value*
No default value

- **locale**
Defines the language and code page of notification messages.

– *Type*
Single-valued

- *Allowed Values*
  You can enter any locale for which the InfoPrint messages in the corresponding language are installed.
- *Default Value*
  The locale of the person who created this server.

pull-print-job-timeout

Specifies the period of time since an authenticated LDAP job, that has the **job-state-reasons** attribute set to **pull-print**, enters the held state, until the server discards it. If a job is in the held state and its timeout expired, the InfoPrint Manager server discards the job.

Note

In most cases, the **submission-time** attribute can be queried to see when the job enters the held state.

GUI label

Pull Print Job Timeout

Type

Resettable, single-valued

Input Synonym

You can use the synonym **pull-print-timeout**.

Allowed Values

You can enter a value using [HH:]MM. The unit is minutes or hours and minutes, separated by a colon.

Default Value

24:00

Usage Guidelines

For more information, see *Secure Print: Installing and Configuring*.

object-class

Identifies the object class to which this object belongs.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to **server**.

Default Value

server

object-classes-supported

Lists the object classes that this server supports.

Type

Non-settable, multi-valued

Allowed Values

InfoPrint sets this value to these fixed values:

- **auxiliary-sheet**
- **destination**
- **document**
- **initial-value-document**
- **initial-value-job**
- **job**
- **log**
- **medium**
- **queue**
- **resource-context**
- **server**
- **transform**

Default Value

See "Allowed Values".

physical-printers-ready

See **actual-destinations-ready**.

physical-printers-supported

See **actual-destinations-supported**.

pre-process-pjl-header

Specifies if, for PDF datastreams, the server maps the InfoPrint Manager PDF Driver set of PJL commands into InfoPrint jobs and document attributes and values.

GUI label

Pre process PJL header

Type

Initially settable, single-valued

Allowed Values

You can enter one of these fixed values:

true yes

false no

Default Value

No default value.

Usage Guidelines

If you process a multiple documents job, only the pjl commands from the first document of the job are interpreted.

InfoPrint Manager only parses the PJL header. PJL nested jobs do not work correctly.

InfoPrint Manager does not update those job and document attributes that have a value in the job or document attribute set.

printer-states-supported

See **destination-states-supported**.

problem-child

Indicates whether one of the objects that this server manages has a problem.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to one of these fixed values:

- **true**
- **false**

Default Value

No default value

Usage Guidelines

The InfoPrint Manager Administration GUI uses this attribute value to determine the problem status of this server.

protected-attributes

Specifies one or more server attributes that InfoPrint Manager operators cannot modify.

GUI label

Protected attributes

Type

Resettable, multi-valued

Allowed Values

You can enter one or more server attribute names.

Default Value

This attribute always specifies itself, **protected-attributes**, as a value.

Usage Guidelines

Anyone with **write** permission for servers can set values for server attributes. By default, the **admin** and **oper** groups both have **write** permission. Once you define a server attribute as a protected attribute, you must have server **delete** permission to modify the attribute. Members of the **oper** group do not have server **delete** permission unless the administrator modifies the default permissions for that group.

queues-supported

Identifies the queues contained in this server.

Type

Non-settable, multi-valued

Allowed Values

InfoPrint sets and resets this value when you create or delete queues.

Default Value

No default value

save-rip-files

Indicates whether this server saves the output files from jobs converted to raster image patterns.

GUI label

Save ripped files

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

Basic

true

Advanced

false

Usage Guidelines

- If you move a RIPped job from a server with **save-rip-files=true** to one with **save-rip-files=false**, the new server keeps the RIP files only until the job is printed, then discards them.
- RIPped files are saved in the directory specified by the **PDBASE** environment variable or in one of its subdirectories. No single user can create a file larger than the amount of free space in the file system containing this directory. If many users are submitting RIPped jobs, the directory might fill up and prevent all users from successfully RIPping files.

security-level

Identifies the security level for this server.

GUI label

Security level

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

none

No security checking is performed.

low

Uses standard access control list and group security checking.

Default Value

low

server-hostname

Identifies the host processor on which this server is running.

Type

Non-settable, single-valued

Input Synonym

You can use the synonym **hostname**.

Syntax

node.node.node

For example:

```
boxer.denver.gym
```

Allowed Values

InfoPrint sets this value to the host name of the processor where this server was created.

Default Value

The host name of the processor where this server was created.

server-ip-address

Identifies the host name of the machine on which this server is running.

Type

Non-settable, single-valued

Input Synonyms

You can use the synonym **ip-address** or **i-p-address**.

Allowed Values

InfoPrint sets this value to the host name of the processor where this server was created.

Default Value

The host name of the processor where this server was created.

server-name

Uniquely identifies this server.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to the name you enter when you create this server.

Default Value

No default value

server-state

Identifies the current state of this server.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to one of these fixed values:

- **initializing**
- **ready**
- **terminating**
- **unavailable**

Default Value

No default value

server-version

Specifies the version of InfoPrint Manager server that is installed on the pdserver computer.

GUI label

Server version

Type

Non-settable, single-valued

Usage Guidelines

This attribute is only for informational use.

smtp-server-host

Identifies the Domain Name System (DNS) host name or Internet Protocol address of the system where the Simple Mail Transfer Protocol (SMTP) server or gateway is running. This server or gateway is used by the Email DSS for email notification.

GUI label

SMTP server

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 4095 characters long that is either of these types of addresses:

Dotted decimal address

A series of integers in the range of 0–255, each separated by a period, . (decimal address). For example:

```
9.99.12.85
```

Hostname

For example:

```
leo.infoprint.com
```

Default Value

localhost

Usage Guidelines

With InfoPrint Manager for Windows, you must enter a value to receive notifications through the **electronic-mail** notification delivery method or use Email DSS.

Note

Select client notifications using the **electronic-mail** notification delivery method.

smtp-server-port

Identifies the port number on which the Simple Mail Transfer Protocol (SMTP) server is listening. This server or gateway is used by the Email DSS for email notification.

GUI label

SMTP port

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 1 through 2147483647, but you typically enter an integer from 5001 to 65535.

Default Value

25

Note

This is the Internet Assigned Numbers Authority (IANA) reserved port number for SMTP.

Usage Guidelines

With InfoPrint Manager for Windows, you must enter a value to receive notifications through the **electronic-mail** notification delivery method or use Email DSS.

Note

Select client notifications using the **electronic-mail** notification delivery method.

snmp-aix-printer-models

Identifies the SNMP descriptive printer model names that the AIX DSS recognizes.

GUI label

SNMP AIX printer models

Type

Non-settable, multi-valued

Allowed Values

InfoPrint sets this value to a list of recognized SNMP printer models.

Default Value

A list of recognized SNMP printer models.

snmp-discovery-during-startup

Specifies that during startup, the server should issue an SNMP query for each SNMP printer to obtain the most up-to-date status.

GUI label

Discover printers at startup

Type

Resettable, single-valued

Allowed Values

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

true

Usage Guidelines

- When **SNMP-discovery-during startup** is **true**, the SNMP queries can cause long startup times, especially when there are lots of SNMP printers and a significant number of them are powered off or disconnected.
- When **SNMP-discovery-during startup** is **false**, the server bypasses the initial SNMP queries, and the SNMP printers show whatever their status was when the server was shut down the last time. When set to **false**, the printer status becomes up-to-date over time as the SNMP polling loop runs.

snmp-normal-poll-interval

Indicates the number of seconds that the server should wait after sequentially polling all the SNMP printers **without** known problems. Increasing the polling interval causes the server to use less CPU and network resources for SNMP polling, but it makes the currently shown printer status (for printers that are not currently printing) less accurate. The field on the SNMP tab is "Normal poll interval".

GUI label

Normal poll interval (sec)

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 0 through 2147483647.

Default Value

300

Usage Guidelines

- When normal polling finds that an output device has a problem, InfoPrint disables the actual destination if necessary and transfers the device to the list of devices to be polled at the problem interval.
- Output devices with which the server has not established, or has lost, SNMP communication, are polled at the normal interval, not the problem interval.
- Set a value of **0** to disable normal polling.

snmp-problem-poll-interval

Indicates the number of seconds that the server should wait after sequentially polling all the SNMP printers **with** known problems. Increasing the polling interval causes the server to use less CPU and network resources for SNMP polling, but it makes the currently shown printer status (for printers that are not currently printing) less accurate. The field on the SNMP tab is "Problem poll interval".

GUI label

Problem poll interval (sec)

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 0 through 2147483647.

Default Value

60

Usage Guidelines

- When problem polling finds that an output device no longer has a problem, InfoPrint re-enables the actual destination if necessary and transfers the device to the list of devices to be polled at the normal interval. To prevent InfoPrint from re-enabling the actual destination, manually disable it.
- Output devices with which the server has not established, or has lost, SNMP communication, are polled at the normal interval, not the problem interval.
- Set a value of **0** to disable problem polling.

transfer-methods-supported

Identifies the transfer methods that this server supports.

Type

Non-settable, multi-valued

Allowed Values

InfoPrint sets this value to any of these fixed values:

- **pipe-pull**
- **with-request**

Default Value

pipe-pull, **with-request**

Usage Guidelines

InfoPrint compares the document attribute **transfer-method** to this attribute for validation.

transform-manager-host

Identifies the Domain Name System (DNS) host name or Internet Protocol address of the system where the InfoPrint Transform Manager feature is running. This attribute can only be used with the InfoPrint Transform Manager feature. For more information, see Installing InfoPrint Manager Transform Feature, G550-20160.

GUI label

Transform manager host

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 4095 characters long that is either of these types of addresses:

Dotted decimal address

A series of integers in the range of 0 to 255, each separated by a period, . (decimal address). For example:

```
9.99.12.85
```

Hostname

For example:

```
leo.infoprint.com
```

Note

To list the host or print server on the Transform Manager user interface page, you should not specify this attribute.

Default Value

No default value.

transform-manager-port

Identifies the port number on which the InfoPrint Transform Manager feature is listening. This attribute can only be used with the InfoPrint Transform Manager feature. For more information, see Installing InfoPrint Manager Transform Feature, G550-20160.

GUI label

Transform Manager port

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 1 through 2147483647, but you typically enter an integer from 5001 to 65535.

Note

To list the port on the InfoPrint Transform Manager user interface page, you should not specify this attribute.

Default Value

Port number 6986.

upper-memory-usage-exit (AIX only)

Identifies the exit program/script to run when the server memory usage passes above the percentage defined in the **upper-memory-usage-threshold** server attribute. This program/script defines the action to take when the server encounters a memory constrained situation.

GUI label

Upper memory usage exit

Type

Resettable, single-valued

Allowed Values

The path and name of the exit program/script to run when the server memory usage passes above the value defined with the **upper-memory-usage-threshold** server attribute.

Note

You do not need to specify the path if the program/script is located in a directory in the system's default path.

Default Value

No default value.

Usage Guidelines

- The **upper-memory-usage-exit** server attribute values allow substitution of various things in the generated command to run the exit program. This way the exit program can be more sophisticated, and it can include conditional logic based on the values of passed arguments. If any of these strings are found in the exit attribute value, the specified data is substituted for it in the general command:

  %s

Server name

%t

Threshold value (value of **upper-memory-usage-threshold** attribute)

For example, if the exit attribute has a value of `memprob %s` in server `pumbaa`, when the server invokes the memory usage exit, it passes `pumbaa` as the first argument.

- If either **upper-memory-usage-exit** or **upper-memory-usage-threshold** are empty, no upper-memory-usage-exit processing is done.

upper-memory-usage-threshold (AIX only)

Specifies the percentage of the total allowed process memory that causes the exit program identified in the **upper-memory-usage-exit** attribute to be run. When the server memory usage rises above the percentage you specify with this attribute, the program/script identified with in the **upper-memory-usage-exit** server attribute runs.

GUI label

Upper memory usage threshold

Type

Resettable, single-valued

Allowed Values

You can enter a percentage between from 0 to 90, but this value must be greater than the value specified for **lower-memory-usage-threshold** attribute if it is specified.

Default Value

No default value.

Usage Guidelines

If either **upper-memory-usage-exit** or **upper-memory-usage-threshold** are empty, no upper-memory-usage-exit processing is done.

web-server-host

Identifies the Domain Name System (DNS) host name or Internet Protocol address of the system where the InfoPrint Manager Web Server is running.

GUI label

Web server

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 4095 characters long that is either of these types of addresses:

Dotted decimal address

A series of integers in the range of 0 to 255, each separated by a period, . (decimal address). For example:

```
9.99.12.85
```

Hostname

For example:

```
leo.infoprint.com
```

Default Value

localhost

web-server-port

Identifies the port number on which the InfoPrint Manager Web server is listening.

GUI label

Web server port

Type

Resettable, single-valued

Allowed Values

You can enter an integer from 1 through 2147483647, but you typically enter an integer from 5001 to 65535.

Default Value

Set from `/etc/services` for InfoPrint Manager for AIX and InfoPrint Manager for Linux, or from `%SystemRoot%\system32\drivers\etc\services` for InfoPrint Manager for Windows.

If you restart InfoPrint Manager, this attribute is reset to default value.

Attributes for transforms

InfoPrint uses transform objects to indicate how specific document formats sent to an associated actual destination are to be transformed before printing or storing.

InfoPrint Manager includes a file called **xfmfltr.out** that contains information about the commands executed by a Configurable Transform Subsystem transform. This information can be helpful for troubleshooting transforms that are failing. For InfoPrint Manager for Windows, the file can be found in Workspace Path defined in the InfoPrint Manager Management Console under **Edit→Service Configuration...**. For InfoPrint Manager for Aix and Linux, the file can be found in `/var/pd/server_name`. You can enable this function by enabling the server traces.

Initially settable attribute listing

There are no initially settable attributes for transforms.

Resettable attribute listing

You can set these attributes with the **pdcreate** command when you create a transform or modify them with the **pdset** command after you create the transform. You can also erase a transform with the **pddelete** command or list selectable attribute values for a transform with the **pdls** command.

- **conditional-terminating-return-code**
- **descriptor**
- **document-formats-supported**
- **other-transform-options**
- **output-document-format**
- **server-locale**
- **terminating-transform**

associated-server

Indicates the name of the server where this transform is located.

GUI label

Server

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value when you create a transform for a given server. InfoPrint assigns the *ServerName* portion of the argument from the **pdcreate** command used to create this transform object.

Default Value

No default value

conditional-terminating-return-code

Specifies a return code that indicates the transform was successful, but the transform will not be returning data for further processing by InfoPrint Manager. InfoPrint Manager behaves the same as if the transform had been defined to be a terminating transform and a successful return code was returned.

GUI label

Conditional terminating return code

Type

Resettable, single-valued

Allowed Values

You can enter a value from 1 through 2147483647; however, the value might be limited by operating system.

Default Value

No default value

descriptor

Provides a description of this transform.

GUI label

Description

Type

Resettable, single-valued

Allowed Values

You can enter a text string up to 4095 characters long that describes this transform.

Default Value

No default value

Usage Guidelines

The use of this attribute is optional. However, a detailed description of the transform that this references can be helpful to users who need to determine which transform to use.

document-formats-supported

Identifies the document formats that this transform supports.

GUI label

Document formats allowed

Type

Resettable, multi-valued

Allowed Values

You can enter any of these fixed values:

Fixed Value	*Input Synonym*
ascii	
dbcs-ascii	
ditroff	
dpf-ipds	
d630	
epson	
gif	
hpgl	**hp-gl**
iso-6429	
jpeg	
kgl	
line-data	
modca-p	**afpds**
passthru	
pcl	**hppcl, hp-pcl**
pdf	
postscript	**ps**
ppds	
sap	
sap-abap	
simple-text	**text**

Fixed Value	*Input Synonym*
tiff	
xml	

Default Value

ASCII, **MODCA–P (AFPDS)**, **PCL**, **PostScript**

Usage Guidelines

- When a document's format it not supported, the document bypasses the transform.
- If you associate a transform with an actual destination that does not support the document format, a document with that format will not be sent to that actual destination, and therefore, will not reach the transform.

object-class

Identifies the object class to which this object belongs.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to **transform**.

Default Value

transform

other-transform-options

Specifies the command line that executes when this transform is run.

GUI label

Transform options

Type

Resettable, single-valued

Allowed Values

You can enter a text string of up to 4095 characters that contains the command line for this transform.

Default Value

No default value

Usage Guidelines

- You should not use the **pdset** command with the **other-transform-options** transform attribute.
- For **transform-library=command-line-transform**, this attribute contains the command line that specifies the transform. The supported substitution control sequences that can be used in **other-transform-options** follow:

  %i

  The name of the input-file to transform.

  %o

  The name of the file in which to store the output transform.

  %e

  The name of the file in which to store any transform information or error messages. If anything is written to this file, it is logged in the InfoPrint Manager for AIX server log.

  Note

  1. If the transform exits with an exit code of 0 or the value set in the **conditional-terminating-return-code** transform attribute, the error messages from the transform are logged as **debug** severity.
  2. If the transform exits with a non-zero exit code, but not the value set with the **conditional-terminating-return-code** transform attribute, the error messages from the transform are logged as **error** severity.
  3. Transform error messages can be written to the file specified through the **%e** substitution variable, or they can be written to standard error (**stderr**). You should not mix output to **%e** and **stderr** in a single run of the exit program. You should use one or the other in any given run.

  %j

  The name of the original print file name, minus the path (from **document-file-name** attribute).

  Note

  This file might not be accessible. This should only be used to construct another name, for example, for a temporary file.

  %n

  The name of the original print file name, minus the path and minus the extension (from **document-file-name** attribute).

  Note

  This file might not be accessible. This should only be used to construct another name, for example, for a temporary file.

  %d

  A string representing the document-format of the input file:

ascii

ASCII

afpds

AFPDS

pcl

PCL

postscript

PS

Note

You can also use **%%Ddocument-format%%** to pass the document format value from the document.

%p

The value of the **destination-pass-through** document attribute from the document. The value can be used as job specific information that can be passed to the transform and the actual destination.

%q

The name of the actual destination that is doing this transform.

%s

The **document-sequence-number** for the document.

%t

The **other-transform-options** for the document.

To write one transform, but use it differently for different jobs, you can pass values into the transform with this parameter.

%g

The global job identifier for the job.

%u

The name of the file to be used to update the job's **pages-completed** and the document's **page-count** attributes. Updating the document's **page-count** changes the job's **job-page-count** attribute.

Note

This file should never be accessed directly; only the **transform_update** utility should be used to modify this file. For more information about the **transform_update** utility, see "Using the transform_update utility" in the appropriate InfoPrint Manager procedures manual.

%#

The 10-digit job-identifier of the job.

%%J*attribute-name*%%

Passes the job attribute value from the job containing the document being transformed.

%%D*attribute-name***%%**

Passes the document attribute value from the document being transformed.

%%A*attribute-name***%%**

Passes the actual destination attribute value from the actual destination processing the job.

Considerations when using the %%*Nattributename* substitution control sequences:

- InfoPrint Manager accepts standard abbreviations for the attribute name, as long as they are not ambiguous. For example, you can enter **res-prof** for **results-profile**. When ambiguous text is used, it is passed to the transform as entered.
- The **%%*Nattributename*** substitution control sequences must be followed by a blank or %%.
- You can put quotes around the single percent values (for example, '%u'), but you should never put quotes around the double-percent values, such as **%%A**.
- Values with spaces are enquoted so they pass as a single argument. You should not enquote % %substitution%% controls.
- Multiple value attributes return all values separated by commas.
- If no attribute exists for the object, a null value is passed to the transform. No checking is done if there is an object class attribute mismatch. For example, if you ask for an actual destination attribute from a job, you get a null value.
- If no value exists on a requested attribute, a null value is passed to the transform.
- The attribute specified in the %%substitution control sequence can be specified in English or the language of the pdserver. A new transform attribute, **server-locale**, specifies whether to use the pdserver's language or to use English. **server-locale** defaults to the language of the pdserver. The same language will be used for values passed to the transform.
- The identification of the end of the attribute name is done based on the occurrence of a blank, end-of-line, or % character. If the class identification is missing after the starting %%, the substitution request will not be recognized as a %%*Nattributename* substitution request with the result that the last % in the ending %% might be misinterpreted as the start of another substitution sequence depending on the next character.

