



## Getting Started

**Version 4.15.1**

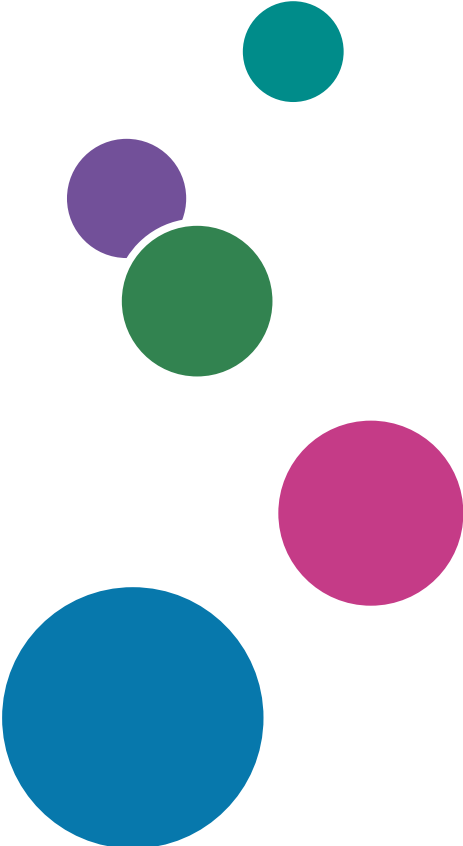
Getting started with server systems

1

Getting started with client systems

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





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## Introduction

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### Important

To the maximum extent permitted by applicable laws, in no event will the manufacturer be liable for any damages whatsoever arising out of failures of this product, losses of documents or data, or the use or non-use of this product and operation manuals provided with it.

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.

In no event will the manufacturer be responsible for any documents created by you using this product or any results from the data executed by you.

### Cautions regarding this guide

- Some illustrations or explanations in this guide could differ from your product due to improvement or change in the product.
- The contents of this document are subject to change without notice.
- No part of this document may be duplicated, replicated, reproduced in any form, modified, or quoted without prior consent of the supplier.
- 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

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- *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


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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**.

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## Displaying property help

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

## Symbols

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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

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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**

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resource access table

## **TIFF**

Tagged Image File Format

## **XML**

Extensible Markup Language

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- z/OS®

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# 1. Getting started with server systems

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- Preparing to install InfoPrint Manager software
- Installing InfoPrint Manager software server
- Managing InfoPrint Manager licensing
- The Windows Firewall
- Solving problems caused by antivirus software
- InfoPrint Manager User Interfaces
- Understanding printer drivers, port monitors, windows gateway printers, and passthrough printers
- Understanding InfoPrint Manager Security
- Understanding Destination Support Systems (DSS)
- Creating actual destinations
- Working with files larger than 2 gigabytes
- Preparing InfoPrint Manager to connect to your host system
- Synchronizing InfoPrint Manager with an InfoPrint 4000 or an InfoPrint 4100
- Printing a test job
- Understanding the LPD Gateway
- Understanding the Virtual Printer Gateway

## Preparing to install InfoPrint Manager software

Before you perform any of the steps documented in this publication, you must understand the general features and requirements of InfoPrint Manager for Windows. You can find this information in *RICOH InfoPrint Manager for Windows: Planning Guide*. Refer to this publication before proceeding with your installation.

You must do all network configuration before installing and configuring InfoPrint Manager. See [Configuring TCP/IP, p. 13](#) for procedures for TCP/IP configuration.

### ↓ Note

When you use InfoPrint Manager for Windows to drive one or more high-speed printers, performance can be improved if you install it in a separate partition, on a separate hard drive, or with a SCSI drive.

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## Configuring TCP/IP

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You might need to configure your Windows system to communicate with other computers or printers on one or more networks. These worksheets are designed to help you with this configuration.

## Planning for a LAN connection

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First, connect your Windows systems to your local area network (LAN). You can do this task when you install Windows or after you finish the installation. In either case, you might find it useful to complete this worksheet ahead of time for each system that is new to your LAN.

## LAN TCP/IP configuration worksheet

Control Panel Prompt	Description	Value
Computer Name	The (NetBIOS) name of this computer on the Windows network.	
Domain/Workgroup	The group of Windows computers to which this computer belongs.	
Adapter	The physical card used to connect this system to the network. An appropriate driver for this card might need to be added.	
Obtain IP address from DHCP server?	The Dynamic Host Configuration Protocol (DHCP) provides a new IP address for this system each time it is restarted. If DHCP is not in use, a static IP address must be assigned.	<p>__ yes __ no</p> <p> <b>Note</b></p> <p>It is strongly recommended that you specify <b>no</b> for DHCP.</p>
IP Address	An IPv4 address (for example, 9.99.178.17) statically assigned to this system. Not needed if DHCP is in use.	
Subnet Mask (IPv4)	Identify a range of IP addresses that are on the same network. Not needed if DHCP is in use.	
Subnet Prefix Length (IPv6)		
Default Gateway	The system used by default to allow this network to communicate with other networks. Not needed if DHCP is in use.	
DNS Host Name	The (Internet) name of this system recognized by the Domain Name System (DNS). If possible, this name should be the same as the Windows computer name.	
DNS Domain	The Internet domain to which this computer belongs.	
DNS Service Search Order	An ordered list of IP addresses of DNS servers. These systems are queried to resolve Internet names into IP addresses.	
Domain Suffix Search Order	An ordered list of TCP/IP domains to search for a given host name.	

Control Panel Prompt	Description	Value
Primary WINS Server	The first Windows Internet Name Service (WINS) system to query to resolve a Windows (NetBIOS) system name into an IP address.	
Secondary WINS Server	The second WINS system to query.	
Enable DNS for Windows Resolution?	DNS can be used to resolve Windows (NetBIOS) names into IP addresses.	__ yes __ no
Enable LMHOSTS Lookup?	LMHOSTS files statically associate Windows system names to IP addresses.	__ yes __ no
Scope ID	The set of IP addresses assignable for a Windows domain is called a <i>scope</i> .	
Enable IP Forwarding?	IP Forwarding allows data to be forwarded on a multi-homed system.	__ yes __ no

## Planning for a printer network connection

You might want to create a separate network of printers with higher bandwidth connectivity. In this case, you must configure an additional network adapter on each InfoPrint Manager server system that controls printers on the independent printer network. Use this worksheet to assist in this configuration. For additional information about setting up a separate printer network, see "Using Multiple Network Adapter Cards" in the *RICOH InfoPrint Manager for Windows: Procedures*.

### Printer Network TCP/IP configuration worksheet

Control Panel Prompt	Description	Value
Adapter	The physical card used to connect this system to the printer network. An appropriate driver for this card might need to be added.	
IP Address	A dotted-decimal address (for example, 9.99.178.17) statically assigned to this system on the printer network. Required for printer network participation.	

Control Panel Prompt	Description	Value
Subnet Mask	A dotted-decimal number (for example, 255.255.255.0) indicating which part of the IP address identifies the network and which part identifies the system. Required for printer network participation.	
Default Gateway	The printer network should not require communication with another network. All communication with the printers is mediated by InfoPrint Manager.	none

## Server software prerequisites

You can find information on the server software prerequisites in the “Verifying prerequisites” chapter of *RICOH InfoPrint Manager for Windows: Planning Guide*.

### Note

InfoPrint Manager supports English, French, German, Italian, Spanish, and Japanese.

## Before upgrading to the latest InfoPrint Manager version

If you are upgrading from an older version of InfoPrint Manager, it is **strongly** recommended that you back up your InfoPrint Manager for Windows install directories, any directories that have been moved out from under the install directory since the initial installation of the product, and the Windows registry. Directories that have been moved out from under the install directory can be identified through the InfoPrint Manager Management Console (**Start** → **Programs** → **InfoPrint Manager** → **Management Console**). From the Management Console, go to **Edit** → **Service Configuration**. Check all paths listed on the displayed panel to determine if any are not in the base install directory. Make note of any paths that are not in the base install directory.

This backup is required to remove the new version from your system and restore InfoPrint Manager to its previous state.

### Note

We suggest that you test the upgrade on a non-commercial system before installing it in a commercial environment.

## Creating a backup of your InfoPrint Manager for Windows install directories

To back up your system, complete these steps:

1. Stop job submissions to the InfoPrint Manager server from all of your locations.
2. Complete printing all jobs, if possible, or delete them.
3. Close the InfoPrint Manager Administration and Operations GUIs, including those on your remote systems, if they are open.
4. Shut down the InfoPrint Manager Server. Using the InfoPrint Manager Management Console, go to **File** → **Stop Server**.
5. Clean up segment files. Using the InfoPrint Manager Management Console, go to **Debug** → **Clean Up Leftover Input Manager Files**, and close the Management Console.
6. Use your local backup procedures to back up the install directories, any directories that have been moved out from under the install directories, and the Windows registry. This key and sub-keys **must be restorable**: HKEY\_LOCAL\_MACHINE\SOFTWARE\RICOH\Infoprint Manager.

#### ↓ Note

In a multi-server environment, all servers must be backed up and upgraded at the same time, including AIX servers.

## After upgrading to the latest version of InfoPrint Manager

Once you have completed the installation, you can update your transform configuration files and upgrade any desired optional features.

### The lpdmap.txt and vpdmap.txt files

InfoPrint Manager for Windows now includes the lpdmap.txt file that is installed in `<workspace_path>\lpd` and the vpdmap.txt file that is installed in `<workspace_path>\vpd`. Before installing the files, InfoPrint Manager creates backup copies of the existing files. If you have modified your version, you need to merge the changes from the backup copies into the newly installed files.

### Updating transform configuration files

As part of the install process, your existing transform configuration files and user exits are automatically zipped and backed up into the path `<install path>\var\pdbk\ipm.bak_MM-DD-YYYY.zip`.

- C:\Program Files\RICOH\Infoprint Manager\pcl2afp\pcl2afp.cfg
- C:\Program Files\RICOH\Infoprint Manager\pcl2afp\pcl2afpd.cfg
- C:\Program Files\RICOH\Infoprint Manager\ps2afp\ps2afp.cfg
- C:\Program Files\RICOH\Infoprint Manager\ps2afp\ps2afpd.cfg
- C:\Program Files\RICOH\Infoprint Manager\ps2afp\3160d.cfg

After installing the latest InfoPrint Manager version, you can edit the newly-installed files to add your customized changes into the new configuration files that reside in the installation directory.

**Note**

Because the new configuration files might have different source material, you should not copy the backed-up files over the new configuration files.

## 1

## Upgrading optional InfoPrint Manager features

Any optional features of earlier InfoPrint Manager versions that are installed on the system are removed when the base server software is upgraded to the latest version. This is done because optional features of earlier versions might be incompatible with the latest InfoPrint Manager server version. The use of previous version options with the latest server version is not supported. To load the latest version options, insert the DVD-ROMs containing features that you want to install.

**Important**

The previous versions of InfoPrint Manager for Windows require the User Account Control (UAC) to be turned off. If you have upgraded InfoPrint Manager to the latest version and you want to use the InfoPrint Manager software with the UAC turned on, contact your local service representative.

## Preparing to reinstall

At some point, you might need to reinstall InfoPrint Manager. You might be upgrading to a new version or reinstalling the current version because of a problem. Try to install *without* uninstalling first, so that your configuration information is not lost. If that does not work, uninstall and reinstall using the same installation directory. When you do, the objects you created will still exist, but any post-installation configuration, especially in multi-server environments, will probably be lost.