- The command line that you specify with **other-transform-options** can run in an AIX shell script. Therefore, make sure that shell meta-characters are *escaped*, that is, preceded by one or more backslashes, so that the resulting attribute value can be correctly parsed by the shell script.
- **Pragma statements with other-transform-options:**

  The **other-transform-options** attribute can now have a value which includes an equals sign, so **pragma** statements are supported. For example, to submit a color print job called PS.doc to a printer called color_printer using perceptual color rendering, you could type this command on the command line:

  ```
  pdpr -d color_printer -x "other-transform-options = -pragma color-rendering-intent=perceptual" PS.doc
  ```

  This pragma can also be used on a command line invocation of a transform or it can be specified in the transform configuration file.

- **Examples for other-transform-options:**

  Use these examples on the command line:

  - To run the **ps2afp** transform and print the generated AFP data, you would specify a one-step transform sequence consisting of a transform object as follows:

```
other-transform-options="ps2afp -o '%o' '%i'"
```

– To run the **ps2afp** transform and also save a copy of the generated AFP data in "`c:\afp\*.afp`", you could create a transform sequence consisting of two transform objects as follows:

1. This step does the PostScript to AFP transform and stores the output in the designated output file, which becomes the input file for step 2:

```
other-transform-options="ps2afp -o '%o' '%i'"
```

2. This step copies the AFP file from step 1. However, in this example, nothing is put in the %o file, so the %i file (the transformed AFP) is passed through to the DSS for printing.

```
other-transform-options="copy '%i' 'c:\afp\%n.afp'"
```

– To run a customized program that removes PostScript controls that might create a problem at the printer, you would use a one-step transform sequence consisting of a transform object as follows:

```
other-transform-options="d:\tools\my_ps_filter.exe '%i' '%o'"
```

– To run Fred's `mytransform` and pass it the **document-sequence-number**, the global jobID, and the document **other-transform-options**, specify:

```
other-transform-options='/home/fred/mytransform %i %o %s %g %t'
```

– To run Sally's `mywork` transform and pass it the actual destination's resource-context value and the job's job owner, specify:

```
other-transform-options='/home/sally/mywork %i %o %%Aresource-context %%Jjob-owner'
```

- **For AIX:**

  The InfoPrint Manager server runs as a setuid program. When setuid programs are started, AIX clears the LIBPATH variable for security reasons. Therefore, transform programs that are run under the transform Subsystem of InfoPrint Manager must either be built not to depend on LIBPATH or to explicitly set LIBPATH themselves.

output-document-format

Identifies the format of the output file generated by the transform specified in **other-transform-options**. This is a required attribute.

GUI label

Format of output file

Type

Resettable, single-valued

Allowed Values

You can enter any of these fixed values:

Fixed Value	*Input Synonym*
ascii	
dbcs-ascii	

Fixed Value	*Input Synonym*
ditroff	
dpf-ipds	
d630	
epson	
gif	
hpgl	**hp-gl**
iso-6429	
jpeg	
kgl	
line-data	
modca-p	**afpds**
passthru	
pcl	**hppcl, hp-pcl**
pdf	
postscript	**ps**
ppds	
sap	
sap-abap	
x**simple-text**	**text**
tiff	
xml	

Default Value

No default value

server-locale

Indicates whether to use the server's locale or English for input and output of information defined on transform %% options.

GUI label

Use server locale

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

true

Usage Guidelines

- When **server-locale** is set to **true**, the attributes specified on the %% options must be in the language of the server. The values passed to the transform will also be in the language of the server.
- When **server-locale** is set to **false**, the attributes specified on the %% options must be in English. The values passed to the transform will also be in English.

terminating-transform

Indicates whether this is a terminating transform.

GUI label

How to process jobs

Type

Resettable, single-valued

Allowed Values

You can enter one of these fixed values:

Fixed Value	*Input Synonym*
true	**yes**
false	**no**

Default Value

false

Usage Guidelines

When you specify **true** for **terminating-transform**, InfoPrint Manager ends the transform sequence and marks the job complete without printing through the DSS backend.

When you are using a sequence of transforms, specify **false** as the value for **terminating-transform** to continue processing transforms that follow. The last transform in the sequence can be **true** when you want it to terminate without printing and **false** when you want it to print through the defined actual destination.

A terminating transform can be used to create an actual destination that only performs a transform and then stores/forwards the transformed data without ever printing it to an output device.

Since the DSS is never actually executed, a terminating transform can be associated with any type of DSS. You should associate a terminating transform with a BSD DSS destination to minimize unnecessary overhead, such as creating files, ports, and so on. When defining a BSD DSS destination for use with a terminating transform, you should not use a valid IP address or a valid command when creating the BSD DSS destination, which not only minimizes overhead, but also logs errors if it tries to print a file.

Because a terminating transform does not provide output to the next step, it is meaningless to specify the **job-rip-action** job attribute with a value of **rip-and-hold**.

Examples for terminating-transform

- For example, a BSD DSS destination could be created and associated with a transform that runs **ps2afp** and stores the resulting AFP file in a library.
- As another example, you could also use a BSD DSS destination fed by one queue and associated with a transform that runs **ps2afp** and then sends (with a **pdpr** command) the resulting AFP file to a logical destination that sends the file to a printer. This example gives you a way to do *pre-spool* transforms.

transform-identifier

Uniquely identifies this transform.

Type

Non-settable, single-valued

Allowed Values

InfoPrint sets this value to the *SimpleName* portion of the argument specified with the **pdcreate** command when this transform is created.

Default Value

No default value

transform-library

Identifies the name of the DLL/Shared library that implements this transform.

Type

Settable, single-valued

Allowed Values

command-line-transform

Default Value

command-line-transform

4. InfoPrint Manager environment variables

- **Querying environment variables**
- **Setting environment variables**

These tables describe the environment variables that affect how InfoPrint Manager processes commands and utilities.

InfoPrint Manager environment variables defaulted or set for InfoPrint Manager for AIX, InfoPrint Manager for Linux, and InfoPrint Manager for Windows

Variable	*Description*
AFPREORDER_REV_ STRIP_LIKE_IMM	When AFPREORDER_REV_STRIP_LIKE_IMM is set to any value, InfoPrint Manager keeps the IMM (Invoke Medium Map) only if the name of the IMM changes from the prior medium map in use. This environment variable is ignored when the **reverse-page-order** attribute has not been specified.
PATH	With InfoPrint Manager for AIX, the directories that AIX searches for command files. Separate multiple directories by a colon, **:**. **Commands:** All **Default:** `$PATH:/usr/lpp/pd/bin:/usr/lpp/psf/bin`, where `$PATH` is the value when InfoPrint Manager is installed. With InfoPrint Manager for Windows, the directories that Windows searches for command files. Separate multiple directories by a semicolon, **;**. **Commands:** All **Default:** `%PATH%:`*`install_path`*`\pd\bin;`*`install_path`*`\psf\bin`, where **%PATH%** is the value when InfoPrint Manager is installed.
PCL2AFP_EMULATE_ SIMPLEX	When **PCL2AFP_EMULATE_SIMPLEX** is set to **1**, the **pcl2afp** transform emulates the plexing from the input file using blank pages. No form definitions are used. This is commonly used for printers that do not support form definitions. Note 1. After defining this environment variable, you must restart the computer to take effect in InfoPrint Manager. 2. If you want to disable this emulation mechanism, you must remove the environment variable and then restart the computer.
PDHOST	Identifies the host clients use to send requests to InfoPrint Manager.

Variable	*Description*
PDIDTABLE	Defines the upper limit (boundary) of local job identifiers that InfoPrint Manager can assign for each user before wrapping to 1. The maximum valid integer is 32767. If you do not set a value, InfoPrint Manager uses 100 as the upper limit. Setting the value to a lower value decreases memory usage but increases the chances of duplicate local job identifiers. Setting the value to 0 disables the mapping function; all local IDs will be set to 0 and you cannot reference jobs by the local IDs.
PD_IP_VERSION	This system environment variable is used by the InfoPrint Manager server and clients to force the applications to use IPv4 addresses (if its value is set to 4) or IPv6 addresses (if its value is set to 6). If you do not set this environment variable, InfoPrint Manager server and clients use all available IPv4 and/or IPv6 addresses. **Values:** **4**, **6** **Enabling SAP Server IPv6 socket communication** If your SAP Server is configured for IPv6 communication, in order for the InfoPrint Manager SAP Callback Daemon to work, you must set the environment variable *SAP_IPv6_ACTIVE* with the value 1, both on the SAP Server system and also on the InfoPrint Manager server. In this case, the InfoPrint Manager server must also run on a system that is IPv6 enabled. **Enabling IPv6 socket communication for InfoPrint Manager Java components** For InfoPrint Manager components that use Java on the server or client side (for example: IPP Gateway), you can force an IPv6 configuration by setting the *_JAVA_OPTIONS* system environment variable. The value of *_JAVA_OPTIONS* must include `-Djava.net.preferIPv6Addresses=true -Djava.net.preferIPv4Stack=false`.
PDNOTIFY	With the InfoPrint Select client: • When **PDNOTIFY** is set to any value, the InfoPrint Select client does not create a notification-profile for the jobs it sends to the InfoPrint Manager server. • When **PDNOTIFY** is not set to any value, the InfoPrint Select client creates a notification-profile for the jobs it sends to the InfoPrint Manager server.
PDPATH	A path of directories that InfoPrint Manager searches for the file name specified by the **-X** *attributes file name* flag. Separate multiple directories by a colon, **:**. If the **PDPATH** environment variable does not exist, InfoPrint Manager uses the current working directory of the person submitting the command. **Commands:**

Variable	*Description*
	All
PDPRINTER	Used as the default logical destination when you do not specify the **-d** *DestinationName*, the **-p** *DestinationName* flag, or the **destination-name-requested** job attribute. **Commands:** **pdls**, **pdq**, **pdpr** InfoPrint Manager also uses this variable to identify the server for other commands.
PD_CONFIRM_DELETE	Specifies whether InfoPrint Manager issues a confirmation message before deleting an object. **Commands:** **pdclean**, **pddelete**, **pdrm** **Values:** **yes**, **no** **Default:** **yes**
PD_ENABLE_TIMEOUT	Specifies the number of seconds that a server waits for an actual destination to register when the actual destination is enabled. **Default:** **15**
PD_LISTEN_COUNT	Specifies the number of simultaneous requests that a server can process. If this number is exceeded, the server issues an error message. **Default:** **10**
PD_SOCKET	Identifies the port number used by the InfoPrint communications daemon. It also identifies the port number clients use to send requests to the Infoprint Server. Internet services reserve socket numbers up to 255. Other non-InfoPrint services reserve socket numbers in the range 256 through 1023. To determine the socket numbers already reserved before assigning a socket number to an InfoPrint communications daemon, look at the contents of the **/etc/services** file. **Default:** **6874** Note On Windows, if you use the MMC Server Configuration window to change the client interface port number, InfoPrint Manager sets the **PD_SOCKET** variable as the port number.

Variable	*Description*
PSFDBLANG	The language and code page used by the **db2afp** transform program. **Values:** **j** (Japanese, code page 943), **c** (Traditional Chinese, code page 950), **je** (Japanese EUC), **ce** (Traditional Chinese EUC), **ke** (Korean EUC)
PSFPATH	A path of directories that InfoPrint Manager searches for print resources (fonts, form definitions, overlays, page definitions, and page segments). Separate multiple directories by a colon, **:**.

InfoPrint Manager environment variables that can be defaulted or set for InfoPrint Manager for AIX or InfoPrint Manager for Linux

Variable	*Description*
GIF2AFP_*option*	Specifies options for the **GIF2AFP** transform command. See gif2afp command: transforms GIF data to AFP, p. 322.
IPIN_DBG	Setting this environment variable value to **TRUE** enabled debug information to be collected for the installer scripts.
IPM_USER	Specifies the user name used to run the InfoPrint Manager product.
IPR_PREDPROD	Used during migration to specify the product that preceded InfoPrint Manager. **Value:** **PSF** (PSF for AIX)
JPEG2AFP_*option*	Specifies options for the **JPEG2AFP** transform command. See jpeg2afp command: transforms JPEG data to AFP, p. 343.
MANPATH	A path of directories that AIX or Linux searches for man pages. Separate multiple directories by a colon, **:**. **Commands:** **man**
PDBASE	Specifies the root directory where the InfoPrint Manager server stores all of its working files, such as log or trace files. Each server has its own subdirectory under this directory to avoid name conflicts when multiple servers are on the same AIX or Linux processor. **Utilities:** **start_server**, **startsrv** **Default:** `/var/pd`
PD_MAX_PIPES	Overrides the InfoPrint Manager server default starting number of named pipes (512). This only applies to the pdserver starting point for pipes.

Variable	*Description*
	Note Setting this value high can affect the startup and shut down time for the pdserver. This variable also affects the SAP Callback daemon and the Notification Server. Both of these are allocated 10 named pipes by default and do not need more. Be careful not to increase the number of named pipes these processes obtain.
PDNAMESP	Specifies the namespace. **Commands:** All **Default:** **/var/pddir/default_cell**
PD_SAVE_TRACE	Specifies that InfoPrint Manager renames and compresses the **trace.log.BAK** file when a server or an SAP Callback daemon is restarted. See log-backup-number, p. 998 for other ways to save extra trace logs.
PD_SUBMITTER_IP_ADDRESS_FORMAT	Adds the client-ip-address to the job-owner information stored in the servers accounting log for any remote print request submitted through the pdservers started with this environment variable set to *IPADDR*. Remote print requests do not include requests that go through a receiver, such as IPP Gateway or Download for z/OS, before being submitted to the InfoPrint Manager server.
PPO_DEFAULT_ENV	The fully qualified name of the InfoPrint SMIT operator's interface environment file, which contains a shell script that defines all other InfoPrint SMIT operator's interface environment variables. **Default:** `/usr/lpp/pd/bin/ppo.env`
TIFF2AFP_*option*	Specifies options for the **TIFF2AFP** transform command. See tiff2afp command: transforms TIFF data to AFP, p. 481.
TYPESETTER	Determines how **troff** files are processed for printing. **Values:** **afp**, **hplj**, **psc**
XBMLANGPATH	A path of directories that AIX searches for the icons used by graphical user interfaces. Separate multiple directories by a colon, **:**.

InfoPrint Manager environment variables that can be defaulted or set for InfoPrint Manager for Linux

Variable	*Description*
PD_CUPS_QUERY_ INTERVAL	Specifies the interval in milliseconds at which InfoPrint Manager queries CUPS for job status when the printer backend is not an InfoPrint Manager backend (**pioinfo** or **piorpdm**). **Values:** Between **150** and **15000.** **Default:** **1000**
PD_DATE_FORMAT	With InfoPrint Manager for Linux, use **PD_DATE_FORMAT** to specify a custom format that is used when you enter or display calendar values. For example, if you want to input USA formatted calendar date the same way as you do on AIX, then you need to set **PD_DATE_FORMAT** to **%m/%d/%y**. Note • By default, on AIX and Linux the local time format is defined by the element D_FMT of the LC_TIME locale category. On Windows, InfoPrint Manager uses the locale time formatting string. • After defining or removing these environment variables, restart the computer so that these changes take effect in InfoPrint Manager.
PD_THRMEM_ THREADSHOLD	Specifies the maximum percent out of total virtual memory to be used for the threads stacks. **Values:** Between **10** and **90.** **Default:** **80**

PD_TIME_FORMAT	With InfoPrint Manager for Linux, use **PD_TIME_FORMAT** to specify a custom format that is used when you enter or display time values. For example, if you want to input USA-formatted time the same way as you do on AIX, then you need to set **PD_TIME_FORMAT** to **%H:%M:%S**. Note • By default, on AIX and Linux the local time format is defined by the element T_FMT of the LC_TIME locale category. On Windows, InfoPrint Manager uses the locale time formatting string. • After defining or removing these environment variables, restart the computer so that these changes take effect in InfoPrint Manager.
PD_USEMEMCLEANUP	By default is **Off** because it is decreasing server performance. If set, then InfoPrint Manager recycles objects, puts them on disk, and thus frees some memory. **Values:** **yes, no** **Default:** **Off**

InfoPrint Manager environment variables set in the InfoPrint SMIT Operator's Interface environment file for InfoPrint Manager for AIX

Variable	*Description*
PPO_CANCEL_ALL_OPTION	Specifies whether operators have the option of canceling all jobs. **Values:** **0** (no), **1** (yes) **Default:** **1** (yes)
PPO_FORM	The list of forms (media) that your printing operation can use. Separate form names by blanks.
PPO_JOB_BATCH	The list of job batches that your printing operation can use. Separate job batch names by blanks.
PPO_JOB_DETAILS_ATTRS	The job and document attributes that are displayed in the InfoPrint SMIT operator's interface job status window. Separate attribute names by commas.
PPO_LP	The name of the default logical destination to which the InfoPrint SMIT operator's interface resubmits print jobs.
PPO_LPS	The names of logical destinations that are available for job submission. Separate logical destination names by blanks.
PPO_PP_ATTRS	The actual destination attributes that are displayed in the InfoPrint SMIT operator's interface destination status window. Separate attribute names by commas.

Variable	*Description*
PPO_PPS	The names of the actual destinations that the InfoPrint SMIT operator's interface manages. Separate actual destination names by blanks.
PPO_QUEUE	The name of the queue that the InfoPrint SMIT operator's interface manages.
PPO_QUEUE_ATTRS	The queue attributes that are displayed in the InfoPrint SMIT operator's interface queue status window. Separate attribute names by commas.
PPO_QUEUE_INFO_ FILE	In installations that use multiple queues, the name of the file that maps queues to their environment files.
PPO_SERVER	The name of the server that the InfoPrint SMIT operator's interface manages.
PPO_TRACE_FILE	The name of the file containing trace records for the InfoPrint SMIT operator's interface. Use this environment variable only under the direction of Ricoh service.

InfoPrint Manager environment variables that can be defaulted or set for InfoPrint Manager for AIX

Variable	*Description*
PDENQ_IGNORE_ AUXILIARY_SHEETS	When **PDENQ_IGNORE_AUXILIARY_SHEETS** is set to any value, InfoPrint Manager ignores the auxiliary sheet creation requests from **lpr** commands. **Values:** **true** **Default:** **No**
PD_LDAP_KDB_PATH	A path of directories that InfoPrint Manager uses to specify the location where you can find the certificates key database file. **Default:** `/var/pddir/default_cell/ldap`
PD_LDAP_LIBRARY_ PATH	A path of directories that InfoPrint Manager uses to specify the location for the LDAP library.

InfoPrint Manager for AIX or InfoPrint Manager for Linux language environment variables

Variable	*Description*
LANG	The name of the locale to use for locale categories when neither **LC_ALL** nor the corresponding environment variable beginning with **LC_** specifies a locale. Used to determine the language, territory, or character set of messages and other information that InfoPrint Manager sends to a person. **Commands:** All
LC_ALL	The name of the locale used to override any values for locale categories specified by the setting of **LANG** or any environment variables beginning with **LC_**. **Commands:** All
LC_CTYPE	The name of the locale for character classification. **Commands:** All
LC_MONETARY	The name of the locale containing monetary-related numeric editing information. **Commands:** All
LC_NUMERIC	The name of the locale containing numeric editing, such as radix and character information. **Commands:** All
LC_TIME	The name of the locale for date and time formatting information. **Commands:** All
LC_MESSAGES	The name of the locale for **STDERR** messaging. **Commands:** All
NLSPATH	A path of directories that AIX or Linux searches for locale-dependent files. Separate multiple directories by a colon, **:**.
PD_LANG	Lets you input English and still receive results in your language. If you set **PD_LANG=en_US** and you are running in German (de_DE), you could enter `pdls -c destination` or `-r brief` *`servername`*, and the results are displayed in German.

Querying environment variables

You can use the **echo** command to query the value of an environment variable. For example, to determine the default logical destination, enter:

```
echo $PDPRINTER
```

To query all environment variables that have values set, enter:

```
env
```

Setting environment variables

You can use the **export** command to set environment variables:

- If you are an administrator, in an environment file.
  - You can set environment variables and many InfoPrint environment variables in the **/etc/environment** file.
  - You can set some InfoPrint environment variables that affect the InfoPrint SMIT operator's interface in the InfoPrint SMIT operator's interface environment file. The **PPO_DEFAULT_ENV** environment variable defines the name of this file.

  Settings in the environment files apply to all sessions for all users, unless a user resets the environment variables in the **.profile** file or on the command line.

  Note

  These settings do not apply to processes that are already running when you edit the file. For example, a server is a process. To make your changes effective, stop and restart the server.
- In the **.profile** file in your home directory. Settings in the **.profile** file override settings in the **/etc/environment** file and the InfoPrint SMIT operator's interface environment file. These settings apply only to you and are in effect for all your sessions, unless you reset the environment variables on the command line.
- On the command line for a single session. Command line settings override settings in the **/etc/environment** file, the InfoPrint SMIT operator's interface environment file, and your **.profile** file. These settings apply only to you and are in effect only until you exit the session.

In a file

To set an environment variable in a file, you need to edit the file with an editor. If you do not know how to use an editor, or the editor you are using is not capable of saving in the plain text (ASCII) file format, do not start. Ask your administrator for assistance.

This example shows how to set the **PDPRINTER** environment variable in your **.profile** file, using the **vi** editor.

1. Enter this command to change to your home directory:

```
cd
```

2. Make a backup copy of the file:

```
cp -p .profile .profile.org
```

The **-p** flag gives the copy the same file permissions and modification date and time as the original file.

3. Enter this command:

```
vi .profile
```

4. A typical **.profile** file contains lines similar to:

```
PATH=.:$HOME/bin:/bin:/usr/bin:/etc:/usr/ucb:/usr/bin/X11:tools/
usr/bin:/usr/lpp/cmvc/bin:/usr/OV/bin:/usr/local/tools/rs6/bin:/usr
/local/tools/rs6:/usr/dt/bin
```

```
export PATH
export EDITOR=vi
```

5. Insert or modify this line in the **.profile** file:

```
export PDPRINTER=LogicalDestinationName
```

where *LogicalDestinationName* is the name of the logical destination that you want to set as your default.

6. Save the change in plain text format and exit from the editor.
7. Make the change effective by entering this command:

```
. .profile
```

8. Verify the change by entering the command:

```
echo $PDPRINTER
```

The logical destination name that you entered displays.

On the command line

To set the value of the environment variable **PDPRINTER** to `Destination3` for a single AIX or Linux session, enter:

```
export PDPRINTER=Destination3
```

5. Notification events and event classes

The next table alphabetically lists the names of individual events that you can specify as values for the **event-identifiers** component of the **notification-profile** attribute. The information for each event includes a description, the event class or classes to which the event belongs, the InfoPrint objects that support the notification of the event, and the text of the notification message that InfoPrint generates for the event. Items in the message text shown in `italics` are variables for which InfoPrint supplies values when it issues the message.

Notification events

Event	***Event Class***	***Objects Supported***
	Description	
	Message	
checkpoint-taken	**class-job-status** **class-report**	Job
	When this job was paused, the server saved checkpoint information for it. The server can restart the job at the checkpoint. Note The server does not save checkpoint information for jobs terminated by errors.	
	`5010-218 The server saved checkpoint information for job JobID (ServerName:GlobalID).`	
close-to-discard-time	**class-job-attention** **class-warning**	Job Server
	The date and time specified by the **job-discard-time** or the **job-retention-period** attribute is approaching. InfoPrint will delete the job at the discard time.	
	`5010-234 Job JobID (ServerName:GlobalID) is close to being discarded.`	
destination-disabled	**class-actual-destination-attention** **class-logical-destination-attention** **class-warning**	Actual destination Logical destination Queue Server
	InfoPrint disabled a logical destination or actual destination and it will not accept new jobs.	
	`5010-240 Successfully disabled destination ServerName:DestinationName.`	
destination-enabled	**class-actual-destination-status** **class-logical-destination-status** **class-report**	Actual destination Logical destination Queue Server

Event	*Event Class*	*Objects Supported*
	Description	
	Message	
	InfoPrint enabled a logical destination or actual destination and it now accepts jobs.	
	`5010-226 Successfully enabled destination ServerName: DestinationName.`	
destination-function-unavailable	**class-actual-destination-status** **class-job-attention** **class-warning**	Actual destination Server
	The actual destination requires an output device function, such as duplex or offset stacking, that is not available. The function is disabled, but processing continues.	
	`5010-307 The destination ServerName:DestinationName requires a function that is not available.`	
destination-needs-administrator	**class-actual-destination-attention** **class-actual-destination-default** **class-job-attention** **class-warning**	Actual destination Job Server
	The server or actual destination detected a condition requiring administrator intervention. The actual destination is disabled.	
	`5010-306 The destination ServerName:DestinationName needs administrator attention.`	
destination-needs-attention	**class-actual-destination-attention** **class-actual-destination-default** **class-job-attention** **class-job-default** **class-warning**	Actual destination Job Server
	The actual destination needs attention from a person, not necessarily the operator. The actual destination cannot process jobs until it receives attention.	
	`5010-245 Actual destination ServerName:destinationname needs attention.`	
destination-needs-operator	**class-actual-destination-attention** **class-actual-destination-default** **class-job-attention** **class-job-default**	Actual destination Job Server

Event	*Event Class*	*Objects Supported*
	Description	
	Message	
	class-warning	
	An actual destination needs operator attention. The actual destination cannot process jobs until it receives attention.	
	`5010-246 Actual destination ServerName:DestinationName needs operator attention.`	
destination-registered	**class-actual-destination-status** **class-report**	Actual destination Queue Server
	An actual destination has registered with this queue. The queue can now schedule jobs to this actual destination.	
	`5010-223 Actual destination ServerName:DestinationName registered with queue ServerName:QueueName.`	
destination-shutdown-job-requeued	**class-actual-destination-attention** **class-job-attention** **class-warning**	Actual destination Job Server
	The actual destination shut down after this job started processing. The job was requeued and will be scheduled again.	
	`5010-237 Actual destination ServerName:DestinationName was shut down after job JobID (ServerName:GlobalID) started processing.`	
destination-state-changed	**class-actual-destination-status** **class-state-changed**	Actual destination
	The actual destination state changed. Processing continues.	
	`5010-228 The state of actual destination ServerName:DestinationName changed to State.`	
destination-timed-out	**class-actual-destination-attention** **class-actual-destination-default** **class-warning**	Actual destination Server
	The actual destination did not connect or get a response from the output device in the time specified by the **destination-timeout-period** actual destination attribute. Another application is using the output device or job progress at the output device has stopped. The actual destination continues its attempts to connect or print to the output device. The actual destination cannot process jobs until it connects to the device. Check the server error log for additional information.	

Event	***Event Class***	***Objects Supported***
	Description	
	Message	
	`5010-247 Actual destination ServerName:DestinationName has timed out.`	
destination-unregistered	**class-actual-destination-status** **class-warning**	Actual destination Queue Server
	This actual destination is no longer registered with this queue and the queue no longer sends jobs to this actual destination.	
	`5010-243 Actual destination ServerName:DestinationName is no longer registered with ServerName:QueueName.`	
destinations-not-ready-for-job	**class-job-attention** **class-job-default** **class-warning**	Job Queue Server
	There are no actual destinations currently available that can support the "ready" attributes for the job. Ready attributes include **job-batch**, **total-job-octets**, **default-medium**, and **page-media-select**.	
	`5010-702 The job JobID (ServerName:GlobalID) cannot be scheduled to an actual destination because resources are not currently ready.`	
detailed-messages	**class-job-attention** **class-report**	Actual destination Job Server
	The transform or the print backend has sent a message.	
	`5010-302 Message from the print backend program` **Note** If this a message from the transform, then you will receive the transform message itself and not the server `5010-302` message.	
disk-space-low	**class-server-status** **class-warning**	Server
	The server has encountered a disk-space-low situation, which means that some filesystem/drive being used by the server has passed some usage threshold.	
	`5010-145 Filesystem/disk` *`filesystem/disk`* `is low on space; usage is` *`nn`* `percent.`	

Event	*Event Class*	*Objects Supported*
	Description	
	Message	
	Note If this is a DPF event, it is only sent once for each receiver, but multiple events might be received since multiple Host Receivers can be running.	
document-aborted-by-destination	**class-aborted** **class-job-attention** **class-job-default**	Actual destination Job Server
	The actual destination deleted the document without printing or sending it. Errors occurred during processing.	
	`5010-292 Document DocNum FileName in job JobID (ServerName:GlobalID) was aborted by the actual destination.`	
document-aborted-by-server	**class-aborted** **class-job-attention** **class-job-default**	Actual destination Job (AIX DSS only) Server
	The server aborted this document and deleted it.	
	`5010-206 Document DocNum (FileName) in print job JobID (ServerName:GlobalID) was aborted by the server.`	
document-cancelled-at-destination	**class-aborted** **class-job-attention** **class-job-default**	Actual destination Job Server
	The document was cancelled at the actual destination.	
	`5010-293 Document DocNum (FileName) in job JobID (ServerName:GlobalID) was cancelled at the actual destination.`	
document-content	**class-error** **class-job-problem**	Actual destination Server
	The server detected an error in the content of this file during printing. An example of this type of error is a syntax error in the page description language for this file.	
	`5010-208 An error was detected in document DocNum (FileName) of job JobID (ServerName:GlobalID) during printing.`	
file-transferred	**class-job-status** **class-report**	Job

Event	*Event Class*	*Objects Supported*
	Description	
	Message	
	A file transfer completed successfully. The file can now be modified without affecting the output.	
	`5010-219 Server (ServerName) completed the transfer of document DocNum (FileName) in job JobID (ServerName: GlobalID).`	
internal-server-error	**class-error** **class-server-attention** **class-server-default**	Server
	A server error occurred. The process failed.	
	`5010-215 An internal error was detected in server ServerName.`	
job-aborted-by-server	**class-aborted** **class-job-attention** **class-job-default**	Actual destination Job Queue Server
	The server aborted this job because job or output device errors occurred during printing or transmission.	
	`5010-204 Job JobID (ServerName:GlobalID) stopped printing due to job or device errors.`	
job-assigned-to-queue	**class-job-status** **class-report**	Job Queue Server
	This job was assigned to this queue in this state. Processing continues.	
	`5010-301 The job JobID (ServerName:GlobalID) is assigned to queue ServerName:QueueName and is in the State state.`	
job-cancelled-by-operator	**class-aborted** **class-job-attention** **class-job-default**	Actual destination Job Queue Server
	The operator or administrator deleted the job.	
	`5010-196 Job JobID (ServerName:GlobalID) was cancelled by the operator or administrator.`	
job-cancelled-by-user	**class-aborted**	Actual destination

Event	*Event Class*	*Objects Supported*
	Description	
	Message	
	class-job-attention	Job Queue Server
	The user deleted the job.	
	`5010-197 Job JobID (ServerName:GlobalID) was cancelled by the user.`	
job-cannot-be-scheduled	**class-job-attention** **class-job-default** **class-warning**	Job Queue Server
	The job cannot be scheduled to process at a destination until requested by the user at the printer. A notification-profile value requested that you be notified of the event job-cannot-be-scheduled. There are no longer any actual destinations available that can support the attributes for the job. The actual destination that supported the attributes for the job at submission is no longer available. The job remains in the queue. Resubmit the job to a logical destination that supports the attributes for the job.	
	`5010-258 The job JobID (ServerName:GlobalID) was held for pull print. If there are no other reasons that the job cannot be scheduled, go to the printer, LDAP log in and request the job.` `5010-303 The job JobID (ServerName:GlobalID) cannot be scheduled to an actual destination.`	
job-completed	**class-job-default** **class-job-status** **class-report**	Actual destination Job Queue Server
	The job completed processing. If more than one actual destination processed this job, the last actual destination is identified in the message. It might or might not have completed successfully. Check the output.	
	`5010-055 Job name jobname with Job ID (ServerName: GlobalID) completed on Destination.` `5010-071 Job name jobname with ID 18 (ServerName: GlobalID) completed successfully on Destination.`	

Event	*Event Class*	*Objects Supported*
	Description	
	Message	
	`5010-072 Job name jobname with ID 19 (ServerName: GlobalID) completed successfully with errors on Destination.`	
job-discarded	**class-job-attention** **class-report**	Job Queue Server
	The date and time specified by the **job-discard-time**, the **job-retain-until**, or the **job-retention-period** attribute passed. InfoPrint deleted the job. The job might or might not have printed if it was discarded because of the **job-retain-until** or **job-retention-period** value.	
	`5010-220 Job JobID (ServerName:GlobalID) was discarded by the server after it printed or the retention period expired.`	
job-modified	**class-job-status** **class-warning**	Job
	The job was modified. Processing continues.	
	`5010-202 Job JobID (ServerName:GlobalID) was modified.`	
job-paused	**class-job-attention** **class-warning**	Job
	The job was paused. If the job state was **processing** or **printing**, it stopped. InfoPrint cannot schedule the job until it is resumed.	
	`5010-203 Job JobID (ServerName:GlobalID) was paused.`	
job-promoted	**class-job-status** **class-report**	Job Queue Server
	The job was promoted to the highest position in the queue.	
	`5010-198 Job JobID (ServerName:GlobalID) was promoted.`	
job-reordered	**class-job-status** **class-report**	Job Queue Server
	The job was successfully moved to a different actual destination or to the unassigned jobs area.	

Event	*Event Class*	*Objects Supported*
	Description	
	Message	
	5010-846 Job JobID (ServerName:GlobalID) was moved from ServerName1:DestinationName1 to ServerName2: DestinationName2.	
job-requeued	**class-job-status** **class-warning**	Job
	InfoPrint added to the job to the queue for rescheduling because the actual destination that accepted the job can no longer print the job.	
	5010-322 Job JobID (ServerName:GlobalID) is added to the queue to be scheduled again.	
job-rerouted	**class-job-status** **class-report**	Job Queue Server
	5010-384 The job JobID (ServerName: GlobalID) was automatically rerouted to backup destinationServerName: DestinationName. The actual destination ServerName: DestinationName that was initially requested to process the job is in State state.	
job-resubmitted	**class-job-status** **class-report**	Job Queue Server
	The job was successfully resubmitted to a different logical destination. Processing continues.	
	5010-222 Job JobID (ServerName:GlobalID) was resubmitted to logical destination ServerName: DestinationName from queue ServerName:QueueName.	
job-resumed	**class-job-status** **class-report**	Job Queue Server
	The job was resumed. If the job state is pending, InfoPrint can schedule the job to an actual destination.	
	5010-199 Job JobID (ServerName:GlobalID) was resumed.	
job-retained	**class-report**	Job
	The job is retained.	

Event	*Event Class*	*Objects Supported*
	Description	
	Message	
	`5010-300 The job JobID (ServerName:GlobalID) is retained.`	
job-state-changed	**class-job-status** **class-state-changed**	Job
	The state of the job has changed. Processing continues.	
	`5010-201 The state of job JobID (ServerName:GlobalID) changed to State.`	
job-submission-not-complete	**class-error** **class-job-problem**	Job Server
	The server waited for the amount of time specified in its **job-submission-timer** attribute to receive an indication that all of the document objects in a job have been sent. It did not receive that indication. The server will process the documents it has received as a complete job.	
	`5010-209 The final document indication for job JobID (ServerName:GlobalID) was not received by the server in the server's job-submission-timer interval. Job processing will continue.`	
low-on-memory	**class-server-attention** **class-server-configuration** **class-server-default** **class-server-status** **class-warning**	Server
	On AIX only, when the Infoprint Server starts hitting memory thresholds, the Infoprint Server logs this information in its error log and sends notification messages for this occurrence.	
	`5010-642 The Infoprint Server ServerID detected a memory shortage and is trying to recover memory.` `5010-648 The Infoprint Server ServerID is using nn percent of its available memory.`	
memory-exhausted	**class-error** **class-server-attention** **class-server-default**	Server
	The Infoprint Server has no memory available.	
	`5010-647 No memory available for the Infoprint Server. Attempting shut down.`	

Event	*Event Class*	*Objects Supported*
	Description	
	Message	
no-document	**class-error** **class-job-problem**	Actual destination Job Server
	The server could not access the document. The document and possibly the entire job have been aborted. Check the error log for messages related to this failure.	
	`5010-210 Document DocNum (FileName) in job JobID (ServerName:GlobalID) could not be accessed by the server.`	
no-resource	**class-error** **class-job-problem**	Actual destination Server
	A resource needed by this job is unavailable. InfoPrint aborted the job. Check the error log for messages related to this failure.	
	`5010-211 The resource Resource needed by job JobID (ServerName:GlobalID) was not available.`	
object-cleaned	**class-actual-destination-default** **class-actual-destination-status** **class-logical-destination-default** **class-logical-destination-status** **class-queue-default** **class-queue-status** **class-server-default** **class-server-status** **class-warning**	Actual destination Logical destination Queue Server
	InfoPrint deleted jobs from this object. Processing continues.	
	`5010-244 Successfully cleaned object ObjectClass ServerName:ObjectName.`	
object-created	**class-actual-destination-configuration** **class-logical-destination-configuration** **class-queue-configuration** **class-report**	Actual destination Logical destination Queue Server
	The object was created.	
	`5010-224 Successfully created object ObjectClass ServerName:ObjectName.`	

Event	*Event Class*	*Objects Supported*
	Description	
	Message	
object-deleted	**class-actual-destination-configuration** **class-actual-destination-default** **class-logical-destination-configuration** **class-logical-destination-default** **class-queue-configuration** **class-queue-default** **class-server-configuration** **class-server-default** **class-report**	Actual destination Job Logical destination Queue Server
	The object was deleted.	
	`5010-225 Successfully deleted object ObjectClass ServerName:ObjectName.`	
object-modified	**class-actual-destination-configuration** **class-logical-destination-configuration** **class-queue-configuration** **class-server-configuration** **class-warning**	Actual destination Logical destination Queue Server
	The object was modified.	
	`5010-241 Successfully modified object ObjectClass ServerName:ObjectName.`	
object-paused	**class-actual-destination-attention** **class-queue-attention** **class-warning**	Actual destination Job Queue Server
	InfoPrint paused an actual destination or queue and it cannot process jobs.	
	`5010-242 Successfully paused object ObjectClass ServerName:ObjectName.`	
object-resumed	**class-actual-destination-status** **class-queue-status** **class-report**	Actual destination Job Queue

Event	***Event Class***	***Objects Supported***
	Description	
	Message	
		Server
	InfoPrint resumed an actual destination or queue.	
	`5010-227 Successfully resumed object ObjectClass ServerName:ObjectName.`	
other-error	**class-error** **class-server-attention**	Actual destination Server
	An error occurred for this object that no other message describes. Check the error log for messages related to this failure.	
	`5010-217 Server ServerName encountered an error.`	
other-warning	**class-server-attention** **class-warning**	Actual destination Server
	The object encountered a warning condition that no other event describes. This warning condition might precede an error. Check the error log for messages related to this failure.	
	`5010-236 Server ServerName has encountered a warning condition.`	
out-of-disk-space	**class-error** **class-server-default** **class-server-status**	Server
	The server has encountered an out-of-disk-space situation, which means that some filesystem/drive being used by the server is full and cannot be written to.	
	`5010-080 Out of filesystem/disk space in "%s".` Note If this is a DPF event, it is only sent once for each receiver, but multiple events might be received since multiple Host Receivers can be running.	
out-of-dpf-haids	**class-error** **class-server-default** **class-server-status**	Server
	A Host Receiver has encountered a situation where there are no more HAIDs (Host Assigned IDs) to assign, which means that too many jobs are on the spool. To alleviate this situation, the operator needs to print or delete jobs from the spool.	
	`5010-259 DPF Host Receiver "%s" is out of Host Assigned IDs (HAIDS). Print or delete DPF jobs to free up HAIDs.`	