**Note**

1. You must have **Administrative Privilege** to install or uninstall InfoPrint Manager for Windows. If you try to uninstall the product without administrative privilege, this message is issued:

Setup Installation Error: Setup has detected Uninstallshield is in use, please close Uninstallshield and restart setup (Error 432).

A similar message is issued at install if you do not have administrative privilege.

2. You must use the same user ID to reinstall InfoPrint Manager for Windows as was used to install it initially.
3. Be sure to close the InfoPrint Manager Administration GUI, the InfoPrint Manager Operations GUI, and the InfoPrint Manager Management Console before installing any service update or reinstalling InfoPrint Manager to avoid problems with files that need to be replaced.

# Installing InfoPrint Manager software server

## Start here for a new installation

This section describes how to complete an installation of the InfoPrint Manager product. If you are upgrading from an older InfoPrint Manager version, begin by first following the instructions in: [Before upgrading to the latest InfoPrint Manager version, p. 16](#) Return to this section after you have completed those instructions.

The InfoPrint Manager Installer lets you install InfoPrint Manager for Windows and the combination of features that meet the needs of your print environment.

After purchasing the product and feature licenses that you have chosen, Ricoh sends an email with EMS - Entitlement Certificate in the subject line to the email address provided when the order was placed. This email contains your **Entitlement ID (EID)**. The EID is only used to identify what you have purchased.

To get the fingerprint of the system where you plan to install InfoPrint Manager, before you start the installation you can run the `getfingerprint.exe` utility available on the root of the base product DVD-ROM or ISO. InfoPrint Manager is automatically installed in **trial mode** on your server.

## How to Generate and Download the Product License Key

1. To get the fingerprint for the machine where you are about to install InfoPrint Manager, log in to the server using the Administrator user.
2. Double-click **getfingerprint.exe** available on the DVD-ROM or ISO of the product and your system fingerprint is displayed.
3. Open the EMS - Entitlement Certificate email and find the EID.
4. Go to the Ricoh Production Print Software website <https://dl.ricohsoftware.com> and click the **Software Activation** button.
5. Type or paste the EID into the **Enter your EID** field.
6. Type or paste the server fingerprint into the **Enter your System Fingerprint** field. Make sure to include the asterisk (\*) at the beginning of the system fingerprint.
7. Click **Confirm Content**. The **Activation Content Confirmation** dialog is displayed.
8. Click **Activate**. The **Activation confirmed** dialog is displayed. The license key has been generated and sent in a file to the email address provided when the purchasing order was placed.

### ↓ Note

If you see an error message that the license could not be generated because checksum validation failed, you entered an incorrect system fingerprint.

9. If you want the license key file to be sent to a different email address, click **Email License Key**. Then type the email address and click **Send**.
10. If you want to download the license key file to your computer, click **Download License Key**.

11. If you want to copy the license key, click **Copy License Key to Clipboard**.
12. Retrieve the license key file from the email (or from your computer) and transfer it to the server.
13. Give the license key file a name that identifies your server.
14. Store the license key file in a convenient location.

You can now proceed to install the license.

1. To install the license with the License Key Management Application (LKMA), see [Managing licenses using the License Key Management Application \(LKMA\)](#), p. 29.
2. To install the license with the Web Management Interface (WMI), see [Managing licenses using the InfoPrint Manager Web Management Interface \(WMI\)](#), p. 31.

#### ★ Important

- You must always check that the license key you download matches the current server version and release. For example, if you have installed an older version but a new license code is available for the latest version, the new license code does not apply to the older version already installed.
- Make sure that you keep a list of EIDs you own and the servers that correspond to these EIDs.
- Not all supplied keys actually unlock specific features. Many keys are supply order features that are used for other purposes.
- Maintenance upgrade licenses purchased after the expiry of the initial one year software maintenance are shipped without any keys to unlock the base version. You must install keys from both EIDs on all systems to extend the Maintenance license.

Information about updates to this release of InfoPrint Manager is available online, where it is updated as necessary. The *RICOH InfoPrint Manager for Windows: Base Server* DVD-ROM or ISO file contains a version of this documentation, but for the most recent information about InfoPrint Manager, go to the RICOH Software Information Center at <https://help.riohsoftware.com/swinfocenter>.

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## Preparing to use the InfoPrint Manager Installer

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Before mounting your DVD-ROM, make sure that you have this information available to reference as you install InfoPrint Manager for Windows:

1. Important configuration information such as:
  - Approximate disk space that is available. If you plan to process numerous large print jobs, you might want to consider increasing the size of the allocated disk space during the installation.
  - Features, if any, that you will be installing.
  - If this will be a secondary server, you will need the name of the primary server.
  - How many printers will this configuration support?
  - What are the speeds of the printers that this configuration will support: high, medium, or low?
2. The invoice shipped with your software or package list.
3. The Entitlement ID, fingerprint, and the license key file received by e-mail or downloaded. The license key file can be generated using the self-service website. For more information about the

Entitlement ID and license keys, see [How to Generate and Download the Product License Key](#), p. 19.

4. The completed communications worksheet that you received from your service representative.

## Installing InfoPrint Manager

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These are the steps for the initial installation of InfoPrint Manager for Windows on your server. For instructions on applying service, see [Installing service updates for InfoPrint Manager clients](#), p. 27.

1. Log in as the Administrator user. You must have **Administrative Privilege** to install or uninstall InfoPrint Manager for Windows.
2. Disable your antivirus software. Installing InfoPrint Manager for Windows on a system running an antivirus software is not recommended.  
If your IT department does not let you disable antivirus software, set up exceptions within your antivirus software for these paths:
  - C:\Program Files\Ricoh\InfoPrint Manager
  - C:\ProgramData\RICOH
3. If you have the installation DVD-ROM, insert the *RICOH InfoPrint Manager for Windows: Base Server* DVD-ROM, LCD4-5659, into your DVD-ROM drive. The install program starts automatically. You can select to view a readme file before starting the install.

If you have the installation .iso file, double-click it and then double-click the `setup.html` file.

### Note

If your install program does not start automatically or if your browser stops responding:

- 1) Select **Start ->Run**.
- 2) Enter `E:\setup.html`, where E is your DVD-ROM drive.
- 3) Click **OK**.
4. Click **Install RICOH InfoPrint Manager™ server** and choose the destination for **InfoPrintManager.exe**.
5. Go to the location of **InfoPrintManager.exe** and double-click it.
6. In the **InstallShield Wizard for InfoPrint Manager** dialog, click **Next**.
7. In the **License Agreement** dialog, select **I accept the terms of the license agreement** and click **Next**.
8. In the **Software Maintenance Agreement** dialog, select **I accept the terms of the license agreement** and click **Next**.
9. In the **Select Options** dialog, choose between **Standard** and **HA** installation and then click **Next**.
  - If you choose **Standard** installation, InfoPrint Manager installs on a standalone Windows Server.
  - If you choose **HA** installation, InfoPrint Manager installs on a Windows Server Cluster for High Availability.

- If you choose **HA primary**, InfoPrint Manager installs on the primary node.
- If you choose **HA failover**, InfoPrint Manager installs on any of the secondary nodes.

For more information, see *RICOH InfoPrint Manager: High Availability Guidelines*.

10. In the **Choose Destination Location** dialog, select the folder where Setup will install the files and then click **Next**.
11. In the **Select Program Folder** dialog, click **Next**. The License Key Management Application is being installed.
12. Select the feature or features you want to install with *RICOH InfoPrint Manager for Windows: Base Server* and then click **Next**.

These features are available to be installed with the *RICOH InfoPrint Manager for Windows: Base Server* installer:

- InfoPrint Manager AFP2PDF Feature
- InfoPrint Manager SAP Print Feature
- InfoPrint Manager Pull Print Feature

**Note**

These features are available on separate DVD-ROMs and can be installed if you purchase a feature license:

- InfoPrint Manager PPFA Feature
- InfoPrint Manager 4247 Feature

13. In the **Ready to Install the Program** dialog, click **Install** if you are ready to begin installation. If your installation program does not respond, close all other applications, restart your system, and install the program again.

**Note**

Do not use special characters in the destination directory name.

14. After you have installed InfoPrint Manager for Windows, the installation program asks to reboot your system. The default is **Yes** because InfoPrint Manager does not function properly until the system is rebooted. When you click **Finish** or press **Enter**, your system reboots, and the InfoPrint Manager service starts automatically.
15. If you are installing optional features, see [Installing optional features on an InfoPrint Manager system, p. 25](#) for instructions.
16. Install the most recent service update if appropriate. Refer to [Accessing the latest information and fixes, p. 26](#) for information and instructions about where to find product updates. Then follow the installation steps in [Installing service updates for InfoPrint Manager clients, p. 27](#).

These software components are now installed on your system:

- InfoPrint Manager server
- InfoPrint Manager Management Console
- InfoPrint Manager Administration GUI
- InfoPrint Manager Operations GUI
- InfoPrint Notifications Server

- InfoPrint TCP/IP Network Port Monitor
- InfoPrint Manager LPD service
- InfoPrint Manager Web Interface
- InfoPrint Manager Web Server
- MVS Download

#### ★ Important

The InfoPrint Manager installation program creates a new local user account used for service account login. The default user starting InfoPrint Manager is **ipm1** with the following user rights set by the InfoPrint Manager installation program: **Act as part of the operating system**, **Create permanent shared objects**, and **Log on as a service**. The **ipm1** user account is part of the **Administrators** group and the default password is **Inf0PrintManager**.

We strongly recommend that you verify the connection from your InfoPrint Manager for Windows server system to an actual destination. To do this, you must first create an actual destination as described in [Creating actual destinations, p. 71](#).

## Installing on non-English operating systems

InfoPrint Manager for Windows detects what language your operating system runs in by checking the Regional Settings of your system. When possible, message files, such as server and destination log messages and error messages, that match that language are loaded. When the messages are not available in the same language, English message files are installed. However, if non-English message files are installed and you change the Regional Settings to English (U.S.), you will receive some, but not all, of your messages in English. We recommend that you do not change the Regional Settings after you have installed InfoPrint Manager.

#### ↓ Note

- To display the correct characters in the Windows command prompt terminal for supported West European languages (French, Italian, German, Spanish), change the code page **850** to code page **1252**. To determine the current code page from the command prompt, use the **chcp** command (without any parameter). To change the terminal code page to **1252**, run the command **chcp 1252**.

## Running InfoPrint Manager with double-byte languages

If you want to run InfoPrint Manager with a double-byte language, you must configure your multi-lingual system so that the double-byte language is the default language.

## Specifying your language for the InfoPrint Manager server with a Windows Multi-Language Version system

Use this procedure to specify your country's language for the InfoPrint Manager Server when you are using a Windows Multi-Language Version (MLV) System:

1. On the system that your InfoPrint Manager Server runs on, open the InfoPrint Manager Management Console and select **File** → **Stop Server**.

**Note**

To start the InfoPrint Manager Management Console, open the **Start** menu and click **Programs** → **InfoPrint Manager** → **Management Console**.

2. Set up a new domain user account that the InfoPrint Manager service will run under:
  1. Log on to the domain that InfoPrint Manager operates in as a domain administrator.
  2. Use **User Manager for Domains** to create a domain user account that InfoPrint Manager will run under.

**Important**

Make the user a member of the **Domain Administrators** group and change the user's primary group from **Domain Users** to **Domain Administrators**. It is recommended that you select **Password never expires** so you do not have to change the password and update all of your servers on a regular basis.