Event	*Event Class*	*Objects Supported*
	Description	
	Message	
out-of-dpf-job-numbers	**class-error** **class-server-default** **class-server-status**	Server
	A Host Receiver has encountered a situation where there are no more job numbers to assign, which means that too many jobs are on the spool. To alleviate this situation, the operator needs to print or delete jobs from the spool.	
	`5010-267 DPF Host Receiver "%s" is out of DPF job numbers. Print or delete DPF jobs to free up HAIDs.`	
out-of-dpf-raids	**class-error** **class-server-default** **class-server-status**	Server
	A Host Receiver has encountered a situation where there are no more RAIDs (RPM Assigned IDs) to assign, which means that too many jobs are on the spool. To alleviate this situation, the operator needs to print or delete jobs from the spool.	
	`5010-262 DPF Host Receiver "%s" is out of RPM Assigned IDs (RAIDS). Print or delete DPF jobs to free up RAIDs.`	
past-deadline	**class-error**	Job
	The date and time specified by the **job-deadline-time** job attribute passed before the job printed. A value of the **notification-profile** job attribute requested that you be notified of the **past-deadline** event.	
	`5010-216 The date and time specified by the job-deadline-time for job JobID (ServerName:GlobalID) has passed.`	
past-discard-time	**class-error** **class-job-attention** **class-job-default**	Job Queue Server
	The date and time specified by the **job-discard-time** job attribute or the interval specified by the **pull-print-job-timeout** server attribute passed before the job printed and InfoPrint discarded the job. A value of the **notification-profile** queue attribute requested that you be notified of the **past-discard-time** event.	
	`5010-213 Job JobID (ServerName:GlobalID) was discarded before it was delivered to its destination.`	
processing-started	**class-job-status**	Actual destination

Event	*Event Class*	*Objects Supported*
	Description	
	Message	
	class-report	Job Queue Server
	The server has begun to process the job. InfoPrint has scheduled the job to print on an actual destination.	
	`5010-200 Job JobID (ServerName:GlobalID) is processing.`	
queue-backlogged	**class-queue-attention** **class-queue-default** **class-warning**	Job Queue Server
	InfoPrint calculates that there are too many jobs in this queue for all jobs to print in the amount of time specified for the **object-class-backlog-upper-bound** attribute. The queue continues to accept jobs, but there is a delay before they print.	
	`5010-304 The queue ServerName:QueueName is backlogged.`	
queue-no-longer-backlogged	**class-queue-status** **class-report**	Job Queue Server
	The queue is no longer backlogged. InfoPrint calculates that the jobs currently in the queue will print in the amount of time specified for the **object-class-backlog-lower-bound** attribute.	
	`5010-299 The queue ServerName:QueueName is no longer backlogged.`	
queue-state-changed	**class-queue-status** **class-state-changed**	Queue
	The queue state changed. Processing continues.	
	`5010-230 The state of queue ServerName:QueueName changed to State.`	
resource-needs-attention	**class-actual-destination-attention** **class-warning**	Actual destination Server
	This resource needs attention from a person, not necessarily the operator. InfoPrint cannot process jobs requiring this resource until someone corrects the problem.	
	`5010-238 Resource Resource on actual destination ServerName:DestinationName needs attention.`	

Event	*Event Class*	*Objects Supported*
	Description	
	Message	
resource-needs-operator	**class-actual-destination-attention** **class-warning**	Actual destination Server
	This resource needs attention from an operator. InfoPrint cannot process jobs requiring this resource until an operator corrects the problem.	
	`5010-239 Resource Resource on actual destination ServerName:DestinationName needs operator attention.`	
sapcbd-down	**class-server-attention** **class-server-configuration** **class-server-default** **class-server-status** **class-warning**	Server
	The SAP callback daemon (**startcbd**) is down.	
	`5010-889 Unable to deliver SAP events to the callback daemon for the ServerName SAP system. Make sure that the callback daemon for this system and others are running.`	
server-shutdown-complete	**class-server-attention** **class-server-default** **class-report**	Server
	This server has shut down and is no longer available.	
	`5010-295 Successfully shut down server ServerName.`	
server-shutdown-started	**class-server-attention** **class-warning**	Server
	This server has begun to shut down. It does not accept jobs.	
	`5010-305 The server ServerName is shutting down.`	
server-startup-complete	**class-report** **class-server-configuration**	Server
	InfoPrint started this server.	
	`5010-294 Successfully started server ServerName.`	
server-state-changed	**class-server-status** **class-state-changed**	Server
	The state of the server has changed.	

Event	***Event Class***	***Objects Supported***
	Description	
	Message	
	`5010-299 The state of server ServerName changed to State.`	
unable-to-register	**class-warning**	Actual destination Server
	Because these types of queues do not allow actual destinations to register with them, this destination could not register with the queue. A value of the **notification-profile** queue attribute requested that you be notified of the **unable-to-register** event. The actual destination could not register with the queue in the amount of time specified for the **destination-register-threshold** actual destination attribute. InfoPrint cannot schedule jobs to the actual destination.	
	`5010-036 The actual destination ServerName: DestinationName cannot register with the queue QueueName because it is a QueueType queue.` `5010-437 The actual destination ServerName: DestinationName cannot register with the queue QueueName.`	
unrecognized-resource	**class-error** **class-job-problem**	Actual destination Server
	A resource required for this job is not known to the server. The job was aborted. Check the server error log for messages related to this failure.	
	`5010-214 Resource Resource that is required for job JobID (ServerName:GlobalID) is not known to the server.`	

An event class is an easy way to include multiple events in a value. Event classes group events based on the functions for which they provide notification. For example, some classes are specific to configuration tasks while other classes provide information about the status of InfoPrint objects. Each event class name begins with **class**.

Note

An event identifier can occur in more than one class. For example, **object-cleaned** occurs in **class-logical-destination-default**, **class-logical-destination-status**, **class-actual-destination-default**, **class-actual-destination-status**, **class-object-class-default**, **class-object-class-status**, **class-server-default**, **class-server-status**, and **class-warning**. If the notification profile values list any of these event classes and you clean a logical destination, actual destination, queue, or server, InfoPrint sends a message to the person identified in that value.

Notification event classes

Event Class	*Description*
	Events
class-aborted	An aborted event occurs whenever a server aborts a job or document object, or when the user or operator cancels a job.
	document-aborted-by-destination **document-aborted-by-server** **document-cancelled-at-destination** **job-aborted-by-server** **job-cancelled-by-operator** **job-cancelled-by-user**
class-actual-destination-attention	These events indicate that problems exist with the actual destination. Such problems usually require an operator or administrator to intervene.
	destination-disabled **destination-needs-administrator** **destination-needs-attention** **destination-needs-operator** **destination-shutdown-job-requeued** **destination-timed-out** **object-paused** **resource-needs-attention** **resource-needs-operator**
class-actual-destination-configuration	These events have to do with the creation or deletion of an actual destination, or with modification of the attributes of an actual destination.
	object-created **object-deleted** **object-modified**
class-actual-destination-default	This is the default event class for actual destinations.
	destination-needs-administrator **destination-needs-attention** **destination-needs-operator** **destination-timed-out** **object-cleaned**

Event Class	*Description*
	Events
	object-deleted
class-actual-destination-status	This event class includes events that give detailed status about the actual destination. These changes in status are often routine and do not require intervention.
	destination-enabled **destination-function-unavailable** **destination-registered** **destination-state-changed** **destination-unregistered** **object-cleaned** **object-resumed**
class-error	An error event occurs whenever an error occurs. Generally, an error event signals a condition that can prevent the job from completing successfully, depending on the settings of other parameters.
	document-content **internal-server-error** **job-submission-not-complete** **memory-exhausted** **no-document** **no-resource** **other-error** **out-of-disk-space** **out-of-dpf-haids** **out-of-dpf-job-numbers** **out-of-dpf-raids** **past-deadline** **past-discard-time** **unrecognized-resource**
class-job-attention	These events indicate that problems exist with a job. They usually require an operator or administrator to intervene.
	close-to-discard-time **destination-function-unavailable**

Event Class	*Description*
	Events
	destination-needs-administrator **destination-needs-attention** **destination-needs-operator** **destination-shutdown-job-requeued** **destinations-not-ready-for-job** **detailed-messages** **document-aborted-by-destination** **document-aborted-by-server** **document-cancelled-at-destination** **job-aborted-by-server** **job-cancelled-by-operator** **job-cancelled-by-user** **job-cannot-be-scheduled** **job-discarded** **job-paused** **past-discard-time**
class-job-default	This is the default event class for jobs.
	document-aborted-by-destination **document-aborted-by-server** **document-cancelled-at-destination** **destination-needs-attention** **destination-needs-operator** **destinations-not-ready-for-job** **job-aborted-by-server** **job-cancelled-by-operator** **job-cannot-be-scheduled** **job-completed** **past-discard-time**
class-job-problem	These are events in which the job has found a problem but will try to proceed.

Event Class	*Description*
	Events
	document-content **job-submission-not-complete** **no-document** **no-resource** **unrecognized-resource**
class-job-status	This event class includes events that give detailed status about the job. These changes in status are often routine and do not require intervention.
	checkpoint-taken **file-transferred** **job-assigned-to-queue** **job-completed** **job-modified** **job-promoted** **job-reordered** **job-requeued** **job-resubmitted** **job-resumed** **job-state-changed** **processing-started**
class-logical-destination-attention	This event indicates that a problem exists with the logical destination. An operator or administrator usually has to intervene.
	destination-disabled
class-logical-destination-configuration	These events have to do with the creation or deletion of a logical destination, or with modification of the attributes of a logical destination.
	object-created **object-deleted** **object-modified**
class-logical-destination-default	This is the default event class for logical destinations.
	object-cleaned **object-deleted**

Event Class	*Description*
	Events
class-logical-destination-status	This event class includes events that give detailed status about the logical destination. These changes in status are often routine and do not require intervention.
	destination-enabled **object-cleaned**
class-queue-attention	These events indicate that problems exist with the queue. An operator or administrator usually has to intervene.
	object-paused **queue-backlogged**
class-queue-configuration	These events have to do with the creation or deletion of a queue, or with the modification of the attributes of a queue.
	object-created **object-deleted** **object-modified**
class-queue-default	This is the default event class for queues.
	object-cleaned **object-deleted** **queue-backlogged**
class-queue-status	This event class includes events that give detailed status about the queue. These changes in status are often routine and do not require intervention.
	object-cleaned **object-resumed** **queue-no-longer-backlogged** **queue-state-changed**
class-report	A report event occurs whenever a significant point in processing occurs.
	checkpoint-taken **destination-enabled** **destination-registered** **detailed-messages** **file-transferred** **job-assigned-to-queue**

Event Class	*Description*
	Events
	job-completed **job-discarded** **job-promoted** **job-reordered** **job-resubmitted** **job-resumed** **job-retained** **object-created** **object-deleted** **object-resumed** **processing-started** **queue-no-longer-backlogged** **server-shutdown-complete** **server-startup-complete**
class-server-attention	These events indicate that problems exist with the server. They usually require an administrator to intervene.
	internal-server-error **low-on-memory** **memory-exhausted** **other-error** **other-warning** **sapcbd-down** **server-shutdown-complete** **server-shutdown-started**
class-server-configuration	These events have to do with the creation or deletion of a server or with modification of the attributes for a server.
class-server-default	This is the default event class for servers.
	internal-server-error **low-on-memory** **memory-exhausted** **object-cleaned**

Event Class	*Description*
	Events
	object-deleted
	out-of-disk-space
	out-of-dpf-haids
	out-of-dpf-job-numbers
	out-of-dpf-raids
	sapcbd-down
	server-shutdown-complete
class-server-status	This event class includes events that give detailed status about the server. These changes in status are often routine and do not require intervention.
	disk-space-low
	low-on-memory
	object-cleaned
	out-of-disk-space
	out-of-dpf-haids
	out-of-dpf-job-numbers
	out-of-dpf-raids
	sapcbd-down
	server-state-changed
class-state-changed	A state-change event occurs whenever the state of an actual destination, job, queue, or server changes.
	destination-state-changed
	job-state-changed
	queue-state-changed
	server-state-changed
class-warning	A warning event occurs whenever a condition arises which affects processing. Generally, a warning event signals a condition that does not prevent completion of the processing, but it might require some action by the operator or user.
	close-to-discard-time
	destination-disabled

Event Class	*Description*
	Events
	destination-function-unavailable destination-needs-administrator destination-needs-attention destination-needs-operator destination-shutdown-job-requeued destination-timed-out destination-unregistered destinations-not-ready-for-job disk-space-low job-cannot-be-scheduled job-modified job-paused job-requeued low-on-memory object-cleaned object-modified object-paused other-warning queue-backlogged resource-needs-attention resource-needs-operator sapcbd-down server-shutdown-started unable-to-register

Job validation and scheduling

Document and destination attributes used for validation and scheduling, p. 1188 and Job and destination attributes used for validation and scheduling, p. 1190 list the document, job, and destination attributes used to validate and schedule each job.

1. InfoPrint Manager validates the value of the document or job attribute in the first column against the values of the logical destination attribute in the second column. If the logical destination does not support the document or job attribute value, InfoPrint Manager rejects the job.

   Note

   If the logical destination attribute has no value, the logical destination supports all valid values of the document or job attribute.
2. If the value of the server attribute **accept-unsupported-jobs** is **false**, InfoPrint Manager validates the value of the document or job attribute in the first column against the values of the actual destination attribute in the second column. If no actual destination supports the document or job attribute value, InfoPrint Manager rejects the job.
3. If the value of the queue attribute **assign-to-destination** is **true**, InfoPrint Manager assigns the job to an actual destination that supports all the job's attribute values.

   Note

   If the value of the **force-destination-setup** actual destination attribute is **true**, InfoPrint Manager assumes that the actual destination supports all valid attribute values.
4. InfoPrint Manager checks the attribute (or, for rescheduling, the checkpoint) in the first column against the attributes in the third column to determine if any actual destinations can process the job.

   - If the job has been assigned to an actual destination, InfoPrint Manager checks only that actual destination.
   - If the job has not been assigned to an actual destination, InfoPrint Manager checks all actual destinations that receive jobs from the queue.

   Note

   If the value of the **force-destination-setup** actual destination attribute is **true**, InfoPrint Manager assumes that the actual destination can process any job with valid attribute values.
5. InfoPrint Manager acts according to the result of step 4:

   - If a required resource is not ready, InfoPrint Manager holds the job. The **required-resources-not-ready** job attribute indicates the resources that a job or document attribute specifies and that are not ready on the actual destination to which the job is assigned, or, if the job is not assigned, on the most suitable actual destination.
     - If the value of the job attribute **job-rip-action** is **rip-and-print-ignore-ready**, InfoPrint Manager RIPs the job before placing it in the **held** state and sets the value of the **job-state-reasons** job attribute to **rip-completed**. The job is automatically released and scheduled for printing or transmission when the resources become ready.
     - Otherwise, InfoPrint Manager sets the value of the **job-state-reasons** job attribute to **required-resource-not-ready**.
   - If a required resource is not supported, InfoPrint Manager holds the job and sets the value of the **job-state-reasons** job attribute to **required-resource-not-supported**. The **required-resources-not-supported** job attribute indicates the resources that a job or document attribute

specifies and that are not supported on the actual destination to which the job is assigned, or, if the job is not assigned, on the most suitable actual destination.

This situation can arise when the value of the server attribute **accept-unsupported-jobs** is **true** or when you change document, job, or actual destination attribute values after InfoPrint Manager accepts a job.

You can change job, document, or actual destination attribute values so that at least one actual destination supports the job.

- If at least one actual destination can handle the job, InfoPrint Manager schedules the job for printing or transmission.

6. If the job has not already been assigned to an actual destination, InfoPrint Manager assigns it to the first suitable actual destination to become available after the job reaches the top of the queue.
7. If the job is assigned to an actual destination with a value of **true** for the **force-destination-setup** attribute, InfoPrint Manager checks the attributes in the third column when the job is about to be printed or sent. If any resources are not ready or not supported, InfoPrint Manager disables the actual destination and sends a message to the operator. The operator changes the destination setup and enables the actual destination.
8. The job is printed or sent.

Document and destination attributes used for validation and scheduling

Document Attribute	*Validation Attribute*	*Scheduling Attribute*
carriage-control-type	**carriage-control-types-supported**	**carriage-control-types-supported**
class		**classes-ready**
color-bits-per-plane	**color-bits-per-plane-supported**	**color-bits-per-plane-supported**
color-profile	**color-profiles-supported**	**color-profiles-supported**
color-toner-saver	**color-toner-saver-supported**	**color-toner-saver-supported**
content-orientation	**content-orientation-supported**	**content-orientation-supported**
convert-to-ebcdic	**convert-to-ebcdic-supported**	**convert-to-ebcdic-supported**
copy-count	**maximum-copies-supported**	**maximum-copies-supported**
data-fidelity-problem-reported	**data-fidelity-problem-reported-supported**	**data-fidelity-problem-reported-supported**
default-character-mapping	**character-mappings-supported**	**character-mappings-supported**
default-input-tray	**input-trays-supported**	**input-trays-supported**

Document Attribute	*Validation Attribute*	*Scheduling Attribute*
default-medium	media-supported	media-ready media-supported
default-printer-resolution	printer-resolutions-supported	printer-resolutions-ready printer-resolutions-supported
document-finishing	document-finishings-supported[1]	document-finishings-supported
document-format	document-formats-supported	document-formats-supported
document-type	document-types-supported	document-types-supported
font-resolution	font-resolutions-supported[1]	font-resolutions-supported
form-length	form-length-range-supported[1]	form-length-range-supported
halftone	halftones-supported[1]	halftones-supported
image-fit	image-fit-supported[1]	image-fit-supported
image-out-format	image-out-formats-supported	image-out-formats-supported
input-tray-select	input-trays-supported	input-trays-supported
number-up	number-up-supported[1]	number-up-supported
octet-count	file-size-range-supported	file-size-range-supported
output-appearance	output-appearances-supported[1]	output-appearances-supported
output-bin	output-bins-supported[1]	output-bins-supported
output-format	output-formats-supported[1]	output-formats-supported
page-media-select	media-supported	media-ready media-supported
page-select	page-select-supported	page-select-supported
plex	plexes-supported	plexes-supported
print-quality	print-qualities-supported	print-qualities-supported
scanner-correction	scanner-corrections-supported[1]	scanner-corrections-supported
screen-frequency	screen-frequencies-supported[1]	screen-frequencies-supported
sides	sides-supported	sides-supported
table-reference-characters	table-reference-characters-supported	table-reference-characters-supported
x-image-shift	x-image-shift-range-supported	x-image-shift-range-supported

Document Attribute	*Validation Attribute*	*Scheduling Attribute*
x-image-shift-back	**x-image-shift-range-supported**	**x-image-shift-range-supported**
y-image-shift	**y-image-shift-range-supported**	**y-image-shift-range-supported**
y-image-shift-back	**y-image-shift-range-supported**	**y-image-shift-range-supported**
All document attributes affecting the actual destination	**document-attributes-supported**[1]	**document-attributes-supported**

1. This attribute applies only to actual destinations, not logical destinations.

Job and destination attributes used for validation and scheduling

Job Attribute	*Validation Attribute*	*Scheduling Attribute*
actual-destinations-requested	**destination-name**[2]	**destination-name**
auxiliary-sheet-selection	**auxiliary-sheet-selections-supported**	**auxiliary-sheet-selections-supported**
destination-locations-requested	**destination-locations**	**destination-locations**
destination-models-requested	**destination-model**	**destination-model**
dss-requested	**destination-support-system**	**destination-support-system**
forms		**forms-ready**
job-batch		**job-batches-ready**
job-end-message	**end-message-supported**	**end-message-supported**
job-finishing	**job-finishings-supported**[1]	**job-finishings-supported**
job-rip-action	**job-rip-actions-supported**[1]	**job-rip-actions-supported**
job-start-message	**start-message-supported**	**start-message-supported**
job-start-wait	**job-start-wait-supported**[1]	**job-start-wait-supported**
total-job-octets	**job-size-range-supported**[1]	**job-size-range-ready job-size-range-supported**

Job Attribute	*Validation Attribute*	*Scheduling Attribute*
All job attributes affecting the actual destination	**job-attributes-supported**[1]	**job-attributes-supported**
Checkpoint where the job was paused		**checkpoint-formats-supported**[3]

1. This attribute applies only to actual destinations, not logical destinations.
2. This attribute applies to both logical destinations and actual destinations, but only the actual destination attribute is used for validation. If validation fails, InfoPrint Manager rejects the job even if the value of **accept-unsupported-jobs** is **true**.
3. You can use this attribute to reschedule paused jobs.

Form definitions and page definitions supplied with InfoPrint Manager

This section describes the form definitions and page definitions that are supplied with InfoPrint Manager. Form definitions provide instructions on how printers position data on the page and are located in directory **/usr/lpp/psf/reslib**. Page definitions contain formatting controls for jobs and are also located in directory **/usr/lpp/psf/reslib**.

Default form definitions

Default form definitions are determined by the output data stream format accepted by the printer that InfoPrint assigns to print the job:

Default form definitions

Data Stream	*Default Form Definition*
Intelligent Printer Data Stream (IPDS)	`F1A10111`
Personal Printer Data Stream (PPDS)	`F1PP0110`
Printer Control Language 4 (PCL4)	`F1HP0111`
PCL5 and PCL5C	`F1H50111`
PCL6	

Table Default form definition characteristics, p. 1192 describes the characteristics controlled by these form definitions.

Default form definition characteristics

Form Definition	IS/3 Compliant	Bin	Sides	Presentation Mode	Print Direction	Page Position (in inches from the top-left corner of the page)
F1A10111	F1AI0111	1	2	Portrait	Across	0.165, 0.165
F1PP0110	F1PPI110	1	1	Portrait	Across	0.25, 0.165
F1HP0111	F1HPI111	1	2	Portrait	Across	0.165, 0.2
F1H50111	F1H5I111	1	2	Portrait	Across	0.165, 0.165

General-purpose form definitions

You can specify different form definitions with jobs if the default form definitions do not satisfy your requirements. General-purpose form definitions, p. 1192 lists the general-purpose form definitions that you can select.

General-purpose form definitions

Form Definition	IS/3 Compliant	Bin	Sides	Presentation Mode	Print Direction	Page Position (in inches from the top-left corner of the page)
F1A10110	F1AI0110	1	1	Portrait	Across	0.165, 0.165
F1A10111	F1AI0111	1	2	Portrait	Across	0.165, 0.165
F1A10112	F1AI0112	1	Tumble	Portrait	Across	0.165, 0.165
F1A10120	F1AI0120	2	1	Portrait	Across	0.165, 0.165
F1A10121	F1AI0121	2	2	Portrait	Across	0.165, 0.165
F1A10122	F1AI0122	2	Tumble	Portrait	Across	0.165, 0.165
F1A10130	F1AI0130	3	1	Portrait	Across	0.165, 0.165
F1A10131	F1AI0131	3	2	Portrait	Across	0.165, 0.165
F1A10132	F1AI0132	3	Tumble	Portrait	Across	0.165, 0.165
F1A10140	F1AI0140	4	1	Portrait	Across	0.165, 0.165
F1A10141	F1AI0141	4	2	Portrait	Across	0.165, 0.165
F1A10142	F1AI0142	4	Tumble	Portrait	Across	0.165, 0.165
F1A10150	F1AI0150	5	1	Portrait	Across	0.165, 0.165
F1A10151	F1AI0151	5	2	Portrait	Across	0.165, 0.165
F1A10152	F1AI0152	5	Tumble	Portrait	Across	0.165, 0.165
F1ACIF	N/A	1	2	Portrait	Across	0.165, 0.165
F1H50110 [1]	F1H5I110	1	1	Portrait	Across	0.165, 0.165

Form Definition	IS/3 Compliant	Bin	Sides	Presentation Mode	Print Direction	Page Position (in inches from the top-left corner of the page)
F1H50111 [1]	F1H5I111	1	2	Portrait	Across	0.165, 0.165
F1H50120 [1]	F1H5I120	2	1	Portrait	Across	0.165, 0.165
F1H50121 [1]	F1H5I121	2	2	Portrait	Across	0.165, 0.165
F1HP0110 [2]	F1HPI110	1	1	Portrait	Across	0.165, 0.2
F1HP0111 [2]	F1HPI111	1	2	Portrait	Across	0.165, 0.2
F1HP0120 [2]	F1HPI120	2	1	Portrait	Across	0.165, 0.2
F1HP0121 [2]	F1HPI121	2	2	Portrait	Across	0.165, 0.2
F1MG0110[3]	F1MGI110	1	1	Portrait	Across	0.33, 0.33
F1MG0111 [3]	F1MGI111	1	2	Portrait	Across	0.33, 0.33
F1MG0120 [3]	F1MGI120	2	1	Portrait	Across	0.33, 0.33
F1MG0121[3]	F1MGI121	2	2	Portrait	Across	0.33, 0.33
F1MGIMP [3], [5]	F1MGIIMP	1	1	Portrait	Across	0.33, 0.33
F1PP0110 [4]	F1PPI110	1	1	Portrait	Across	0.25, 0.165
F1PP0111 [4]	F1PPI111	1	2	Portrait	Across	0.25, 0.165
F1PP0120 [4]	F1PPI120	2	1	Portrait	Across	0.25, 0.165
F1PP0121 [4]	F1PPI121	2	2	Portrait	Across	0.25, 0.165
F1SAPS	F1SAPSI	1	1	Portrait	Across	0.16525, 0.16525
F1SAP	F1SAPI	1	2	Portrait	Across	0.16525, 0.16525

1. These form definitions are recommended for printer devices that support the PCL6 data streams. They position the page of data so that the data is not placed in the unprintable area.
2. These form definitions are recommended for printer devices that support the PCL5 and PCL5C data streams. They position the page of data so that the data is not placed in the unprintable area.
3. These form definitions are recommended for printer devices that support the PCL4 and PCL5 data streams. They position the page of data so that the data is not placed in the unprintable area.
4. These form definitions are recommended for the message pages printed by InfoPrint supported printers.
5. These form definitions are recommended for printer devices that support the PPDS data stream. They position the page of data so that the data is not placed in the unprintable area.
6. The F1MGIMP form definition specifies offset stacking.

Form definitions for printing envelopes

Use the form definitions in Form definitions supplied with InfoPrint for printing envelopes, p. 1194 to print envelopes and use the manual input bin on the LaserPrinter 4028. You can use these form definitions with other printers that use bin 65 as the envelope bin and bin 100 as the manual feed bin.

Form definitions supplied with InfoPrint for printing envelopes

Form Definition	*IS/3 Compliant*	*Bin*	*Sides*	*Presentation Mode*	*Print Direction*	*Page Position (in inches from the paper edge)*
F1A000E0	F1AI00E0	Envelope	1	Landscape	Across	0, 0
F1A000M0	F1AI00M0	Manual	1	Landscape	Across	0, 0
F1A101E0	F1AI01E0	Envelope	1	Landscape	Across	0.165, 0.165
F1A101M0	F1AI01M0	Manual	1	Landscape	Across	0.165, 0.165

Form definitions for 17 by 11 inch paper

Use the form definitions in Form definitions supplied for 17 by 11 paper, p. 1194 for jobs that require 17 by 11 inch paper.

Form definitions supplied for 17 by 11 paper

Form Definition	*IS/3 Compliant*	*Bin*	*Sides*	*Presentation Mode*	*Print Direction*	*Page Position (in inches from the top-left corner of the page)*
F100LS	F100LSI	1, 2, 3, 4, 5	1	Landscape	Across	0, 0
F100LD	F100LDI	1, 2, 3, 4, 5	2	Landscape	Across	0, 0
F100LT	F100LTI	1, 2, 3, 4, 5	Tumble	Landscape	Across	0, 0
F100LAND[1]	F10ILAND[1]	1, 2, 3, 4, 5	2	Landscape	Across	0, 0

1. Used for N_UP of 1.

Form definitions specifying a 0, 0 offset

The form definitions in Form definitions supplied with InfoPrint specifying a 0, 0 offset, p. 1195 specify a 0, 0 offset from the upper-left corner of the page. Use these form definitions if images or data in the job prints off-center or appears to be shifting on the page.

Form definitions supplied with InfoPrint specifying a 0, 0 offset

Form Definition	*IS/3 Compliant*	*Bin*	*Sides*	*Presenta-tion Mode*	*Print Direction*	*Page Position (in inches from the top-left corner of the page)*
F100S	F100SI	1, 2, 3, 4, 5	1	Portrait	Across	0, 0
F100D	F100DI	1, 2, 3, 4, 5	2	Portrait	Across	0, 0
F100T	F100TI	1, 2, 3, 4, 5	Tumble	Portrait	Across	0, 0
F1A00010	F1AI0010	1	1	Portrait	Across	0, 0
F1A00011	F1AI0011	1	2	Portrait	Across	0, 0
F1A00012	F1AI0012	1	Tumble	Portrait	Across	0, 0
F1A00020	F1AI0020	2	1	Portrait	Across	0, 0
F1A00021	F1AI0021	2	2	Portrait	Across	0, 0
F1A00022	F1AI0022	2	Tumble	Portrait	Across	0, 0
F1A00030	F1AI0030	3	1	Portrait	Across	0, 0
F1A00031	F1AI0031	3	2	Portrait	Across	0, 0
F1A00032	F1AI0032	3	Tumble	Portrait	Across	0, 0
F1A00040	F1AI0040	4	1	Portrait	Across	0, 0
F1A00041	F1AI0041	4	2	Portrait	Across	0, 0
F1A00042	F1AI0042	4	Tumble	Portrait	Across	0, 0
F1A00050	F1AI0050	5	1	Portrait	Across	0, 0
F1A00051	F1AI0051	5	2	Portrait	Across	0, 0
F1A00052	F1AI0052	5	Tumble	Portrait	Across	0, 0

Form definitions specifying N_UP page positioning

The form definitions in Form definitions for N_UP page positioning, p. 1196 have various N_UP values and page placement. See *InfoPrint Page Printer Formatting Aid: User's Guide* more information about N_UP printing.

Form definitions for N_UP page positioning

Form Definition	*IS/3 Compliant*	*Bin*	*Sides*	*N_UP*	*Page Placement*	*Presentation Mode*	*Print Direction*	*Page Position*[1]
F1BOOK[2]	F1BOOKI	1	2	2	Page 1 at 1 Front Page 2 at 2 Front Page 3 at 2 Back Page 4 at 1 Back	Portrait	Across	0, 0
F1N2SST1[2]	F1N2IS-T1	1, 2, 3, 4, 5	Tumble	2	Page 1 at 1 Front Page 2 at 1 Back Page 3 at 2 Front Page 4 at 2 Back	Portrait	Across	0, 0
F1N2SS11[2]	F1N2I-S11	1, 2, 3, 4, 5	2	2	Page 1 at 1 Front Page 2 at 2 Back Page 3 at 2 Front Page 4 at 1 Back	Portrait	Across	0, 0
F1N2SS12[2]	F1N2I-S12	1, 2, 3, 4, 5	2	2	Page 1 at 1 Front Page 2 at 2 Front Page 3 at 1 Back Page 4 at 2 Back	Portrait	Across	0, 0
F1N2SS13[2]	F1N2I-S13	1, 2, 3, 4, 5	2	3	Page 1 at 1 Front Page 2 at 2 Front Page 3 at 3 Front	Portrait	Across	0, 0

Form Definition	IS/3 Compliant	Bin	Sides	N_UP	Page Placement	Presentation Mode	Print Direction	Page Position[1]
					Page 4 at 1 Back Page 5 at 2 Back Page 6 at 3 Back			
F1N20010	F1N2-I010	1	1	2	Default	Portrait	Across	0, 0
F1N20011	F1N2-I011	1	2	2	Default	Portrait	Across	0, 0
F1N20012	F1N2-I012	1	Tumble	2	Default	Portrait	Across	0, 0
F1N20110	F1N2-I110	1	1	2	Default	Portrait	Across	0.165, 0.165
F1N20111	F1N2-I111	1	2	2	Default	Portrait	Across	0.165, 0.165
F1N20112	F1N2-I112	1	Tumble	2	Default	Portrait	Across	0.165, 0.165
F1N20120	F1N2-I120	2	1	2	Default	Portrait	Across	0.165, 0.165
F1N20121	F1N2-I121	2	2	2	Default	Portrait	Across	0.165, 0.165
F1N20122	F1N2-I122	2	Tumble	2	Default	Portrait	Across	0.165, 0.165
F1N20130	F1N2-I130	3	1	2	Default	Portrait	Across	0.165, 0.165
F1N20131	F1N2-I131	3	2	2	Default	Portrait	Across	0.165, 0.165
F1N20132	F1N2-I132	3	Tumble	2	Default	Portrait	Across	0.165, 0.165
F1N20140	F1N2-I140	4	1	2	Default	Portrait	Across	0.165, 0.165
F1N20141	F1N2-I141	4	2	2	Default	Portrait	Across	0.165, 0.165
F1N20142	F1N2-I142	4	Tumble	2	Default	Portrait	Across	0.165, 0.165
F1N20150	F1N2-I150	5	1	2	Default	Portrait	Across	0.165, 0.165
F1N20151	F1N2-I151	5	2	2	Default	Portrait	Across	0.165, 0.165

Form Definition	IS/3 Compliant	Bin	Sides	N_UP	Page Placement	Presentation Mode	Print Direction	Page Position[1]
F1N20152	F1N2-I152	5	Tumble	2	Default	Portrait	Across	0.165, 0.165
F1N201LA	F1N2I1-LA	1	1	2	Default	Landscape	Across	0.0, 0.5
F1N201LD	F1N2I1-LD	1	1	2	Default	Landscape	Down	0.0, 0.5
F1N201PA	F1N2I1-PA	1	1	2	Default	Portrait	Across	0.0, 0.5
F1N201PD	F1N2I1-PD	1	1	2	Default	Portrait	Down	0.0, 0.5

1. Specified in inches from the top-left corner of the page.
2. Used with printers that support enhanced N_UP values.

Form definitions for printing on prepunched paper

Use the form definitions in Form definitions for prepunched paper, p. 1198 for jobs that require prepunched paper.

Form definitions for prepunched paper

Form Definition	IS/3 Compliant	Bin	Sides	Presentation Mode	Print Direction	Page Position (in inches from the top-left corner of the page)
F1H10110	F1HI0110	1	1	Portrait	Across	1.000, 0.165
F1H10111	F1HI0111	1	2	Portrait	Across	1.000, 0.165, 0.165, 0.165
F1H10112	F1HI0112	1	Tumble	Portrait	Across	1.000, 0.165, 1.000, 0.165
F1H10120	F1HI0120	2	1	Portrait	Across	1.000, 0.165
F1H10121	F1HI0121	2	2	Portrait	Across	1.000, 0.165, 0.165, 0.165
F1H10122	F1HI0122	2	Tumble	Portrait	Across	1.000, 0.165, 1.000, 0.165
F1H10130	F1HI0130	3	1	Portrait	Across	1.000, 0.165
F1H10131	F1HI0131	3	2	Portrait	Across	1.000, 0.165, 0.165, 0.165
F1H10132	F1HI0132	3	Tumble	Portrait	Across	1.000, 0.165, 1.000, 0.165
F1H10140	F1HI0140	4	1	Portrait	Across	1.000, 0.165

Form Definition	IS/3 Compliant	Bin	Sides	Presentation Mode	Print Direction	Page Position (in inches from the top-left corner of the page)
F1H10141	F1HI0141	4	2	Portrait	Across	1.000, 0.165, 0.165, 0.165
F1H10142	F1HI0142	4	Tumble	Portrait	Across	1.000, 0.165, 1.000, 0.165
F1H10150	F1HI0150	5	1	Portrait	Across	1.000, 0.165
F1H10151	F1HI0151	5	2	Portrait	Across	1.000, 0.165, 0.165, 0.165
F1H10152	F1HI0152	5	Tumble	Portrait	Across	1.000, 0.165, 1.000, 0.165

Page definitions supplied with InfoPrint Manager

Page definitions for letter-sized paper, p. 1199 through Page definitions for B4-sized paper, p. 1202 list the page definitions that are supplied with InfoPrint Manager. The page definitions are grouped by the size of the paper on which the job prints.

Page definitions for letter-sized paper

Page definitions for letter-sized paper

Page Definition	Printable Area (Width by Height, In Inches)	Print Lines per Page	Print Position: Down or Across	Recommended Font	Printing Direction	Page Orientation
P1A06462[1]	8.17 by 10.67	64 at 6.0 lpi	30/0	GT10	Across	Portrait
P1A08682	8.17 by 10.67	86 at 8.2 lpi	24/0	GT12	Across	Portrait

1. This page definition is also valid for 9.5 by 11.0 inch continuous-form paper.

Page definitions for A4-sized paper

Page definitions for A4-sized paper

Page Definition	Printable Area (Width by Height, In Inches)	Print Lines per Page	Print Position: Down or Across	Recommended Font	Printing Direction	Page Orientation
P1C09182	7.94 by 11.36	91 at 8.2 lpi	25/0	GT12	Across	Portrait
P1CYR182[4]	7.94 by 11.36	91 at 8.2 lpi	25/0		Across	Portrait

Page Definition	Printable Area (Width by Height, In Inches)	Print Lines per Page	Print Position: Down or Across	Recommended Font	Printing Direction	Page Orientation
P1CYR683[1, 2, 4]	10.67 by 7.94	66 at 8.5 lpi	24/224		Down	Landscape
P1V0436B[1]	10.67 by 7.11	43 at 6.1 lpi	30/0	GT10	Up	Landscape
P1V04863[1]	10.67 by 7.94	48 at 6.1 lpi	30/0	GT10	Down	Landscape
P1V0588B[1]	10.67 by 7.11	58 at 8.2 lpi	24/0	GT12	Up	Landscape
P1V0598B[1]	10.67 by 7.11	59 at 8.2 lpi	24/0	GT12	Up	Landscape
P1V0608B[1, 2]	10.67 by 7.11	60 at 8.5 lpi	24/224	GT15	Up	Landscape
P1V0618B[1, 2]	10.67 by 7.11	61 at 8.5 lpi	24/224	GT15	Up	Landscape
P1V06483[1]	10.67 by 7.94	64 at 8.2 lpi	24/0	GT12	Down	Landscape
P1V06683[1, 2]	10.67 by 7.94	66 at 8.5 lpi	24/224	GT15	Down	Landscape
P1X04763[1, 3]	10.60 by 7.77	47 at 6.1 lpi	30/0	GT10	Down	Landscape

1. Designed to work for letter-sized and A4-sized paper.
2. The printable area is 9.74 by 7.94 inches because of the 224 logical unit offset in the "Print Position: Down/Across" column.
3. Designed for use with HPCL and PPDS data streams.
4. Designed for Cyrillic support for the **sap2afp** transform and shipped with the InfoPrint Manager: SAP Print Feature. This page definition calls the codepage T1001172 (Cyrillic Multilingual with Box Draw) with character set CZ4203 (Courier Normal) and CZ4403 (Courier Bold) directly.