3. Give the domain user these user rights: **Act as part of the operating system**, **Create permanent shared objects**, and **Log on as a service**.
3. Log off the domain.
4. Grant the same user rights to the new domain user on the system that InfoPrint Manager is installed on:
  1. Log on the system that the InfoPrint Manager is installed on as a user who is a member of the **Domain Administrators** group.
  2. Use the local **User Manager** to give the domain user that you created in step 2 these user rights on that system: **Act as part of the operating system**, **Create permanent shared objects**, and **Log on as a service**.
5. Log off the system.
6. Change the regional settings for the new domain user to the appropriate language:
  1. Log on the system as the domain user you created above.
  2. Select **Start** → **Settings** → **Control Panel**.
  3. Double-click **Regional Settings**.
  4. Select the appropriate language.
  5. Click **OK**.
7. Log off the system.
8. Log on as a user who is a member of the **Administrators** group for that system and complete these steps:
  1. Open the InfoPrint Manager Management Console and select **Edit** → **Service Account/Domain**.
  2. Enter the name of the domain that the InfoPrint Manager is installed on and the user name and password from above.
  3. Click **OK**.

9. On the system that your InfoPrint Manager Server runs on, open the InfoPrint Manager Management Console and select **File** → **Start Server**.

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## Uninstalling InfoPrint Manager for Windows

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To remove InfoPrint Manager from a system:

1. Determine all directory paths where the product is installed under:
  1. Click the Windows **Start** button and select **Programs** → **InfoPrint Manager** → **Management Console** to start InfoPrint Manager Management Console.
  2. In the Management Console, click **Edit** → **Service Configuration**.
  3. Note all paths listed on the displayed panel to determine all path where the product was installed.
  4. To find the path where the IJT working directory is located, go to %ALLUSERSPROFILE%\RICOH\Infoprint Manager\ipmws\ and open the setenv.bat file using a text editor. The path is associated with the **IJT\_WORKDIRECTORY** variable.
  5. Note as well the following directory %ALLUSERSPROFILE%\RICOH\Infoprint Manager\.
  6. Make list of all paths locations identified in the steps above.
2. Uninstall the product:
  1. Click the Windows **Start** button and select **Settings** → **Control Panel**.
  2. Double-click **Add or Remove Programs**.
  3. Select **InfoPrint Manager for Windows**.
  4. Click **Remove** and follow all instructions as directed.
3. Restart the computer.
4. Delete all directories from the paths locations listed on step 1.6).

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## Installing InfoPrint Transform Manager Feature

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For more information on the installation procedure, go to "Installing and logging in to InfoPrint Manager Transform Feature " in *Installing InfoPrint Manager Transform Feature, G550-20160*.

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## Installing optional features on an InfoPrint Manager system

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After installing InfoPrint Manager on your server, you can install additional optional features, such as the PPF A Feature. Each feature DVD has an installation program similar to the InfoPrint Manager server installer. Insert the appropriate InfoPrint Manager for Windows feature DVD into the DVD-ROM drive. The install program starts automatically; follow the instructions to complete the installation.

If you have already installed a service update to InfoPrint Manager and you are now installing a non-triable optional feature, install it from the DVD-ROM for that feature first, and then install the service update for the feature from the DVD-ROM.

## 1 Accessing the latest information and fixes

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You can find download fixes for InfoPrint Manager for Windows on the RICOH website at <https://dl.ricohsoftware.com/>.

You can find updated documentation for InfoPrint Manager for Windows in the RICOH Software Information Center at <https://help.ricohsoftware.com/swinfocenter>.

In order to obtain additional support for InfoPrint Manager for Windows, you need to purchase a support contract. Please contact your local marketing team for more information about how to obtain this support. Terms and conditions for support vary by country and geography.

If you are in the U.S., you can call 1-888-426-4343 to set up a SupportLine contract for InfoPrint Manager for Windows. After a SupportLine contract is established, you can request technical assistance by calling 1-800-237-5511. When you call this number, you will be asked to provide your customer number, operating system, name of the failing product (InfoPrint Manager for Windows), and a brief description of the problem. Please have this information available when you place a call for technical assistance.

## Installing service updates for InfoPrint Manager and optional features

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Before installing any service update, it is **strongly** recommended that you back up your InfoPrint Manager for Windows install directories, any directories that have been moved out from under the install directory since the initial installation of the product, and the Windows registry. Refer to [Creating a backup of your InfoPrint Manager for Windows install directories](#), p. 16 for a description of the steps involved in backing up your system.

Follow these steps to install a service update to the InfoPrint Manager server:

1. Log in as the Administrator user.
2. Insert the *InfoPrint Manager for Windows* service update DVD-ROM into your DVD-ROM drive. The install program will start automatically.
3. Click Install InfoPrint Manager server.
4. The license agreement displays. Read the license agreement and then click **Accept**.
5. Follow the instructions on the installation screens to install the update. The destination directory and other necessary settings will be obtained automatically based on your initial installation.

### Note

The service update install program might ask to update additional features at this time. If you click **Yes** to continue, you can follow the window prompts to install the updates when the features install are complete, the InfoPrint Manager service update installation resumes. If you choose not to install the update at this time, you can install it later from the main installation menu on the DVD.

6. After you have installed InfoPrint Manager for Windows, the installation program asks to reboot your system. The default answer to this question is **Yes** because InfoPrint Manager will not function properly until the system is rebooted. When you click **OK** or press **Enter**, your system reboots, and the InfoPrint Manager service will start automatically.

To access all changes as they are released in service updates, make sure that the InfoPrint Manager server is at the same level or at a higher level of service than the InfoPrint Manager Administration GUI and the InfoPrint Manager Operations GUI. Otherwise, you might receive error messages like: 5010-625 Cannot recognize attribute. . . . For this to occur, the InfoPrint Manager Administration GUI or the InfoPrint Manager Operations GUI would have to be running on a different workstation than the InfoPrint Manager server. This might occur if you install a new version of a GUI on a workstation and point to a downlevel InfoPrint Manager server.

To install a service update to the PPFA Feature or the SAP Print or the Pad Features:

1. Log in as the Administrator user.
2. Insert the *InfoPrint Manager for Windows* service update DVD-ROM into your DVD-ROM drive. The install program will start automatically.
3. Select **Product Feature Updates** button.
4. Select the feature you want to update and follow the instructions on the installation screens. The destination directory and other necessary settings will be obtained automatically based on your initial installation.

## Installing service updates for InfoPrint Manager clients

To install a service update to an InfoPrint Manager client component:

1. Insert the *RICOH InfoPrint Manager: Common Clients* service update DVD-ROM, into your DVD-ROM drive. The install program starts automatically.
2. Select the client program you want to update.
3. Follow the instructions on the installation screens to install the update. The destination directory and other necessary settings will be obtained automatically based on your initial installation.

## Uninstalling a service update

To remove a service update from a system and restore InfoPrint Manager to an unconfigured state, follow these steps:

1. Determine if any directories have been moved out from under the install directory since the initial installation. You can do this through the InfoPrint Manager Management Console (**Start** → **Programs** → **InfoPrint Manager** → **Management Console**). From the Management Console, go to **Edit** → **Service Configuration**. Check all paths listed on the displayed panel to determine if any are not in the base install directory. Make note of any paths that are not in the base install directory.
2. Uninstall the product. Go to **Start** → **Programs** → **InfoPrint Manager** → **Uninstall InfoPrint Manager**. Follow all instructions as directed.

3. Restart the computer.
4. Delete the install directory. If any directories were moved out from under the InfoPrint Manager install directory (as identified in step 1), delete those as well.
5. Install the InfoPrint Manager product. Follow the directions as specified.
6. Install any required service update to get the product to the desired level.

## Managing InfoPrint Manager licensing

You can use the License Key Management Application (LKMA) or the InfoPrint Manager Web Management Interface (WMI) to manage InfoPrint Manager licenses.

There are several license types available for InfoPrint Manager:

### Trial

The trial license expires after 60 days from the installation of InfoPrint Manager.

#### Note

- For more information about the trial license, see the "InfoPrint Manager Electronic Software Distribution" topic in *RICOH InfoPrint Manager for Windows: Planning Guide*.

### Perpetual

The perpetual license grants unlimited usage with no expiration.

### Subscription

The subscription license is valid for a specific period.

### Maintenance

The maintenance license expires after 1, 2, 3, 4, or 5 years, depending on which license you purchase.

### Enterprise

The enterprise license lets you to make multiple installations on different machines using the same license key. To find out if you are eligible for the enterprise license, contact your Ricoh representative.

**Note**

1. The initial purchase of the InfoPrint Manager product gives you a free one year maintenance license. Under normal circumstances for a purchased product, you receive a perpetual plus one year maintenance license.
2. The subscription license automatically includes a corresponding maintenance license for the same validity period.
3. If you have a perpetual license and the system fingerprint used for generating a license key is changed, the InfoPrint Manager software continues to run in grace mode for a period of 7 days. You must contact your Ricoh representative to receive a new license key before the period expires, otherwise the InfoPrint Manager software stops running on your system when the grace period ends.
4. If you make changes to the system configuration of the InfoPrint Manager host that could affect the system fingerprint, you must first stop all the processes related to InfoPrint Manager.
5. InfoPrint Manager does not check for feature maintenance keys at runtime.

## Managing licenses using the License Key Management Application (LKMA)

The License Key Management Application (LKMA) comes with the InfoPrint Manager base installation and handles the license types for your InfoPrint Manager server software. You can select or switch between the license types available using the License Key Management Application.

**Important**

If the UAC is turned on, you can add new licenses using the License Key Management Application only when using the "Run as Administrator" option. To do this, right-click on the application icon and select "Run as Administrator".

## Using the License Key Management Application

You can use the License Key Management Application (LKMA) to install, register, or delete InfoPrint Manager licenses.

**To install or register a license:**

1. Double-click the License Key Management Application icon on your desktop.
2. From the **InfoPrint Manager Licenses** main window, click **Add...**
3. Choose which type of license you want to use for your installation and then click **Next**.
  - You can choose to try the product, which will run in trial mode for the period shown (60 days). To continue using the product after the trial period, purchase a license before the trial expires.
  - You can choose to register your product manually using the self-service website.

↓ **Note**

- 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. Thus renewed maintenance licenses can be installed without manually deleting previously installed licenses. Always make sure you install a valid license for you product.

4. The next screen displays the **License Agreement**. Select **I accept the terms of the license agreement** and click **Next**.

5. Depending on the type of license you selected, there are two possibilities:

1) If you selected the trial license, choose the trial license file you want to install.

2) If you selected to register your purchased license, complete the following steps:

- From the **Register manually using the self-service website** dialog, go to the self-service website <https://dl.ricohsoftware.com>.
- Click **Software Activation** and follow the prompts to obtain your license key. Use the **Entitlement ID** from your invoice and the **System fingerprint** from the dialog.

↓ **Note**

If the system fingerprint used for generating a license key is changed, the InfoPrint Manager software continues to run in grace mode for a period of 7 days. You must contact your Ricoh representative to receive a new license key before the period expires, otherwise the InfoPrint Manager software will stop running on this system when the grace period ends.

- Return to the **Register manually using the self-service website** dialog and click **Browse** to select the folder where the **License key** was saved after you received it by e-mail or downloaded it from the self-service website.
- Select the **License key** file and click **Open** to upload it.

6. Click **Next** or **Register** to display the next screen.

1) If you select **Register**, the following message appears:

- **Registration successful** if the registration process was successful.
- **Registration failed** if the registration process failed.

If the registration process was successful, click **OK**. If the registration process failed, a pop-up message is displayed to indicate why the registration failed.

↓ **Note**

If the license management application fails to install the license, the InfoPrint Manager Installer will not proceed with the installation.