Page definitions for letter- and A4-sized paper with multiple-up of 2 and 4

Page definitions for letter- and A4-sized paper with multiple-up of 2 and 4

Page Definition	Printable Area (Width by Height, In Inches)	Print Lines per Page	Print Position: Down or Across	Recommended Font	Printing Direction	Page Orientation
P1W1168B	10.67 by 7.11	58 at 8.2 lpi	Page 1 24/0	GT15	Up	Landscape

Page Definition	*Printable Area (Width by Height, In Inches)*	*Print Lines per Page*	*Print Position: Down or Across*	*Recommended Font*	*Printing Direction*	*Page Orientation*
			Page 2 24/ 1281			
P1W1188B	10.67 by 7.11	59 at 8.2 lpi	Page 1 24/0 Page 2 24/ 1281	GT15	Up	Landscape
P1W120C2	7.94 by 10.67	60 at 12.0 lpi	Page 1 16/ 160 Page 2 1344/ 160	GT20	Across	Portrait
P1W12883	10.67 by 7.94	64 at 8.2 lpi	Page 1 24/0 Page 2 24/ 1281	GT15	Down	Landscape
P1W216FB	10.67 by 7.11	54 at 15.2 lpi	Page 1 16/48 Page 2 890/ 48 Page 3 16/ 1322 Page 4 890/ 1322	GT24	Up	Landscape
P1W220FB	10.67 by 7.11	55 at 15.2 lpi	Page 1 16/48 Page 2 890/ 48 Page 3 16/ 1322 Page 4 890/ 1322	GT24	Up	Landscape
P1W240F3	10.67 by 7.94	60 at 15.2 lpi	Page 1 16/48 Page 2 968/ 48 Page 3 16/ 1322 Page 4 968/ 1322	GT24	Down	Landscape

Page definitions for legal-sized paper

Page Definition	*Printable Area (Width by Height, In Inches)*	*Print Lines per Page*	*Print Position: Down or Across*	*Rec-om-men-ded Font*	*Printing Direction*	*Page Orientation*
P1B0446B	13.67 by 7.34	44 at 6.0 lpi	30/0	GT10	Up	Landscape
P1B04963	13.67 by 8.17	49 at 6.0 lpi	30/0	GT10	Down	Landscape
P1B0608B	13.67 by 7.34	60 at 8.2 lpi	24/0	GT12	Up	Landscape
P1B06683	13.67 by 8.17	66 at 8.2 lpi	24/0	GT12	Down	Landscape
P1B08262	8.17 by 13.67	82 at 6.0 lpi	30/0	GT10	Across	Portrait
P1B11082	8.17 by 13.67	110 at 8.2 lpi	24/0	GT12	Across	Portrait
P1R04763 [1]	13.6 by 8.0	47 at 6.0 lpi	30/0	GT10	Down	Landscape

1. Designed for use with HPCL and PPDS data streams.

Page definitions for B4-sized paper

Page Definition	*Printable Area (Width by Height, In Inches)*	*Print Lines per Page*	*Print Position: Down or Across*	*Recom-mended Font*	*Printing Direction*	*Page Orientation*
P1D0556B	14.0 by 8.96	55 at 6.1 lpi	30/0	GT10	Up	Landscape
P1D06063	14.0 by 9.79	60 at 6.1 lpi	30/0	GT10	Down	Landscape
P1D0748B	14.0 by 8.96	74 at 8.2 lpi	24/0	GT12	Up	Landscape
P1D08083	14.0 by 9.79	80 at 8.2 lpi	24/0	GT12	Down	Landscape

Page Definition	*Printable Area (Width by Height, In Inches)*	*Print Lines per Page*	*Print Position: Down or Across*	*Recom-mended Font*	*Printing Direction*	*Page Orientation*
P1D08462	9.79 by 14.0	84 at 6.0 lpi	30/0	GT10	Across	Portrait
P1D11382	9.79 by 14.0	113 at 8.2 lpi	24/0	GT12	Across	Portrait

Accessibility

Ricoh strives to provide products with usable access for everyone, regardless of age or ability. For more information about the commitment that we have made to accessibility, see: https://www.ricoh-usa.com/en/about-us/corporate-responsibility-and-environmental-sustainability/accessibility.

Accessibility features

Accessibility features help users who have disabilities, such as restricted mobility or limited vision, use information technology products successfully.

The major accessibility features in this product let you:

- Use screen readers, screen magnifiers, and other assistive technologies.
- Use a keyboard instead of a mouse.
- Change attributes such as volume, color, contrast, and font size.

In addition, the information center and the publications for the product are in an accessible format.

Keyboard navigation

This product uses standard Microsoft Windows navigation keys.

Glossary

This glossary defines technical terms and abbreviations used in InfoPrint Manager.

Special Characters

.Guidefaults file

A file created by InfoPrint Manager in the home directory of a person using the InfoPrint Manager GUI. InfoPrint Manager uses this file to save and reference information about the servers you are monitoring and the windows you are working in.

A

Access Control List (ACL)

In computer security, a collection of all access rights for one object.

ACL

Access Control List.

acl editor

A command line interface that lets you view, add, update, and delete access authorization records in an ACL.

action

In the InfoPrint Manager GUI, an icon that represents an operation that you can perform on an InfoPrint Manager object. You drag and drop the action onto an object to initiate the operation for that object. For example, using the `Enable` action to enable a disabled actual destination.

actual destination

In InfoPrint Manager, an object that represents the output device that performs the printing or transmission function. See *email destination*; see also *physical printer*, *printer device*; contrast with *logical destination*.

additive color system

A system that reproduces an image by mixing (adding) appropriate quantities of red, green, and blue light (the additive primary colors) to create all other colors of light, either direct or transmitted. When the additive primaries are superimposed on one another, they create white light. Contrast with *subtractive color system*.

administrator

In InfoPrint Manager, the person who creates and manages one or more components of a printing system, such as servers and actual destinations. By default, InfoPrint Manager gives administrators authorization to perform some InfoPrint Manager operations and to access certain information that is not available to the operators or job submitters.

Adobe Acrobat

An Adobe software program that provides instant access to documents in their original format, independent of computer platform. With the Adobe Acrobat Reader, you can view, navigate, print, and present any Portable Document Format (.pdf) file.

Adobe PostScript Raster to Image Transform (RIP)

See *raster image processor (RIP)*.

ADSM/6000

Advanced Distributed Storage Manager.

Advanced Distributed Storage Manager (ADSM/6000)

A program that provides storage management for archived files.

Advanced Function Common Control Unit (AFCCU)

A RISC-based control unit with code common to all printers that use the AFCCU.

Advanced Function Presentation (AFP)

A set of licensed programs, together with user applications, that use the all-points-addressable concept to print data on a wide variety of printers or to display data on a wide variety of display devices. AFP includes creating, formatting, archiving, retrieving, viewing, distributing, and printing information.

Advanced Function Presentation data stream (AFP data stream)

The printer data stream used for printing AFP data. The AFP data stream includes composed text, page segments, electronic overlays, form definitions, and fonts downloaded from the operating system to the printer.

A presentation data stream that is processed in AFP environments. The AFP data stream includes MO:DCA-P-based data streams.

Advanced Interactive Executive (AIX)

An operating system used with pSeries computers. The AIX operating system is IBM's implementation of the UNIX operating system.

AFCCU

Advanced Function Common Control Unit.

AFP

Advanced Function Presentation.

AFP data stream

Advanced Function Presentation data stream.

ainbe

The printer input/output backend program used by the PSF DSS to send jobs to printer devices. Depending on the incoming data stream of the job, the PSF DSS might have transformed the data stream of the job before the backend program sending it to the printer device.

AIX

Advanced Interactive Executive.

AIX-attached printer

A printer device, attached to a pSeries computer through the network or through a serial or parallel port that receives jobs from an AIX print queue.

In InfoPrint Manager, a PSF physical printer that represents an AIX-attached printer device. See also *direct-attached printer*, *TCP/IP-attached printer*, *upload-TCP/IP-attached printer*.

AIX destination support system

In InfoPrint Manager, the destination support system that communicates with the standard AIX print backend (`piobe`), or with certain variations of the `rembak` print backend, to print jobs.

AIX physical printer

In InfoPrint Manager, the object representing a printer device that uses the AIX destination support system.

aliasing

In a digitized image, the creation of diagonal lines by combining short horizontal and vertical line segments that approximate the path of the desired line.

all-points-addressability (APA)

The capability to address, reference, and position text, overlays, and images at any defined point of the printable area of the paper or display medium.

alphameric

Synonym for *alphanumeric*.

alphanumeric

Pertaining to a character set containing letters, digits, and other symbols such as punctuation marks. Synonymous with *alphameric*.

AMPV

Average monthly print volume.

analog

Pertaining to a continuous variable sampling of information between two points that achieves an even, smooth transition of photographic material.

analog color proof

An off-press color proof made from separation films.

anti-aliasing

The rendering of hard-edged objects so that they blend smoothly into the background.

Removing the jagged "stairstep" quality in diagonal lines produced on a computer screen by aliasing. This removal is effected by creating less densely shaded fields parallel to the diagonal line.

APA

All-points-addressability.

API

Application Program Interface.

Application Program Interface (API)

The call interface between a client program and the procedures that implement the printing system, as defined by the specification. Clients use the API to access servers. (P)

architecture

The set of rules and conventions that govern the creation and control of data types such as text, image, graphics, font, color, audio, bar code, and multimedia.

archiving

The transfer of digital information from an online system onto various media for offline storage. The original copy is deleted from the online system. See also *retrieval*.

array inkjet

An ordered collection of multiple print heads used in an inkjet printer.

ASCII

American National Standard Code for Information Exchange. The standard code, using a coded character set consisting of 7–bit coded characters (8 bits including a parity check). The ASCII code is used for information exchange among data processing systems, data communications systems, and associated equipment. The ASCII character set includes control characters and graphic characters.

asynchronous

Pertaining to two or more processes that do not depend upon the occurrence of specific events, such as common timing signals. (T)

In InfoPrint Manager, occurring without a regular or predictable time relationship to a specified action. Contrast with *synchronous*.

attachment type

Defines the method by which a printer device is attached to the AIX system from which it receives data. See *AIX-attached printer*, *direct-attached printer*, *TCP/IP-attached printer*, and *upload-TCP/IP-attached printer*.

attribute

A defined characteristic of an object, such as the number of copies required of a job, or the document formats accepted by an actual destination.

attribute name

A string that identifies an attribute. Typically, in InfoPrint Manager attribute names consist of two or more words separated by hyphens.

attribute value

The element of an attribute that specifies the characteristics relating to the attribute.

authorization

In computer security, verification of the eligibility of a user to access an object.

authorized user

A person with the appropriate permissions to access an object or to issue a command.

automatic recovery

A function of printer logic that permits the printer to reprint a job if the job is misprinted or damaged or if a component has failed.

auxiliary sheet

In InfoPrint Manager, an object that represents a particular sheet of paper, blank or otherwise, that can precede a job, separate documents in a job, or follow a job.

auxiliary-sheet selections

A particular combination of start, separator, and end sheets that print with jobs on a particular printer device.

B

backend

In AIX or Linux, the program that is invoked by the `qdaemon` process (AIX) or CUPS printing system (Linux) to run a print or batch job. Synonymous with *backend program*.

backend program

Synonym for *backend*.

backlog

In InfoPrint Manager, the amount of time calculated by InfoPrint Manager that is required to print all of the jobs currently in a queue.

backspace

In InfoPrint Manager, the action used to back up and reprint pages in a job.

bar code

A code representing characters by sets of parallel bars of varying thickness and separation that are read optically by transverse scanning.

An array of parallel rectangular bars and spaces that together represent data elements or characters in a particular symbology. The bars and spaces are arranged in a predetermined pattern following unambiguous rules defined by the symbology.

BCOCA

Bar Code Object Content Architecture.

Bezier curves

A method of defining curves using anchor points, control handles, and tangent lines. The PostScript path passes through anchor points. Its approach direction is along the tangent lines that are controlled by the control handles. Many personal computer programs use this drawing method. Type 1 PostScript fonts are defined using Bezier curves.

binding

The cover and materials that hold a book together. See *edition binding*, *perfect binding*, *spiral binding*, *wire-o binding*.

The process of applying the binding to a book.

In InfoPrint Manager, assigning a job to an actual destination. See *early binding*, *late binding*.

bitmapped

Pertaining to an image formed by a rectangular grid of pixels. Each pixel is assigned a value to denote its color. One-bit images are black and white; 8–bit images have 256 colors (or grays); 24–bit images have full color. CMYK images have 32–bits per pixel to encode 256 levels in each of four channels. Bitmapped images are also called raster images.

bleed

An extra amount of printed image that extends beyond the trim edge of the sheet. Bleed ensures that no white gap appears at the edge of the sheet.

boot

To prepare a computer for operating by loading an operating system.

BSD

Berkeley Software Distribution.

BSD destination support system

In InfoPrint Manager, the destination support system that generates a print command string that the shell runs to print jobs.

BSD physical printer

In InfoPrint Manager, the object representing a printer device that uses the BSD destination support system.

burn

In platemaking, an exposure. Burn is named because of the extremely bright ultraviolet lamps used to transfer images from film to plate.

In photography, to lengthen the final exposure time to increase the final density of print.

C

CDE

Common Desktop Environment.

child

See *parent/child relationship*.

choke

In color printing, an area whose dimensions have been reduced to avoid overlapping another color. Contrast with *spread*.

class

Synonym for *object class*.

clean

In InfoPrint Manager, an action used to remove all the jobs from specified servers, actual destinations, or queues, or to remove all the jobs submitted to specified logical destinations.

CLI

Command Line Interface.

client

In InfoPrint Manager, the component of the print system that assembles a print request and submits the request to a server. The client generates the local ID numbers for each job, submits the jobs to the servers, and keeps track of where each user's jobs have been submitted.

CMR

Color Management Resource.

CMY

Cyan, magenta, yellow.

CMYK

Cyan, magenta, yellow, black.

collator

In some printers a special-purpose hard drive disk array used to store RIPped files and later transfer them to the LED print heads for imaging.

color balance

The relative levels of cyan, magenta, and yellow channels in an image to produce accurate color rendition of an original image.

color correction

The adjustment of the color balance in an image to produce accurate color rendition of an original image. Color correction is used for two- or three-spot-color jobs.

color key

A color proof similar to Cromalin, but typically not laminated and not necessarily accurate in color. Color keys are used to verify that breaks or color assignments and traps have been made accurately.

Color management resource

Color management resource (CMR) is an architected resource that is used to carry all of the color management information required to render a print file, document, group of pages or sheets, page, or data object with color fidelity.

Command Line Interface (CLI)

A type of user interface where commands are specified on the command line. Contrast with *Graphical User Interface*.

Common Desktop Environment (CDE)

A graphical user interface running on a UNIX operating system.

complex attribute

In InfoPrint Manager, an attribute that can have multiple values with each value containing multiple components.

constant data

Data that does not change between copies of a document and that is merged with variable data to produce personalized documents. For example, a form letter (constant data) can be merged with a customer's name and address (variable data).

contextual help

A type of online help that provides specific information about each selectable object, menu choice, notebook tab, field, control, and pushbutton in a window.

control strip

A strip of information that can be attached to a print job and used to measure registration and density.

Cromalin

The Dupont color proofing system. Four layers (CMYK) of light-sensitive material are exposed through final halftone negative films, then laminated together on an opaque backing to produce a color- and trap-accurate final proof showing actual halftone dot structure. Cromalin is sometimes called an analog proof.

crop

To remove unwanted areas of an image, usually indicated by crop marks on the original.

CTS

Cutter-trimmer-stacker.

CUPS

Common Unix Printing System is a modular printing system for Unix-like computer operating systems which allows a computer to act as a print server. A computer running CUPS is a host that can accept print jobs from client computers, process them, and send them to the appropriate printer.

CUPS destination support system

In InfoPrint Manager, the destination support system that communicates with the standard Linux print system (CUPS) and that uses InfoPrint Manager **pioinfo** backend, InfoPrint Manager **piorpdm** backend for Ricoh printers, or other print backends to print jobs.

cutter-trimmer-stacker (CTS)

A post-processing device attached to a printer device and used for paper handling.

cyan, magenta, yellow (CMY)

The subtractive primary colors.

cyan, magenta, yellow, black (CMYK)

The four basic colors used in offset printing, as opposed to the three basic colors of light: red, green, and blue. Magenta, yellow, and cyan are the subtractive primaries. Black is added to provide better density and to produce a true black.

D

daemon

A program that runs unattended to perform a standard service. Some daemons are triggered automatically to perform their tasks; others operate periodically. Daemon processes generally provide a service that must be available at all times to more than one task or user, such as sending data to a printer.

data stream

All information (data and control commands) sent over a data link.

A continuous stream of data that has a defined format.

In InfoPrint Manager, pertaining to the incoming format of the job and the output format required by the printer device. InfoPrint Manager transforms the incoming format into the output format, as required. See also *document format*.

deadline

In InfoPrint Manager, a queuing technique where the next job assigned to the first position in the queue is the one whose deadline is closest. Contrast with *FIFO (first-in-first-out)*, *job-priority*, *longest-job-first*, and *shortest-job-first*.

default document

In InfoPrint Manager, an object that represents default attribute values for a document in a job. Synonymous with *initial value document*.

default job

In InfoPrint Manager, an object that represents default attribute values for a job. Synonymous with *initial value job*.

default object

In InfoPrint Manager, a general term that refers either to a *default document* or a *default job*. Synonymous with *initial value object*.

default value

A value stored in the system that is used when no other value is specified.

delete

In InfoPrint Manager, an action used to delete default objects, jobs, logical destinations, actual destinations, or queues from the server.

desktop publishing

Performing print-related activities on a personal computer, including but not limited to layout, design, photo manipulation, creating fonts, editing text, color separation, scanning, and animation.

destination

See *actual destination*, *logical destination*.

destination support system (DSS)

In InfoPrint Manager, the programs that an actual destination uses to communicate with the output device. Synonymous with *device support system*. See *AIX destination support system*, *BSD destination support system*, *email destination support system*, and *PSF destination support system*.

device

An individual piece of equipment (hardware) that attaches to a computer, such as a printer device.

device address

The identification of an input or output device by its channel and unit number.

device driver

A file that communicates with a specific device such as a printer, disk drive, or display. An application that sends output to a device controls the actions of the device through the device driver. See *printer driver*.

device support system (DSS)

Synonym for *destination support system*.

DFE

Digital Front End

DFE destination support system

In InfoPrint Manager, the destination support system that communicates with a DFE print server driving a Ricoh printer.

DFE printer

In InfoPrint Manager, the object representing a DFE print server driving a Ricoh printer.

digital

Pertaining to data represented by digits, sometimes with special characters and the space character.

digital color proof

An off-press color proof made from a color printer attached to a computer.

digital printing

A filmless and plateless printing process in which digital data for each page is transferred directly to a light-sensitive drum and then to paper for a final image.

direct-attached printer

A printer device, attached to an pSeries computer through the network or through a serial or parallel port.

In InfoPrint Manager, a PSF physical printer that represents a direct-attached printer device. See also *AIX-attached printer*, *TCP/IP-attached printer*, and *upload-TCP/IP-attached printer*.

disable

In InfoPrint Manager, an action used to stop the acceptance of jobs on destinations, queues, or servers, or to stop writing information to logs.

distributed print system

A computer system with the ability to interchange print data and controls among different computing environments with the intent of printing the data on a different system from the one where the print request was generated. For example, in host-to-LAN distributed printing, data that is located on the host is printed on printers attached to a local area network.

dithering

A technique of filling the gap between two pixels with another pixel having an average value of the two to minimize the difference or to add detail to smooth the result.

document

In InfoPrint Manager, an object representing a grouping of data in a job. A job can contain one or more documents. The documents in a job can differ from each other in some ways. For example, they can contain different data and can have different document formats. A document in a job can contain printable data or a resource that is not printable by itself. See *file-reference document*, *printable document*, and *resource document*.

document element

A portion of a document at least a single page in size.

document format

In InfoPrint Manager, a document format describes the type of the data and control characters in the document, such as line data or PostScript. The format of the data determines which printer devices are capable of printing the document and whether InfoPrint Manager must transform the format.

document identifier

A string that identifies a document in a job. It consists of a job ID followed by a period (.) and a document sequence number. For example, `12.2`. Document sequence numbers are integers starting at `1`.

Document Printing Application (DPA)

An ISO/IEC 10175 standard that addresses those aspects of document processing that enable users in a distributed open systems environment to send electronic documents to shared, possibly geographically-dispersed printers. InfoPrint Manager supports the DPA standard.

document transfer method

In InfoPrint Manager, the transfer method describes how documents are transferred to, or acquired by, servers. See *pipe-pull* and *with-request*.

document type

In InfoPrint Manager, the document type describes the kind of data in the document. A *printable document* can only contain printable data. A *resource document* can only contain data such as fonts or form definitions that are not printable. A *file reference document* can only contain names of files entered on separate lines.

dot

The individual elements of a halftone.

dot gain

An increase in the size of a halftone dot during printing, caused by ink spreading. Generally, this value is known precisely, and the scanning and filming production process is calibrated to compensate for it. The Cromalin proofing system simulates this effect.

dots per inch (dpi)

A measure of data density per unit distance. Typical values for desktop publishing range from 200 to 300 dpi.

DPA

Document Printing Application.

DPF

Distributed Print Facility.

dpi

Dots per inch.

drag and drop

In graphical user interfaces, a procedure by which you perform actions and tasks. Using the mouse, you drag (move) an action or object icon to a new position where you want the action or task to occur.

DSS

Destination support system.

dummy

A rough paste-up or hand-drawn representation of the anticipated finished product. A dummy is used for basic design and pagination.

duplex printing

Printing on both sides of the paper. Contrast with *simplex printing (1)*.

Printing on both sides of the paper, placing output images on the media in a head-to-head format, so that the top of one image is at the same edge as the top of the next image. Contrast with *tumble duplex printing*; see also *simplex printing (2)*.

E

early binding

In InfoPrint Manager, assigning a job to an actual destination as soon as it is accepted. Early binding permits InfoPrint Manager to estimate the time when the job will be completed. Contrast with *late binding*.

edition binding

A type of book binding in which printed sheets are folded into 16- or 32-page signatures. Four-page endleaves are pasted on the outside of the first and last signature. The signatures are then collated by machine and sewn together using special sewing machines. Contrast with *perfect binding*, *spiral binding*, and *wire-o binding*.

electronic document

A document stored in a computer instead of printed on paper.

electronic mail

Correspondence in the form of messages sent between workstations over a network. Synonymous with *email*.

electrophotographic

Pertaining to a type of printer technology that creates an image on paper by uniformly charging the photoconductor, creating an electrostatic image on the photoconductor, attracting negatively charged toner to the discharged areas of the photoconductor, and transferring and fusing the toner to paper.

em

In composition, a unit of measurement exactly as wide and as high as the point size of the font being set. The name is derived from the fact that the letter M in early typefaces was usually cast on a square body.

email

Electronic mail.

email destination

In InfoPrint Manager, an actual destination representing an electronic mailing system.

email destination support system

In InfoPrint Manager, the destination support system that supports email destinations.

embellishments

Variable data added to all copies of assembled pages to make the unit appear like a whole; for example, headers, footers, a table of contents, and chapter separations.

en

In composition, exactly one-half an em.

enable

In InfoPrint Manager, the action that makes a destination, queue, or server able to accept jobs, or a log able to accept information.

end sheet

The sheet of paper, blank or otherwise, that can follow a job. See also *auxiliary sheet*.

Enhanced X-Windows

A tool designed to permit multiple application processes to operate in multiple windows displayed on a virtual terminal. See *X-Windows*.

environment variable

Any one of a number of variables that describe the way an operating system runs and the devices it recognizes.

error log

A data set or file in a product or system where error information is stored for later access.

estimate

The professional cost analysis made by a print shop in response to a customer's request for a price quotation on a print job.

event

In InfoPrint Manager, an occurrence in the printing system during an operation; for example, the completion of a command.

event log

In InfoPrint Manager, a collection of messages about events that have occurred.

event notification

The notification that is sent by InfoPrint Manager for an event.

F

Federated Authentication

A technology that grants users secure access to InfoPrint Manager relying on external identity providers (IdPs). Instead of managing separate user credentials within the InfoPrint Manager system, federated authentication allows users to log in using their existing accounts from trusted third-party services.

FIFO (first-in-first-out)

In InfoPrint Manager, a queuing technique where the next job assigned to the first position in the queue is the job that has been in the queue for the longest time. InfoPrint Manager processes jobs in the order in which they are received. Contrast with *deadline*, *job-priority*, *longest-job-first*, and *shortest-job-first*.

file-reference document

In InfoPrint Manager, a file containing the names of other files, each entered on a separate line. Job submitters can specify this file for printing when they specify a document type of `file-reference`; InfoPrint Manager prints each file listed in the reference document.

File Transfer Protocol (FTP)

In TCP/IP, the application protocol that makes it possible to transfer data to and from host computers and to use foreign hosts indirectly.

finisher

A hardware device attached to a printer that performs such operations as folding or stapling the printed pages.

finishing

In a print shop, the final operations on a printed product, such as stapling, trimming, drilling, folding, embossing, varnishing, gluing, shrink wrapping, perforating, laminating, collating, and so on.

flag

A modifier of a command that specifies the action of the command. A dash usually precedes a flag. Synonymous with *option*. See also *keyword*.

FOCA

Font object content architecture.

folder

In the InfoPrint Manager GUI, an object that represents a container for a collection of similar objects. For example, the Retained Jobs folder contains retained jobs.

font

A family of characters of a given size and style; for example, 9-point Helvetica.

One size and one typeface in a particular type family, including letters, numerals, punctuation marks, special characters, and ligatures.

A paired character set and code page that can be used together for printing a string of text characters. A double-byte font can consist of multiple pairs of character sets and code pages.

form definition

A resource object used by InfoPrint Manager that defines the characteristics of the form or printed media, which include: overlays to be used, the paper source (for cut-sheet printers), duplex printing, text suppression, and the position of composed-text data on the form.

forward space

In InfoPrint Manager, the action used to move ahead and skip the printing of a specified number of pages in a job.

FPO

Low-quality (sometimes photographic) images placed in a dummy to represent final images. Desktop publishing software produces images as display-screen resolution FPOs.

front panel

In the CDE, a workspace area containing controls that represent various tasks you can perform and workspace switches.

FST

Files and Sockets Transport is the local security implementation for InfoPrint Manager. It uses the local namespace for user credentials, and it is a lightweight security protocol.

FTP

File Transfer Protocol.

G

GCR

Gray component replacement.

GIF

Graphics Interchange Format.

global change

In the InfoPrint Manager GUI, an action used to make changes to one or more attributes of several objects at once. You can also perform the same action on several objects of the same object class at the same time; for example, disabling two or more actual destinations at the same time.

global character

A character or set of characters used to specify an unknown number or set of characters in a search string. In InfoPrint Manager, a global character is represented by an asterisk (*).

global ID

Global job identifier.

global job identifier

An unambiguous job identifier. In InfoPrint Manager, it is represented as the name of the server managing the job followed by a colon (:) and a generated integer. This ID uniquely identifies the job in the InfoPrint Manager server.

glyph

An image, usually of a character, in a font.

GOCA

Graphics object content architecture.

graphic character

A visual representation of a character, other than a control character, that is normally produced by writing, printing, or displaying.

Graphical User Interface (GUI)

A type of user interface that takes advantage of a high-resolution monitor and includes a combination of graphics to implement an object-action paradigm, the use of pointing devices, menu bars, overlapping windows, and icons. Contrast with *Command Line Interface*.

Graphics Interchange Format (GIF)

A compressed graphics format widely used on the Internet.

gray component replacement (GCR)

Synonym for *under color removal (UCR)*.

gray scale

A strip of standard gray tones, ranging from white to black, placed at the side of the original copy during photography to measure the tonal range and contrast obtained.

GUI

Graphical User Interface.

gutter

The blank area or inner margin from the printing area to the binding.

H

halftone

A printing method that simulates continuous-tone shading using dots of varying sizes laid out on a rectangular grid. Larger dots simulate darker tones and smaller dots simulate lighter tones. Typical grid spacings are 85 lines per inch (lpi) (newspaper), 133 lpi (low end), 150 lpi (midrange), and 175+ lpi (high quality).

help

In the InfoPrint Manager GUI, an action used to display the online help for a specific template, object, action, button, control, or area in an application window.

The name of a button used to access the online help.

hold

An indication determined by the **job-hold** attribute that is used to keep a job in the queue and prevent InfoPrint Manager from scheduling it.

host name

A unique label assigned to a device (such as a computer, server, or router) on a network, used to identify it. It can be a simple name (such as *laptop-01*) or part of a fully qualified domain name (FQDN) like *server.example.com*, allowing devices to locate and communicate with each other.

hot folder

A workstation directory where users copy jobs to submit them to print.

hypertext

A way of presenting information online with connections between one piece of information and another. These connections are called hypertext links. See also *hypertext link*.

hypertext link

A connection between one piece of information and another. Selecting a link displays the target piece of information.

I

icon

A graphic symbol displayed on a screen that a user can click to invoke a function or software application.

image

Toned and untoned pels arranged in a pattern.

image data

Rectangular arrays of raster information that define an image.

imagesetter

A high resolution (1270–3600+ dpi) printer that uses an Argon (green) laser to write to film using digital input. Imagesetting is the step before Cromalin proofing and platemaking.

imposition

The process of arranging pages on a press sheet to ensure the correct order during final cutting, folding, and binding. Electronic imposition builds press sheets automatically during the RIP and outputs film formatted for immediate use in platemaking.

InfoPrint

A solution of hardware products that can supplement or replace the offset presses and copiers in print shops with high-quality, non-impact, black and white or process color printers.

InfoPrint Manager

A print management product that runs on an AIX, Linux, or Windows operating system. InfoPrint Manager handles the scheduling, archiving, retrieving, and assembly of print jobs and their related resource files. It also tracks the finishing and packaging of the printed product.

InfoPrint Manager Select

Synonym for *InfoPrint Select*.

InfoPrint Manager Submit Express

Synonym for *InfoPrint Submit Express*.

InfoPrint Network

The local area network running TCP/IP protocol that InfoPrint Manager uses to communicate among servers, clients, and output devices.

InfoPrint Select

The component of InfoPrint Manager that lets you submit and track jobs from your system to a destination that is managed by InfoPrint Manager.

InfoPrint Submit Express

The component of InfoPrint Manager that lets you submit and track jobs with a job ticket from a Windows workstation.

InfoPrint 4000

A duplex, black and white, continuous-forms printer with 600-dpi resolution.

initial value document

Synonym for *default document*.

initial value job

Synonym for *default job*.

initial value object

Synonym for *default object*.

initially settable attribute

An attribute whose value can be established when an object is created but cannot be subsequently set or modified. See also *resettable attribute*; contrast with *non-settable attribute*.

input focus

The area of a window where user interaction is possible from either the keyboard or the mouse.

input tray

For a printer device, the container that holds the medium upon which the printer prints its output.

Intelligent Printer Data Stream (IPDS)

An all-points-addressable data stream that enables users to position text, images, and graphics at any defined point on a printed page.

Information that the host sends to IPDS printers. This information generally contains basic formatting, error recovery, and character data and enables the printers to make decisions.

An architected host-to-printer data stream that contains both data (text, image, graphics, and bar codes) and controls defining how the data is to be presented. IPDS provides a device-independent interface for controlling and managing all-points-addressable (APA) printers.

International Organization for Standardization (ISO)

An organization of national standards bodies from various countries established to promote development standards to facilitate international exchange of goods and services, and develop cooperation in intellectual, scientific, technological, and economic activity.

Internet

A wide area network connecting thousands of disparate networks in industry, education, government, and research. The Internet network uses TCP/IP as the protocol for sending information.

Internet Protocol

The set of rules that determines how to route data from its source to its destination in an internet environment.

intervening jobs

In InfoPrint Manager, the number of jobs in a queue that are scheduled to print before the job in question.

IOCA

Image object content architecture.

IP address

The IPv4 or IPv6 address.

IPDS

Intelligent Printer Data Stream.

ISO

International Organization for Standardization.

J

job

In InfoPrint Manager, an object that represents a request to print or send one or more documents together in a single session. A job includes the data to be printed or sent and resources such as fonts, images, and overlays. Depending on how it was submitted, it can also include a job ticket. Synonymous with *job bundle* and *print job*.

job bundle

Synonym for *job*.

job data

The page descriptions, merge data, and embellishments that compose a document in a job, either directly or by reference.

job ID

A local or a global identifier that identifies a job to a job submitter, administrator, operator, or InfoPrint Manager. See *local job identifier*, *global job identifier*.

job-priority

In InfoPrint Manager, a queuing technique where the next job assigned to the first position in the queue is the one with the highest priority. Contrast with *deadline*, *FIFO (first-in-first-out)*, *longest-job-first*, and *shortest-job-first*.

job submitter

In InfoPrint Manager, the person who submits jobs for printing. Often, this person is an application programmer who maintains applications that generate data to be printed.

job ticket

The customer's hardcopy or electronic instructions listing all the variables describing a print job, either directly or by reference. The print shop can add specifications to the job ticket and can print the job ticket.

Joint Photographic Experts Group (JPEG)

A compressed graphics format widely used on the Internet.

JPEG

Joint Photographic Experts Group.

K

kerning

In typesetting, adjusting the relative spacing of two characters to improve their appearance and readability. Kerning pairs are specific sets of characters with built-in relative spacing. Some typefaces have as many as 100 kerning pairs.

keyword

A name or symbol that identifies a parameter.

Part of a command operand that consists of a specific character string, such as `DSNAME=`.

kitting

In a print shop, packaging the completed published work with attendant binders, tabs, diskettes, and other equipment or information, before shipping the finished product.

L

LAN

Local Area Network.

laser (light amplification by stimulated emission of radiation)

In InfoPrint printers, a device that emits a beam of coherent light that forms the image on the photoconductor that is subsequently transferred to the paper.

late binding

In InfoPrint Manager, waiting to assign a job to an actual destination until it is about to be processed. Late binding permits InfoPrint Manager to route a job to the first suitable actual destination that becomes available. Contrast with *early binding*.

LDAP

Lightweight Directory Access Protocol is the network security implementation for InfoPrint Manager. It uses an LDAP or Active Directory server for user credentials, and it offers a unified security implementation in a customer environment.

LED

Light-emitting diode.

light-emitting diode (LED)

The imaging device element for electrophotographic print units.

lines per inch (lpi)

A measure of the density of the grid used to space halftone dots. Typical grid spacings are 85 lpi (newspaper), 133 lpi (low end), 150 lpi (midrange), and 175+ lpi (high quality).

Linux

Linux is an open-source operating system modeled on UNIX. There are multiple distributions available, InfoPrint Manager is supported on AlmaLinux, Red Hat Enterprise Linux (RHEL), Rocky Linux, and SUSE Linux Enterprise Server (SLES).

Local Area Network (LAN)

A computer network at one location that consisting of devices connected to one another and communicating. This network can also be connected to a larger network.

local ID

Local job identifier.

local job identifier

In InfoPrint Manager, a job identifier automatically generated by the server, identifying the job to the person who submitted it. InfoPrint Manager maps a local job ID to a global job ID.

locale

The human language and character set of information presented to a user.

In InfoPrint Manager, the language InfoPrint Manager uses when sending notification and error messages or displaying the InfoPrint Manager graphical user interfaces.

log

A collection of messages or message segments added to a file for accounting or data collection purposes.

To record messages in a file.

logical destination

In InfoPrint Manager, an object to which users submit their jobs. The logical destination routes jobs to one or more actual destinations representing output devices such as printers, or electronic mail systems. See also *logical printer*; contrast with *actual destination*.

logical printer

In InfoPrint Manager, a type of logical destination. The logical printer routes jobs to one or more physical printers representing printing devices.

logical unit (LU)

A type of network accessible unit that enables end users to gain access to network resources and communicate with each other.

logical unit (LU) 6.2

A type of logical unit that supports general communication between programs in a distributed processing environment. LU 6.2 is characterized by (a) a peer relationship between session partners, (b) efficient utilization of a session for multiple transactions, (c) comprehensive end-to-end error processing, and (d) a generic application program interface (API) consisting of structured verbs that are mapped into a product implementation.

longest-job-first

In InfoPrint Manager, a queuing technique where the next job assigned to the first position in the queue is the longest job in the queue. Contrast with *deadline*, *FIFO (first-in-first-out)*, *job-priority*, and *shortest-job-first*.

lpi

Lines per inch.

LU

Logical unit.

M

magnetic ink character recognition (MICR)

Identification of characters printed with ink that contains particles of magnetic material.

mainframe processor

A functional unit that interprets and executes instructions in a large computer to which other computers are connected so that they can share the facilities the mainframe provides.

makeready

All the setup work involved in preparing a press for a print run.

manage

In the InfoPrint Manager GUI, the action used to put an object into a mode where its icon reflects changes of status.

mechanical

A camera-ready layout. The mechanical can consist of multiple sheets or overlays for each spot or process color used. Final images, if not stripped in later, should be at final size, cropped and screened to the correct line frequency.

medium

In InfoPrint Manager, an object representing the physical material upon which a job is printed.

merge data

Data that is unique to each copy of a document and that customizes the document; for example, serial numbers or mailing information. Merge data is typically a small percentage of the total data in the document.

message catalog

A file of all the possible messages than can display during the processing of an application.

MICR

Magnetic ink character recognition.

Mixed Object Document Content Architecture (MO:DCA)

An architected, device-independent data stream for interchanging documents.

MO:DCA-P

Mixed Object Document Content Architecture Presentation.

modify

In InfoPrint Manager, an action used to modify the values of attributes in the object attributes notebook.

moire

Undesirable interference patterns caused by two overprinting halftone screens with incorrect halftone dot angles.

monospaced

In typesetting, pertaining to a typeface in which all the characters have equal widths. Monospaced typefaces are useful for tabulating figures.

Multiple Virtual Storage (MVS)

An operating system developed by IBM. The design of MVS incorporates an addressing architecture that provides a unique address space to each job in the system.

MVS

Multiple Virtual Storage.

N

N_UP

Pertaining to the number of forms placed together in a layout. Typical layouts are 2_UP, 4_UP, 8_UP, 16_UP, and so on. N_UP printing is done to use the maximum area of the print sheet.

namespace

A global name repository available to all utilities and API procedures. The namespace contains mappings of object names to other related objects. For example, the namespace provides the mapping of a logical destination to the server in which it is located.

Network File System (NFS)

A protocol that uses Internet Protocol to allow a set of cooperating computers to access each other's file systems as if they were local.

newline options

The different ways in which the printer determines how lines are delimited in a document data stream.

NFS

Network File System.

non-process-runout (NPRO)

A printer function that moves the last printed sheet to the stacker of the printer device.

non-settable attribute

An attribute that is neither initially settable nor resettable. The values for these attributes are controlled by InfoPrint Manager. Contrast with *initially settable attribute* and *resettable attribute*.

notification

The act of reporting the occurrence of events.

In InfoPrint Manager, notification of events appears as messages in event logs or messages sent to administrators, operators, and job submitters. In the InfoPrint Manager GUI, notification of events also appears as changes to the appearance of icons.

notification-profile

In InfoPrint Manager, an attribute associated with an object that contains information designating the people to whom InfoPrint Manager sends notification about events for that object, which event information it sends, and how it sends the information.

NPRO

Non-process-runout.

O

object

A collection of attributes that represent a physical or logical entity in the print system. For example, a specific printer device is represented by an actual destination (physical printer) object. An object is identified by its object name. Objects are grouped into classes. See also *object class*.

object class

A group of objects that share a common definition and therefore share common properties, operations, and behavior as defined by their attributes. For example, all InfoPrint Manager queue objects are in the same object class and each queue has the same set of queue attributes. However, the values for those attributes can differ for each queue in the queue object class.

Object Identifier (OID)

In architecture, a notation that assigns a globally unambiguous identifier to an object or a document component. The notation is defined in international standard ISO.IEC 8824(E).

object name

The alphanumeric term that identifies an object.

object state

The state of an object indicates its availability and readiness for performing its functions. An object can be in one of a number of states such as ready, busy, or unknown.