### To delete a license:

1. From the **Licence Key Management Application for InfoPrint Manager** main window, click **Delete...**
2. In the dialog box, select **yes** to delete the license or **no** to preserve it.

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## Using the License Key Management Application from command line

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You can access the License Key Management Application (LKMA) from the command line using the **pdlicmgm** command. For more information, see *RICOH InfoPrint Manager: Reference*.

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## Managing licenses using the InfoPrint Manager Web Management Interface (WMI)

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You can install, delete, or revoke InfoPrint Manager licenses using the Web Management Interface.

For more information on starting and configuring the Web Management Interface, see [Setting up the InfoPrint Manager Web Management Interface](#), p. 113.

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## Installing licenses using the InfoPrint Manager Web Management Interface

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You can install InfoPrint Manager licenses using the Web Management Interface.

To install a license:

1. Click the **Configuration** tab in the left panel and select **Licenses**.
2. Click the **Install licenses** button.
3. Complete the five steps in the **Install licenses** dialog to install a license key.
4. Click **Done**.

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## Deleting licenses using the InfoPrint Manager Web Management Interface

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You can delete installed InfoPrint Manager licenses using the Web Management Interface.

To delete installed licenses:

1. Click the **Configuration** tab in the left panel and select **Licenses**.
2. To find a specific license in the list, enter at least three characters of its name in the **Filter by** box, then click the **Filter** button.
3. Right-click the license and select **Delete**.
4. To delete multiple licenses:
  1. Select the checkbox next to each license you want to delete.
  2. Right-click the selection and choose **Delete**.
5. To delete all licenses:
  1. Select the checkbox at the top of the list.
  2. Right-click the selection and choose **Delete**.
6. In the **Confirm delete** dialog, click **OK**.

## Revoking licenses using the InfoPrint Manager Web Management Interface

You can revoke sets of InfoPrint Manager license keys that share the same Activation ID (AID) using the Web Management Interface.

To revoke license keys:

1. Click the **Configuration** tab in the left panel and select **Licenses**.
2. Right-click the AID you want to revoke and select **Revoke activation**.
3. Complete the steps in the **Revoke activation** dialog.
4. Click **Done**.

### ↓ Note

- You can also revoke your licenses using the Self-service License Key Revoke System (SSR). For more information, see [Revoking the License Key using the Self-Service License Key Revoke System \(SSR\)](#), p. 32.

## Revoking the License Key using the Self-Service License Key Revoke System (SSR)

The Self-Service License Key Revoke System (SSR) is designed to permit Ricoh customers a method to move license keys between systems and recover from system failures. If you must revoke more than 2 keys from the same EID, contact your local Ricoh Support team for assistance.

To revoke the license key:

1. Go to <https://dl.ricohsoftware.com/>.
2. Click the **Self-Service Revoke** button.
3. Select one of the 3 available revoke methods from the **Revoke By** list:

### Entitlement ID (EID)

The EID that you must revoke for the software reporting a license violation condition.

### Activation ID (AID)

The AID is necessary when you only must revoke a single set of keys for 1 EID. For example, if you accidentally activated using the wrong system fingerprint and have the AID string available.

### License Key File Upload (license.key file or lservrc file)

Best general-purpose option for resetting all EIDs installed for a specific product on a given server. You can select a **license.key** file or **lservrc** file.

4. Depending on your selection from the **Revoke By** list, enter the EID, AID, or upload the key file in the **Enter your EID**, **Enter your AID**, or **Upload Your License File (Max file size, 2 MB)** fields.
5. Enter your company name in the **Company Name** field. Make sure to use the same the company name used in the original EID email.

6. To receive the revoke details, enter your valid business email address in the **Business Email Address** field.
7. Agree that you have removed any infringing copies of the software and are compliant with product licensing terms.
8. Click **Submit**.

After 30 seconds, you receive a notification on the website. If your request could not be approved automatically and requires review, you receive an email from the reviewer within the next few business days.

#### ↓ Note

- Depending on the network speed or processing time, it might take up to 90 seconds to receive the notification.
- Do not resubmit your revoke request if you have already received a notification that the request has been denied or is pending approval. Submitting duplicate requests might delay the approval process and increase the time required for license status resolution.
- You can also revoke your license key using the InfoPrint Manager Web Management Interface. For more information, see [Revoking licenses using the InfoPrint Manager Web Management Interface](#), p. 32.

## The Windows Firewall

The Windows operating systems include a Windows Firewall that provides a protective boundary that monitors and restricts information that travels between your computer and a network or the Internet. This provides a line of defense against someone who might try to access your computer from outside the Windows Firewall without your permission. Windows Firewall considers an “unsolicited request” any try to connect to your computer from the Internet or from the network. Every time your computer gets an “unsolicited request”, the Windows Firewall blocks that connection. If you choose to unblock a connection, Windows Firewall keeps track of it by creating an exception, so you will not be notified about it in the future.

When Windows is installed on your system and the Windows Firewall is turned on, most programs will not be allowed to accept unsolicited communications unless you choose to list those programs as exceptions. Because firewalls restrict communication between your computer and network, you might need to adjust settings for some other programs that prefer an open connection. You can make an exception for these programs or services, so that they can communicate through the Windows Firewall.

If you are running the InfoPrint Manager server on a Windows operating system, you can configure your Windows Firewall in one of two ways:

- Turn the Windows Firewall off.
- Define an exception for a program or service, in this case, one of the supported InfoPrint Manager components.

#### ↓ Note

1. Turning the Windows Firewall off can cause security issues in your network.
2. Defining an exception for a program or a service is recommended over opening a port.

## Working with the Windows Firewall

To work with the Windows Firewall on the InfoPrint Manager for Windows server:

1. Go to **Start** → **Control Panel** → **Windows Firewall**, and the **Windows Firewall** dialog appears.

### ↓ Note

- 1) When the Windows Firewall is active, the Firewall pop-up windows appears every time an unsolicited request is received by your computer from the network or Internet. These pop-up windows ask you to allow access to programs or services that are not yet on the Exceptions list. If you choose to allow them access, the exception is saved in the exception list, and from that moment, all requested from that program or service are accepted.
  - 2) Microsoft recommends that you define a program or service exception, rather than opening a port.
2. Leave the **On (recommended)** radio button selected to use the Windows Firewall, or click **Off (not recommended)** to turn off the Windows Firewall.
  3. Click **Exceptions** to add or remove the programs and services for which you want to change the access to your computer through the Internet or a network. Make sure that you deselect **Do not allow exceptions**.
    - 1) You can either use the Windows Firewall pop-up windows or the **Windows Firewall Exceptions** tab to give these programs or services access:
      - If you are running the InfoPrint Manager server, define an exception for the **pdserver.exe** and the **notifyd.exe**.
      - If you are running the InfoPrint Manager IPP Gateway, define an exception for the **ippgw.exe**.
      - If you are running the InfoPrint Manager LPD service, define an exception for the **lpd.exe**.
      - If you are running InfoPrint Manager MVS Download receivers, define an exception for the **mvsprsd.exe**.
      - If you are running DPF Host Receivers, define an exception for the **aindpfr.exe**.
      - If you have installed the InfoPrint Manager SAP Print feature, and you are running the SAP Callback processes, define an exception for the **sapcbd.exe**.
    - 2) Define an exception for **File and Printer Sharing** for these situations:
      - If you are using Hot Folders or the Windows Gateway to accept jobs from other machines.
      - If you are using the Submit Express client from the *RICOH InfoPrint Manager: Common Clients* DVD-ROM or ISO file.
      - If you are using interoperating InfoPrint Manager servers.
  4. After a program or a service is added to the **Exceptions** list, you can edit and change the scope of the exception to use IP trust and allow clients to connect to the server from any computer, subnet network, or specific IP/mask by clicking the appropriate radio button.
  5. To create a security log from the Windows Firewall, click **Settings** on the **Security Logging** section of the **Windows Firewall Advanced** tab.

6. The **Log Settings** dialog appears.  
The default log is `C:\Windows\pfirewall.log`, and it identifies what connections were dropped or successful, depending on the custom settings that you select.
7. To restore the default settings of the firewall, go to **Advanced Tab** on the **Windows Firewall** dialog and click **Restore Defaults**.

## Solving problems caused by antivirus software

Programs that scan and lock files, such as antivirus products, often cause installation, functioning, and performance problems.

In some situations, antivirus software has caused InfoPrint Manager to:

- Fail to install.
- Fail when running a custom step.
- Experience degraded performance.
- Block network traffic on some ports.

You may need to exclude some directories from scanning in order to avoid these consequences.

Suggested directories include:

- `C:\Program Files\Ricoh\InfoPrint Manager`
- `C:\ProgramData\RICOH`

If you experience any of these symptoms while running InfoPrint Manager on a server with antivirus software installed, contact your Ricoh support representative.

## InfoPrint Manager User Interfaces

This section lists the tasks you can complete with the InfoPrint Manager Administration and Operations GUIs and the InfoPrint Manager Management Console. You use the InfoPrint Manager Administration and Operations GUIs for most of your day-to-day InfoPrint Manager tasks, while you use the InfoPrint Manager Management Console for tasks that must be done on the InfoPrint Manager server system.

For more information about the tasks listed here, see the online help systems in the InfoPrint Manager Administration and Operations GUIs and the InfoPrint Manager Management Console. The InfoPrint Manager Administration GUI and the InfoPrint Manager Operations GUI help systems also include tutorials to help you become acquainted with the GUIs and the tasks you might need to do. To access the tutorials, launch one of the InfoPrint Manager GUIs and select **Help** → **Tutorials**.

For information about installing and starting the InfoPrint Manager Administration and Operations GUIs, see [InfoPrint Manager GUI software](#), p. 101.

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## Tasks you do using the InfoPrint Manager Administration interface

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### Printer tasks:

- Create or copy a printer (except Windows Gateway printers)

- Move a printer
- Delete a printer
- Create, copy, and modify job and document defaults
- Change logical destinations
- Check the status of a printer
- Show the printer webpage
- Enable a printer
- Disable a printer
- Space a PSF printer
- Resume a printer
- Stop or pause a PSF or InfoPrint Color printer
- Change media for a PSF, BSD, InfoPrint Color, or Passthrough printer
- Change the AFP resource information
- Change AFP color options
- Interrupt the printing of a current job
- Change job batch
- Change job routing
- Change tuning
- View or change printer properties
- Determine the media supported in the server
- Associate a medium with a physical printer
- Set or modify notification for an actual destination
- Set or modify notification for default jobs
- Specify the default form definition for a PSF printer
- Specify the default input tray and output bin for a PSF printer
- Map output-bin names to output-bin numbers
- Force messages from a printer
- Configure BSD printers that do not support the -Z flag
- Filter on actual destinations
- Display actual destinations
- Monitor printers
- Specify job batches ready for a printer
- Associate resource-context objects with an actual destination
- Associate auxiliary sheets with a PSF printer
- Activate auxiliary sheets for accounting or auditing information
- Associate input and output data user-exit programs with an actual destination

- Change the job classes that the printer can accept
- Change the job forms that the printer can use<sup>2</sup>

**Other Destination tasks:**

- Create an actual destination (email)
- Move a destination
- Delete a destination
- Create, copy, and modify job and document defaults
- Change logical destinations
- Check the status of a destination
- Enable a destination
- Disable a destination
- Resume a destination
- Stop or pause a destination
- Change the AFP resource information
- Change job batch
- Change job routing
- View or change destination properties
- Set or modify notification for a destination
- Set or modify notification for default jobs
- Force messages from a destination
- Filter on actual destinations
- Display actual destinations
- Monitor actual destinations
- Specify job batches ready for a destination
- Associate resource-context objects with an actual destination
- Activate auxiliary sheets for accounting or auditing information
- Associate input and output data user-exit programs with an actual destination
- Change the job classes that the destination can accept
- Change the job forms that the destination can use<sup>2</sup>

**Job tasks:**

- Check the status of a queued or retained job
- Hold a job
- Release a job<sup>1</sup>
- Pause a job
- Resume a job

- Change the media for a job
- Change the number of copies to print
- Change the priority of a job
- Change the requested destination of job
- Select the sheets of a job that you want to print
- Change the retain time for a job
- Make a job first (promote a job)
- Move a job to a destination (reorder a job)
- Move a job to an actual destination
- Move a job while ignoring the default object values
- Delete (cancel) a job
- Delete and retain a job
- View a job log
- View a job ticket
- Search for a job
- View or change job properties
- Display queued or retained jobs in the server
- Request a specific actual destination for a job
- Set or modify notification for a job
- Monitor jobs
- List all jobs for an actual destination or a queue
- Adjust the print quality of a job
- Set a job-batch value for a job
- Resubmit a retained job
- Select the pages of a job that you want to print
- Change the AFP resource information
- Change the AFP color options
- Change the job class
- Change the forms used for the job<sup>2</sup>

**Queue tasks:**

- Create a queue
- Delete a queue
- Check status of a queue
- Filter on queues
- Monitor queues

- Pause and resume a queue
- Keep failed jobs
- View or change queue properties

**Logical destination tasks:**

- Create or copy a logical destination
- Move a logical destination
- Delete a logical destination
- Copy and modify job and document defaults
- Change the actual destinations fed by a logical destination
- Enable a logical destination
- Disable a logical destination
- View or change logical destination properties
- Filter on logical destinations
- Display logical destinations
- Associate a default job or default document
- Monitor logical destinations
- Specify the location of resources
- Specify printer driver names
- Adjust print quality in a default document
- Set or modify notification for default jobs

**Server tasks:**

- Show all servers currently running in the namespace
- View or change server properties
- Set or modify notification for a server

**Transform tasks:**

- Create a transform
- Copy a transform
- Show transforms in all servers currently being monitored
- Delete a transform
- View or change transform properties
- Associate a sequence of transforms with an actual destination

**Miscellaneous tasks:**

- Open windows (Main Window, Printers Window, Other Destinations Window, Logical Destinations Window, Jobs Window, Retained Jobs Window, Queues Window)
- Check error messages

- Update interface windows
- Customize the appearance of the interface
- Add and remove menu items and toolbar buttons
- Sort details views and tree views
- Change primary InfoPrint server connection
- Filter your view (destinations, queues, or servers)
- Access Help topics and tutorials

**Note**

- When you want to copy a logical destination without the associated initial value jobs and initial value documents, select the Copy command from the Logical menu in the InfoPrint Manager Administration GUI. The new logical destination is associated with a new initial value job object and all the attributes are set to default values. If you want to copy the logical destination with all the objects associated to it, select Logical -> Job and Document Defaults -> Copy. The new logical destination objects contain the job and document defaults as the original logical destination.
- Selected jobs are released in the same order that they are listed in the interface.
- When you add a *form* in the interface, it only shows up in the list of available forms after a job has been run with that specific form.  
For example, if you associate the form Letter with Job 1, Letter will not display in the **Printer** → **Change Forms** or **Job** → **Change Forms** drop-down lists until after Job 1 has completed.

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## Tasks you do using the InfoPrint Manager Operations interface

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### Printer tasks:

- Check the status of a printer
- Show the printer webpage
- Specify job batches ready for a printer
- Enable a printer
- Disable a printer
- Space a PSF printer
- Resume a printer
- Stop or pause a PSF or InfoPrint Color printer
- Change media for a PSF, BSD, or InfoPrint Color printer
- Change job routing
- Interrupt the printing of a current job
- Monitor printers
- Change the job classes that the printer can accept
- Change the job forms that the printer can use<sup>2</sup>

**Other Destination tasks:**

- Check the status of a destination
- Enable a destination
- Disable a destination
- Resume a destination
- Stop or pause a destination
- Change job routing
- Display actual destinations
- Monitor destinations
- Change the job classes that the destination can accept
- Change the job forms that the destination can use<sup>2</sup>

**Job tasks:**

- Check the status of a queued or retained job
- Hold a job
- Release a job<sup>1</sup>
- Pause a job
- Resume a job
- Change the media for a job
- Change the number of copies to print
- Change the priority of a job
- Change the requested destination of job
- Select the sheets of a job that you want to print
- Change the retain time for a job
- Make a job first (promote a job)
- Move a job to a destination (reorder a job)
- Move a job to an actual destination
- Move a job while ignoring the default object values
- Delete (cancel) a job
- Delete and retain a job
- View a job log
- View a job ticket
- Search for a job
- View or change job properties
- Display queued or retained jobs in the server
- Display retained jobs in the server

- Request a specific actual destination for a job
- Set or modify notification for a job
- Monitor jobs
- List all jobs for an actual destination or a queue
- Adjust the print quality of a job
- Set a job-batch value for a job
- Resubmit a retained job
- Select the pages of a job that you want to print
- Change the AFP resource information
- Change the AFP color options
- Change the job class
- Change the forms used for the job<sup>2</sup>

#### Queue tasks:

- Filter on queues
- Monitor queues
- Pause and resume a queue

#### Server tasks:

- Show all servers currently running in the namespace

#### Miscellaneous tasks:

- Open windows (Main Window, Printers Window, Other Destinations Window, Jobs Window, Retained Jobs Window, Queues Window)
- Check error messages
- Update interface windows
- Customize the appearance of the interface
- Add and remove menu items and toolbar buttons
- Sort details views and tree views
- Change primary InfoPrint server connection
- Filter your view (destinations, queues, or servers)
- Access Help topics and tutorials

#### ↓ Note

1. Selected jobs are released in the same order that they are listed in the interface.
2. When you add a *form* in the interface, it only shows up in the list of available forms after a job has been run with that specific form.  
For example, if you associate the form Letter with Job 1, Letter will not display in the **Printer** → **Change Forms** or **Job** → **Change Forms** drop-down lists until after Job 1 has completed.

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## Tasks you do using the InfoPrint Manager Web Interface

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### Printer tasks:

- Associate a media with a physical printer
- Check the status of a printer
- Show the printer webpage
- Specify job batches ready for a printer
- Enable a printer
- Disable a printer
- Space a PSF printer
- Resume a printer
- Stop or pause a PSF or InfoPrint Color printer
- Change media for a PSF, BSD, or Passthrough printer
- Change job routing
- Interrupt the printing of a current job
- Monitor printers
- Favorite printers
- Change the job classes that the printer can accept
- Change the job forms that the printer can use

### Other Destination tasks:

- Check the status of a destination
- Enable a destination
- Disable a destination
- Resume a destination
- Stop or pause a destination
- Change job routing
- Display printers
- Monitor destinations
- Change the job classes that the destination can accept
- Change the job forms that the destination can use

### Job tasks:

- Check the status of a queued or retained job
- Hold a job
- Release a job

- Pause a job
- Resume a job
- Change the media for a job
- Change the number of copies to print
- Change the priority of a job
- Change the requested destination of job
- Select the sheets of a job that you want to print
- Change the retain time for a job
- Make a job first (promote a job)
- Move a job to a destination (reorder a job)
- Move a job to a printer
- Move a job while ignoring the default object values
- Delete (cancel) a job
- View a job log
- View a job ticket
- View a job
- Search for a job
- View or change job properties
- Display queued or retained jobs in the server
- Display retained jobs in the server
- Request a specific printer for a job
- Set or modify notification for a job
- Monitor jobs
- List all jobs for a printer or a queue
- Adjust the print quality of a job
- Set a job-batch value for a job
- Resubmit a retained job
- Select the pages of a job that you want to print
- Change the AFP resource information
- Change the AFP color options
- Change the job class
- Change the forms used for the job

**Queue tasks:**

- Filter on queues
- Monitor queues

- Pause and resume a queue

#### Server tasks:

- Show all servers currently running in the namespace

#### Miscellaneous tasks:

- LDAP and Federated authentication login
- Opening panels: Objects Panel, Jobs Panel, Main Panel
- Customizing the appearance of the interface
- Sorting tables and panels
- Filtering your view (destinations, queues, or servers)
- Accessing Help topics
- Adding, modifying, deleting a connection
- Activating and deactivating a connection
- Filtering objects
- Viewing objects
- Adding favorite objects
- Viewing the media catalog
- Creating, copying, modifying, deleting media objects
- Viewing a job document
- User management: creating, modifying, deleting users
- Logging in and out of InfoPrint Manager Web Interface

#### ↓ Note

- Selected jobs are released in the same order that they are listed in the interface.
- When you add a *form* in the interface, it only shows up in the list of available forms after a job has been run with that specific form.  
For example, if you associate the form Letter with Job 1, Letter will not display in the **Printer** → **Change Forms** or **Job** → **Change Forms** drop-down lists until after Job 1 has completed.
- If you are restricting **read** access to InfoPrint Manager objects to specific users or groups, you must add the **wsClient** user to the list of users allowed to access the objects in order to view them in the Web Interface.

## Tasks you carry out using the InfoPrint Manager Web Management Interface

- Create New or Start/Stop existing pdservers
- Create New or Start/Stop existing IPP Gateway services
- Create New or Start/Stop existing MVS Download daemons
- Create New or Start/Stop existing SAP Callback daemons

- Create and manage SAP printers
- Restart the Web Server
- Configure the Web Server settings
- Configure the Web GUI settings
- Configure the Pull Print Feature settings
- View server logs
- Control server log information
- Control ACL Security for Objects, Operations, Users or Groups
- Configure LDAP security
- Enable/Disable LDAP security
- Configure federated authentication
- Enable/Disable federated authentication
- Capture system information to send to Software Support. This task should only be carried out at the direction of your service representative

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## Tasks you do using the Management Console

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### Server tasks:

- Create, delete, start, or stop an InfoPrint Manager server
- Check server status
- View or filter the server log
- Save the view of the server log that is currently displayed as a text file
- Check the percentage of server filespace used
- Set an InfoPrint Manager server to start automatically when the system starts up

### Servers Configuration tasks:

- Change the user account that the servers run under
- Change the password associated with the user account that the servers run under
- Change the domain that the InfoPrint Manager servers operate in
- View or modify InfoPrint Manager directory structure, resource search path information, and the shared file folder location
- View or modify the ports that the servers communicate on

### Web Server tasks:

- Start or stop the InfoPrint Manager Web Server

### DPF tasks:

- Create, view, modify, or delete a DPF host receiver

- Start, stop, pause, or resume a DPF host receiver
- Cancel a DPF print job that is currently downloading
- Obtain printer characteristics
- Find a specific DPF resource in the DPF Resource database
- Delete a DPF resource

**Destination tasks:**

- View the status and attributes of InfoPrint destinations
- Migrate a Windows printer into an InfoPrint destination
- Create, view, modify, or delete a Windows Gateway Printer
- Prevent some users or groups from submitting jobs to a particular destination

**MVS Download tasks:**

- View MVS Download receiver information
- Create or delete MVS Download receivers
- Start or stop MVS Download receivers
- Delete orphaned files
- Open the destination control file so you can edit it

**SAP Callback Process tasks:**

- View SAP Callback Process
- Add SAP Callback Process
- Change SAP Callback Process
- Delete SAP Callback Process
- Start SAP Callback Process
- Stop SAP Callback Process