OCR

Optical character recognition.

octet

A byte that consists of eight binary digits (bits).

offset stacking

In certain printer devices, a function that allows the printer to offset the printed output pages for easy separation of the jobs.

OID

Object Identifier.

open destinations window

In the InfoPrint Manager GUI, the action used to open a new application window displaying the logical and actual destinations associated with a queue.

Open Prepress Interface (OPI)

An industry standard for replacing low-resolution images in review documents with high-resolution images needed for high-quality final output.

Open Software Foundation (OSF)

A nonprofit research and development organization created by a consortium of companies that work together to develop software in the open systems market.

OpenType font (OTF)

An extension of the TrueType font format that adds:

- Support for PostScript outlines
- Better support for international character sets
- Broader support for advanced typographic control

open window

In the InfoPrint Manager GUI, the action used to open a new application window representing one or more objects displayed in the currently open application window.

operation

An action performed on one or more data items.

operator

In InfoPrint Manager, the person responsible for printer devices. Also, this person performs a subset of tasks for InfoPrint Manager queues and actual destinations and performs some job-related tasks.

OPI

Open Prepress Interface.

optical character recognition (OCR)

Conversion of scanned text to editable ASCII characters.

option

A modifier of a command that specifies the action of the command. A dash usually precedes an option. Synonymous with *flag*. See also *keyword*.

orphan logical destination

In the InfoPrint Manager GUI, an object that represents a logical destination that is not associated with an existing queue.

orphan logical printer

In the InfoPrint Manager GUI, an object that represents a logical printer that is not associated with an existing queue.

OSF

Open Software Foundation.

overlay

A collection of constant data, such as lines, shading, text, boxes, or logos, that is electronically composed in the host processor and stored in a library, and that can be merged with variable data during printing.

OTF

OpenType font.

P

PAC

Privilege Attribute Certificate.

page definition

A resource that contains the formatting controls for line data.

In InfoPrint Manager, a resource that defines the rules of transforming line data into composed pages and text controls.

page segment

A resource that contains composed text and images, which are prepared before formatting and included during printing.

pane

In the Work Area of the InfoPrint Manager Administration GUI, an area containing a group of objects of a specific type, such as an actual destinations pane.

parent/child relationship

In InfoPrint Manager, servers, queues, and destinations are related to one another in a parent/child relationship. For example, a server is the parent of all the queues that reside in that server, and these queues are its children.

pass through

In InfoPrint Manager, referring to options submitted with a job that are used by the device driver, but not InfoPrint Manager. InfoPrint Manager does not process or validate this information; it passes it along to the device driver. See *printer driver*.

path

The route used to locate files; the storage location of a file. A fully qualified path lists the drive identifier (if any), directory name, subdirectory name (if any), and file name with the associated extension.

pause

In InfoPrint Manager, the action used to temporarily halt the printing or transmission of jobs on actual destinations or the distribution of jobs from servers or queues.

pdcreate

In InfoPrint Manager, the command used to create a new object and set its attributes to specified values.

PDF

Portable Document Format.

Printer description file.

pdmsg

In InfoPrint Manager, a utility used to display information about a message.

pdpr

In InfoPrint Manager, the command used to create and submit a job, consisting of one or more documents, to a server for printing or transmission.

perfect binding

A type of book binding in which the pages are held together with flexible adhesive. Contrast with *edition binding*, *spiral binding*, and *wire-o binding*.

permissions

In AIX, codes that determine who can access a file and what operations they can perform on the file.

physical printer

In InfoPrint Manager, a type of actual destination that represents a printer device. See also *printer device*.

piobe

The standard printer input/output backend program used by AIX for printing. See also *ainbe*.

pipe-pull

In InfoPrint Manager, a document transfer method where InfoPrint Manager saves the documents in a file and transfers the address of the file to the server. InfoPrint Manager transfers the file to the server upon the request from the server. This is an efficient transfer method for large jobs and is the default transfer method at job submission. Contrast with *with-request*.

plex

A document or actual destination attribute used to define the placement of output images on the page. See the plex values *simplex* and *tumble*.

Portable Document Format (PDF)

An Adobe PostScript data format that can be viewed or printed.

Portable Operating System Interface for Computer Environments (POSIX)

An Institute of Electrical and Electronics Engineers (IEEE) standard for computer operating systems.

POSIX

Portable Operating System Interface for Computer Environments.

PostScript

Adobe's page description language. PostScript has become a standard for graphic design and layout software. PostScript files can contain both vector and raster data. Fonts are described using PostScript coding. Many desktop publishing systems produce PostScript data as their output data stream.

PostScript printer description (PPD)

A file that contains options for printing PostScript data on various printer devices.

PPD

PostScript printer description.

Prefix lengths

Identify a range of IPv6 addresses that are on the same network.

preflight

To assess all resources for a job before the actual print run.

prepress

Work done in the print shop before printing a job, such as preparing data and art, page imposition, color retouching, electronic editing, and page layout.

print database

The set of files on disk that provide a permanent repository for the attributes of all print objects, such as logical destinations, queues, and actual destinations.

print job

Synonym for *job*.

Print Quality Enhancement (PQE)

A printer facility that provides edge smoothing along diagonal lines, fine fidelity protection, and independent boldness control.

Print Services Facility (PSF)

Any of several programs, including PSF for AIX, PSF/MVS, PSF/VM, and PSF/VSE, that produce printer commands from the data sent to them.

print system

A group of one or more print servers and one or more printing devices, which might or might not be located in the same geographical area. The components of a print system are assumed to be interconnected in some manner, providing at least one network interface to print clients, and acting synergistically to supply the defined document print service. (D)

printable document

In InfoPrint Manager, an object that represents text or data to be printed by a job. Contrast with *resource document*.

printer description file (PDF)

A file that contains options for printing PostScript data on a specific printer device.

printer device

The physical output device that performs the printing function. See also *physical printer*.

printer driver

A file that describes the physical characteristics of a printer or other peripheral device. This file is used to convert graphics and text into device-specific data at the time of printing or plotting. Synonymous with *device driver*.

priority

In InfoPrint Manager, a number assigned to a job that determines its precedence in being printed. Jobs with higher priority numbers are handled before jobs with lower priority numbers.

process color

Color made up of CMYK links simulating a specified color. This is the traditional method of reproducing continuous tone color images (color separations). Because of the nature of color inks, certain inks do not reproduce well.

processor

In a computer, a functional unit that interprets and executes instructions. A processor consists of at least an instruction control unit and an arithmetic and logic unit. (T)

promote

In InfoPrint Manager, the action used to move a job to the beginning of the queue so that it will print on the next available printer that can handle that job.

protocol

A set of semantic and syntactic rules that determines the behavior of functional units in achieving communication.

pSeries

A family of workstations and servers based on IBM's POWER architecture. They are primarily designed for running multi-user numerical computing applications that use the AIX operating system.

PSF

Print Services Facility.

PSF destination support system

In InfoPrint Manager, the destination support system that communicates with PSF for AIX to print jobs.

PSF physical printer

In InfoPrint Manager, the object representing a printer device that uses the PSF destination support system.

Q

queue

In InfoPrint Manager, an object that manages a collection of jobs that are waiting to print. A queue receives jobs from one or more logical destinations and sends jobs to one or more actual destinations.

A line or list formed by items waiting for processing.

R

raster

A pattern of dots defined at varying data depths. Black and white images are one-bit (on/off); grayscale images are 8-bit (256 levels); RGB images are 24-bit; CMYK images are 32-bit.

raster image processor (RIP)

A processor in which a PostScript data stream is converted into dot patterns that are transferred to the final print medium. InfoPrint Manager uses an Adobe RIP to convert PostScript to IPDS for such printers as the InfoPrint 4000.

rc.pd

In InfoPrint Manager, a utility used to start the InfoPrint Manager servers listed in the **/etc/pd.servers** file.

read-only

In InfoPrint Manager, describes an attribute value that cannot be set by the user but can change based on other activity.

ready

A state in which an object is ready and able to perform tasks.

An available resource, such as a value of the `media-ready` attribute. Contrast with *supported*.

red, green, blue (RGB)

The colors of CRT display phosphors. RGB images are for screen display only. They must be converted to CMYK images before printing.

registration

The accuracy of printing on paper relative to the edges of the paper.

The accuracy of printing a single color (cyan, magenta, or yellow) relative to black.

The accuracy of printing on one side of a page relative to printing on the reverse side of the page.

reprographics

The process of copying or duplicating documents or information.

requested

In InfoPrint Manager, pertaining to the specific values of attributes requested by a job when it is submitted. The requested attribute values of a job are validated against supported attribute values for an actual destination to determine if the printer can handle that job. Contrast with *supported*.

resettable attribute

An attribute whose value can be set or modified after an object has been created, assuming the object is in an appropriate state to be modified. See also *initially settable attribute*; contrast with *non-settable attribute*.

resource

In AFP, a file containing a collection of printing instructions used when printing a job. Resources include fonts, overlays, form definitions, page definitions, and page segments.

resource context

In InfoPrint Manager, an object that contains directory path information that helps the print system locate resources needed for printing a job. The resources include fonts, overlays, form definitions, page definitions, and page segments.

resource document

In InfoPrint Manager, an object that represents a resource, such as graphics or fonts, used by a job to print a printable document. Contrast with *printable document*.

resubmit

In InfoPrint Manager, an action used to reroute pending or retained jobs to a different logical destination than the one through which the job was originally submitted.

resume

In InfoPrint Manager, the action used to resume the printing of paused jobs or resume the distribution of jobs from paused servers or queues.

retained job

In InfoPrint Manager, an object that represents a job that is being stored in the print system for a specified amount of time, normally after the completion of printing the job. A retained job does not reside in a queue.

retention

The process of storing data after completion of a process for a certain length of time.

retrieval

The process of bringing digital archived data out of storage and into online memory for reuse. See also *archiving*.

RGB

Red, green, blue.

RIP

Raster image processor.

To convert data to dot patterns using a raster image processor.

root user

In the AIX environment, the system user with the most authority who can log in and execute restricted commands, shut down the system, and edit or delete protected files. Synonymous with *superuser*.

RPC

Remote Procedure Call.

RPM

Red Hat Package Management is the baseline package format of the Linux Standard Base distribution.

S

scanner

A device that converts hardcopy source data into digital format (halftone dots) to avoid retyping the data.

scheduler

In InfoPrint Manager, the scheduling method that the queue uses when assigning a job to an actual destination.

separator sheet

The sheet of paper, blank or otherwise, that separates documents in a job. See also *auxiliary sheet*.

server

In InfoPrint Manager, the object that accepts configuration, management, and printing requests, performs the requested operations, and sends responses back as a result of the operation.

settable attribute

See *initially settable attribute*, *resettable attribute*.

severity

An indication of how serious an error condition is.

shell

In the AIX operating system, a command interpreter that acts as an interface between the user and the operating system. In InfoPrint Manager documentation, all shell examples use the Korn shell.

shift-out, shift-in code

Control characters used to indicate the beginning and end of a string of double-byte, ideographic characters.

shortest-job-first

In InfoPrint Manager, a queuing technique where the next job assigned to the first position in the queue is the shortest job in the queue. Contrast with *deadline*, *FIFO (first-in-first-out)*, *job-priority*, and *longest-job-first*.

shut down

In InfoPrint Manager, the action used to halt all server or actual destination processes without deleting the server or actual destination.

signature

A group of pages that are printed, folded, cut, and bound together. Manual placement of pages in the signature is determined using a folding dummy.

simplex

In InfoPrint Manager, the value of the document or actual destination `plex` attribute indicating that output images are placed on the media in a head-to-head format, so that the top of one image is at the same edge as the top of the next image. Depending on the value of the document or actual destination `sides` attribute, the document can be printed on one or both sides of the paper. Contrast with *tumble*; see also *simplex printing* and *duplex printing*.

simplex printing

Printing on only one side of the paper. Contrast with *duplex printing (1)*.

Printing on one or both sides of the paper, placing output images on the media in a head-to-head format, so that the top of one image is at the same edge as the top of the next image. Contrast with *tumble duplex printing*; see also *duplex printing (2)*.

SMIT

System Management Interface Tool.

SNA

Systems Network Architecture.

spiral binding

A type of book binding in which wire or plastic coils are threaded through a series of holes or slots in the binding edge. Contrast with *edition binding*, *perfect binding*, and *wire-o binding*.

spot color

Individual colored inks formulated to exactly match a specified color. Spot color is used when CMYK process color cannot produce a reasonable facsimile of the color or when vivid color is needed. Spot color is also used when fluorescent or metallic colors are needed.

spread

In color printing, an area whose dimensions have been enlarged to eliminate white space between it and another color. Contrast with *choke*.

start sheet

The sheet of paper, blank or otherwise, that can precede a job. See also *auxiliary sheet*.

state

Synonym for *object state*.

stripping

The process of mechanically assembling film into plate layouts. Page imposition takes place during stripping.

subnet mask

Identify a range of IPv4 addresses that are on the same network.

subnetwork

Any group of nodes that have a set of common characteristics, such as the same network ID.

In the AIX operating system, one of a group of multiple logical divisions of another network, such as can be created by TCP/IP.

subtractive color system

A system that reproduces an image by mixing (adding) appropriate quantities of cyan, magenta, and yellow paints on white paper. These paints reflect certain colors and absorb—or subtract—others. Contrast with *additive color system*.

superuser

Synonym for *root user*.

supported

In InfoPrint Manager, pertaining to the specific job attribute values that the actual destination can accept during job validation. InfoPrint Manager validates the requested attribute values of the job against the supported attribute values of the actual destination to determine whether the actual destination can handle that job. Contrast with *requested*.

synchronous

Occurring with a regular or predictable time relationship to a specified action. Contrast with *asynchronous*.

system administrator

Synonym for *administrator*.

System Management Interface Tool (SMIT)

In the AIX operating system, an interface tool for installation, maintenance, configuration, and diagnostic tasks. SMIT lets you perform tasks without entering any commands.

Systems Network Architecture (SNA)

The description of IBM's logical structure, formats, protocols, and operational sequences for sending units through, and controlling the configuration and operation of, networks.

T

table reference character (TRC)

An optional control character in a print data set. The TRC identifies the font used to print the record and can be used to select a font during printing.

Tagged Image File Format (TIFF)

A digital format for storing scanned images. TIFF files are also referred to as raster format files (as opposed to vector format files). When used in desktop publishing, TIFF files produce only a low-resolution FPO image; the high-resolution data remains on the hard disk.

task help

A type of online help that provides a list of tasks that can be completed with a selected object. When you select a task, the help provides step-by-step information about how to complete the task.

TCP/IP

Transmission Control Protocol/Internet Protocol.

TCP/IP-attached printer

A printer device attached to an pSeries computer through telecommunication lines using the TCP/IP protocol.

In InfoPrint Manager, a PSF physical printer that represents a TCP/IP-attached printer device. See also *AIX-attached printer*, *direct-attached printer*, and *upload-TCP/IP-attached printer*.

template

In the InfoPrint Manager Administration GUI, an object that represents a set of default attribute values that has been defined for creating a particular type of object, such as an actual destination.

ticket

See *job ticket*.

TIFF

Tagged Image File Format.

Transmission Control Protocol/Internet Protocol (TCP/IP)

A set of communication rules used in the Internet and in any network that follows the U.S. Department of Defense standards for inter-network protocol. TCP provides a reliable host-to-host protocol between hosts in packet-switched communications networks and in interconnected systems of such networks. It assumes that the Internet Protocol (IP) is the underlying protocol. See also *Internet Protocol*.

trapping

In desktop publishing, the amount of overlap in overprinting colors. Trapping prevents white paper showing through gaps caused by normal errors in registration. On sheet-fed presses, trapping is usually 0.25 point. See also *choke* and *spread*.

TRC

Table Reference Character.

TrueType font (TTF)

A font format based on scalable outline technology with flexible hinting. Glyph shapes are based on quadratic curves. The font is described with a set of tables contained in a TrueType Font File.

TTF

TrueType font.

tumble

In InfoPrint Manager, the value of the document or actual destination **plex** attribute indicating that output images are placed on the media in a head-to-toe format, so that the top of one image is at the same edge as the bottom of the next image. The document must be printed on both sides of the paper. Contrast with *simplex*.

tumble duplex printing

Printing on both sides of the paper, placing output images on the media in a head-to-toe format, so that the top of one image is at the same edge as the bottom of the next image. Contrast with *simplex printing (2)*, *duplex printing (2)*.

U

UCR

Under color removal.

under color removal (UCR)

Conversion of neutral color areas to black ink that reduces use of CMY inks, improves trapping, and reduces setup time. Generally, UCR is performed during image scanning, but some RIPs perform it during processing. Synonymous with *gray component replacement (GCR)*.

unmanage

In the InfoPrint Manager Administration GUI, the action used to put an object into a mode where its icon does not reflect the changes of status for the object.

upload printer

See *upload-TCP/IP-attached printer*.

upload-TCP/IP-attached printer

In InfoPrint Manager, a PSF physical printer that represents a printer device attached through an MVS system and managed by PSF/MVS. InfoPrint Manager communicates with the MVS system through the TCP/IP network. See also *AIX-attached printer*, *direct-attached printer*, and *TCP/IP-attached printer*.

V

validate

In InfoPrint Manager, to compare the attribute values requested by a job with the supported attribute values of the actual destinations in the system and to determine whether there is an actual destination capable of printing or sending the job.

value

A specific characteristic of an attribute.

variable

A name used to represent a data item whose value can change while the program is running.

variable data

Data that can be changed between copies of a document. For example, a form letter (constant data) can be merged with variable data, such as a customer's name and address to produce personalized documents.

varnish

A protective layer applied to a finished sheet, usually for photos, but sometimes used as a design element because of its reflective qualities. Varnishes can be tinted.

vector

An absolute coordinate point and line in space. PostScript files can contain vector artwork. Vector files are converted to rasters during the RIP process.

velox

A black and white photographic print made from a halftone negative, to be used as a proof copy.

vignette

An image with soft, fade-away edges.

Virtual Machine (VM)

A product that manages the resources of a single computer so that multiple computing systems appear to exist.

A virtual data processing system that appears to be at the exclusive disposal of a particular user, but whose functions are accomplished by sharing the resources of a real data processing system. (T)

Virtual Storage Extended (VSE)

A program whose full name is the Virtual Storage Extended/Advanced Function. It is a software operating system controlling the execution of programs.

Visual Systems Management (VSM)

In AIX, a type of graphical user interface that allows system management through the direct manipulation of objects.

VM

Virtual Machine.

VSE

Virtual Storage Extended.

VSM

Visual Systems Management.

W

web

A roll of paper used in web or rotary printing.

well

In the InfoPrint Manager Administration GUI, an area in a pane that contains a group of objects related to the objects in the pane; for example, a queues well in a servers pane.

what you see is what you get (WYSIWYG)

Refers to the fact that the composite image displayed on the screen at a computer workstation has the appearance of the final printed image.

window

A rectangular area of the screen that you can move about, place on top of, or pull under other windows, or reduce to an icon.

wire-o binding

A continuous double series of wire loops run through punched slots along the binding side of a booklet. Contrast with *edition binding*, *perfect binding*, and *spiral binding*.

with-request

In InfoPrint Manager, a document transfer method where the client transfers the documents directly to the server. Contrast with *pipe-pull*.

workstation

A terminal or microcomputer, usually one that is connected to a mainframe or to a network, at which a user can use applications.

write access

A level of authorization that grants the ability to modify data.

WYSIWYG

What you see is what you get.

X

X-Windows

A network-transparent windowing system developed by MIT. It is the basis for Enhanced X-Windows, which runs on the AIX Operating System.

xerography

A dry printing process using corona-charged photoconductive surfaces to hold latent images that are developed with a dry toner and then transferred to paper and fused with heat.

Xstation

A terminal that is connected through a network to an pSeries computer, from which a user can perform command-line functions and run X-Windows based applications.

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