**Troubleshooting tasks:**

- Capture system information to provide to InfoPrint Service. This task should only be carried out under the guidance of your service representative.
- Manage server tracing
- Manage PSF destination tracing
- View PSF destination logs
- Reset communications between the InfoPrint Manager server and other servers
- Create or clear namespace
- Manage DPF host receiver tracing
- Show DPF host receiver drive information
- Recreate DPF resources database
- ControlMVS Download Tracing

- Export configuration
- Import configuration

**Security tasks:**

- View InfoPrint Access Control Lists (ACLs) and the InfoPrint users and groups who have permissions associated with them
- Add or delete InfoPrint member/group of InfoPrint ACL
- Modify InfoPrint member/group permissions in InfoPrint ACL
- Create, view, modify, or delete InfoPrint security groups and their members
- Enable/Disable LDAP security
- Configure LDAP security
- Clear LDAP cache

**Input Manager tasks:**

- Change Input Manager settings
- Clean up leftover Input Manager files

**Pull Print Feature tasks:**

- Add or change the Pull Print Feature settings
- Configure the Pull Print Feature settings

**Miscellaneous tasks:**

- Start up one of the other InfoPrint Manager GUIs
- Specify which view of the InfoPrint Manager GUI to launch from the Management Console
- Print a test job
- Enable or disable IPP Gateway
- Enable or disable the notification server
- Add a Windows port
- Specify how often you want the information displayed in the Management Console to be updated
- Update the information currently displayed in the Management Console
- View help for error and informational messages
- Enable/disable the InfoPrint Manager LPD
- Export configuration
- Import configuration

**Note**

- For more information on which configuration settings can be exported and imported, see “Using the InfoPrint Manager System Migration (ISMU) Utility” from the *RICOH InfoPrint Manager for Windows: Procedures* publication.
- You cannot use any multi-byte or special characters, such as: ~!@#%\$^&\* \_ - += ` | \ ( ) { } [ ] : ; " ' < > , . ? / in the name of the folder in the **Import/Export** dialogs in the Management Console.

1

## Starting the InfoPrint Manager Management Console

To start the InfoPrint Manager Management Console, click the Windows **Start** button and select **Programs** → **InfoPrint Manager** → **Management Console**.

## Understanding printer drivers, port monitors, windows gateway printers, and passthrough printers

Before you decide which type of InfoPrint actual destination to create, you should first understand these terms and concepts. [Figure 1: InfoPrint Manager print data stream flow, p. 51](#) illustrates how these items can fit into your InfoPrint Manager system.

### Printer driver

Software that accepts the output of your applications and converts it into a data stream that the printer can understand. Most printers come with one or more drivers that you can install and use; the printer documentation provides more specific information about the capabilities of the drivers. The driver you use determines what data stream is sent to the printer. In InfoPrint Manager, the driver might process the data before it is placed on the print spool.

### Port monitor

Software that controls how the data stream that is generated by the printer driver gets to the printer. If your printer is local- or parallel-attached to your system, you use a local port monitor; if your printer is attached over TCP/IP, you can use a TCP/IP port monitor. InfoPrint Manager includes these port monitors:

#### InfoPrint port monitor

Use this port monitor to send print data to the InfoPrint Manager spool.

#### InfoPrint TCP/IP Network Port Monitor

Use this port monitor to send print data with PDL to the Windows spool.

To use the InfoPrint TCP/IP Network Port Monitor, the printer must support the PDL USTATUS command.

InfoPrint TCP/IP Network Port Monitor is distributed with the InfoPrint Manager server.

When you use the InfoPrint TCP/IP Network Port Monitor with the Passthrough DSS, InfoPrint Manager provides accurate page completion information.

If a job is printing and another job is sent to the same printer from a different machine when you use the InfoPrint TCP/IP Network Port Monitor, the page count shown in the server accounting log might not be accurate. The PDL implementation in the printer causes this situation. This does not happen for jobs sent from the same machine.

**Note**

When you use Class drivers (type 4 printer drivers), **InfoPrint port monitor** and **InfoPrint TCP/IP Network Port Monitor** are not supported. Use V3 print drivers either shipped with the Windows installation base or downloaded from the manufacturer's website.

## 1

**Port**

A Windows entity that represents a particular output device or target. The data stream that the driver creates is sent to the printer through a port. A port is always created with and controlled by a specific port monitor. InfoPrint Manager creates ports that use the InfoPrint port monitor when it needs them. You might have to create some ports yourself (such as a port that uses the InfoPrint TCP/IP Network Port Monitor), but you should never have to create an InfoPrint port.

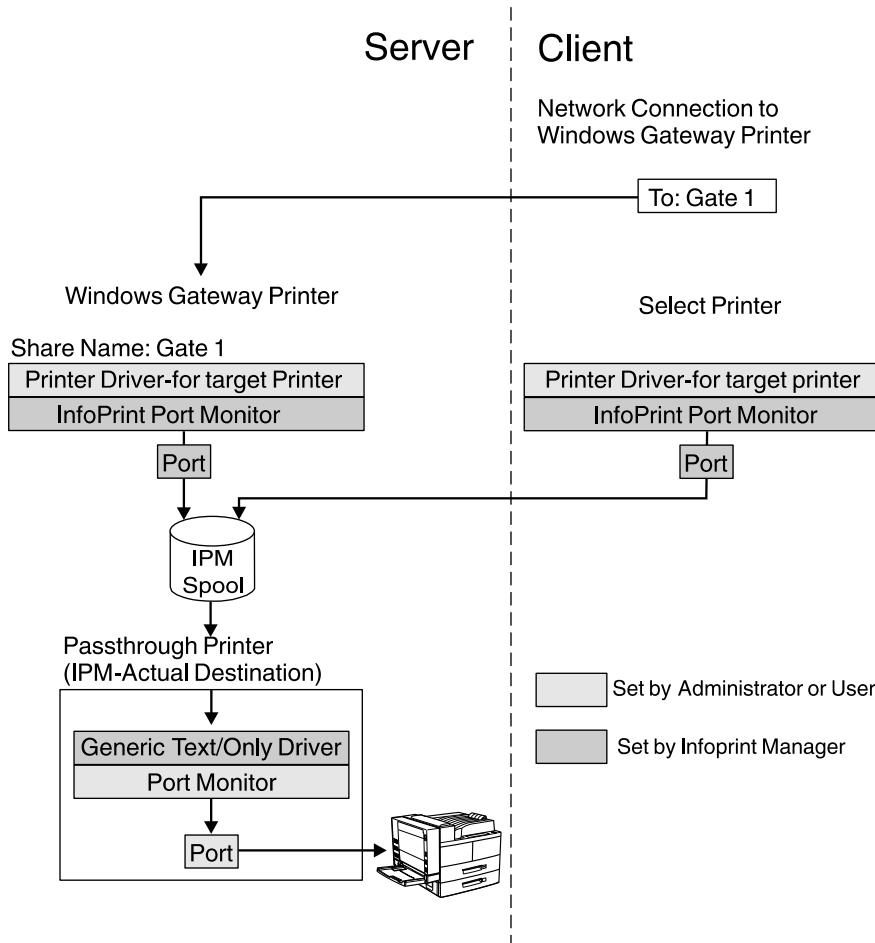
**Windows printer**

The combination of a printer driver and a port. You can create a Windows printer using the Windows **Add printer** wizard. A Windows printer receives print data, sends it through the printer driver to create the data stream that you want to use, then sends the data stream to an output device (printer) or target through the port. InfoPrint Manager sometimes creates Windows printers under the covers and names them **IPM-*<actual destination name>***. You will be able to see these printers in the Windows **Printers** window, but you should never open and modify them from there.

**Windows shared printer**

A Windows printer that is defined so that a remote Windows user can send print jobs to it. When a user on the network uses the Windows **Add printer** wizard to create a network printer on his or her desktop, the wizard provides a list of the Windows shared printers that are available. In InfoPrint Manager, a Windows gateway printer is a type of Windows shared printers.

## InfoPrint Manager print data stream flow



## Windows gateway printers

A Windows gateway printer is a Windows shared printer that you create on your InfoPrint Manager system. Then, users can add that printer to their desktops and submit jobs to it. The gateway submits the jobs to the specified InfoPrint Manager destination to be printed.

### ★ Important

InfoPrint Manager manages this Windows shared printer for you; you should never modify the port monitor or port configuration of this printer by opening it from the **Start** → **Settings** → **Printers** window.

You create a Windows gateway printer on the InfoPrint Manager server system using the Management Console. Select **Edit** → **New** → **Windows Gateway Printer** to open the **Create Gateway Printer** dialog. In the dialog:

- Specify a *share name* for the Windows gateway printer. The share name is the name that users will see in the **Add Printer** wizard when they look for the printer.
- Select the InfoPrint Manager destination that the gateway will send jobs to.

**Note**

You must create this destination before you create the Windows gateway printer. Refer to [Understanding Destination Support Systems \(DSS\)](#), p. 56 and [Creating actual destinations](#), p. 71 for more information about creating destinations.

- Select the printer driver that generates a data stream that corresponds to the destination or destinations that the jobs can be printed on.

InfoPrint Manager associates the selected driver with the InfoPrint Manager port monitor to create a Windows printer.

## Passthrough printers

When you want to create a Passthrough printer, you first use the Management Console to create a port that the Passthrough printer will use. When you create this port, you must select a port monitor that supports the attachment type for your printer. For example, if your printer is local or parallel-attached, select the Local Port; if your printer is TCP/IP attached, use a TCP/IP port monitor designed for that printer.

**Note**

For most TCP/IP attached printers, you can use the InfoPrint TCP/IP Network Port Monitor. However, to send PDF jobs to a printer that accepts the PDF data stream, you will have to use a different port monitor.

Then you use the InfoPrint Manager Administration GUI to create the Passthrough printer, specifying the port you just created.

To see a list of ports that are available on your system, complete these:

1. Click the Windows **Start** button and select **Settings** → **Printers**.
2. In the **Printers** window, select **File** → **Server Properties**, and in the **Print Server Properties** window, click **Ports**.

InfoPrint Manager automatically creates a Windows printer (named **IPM-*<actual destination name>***) that uses the port you named, along with the **Generic / Text Only** printer driver. The **Generic / Text Only** driver is considered a passthrough driver because it does not change the data stream it receives. If you send PostScript to it, it sends the same PostScript to the printer.

**Important**

InfoPrint Manager manages this Windows printer for you; you should **never** modify it directly by opening it from the **Start** → **Settings** → **Printers** window.

## Understanding InfoPrint Manager Security

InfoPrint Manager Security, a feature that you administer through the InfoPrint Manager Management Console (MMC), lets you protect your printing system by associating an Access Control List (ACL) with an InfoPrint Manager object or operation. An ACL is the list of users and groups who have permission to do something to or with an object. The ACL also refers to the type of permission.

### Types of permission

In InfoPrint Manager, users can have three levels of permission: **read**, **write**, and **delete**. The levels provide these types of access:

### Read

For operations, the user can do the operation. For servers and queues, the user can view the attributes. If you restrict access to a server or queue, access to all objects contained by that server or queue is automatically restricted, even if the objects are not explicitly protected. For destinations, the user can view attributes and submit jobs to that destination.

#### ↓ Note

- To access an object contained by a server or a queue, you must have at least **read** permission for the higher-level object.

### Write

For all objects, the user can view and modify attributes.

### Delete

For all objects, the user can view and modify attributes and can delete the object.

## FST Users and Groups

When InfoPrint Manager is running in FST mode, the FST users and FST groups are required to manage the security of your printing system.

When InfoPrint Manager is first installed, three groups are created for you by default: **acl\_admin**, **admin**, and **oper**. The user selected as authorized user during InfoPrint Manager installation is placed in the **acl\_admin** group. To have the access necessary to modify the security characteristics, the user must be a member of the **acl\_admin** group.

The users in the **admin** group have more default privileges from the users in the **oper** group: the possibility to create and delete InfoPrint Manager objects, and clean all the jobs associated with an InfoPrint Manager object.

## Federated Authentication Overview

Federated authentication is a method of granting users secure access to InfoPrint Manager Web Management Interface and the InfoPrint Manager Web Administration Interface by relying on external identity providers (IdPs). Instead of managing separate user credentials within our system, federated authentication allows users to log in using their existing accounts from trusted third-party services.

#### ★ Important

- InfoPrint Manager federated authentication implementation is mapped on existing FST security groups.
- When enabling federated authentication, FST or LDAP security continue to work as before.
- Federated authentication can be used only for the Web Management Interface or the Web Administration Interface.
- Federated authentication works only if you enabled https for the InfoPrint Manager web applications.

InfoPrint Manager supports the following federated authentication servers:

- Active Directory Federation Services (AD FS)

- Common Approach to Identity Assurance (CAIA)
- Keycloak
- Okta

## Mapping Federated Authentication groups to FST groups

When logging in through federated authentication, the groups passed by the federated authentication server for the user must match existing InfoPrint Manager FST groups. Those groups identify the access rights that the user will have in the system.

### ★ Important

- If you decide to bypass the standard (FST or LDAP) login for the web applications, make sure that at least one user has the **acl\_admin** group attached in the federated authentication server. This setting allows the user to log in to Web Management Interface.

## LDAP Security Overview

Lightweight Directory Access Protocol (LDAP) is an application that allows the secure use and administration of distributed users. As an LDAP administrator, you create groups that have certain permissions.

### ★ Important

- InfoPrint Manager LDAP implementation is an extension of the FST security. When enabling LDAP security, the FST security continues to work as before. To use only the LDAP security, see [Convert FST security to LDAP security](#).

InfoPrint Manager supports these LDAP implementations:

- Active Directory
- IBM Tivoli Directory Server
- OpenLDAP
- NetIQ eDirectory 8.8 SP8 (Novell eDirectory)

Communication with the LDAP system can be done without encryption, using StartTLS encryption, or SSL encryption. This offers you flexibility, depending on your implementation of LDAP.

To be able to take full advantage of the LDAP security features, InfoPrint Manager allows 2 methods of authentication: **Simple** and **Digest**. In addition, you can do Anonymous or Authenticated searches in the LDAP system. To be able to do an Authenticated search, you have to provide InfoPrint Manager with a Bind DN and a password for an LDAP user allowed to run searches against the LDAP system.

On the client side, InfoPrint Manager supports 2 ways of authentication:

1. The client determines if it is running under an LDAP (PAM)/Active Directory system authentication session and no more credential checks are done. The LDAP user taken from the LDAP(PAM)/Active Directory system authentication session is used for the InfoPrint Manager user-related attributes.  
Clients using this method: InfoPrint Select without LDAP, Java GUI, SAP Clients, Command Line Clients.
2. The client asks for the LDAP credentials and uses them to authenticate to the LDAP server. After the authentication, the client uses the LDAP user for InfoPrint Manager user-related attributes.

Clients using this method: Web GUI and InfoPrint Select with LDAP.

Clients not using LDAP authentication: Submit Express, MVS Download, DPF Receiver, LPD, and hot folders.

#### ↓ Note

- The default Windows logon does not support LDAP, only Active Directory. This means that InfoPrint Select, CLC, Java GUI, and SAP clients work as LDAP-enabled clients on Windows only when you are using the Active Directory implementation of LDAP.
- When InfoPrint Manager clients are using LDAP for authentication, the following InfoPrint Manager attributes contain the LDAP login attribute instead of the *username@computername* information:
  - **user-name**
  - **job-owner**
  - **job-originator**
  - **name-of-last-accessor**
  - **results-profile**

For more information on how to configure your LDAP security settings, see: “Managing security for InfoPrint Manager for Windows” in *RICOH InfoPrint Manager for Windows: Procedures*.

## LDAP Users and Groups

When InfoPrint Manager is running in LDAP mode, adding LDAP users and/or LDAP groups is required to manage the security of your print system.

An LDAP user/group can be added to any of the FST groups or directly in the ACLs for enhanced security. Once the user/group is defined in the InfoPrint Manager security, any client using LDAP authentication is verified against the LDAP system. This means that you can have two users with the same name, one using FST security and the other one using LDAP security. If you add LDAP groups to the IPM security, the LDAP client login is checked for group membership in the LDAP system.

## LDAP caching mechanism

To minimize the number of LDAP queries run, InfoPrint Manager has an LDAP caching mechanism. This cache is unique per machine and contains information about users, groups, and LDAP login attributes. When a user first connects to any InfoPrint Manager server, the server checks the user credentials against the cache. If the user exists in the cache, the server uses the local information for security purposes. If the user does not exist, the LDAP system is queried and the user information is stored in the cache for future usage.

There are two important advantages of using a caching mechanism:

- The number of LDAP searches is minimized, thus the InfoPrint Manager performance is not affected.
- The LDAP connection can be interrupted for short periods of time without losing functionality (users are able to work with the system)

You can manually purge the cache using MMC (**Debug** → **Clean LDAP Cache**).

#### ★ Important

The LDAP caching mechanism can be manually enabled by editing the `/etc/rc.1cd`.

### ↓ Note

- If multiple InfoPrint Manager servers are started on the system where the cleanup command is run, the cache of all servers is cleaned.
- If the servers are interoperated, a cleanup command cleans all server cache.

## Convert FST security to LDAP security

To convert from FST security to LDAP only security, it is recommended that you create two LDAP groups: **pd\_admin** and **pd\_operator** and map these groups to the **admin** and **oper** FST groups. You can also use existing LDAP groups, if they suit your needs. The **pd\_admin** and **pd\_operator** groups are sufficient for your needs. Members of these two groups can do all the administrator and operator tasks for your system. You might need to create more LDAP groups with different permissions depending on the access rights you need for each group and map them to the corresponding InfoPrint Manager FST groups or directly in the InfoPrint Manager ACLs. Once you have created and mapped the LDAP groups to the InfoPrint Manager security system, enable the LDAP security for InfoPrint Manager. The final step in the FST to LDAP security conversion is to remove any FST users from the FST groups or InfoPrint Manager ACLs. This operation restricts the access of any FST users to the InfoPrint Manager objects.

## Convert LDAP security to FST security

To convert from LDAP security to FST only security, you must add FST users (in the form of *username@hostname*) to the **admin** and **oper** FST groups. To restrict the access level, you can add specific users directly to the InfoPrint Manager ACLs. Once you have added all the FST users to the InfoPrint Manager security system, disable the LDAP security for InfoPrint Manager. The final step in the LDAP to FST security conversion is to remove any LDAP users or groups from the FST groups or InfoPrint Manager ACLs. This restricts the access of any LDAP users to the InfoPrint Manager objects.

## Understanding Destination Support Systems (DSS)

The software that the actual destination uses to send jobs to the output device is called the destination support system (DSS). When you select a DSS for an actual destination, you must consider a variety of different criteria. These criteria include the type of destination (for example, email server or printer), the document formats your destination accepts (for example **ipds**, **pcl** or **ps**), and the document formats you plan to send to InfoPrint Manager to deliver to your printer, and in some cases the printer model that an actual destination represents. For the attributes supported by each DSS, see *RICOH InfoPrint Manager: Reference*.

## InfoPrint Manager for Windows Supported DSSs

InfoPrint Manager for Windows supports these DSSs:

### PSF DSS

The PSF DSS lets InfoPrint Manager use the Print Services Facility (PSF) printing subsystem. You can use the PSF DSS to submit print jobs to output devices that accept the Intelligent Printer Data Stream (IPDS) or the PCL data stream. The PSF DSS accepts print jobs in various data streams and transforms them into IPDS or PCL before sending them to the output device. The PSF DSS is the most flexible DSS. It provides a single point of control and tracking for print jobs.

The way 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. 63.)

## Passthrough DSS

The Passthrough DSS lets InfoPrint Manager for Windows use the Windows print-spooling subsystem. This DSS supports non-IPDS (such as PostScript or PCL) printers using standard Windows ports and port monitors.

Before you create an InfoPrint Manager Passthrough printer (also known as a Passthrough *actual destination*), you must do these tasks:

- Attach the printer device as specified by its documentation
- Use the InfoPrint Manager Management Console to create a Windows port to communicate with the printer device (see [Passthrough printer](#), p. 78 for details)
- Install the Windows Generic/Text Only Driver from the Windows DVD

## IPP DSS

InfoPrint Manager uses the IPP DSS to communicate with printers that are Internet Print Protocol (IPP) enabled. This DSS allows InfoPrint Manager to access a printer by a Uniform Resource Indicator (URI) string.

### Note

InfoPrint Manager supports TLS encryption using the IPP DSS.

## BSD DSS

The BSD DSS lets InfoPrint Manager use remote printers or printing subsystems. InfoPrint Manager sends jobs submitted to BSD physical printers as separate print requests to a remote print queue.

InfoPrint Manager typically uses the **lpr** command to send jobs to a printer device or to another system. The target can be any device or system that supports the **lpd** protocol and that connects to the network with TCP/IP.

See the printer configuration documentation of the remote device or system for details on how to set up a remote queue.

## Email DSS

InfoPrint Manager uses the email DSS to send jobs as emails to electronic mailing systems. Only one email DSS is supported per InfoPrint Manager server instance.

## 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.

## DFE DSS

The DFE DSS lets InfoPrint Manager send jobs to Ricoh color engines through a DFE (Digital Front End) print server, using its added performance and advanced workflow tools.

# 1

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## Selecting a DSS

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Selecting the right DSS in some cases is obvious. For example, it should be clear when you create an email DSS. Selecting a DSS to drive other printers is more complicated and requires more understanding of the InfoPrint Manager DSSs.

One important factor is the document formats your printer accepts and the document formats of the jobs you plan to submit. The BSD DSS passes through any data streams including PS, PCL5E, and PCL6. The DFE DSS submits jobs to DFE print servers that drive Ricoh engines. The PSF DSS has a variety of attachment types that need to be understood and is capable of converting the following input data streams to IPDS, PCL4, PCL5, PCL5C, PCL6, or PPDS:

- AFPDS
- ASCII
- DBCS ASCII
- GIF
- EBCDIC
- JPEG
- PCL ( PCL6 and earlier)
- PDF (1.7 and earlier)
- PS (level 3 and earlier)
- PPDS
- SAP (ABAP and OTF)
- TIFF

If you send intelligent printer data stream (IPDS) to your printer, you should create PSF printers. Check [Selecting an attachment type for PSF actual destinations, p. 64](#) to see which attachment type to create. Otherwise, the type of destination you create primarily depends on where your print jobs are coming from. The appropriate DSS is different for each of these job submitters:

- PC-based applications
- Both PC-based applications and a host system (through DPF or MVS Download)

## Selecting a DSS for printing from PC-based applications or a host system using IP Printway

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If you do not use DPF or MVS Download to submit jobs, use [Selecting a DSS for printing from PC-based applications, p. 59](#) to see which type of destination fits your needs.

## Selecting a DSS for printing from PC-based applications

<b>If the data stream that your applications send to InfoPrint Manager is:</b>	PostScript, PCL, or any non-IPDS data stream			PostScript, PCL (versions 4, 5, 5c and 6), or any non-IPDS data stream
<b>and the data stream that you send to this printer is:</b>	the same that the application sends to InfoPrint Manager			PCL4, PCL5, PCL5c, PCL6, PPDS <sup>1</sup> , IPDS
<b>and your jobs are going to be sent to a printer:</b>	through a Windows defined port	using a command such as lpr	that is IPP enabled	that is attached to your InfoPrint Manager system in any of the ways listed in <a href="#">Selecting an attachment type for PSF actual destinations, p. 64.</a>
<b>Create this kind of actual destination:</b>	Passthrough <sup>2</sup>	BSD	IPP	PSF

### Note

1. You can only print PPDS on a non-Windows system, for example, by sending the PPDS data stream to an AIX system.
2. If you are printing PCL data to a Windows-defined printer, you might want to consider creating a PSF (Other Driver or Command) destination instead. A Passthrough destination uses fewer processing resources, but a PSF destination provides much more functions, such as accounting and automatic data stream transforms.

## Selecting a DSS for printing using MVS Download, DPF, or from a combination of PC-based applications and host systems

If you send jobs to a destination from both PC-based applications and host systems using DPF or MVS Download, use [Selecting a DSS for printing using MVS Download, DPF, or from a combination of PC-based applications and host systems, p. 60](#) to see which type of destination fits your needs.

## Selecting a DSS for printing using MVS Download, DPF, or from a combination of PC-based applications and host systems

<b>If the data stream that your host system and applications send to InfoPrint Manager is:</b>	AFP, ASCII, DBCS ASCII, line data, PCL4, PCL5, PCL5c, PCL6, PS, PDF, IPDS (through DPF) <sup>1</sup>		PCL4, PCL5, PCL5c and PCL6	PS only
<b>and the data stream that you send to your printer is:</b>	IPDS	PCL4, PCL5, or PCL5c, PCL6 or PPDS <sup>2</sup>	PCL	PS
<b>Create this kind of actual destination:</b>	PSF (TCP/IP)	PSF (Other Driver or Command)	PSF (Other Driver or Command) <b>OR</b> any of the destination types listed in <a href="#">Selecting a DSS for printing from PC-based applications, p. 59</a> .	One of the destination types listed in <a href="#">Selecting a DSS for printing from PC-based applications, p. 59</a> .

### Note

1. DPF can only submit jobs to PSF printers. MVS Download can submit jobs to any of the printer types listed.
2. You can only print PPDS on a non-Windows system, for example, by sending the PPDS data stream to an AIX system

## Selecting an IPP DSS

Use an Internet Printing Protocol Destination Support System (IPP DSS) if your printer natively supports IPP and accepts the required document formats (for example, PDF, PostScript, or PCL).

### IPP DSS overview

An IPP DSS sends print jobs directly to the printer using standard IPP operations, without relying on a local print subsystem such as CUPS. The IPP DSS is designed for environments where no data transformation is required and where job control can be achieved using standard, non-collection IPP job template attributes.

### Job submission model

The IPP DSS submits jobs using one of the following IPP operation models, depending on the printer capabilities:

- **Print-Job**

- Used when the printer supports submitting job attributes and document data in a single operation.
- **Create - Job** followed by **Send - Document**
  - Used when the printer supports or requires job creation and document submission as separate steps.

The selection of the submission model is based on the printer supported operations as reported by the operations-supported attribute.

### Destination command

The destination command for an IPP DSS specifies the IPP URI of the target printer. Typical destination commands include:

```
ipp://ip-address:631/ipp/print
```

```
ipps://ip-address:631/ipp/print
```

where ip-address is the IP address or host name of the printer.

Some printers expose different IPP resource paths depending on vendor implementation or firmware version, for example:

```
ipp://ip-address:631/ipp/print
```

```
ipp://ip-address:631/ipp/printer
```

### Supported document formats

The IPP DSS determines supported input formats based on the printer document-format-supported attribute. Common formats include:

- application/PDF
- application/PS
- printer-specific PCL formats

Only formats explicitly advertised by the printer should be submitted. The IPP DSS does not perform document format conversion.

### Job attributes handling

The IPP DSS supports a defined subset of IPP job template attributes. Collection-type attributes (such as media-col) are not used. All job attributes are mapped directly from InfoPrint Manager attributes to their corresponding IPP attributes. Only attributes supported by the destination printer should be submitted to ensure predictable behavior.

### InfoPrint Manager to IPP attribute mapping in IPP DSS

InfoPrint Manager attribute	IPP attribute
job-name	job-name
job-owner	requesting-user-name
job-priority	job-priority

InfoPrint Manager attribute	IPP attribute
job-finishing	finishings
message-from-administrator	message-from-operator
sides	sides
color-bits-per-plane	print-color-mode
copy-count	copies
document-format	document-format
output-bin	output-bin
number-up	number-up
page-select	page-ranges
content-orientation	orientation-requested
default-printer-resolution	printer-resolution
print-quality	print-quality

## Transport and protocol features

The IPP DSS uses standard IPP or IPPS transport for job submission and status reporting. When IPPS is used, communication may be encrypted depending on printer support.

## When to use an IPP DSS

An IPP DSS is a good choice when:

- The printer provides a compliant IPP interface
- Required job control can be achieved using non-collection IPP attributes
- Supported document formats can be sent directly to the printer
- You prefer a lightweight, standards-based printing solution

If more advanced media modeling, collection-based attributes, or vendor-specific backends are required, a CUPS DSS or another DSS implementation might be more appropriate.

## Selecting a DFE DSS

Digital Front Ends (DFEs) can produce high-quality accurate output quickly and efficiently. You can use DFE DSS to submit jobs to DFE print servers that drive Ricoh engines.

The integration of a DFE equipped with a print server with the InfoPrint Manager DSS offers enhanced document processing, as well as management and printing capabilities.

InfoPrint Manager authenticates with the DFE server that drives the printer using the credentials provided with the **dfc-user** and **dfc-password** attributes.

You can configure DFE DSS to transform certain document formats using InfoPrint Manager, while allowing all others to be transformed by the DFE print server. DFE DSS processes incoming data streams

by transforming them first to AFP and then to PDF before printing, except for the formats that are assigned to the **document-formats-ripped-at-destination** attribute. By default, these formats are: ASCII, PDF, PostScript, PCL, and TIFF.

#### ↓ Note

- If DFE DSS transforms the incoming data stream, device commands (such as beginning or ending duplexing or changing the input bin) will be ignored, conversion algorithms might cause degraded appearance, and print fidelity could be lost. You can specify the following printer options using InfoPrint Manager attributes: media size, input tray, output bin, simplex/duplex printing, color/black-and-white printing, banner pages, and finishing options. For specific details, see the “Limitations” topics for the InfoPrint Manager transform commands in the “InfoPrint Manager transform commands” section of *RICOH InfoPrint Manager: Reference*.

To configure a DFE DSS printer not to transform certain input data formats, use the InfoPrint Manager Administration GUI. After you create the DFE printer with the **Create Printer Wizard**, go into the **Printer Properties** notebook for the printer and modify the **Formats to RIP at destination** field to configure your actual destination for passthru jobs. The **Formats to RIP at destination** field can be found on the **Document** tab of the **Printer Properties** notebook when all the available properties are displayed. It might be necessary to click **Show More** to display all the printer properties.

#### ↓ Note

- To ensure that jobs are not transformed, avoid specifying particular InfoPrint Manager attributes.

The DFE DSS also supports accurate job completion and job accounting (including the number of pages printed in color mode) which you can control using the **wait-for-job-completion** destination attribute.

## Understanding attachment types for PSF actual destinations

The attachment type for an actual destination defines how the printer device attaches to the Windows system and communicates with InfoPrint Manager for Windows. Based on the printer device, the attachment type is one of these:

### TCP/IP

The printer device communicates using IPDS and attaches to the Windows system 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.

### Command

Before you create a PSF Command actual destination, you must attach the printer device as specified by its documentation. If you are using this device for converting data to PCL to print on a PCL printer, make sure that you review [Processing concerns when using the PCL Secondary, p. 67](#).

### Other Driver

The PCL printer device communicates using TCP/IP or attaches directly to the Windows system through a parallel or serial port. To create the actual destination, you must specify the port associated with a port monitor needed to operate the PCL printer. If you are using this device for converting data to PCL to print on a PCL printer, make sure that you review [Processing concerns when using the PCL Secondary, p. 67](#).

Use [Selecting an attachment type for PSF actual destinations](#), p. 64 to determine the appropriate attachment type for PSF actual destinations.

## Selecting an attachment type for PSF actual destinations

<b>If you are sending this data stream to the printer:</b>	IPDS	PCL4, PCL5, PCL5c, PCL6 or PPDS	PCL4, PCL5, PCL5c, PCL6 or PPDS
<b>and you are going to attach the printer to the system where InfoPrint Manager is running this way:</b>	over the TCP/IP network	over the TCP/IP network <b>OR</b> directly attaching it through a parallel or serial port	over the TCP/IP network using a command such as lpr to submit jobs to it
<b>Select this attachment type:</b>	TCP/IP	Other Driver	Command

To configure a PSF Other Driver printer to not transform certain input data formats, you use the **InfoPrint Manager Administration GUI** to do this configuration task. After you create the PSF Other Driver attached printer with the **Create Printer Wizard**, you must go into the **Printer Properties** notebook for the printer and modify the **Formats to RIP at destination** field to configure your actual destination for passthru PCL and PostScript jobs. The **Formats to RIP at destination** field can be found on the **Document** tab of the **Printer Properties** notebook when all the available properties are displayed. It might be necessary to click **Show More** to display all the printer properties.

Highlight both **PCL** and the **PostScript** (or only one of the two, depending upon what data types your actual destination supports natively) from the **Formats to RIP at destination** list of possible values, and click on the **Add>>** button.

You can specify other values besides **PCL** and **PostScript** because you might have a destination that can accept them directly. For example, your printer might accept **PDF** or **ASCII**.

### Note

You must avoid specifying particular InfoPrint Manager attributes to make sure that jobs are not transformed.

## Document attributes that cause a job to be transformed

The following document attributes negate the **Document Formats Ripped at Destination** setting and force jobs to be transformed:

- **base-printer**
- **carriage-control-type**
- **chars**
- **color-mapping-table**
- **convert-to-ebcdic**
- **data-fidelity-problem-reported**
- **default-printer-resolution**
- **document-finishing**

- **explicit-page-placement**
- **font-fidelity-action**
- **font-processing-messages**
- **font-resolution**
- **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-segment-id**
- **new-line-option**
- **new-line-option-data-encoding**
- **number-up**
- **other-transform-options**
- **output-appearance**
- **output-bin**
- **output-format**
- **overlay**
- **overlay-back**
- **overlay-front**
- **page-definition**
- **page-media-select**
- **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**
- **resource-exit**
- **reverse-page-order**
- **scanner-correction**
- **screen-frequency**

- **segment-file-size**
- **shared-formdef**
- **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**

For more information about these attributes, see *RICOH InfoPrint Manager: Reference*.

## Job attributes that cause a job to be transformed

---

These job attributes negate the **Document Formats Ripped at Destination** setting and force the jobs to be transformed. For more information about these attributes, see *RICOH InfoPrint Manager: Reference*.

- **delete-segment-list**
- **job-finishing**
- **job-rip-action**
- **optimize-for-multiple-copies**

## PSF header sheet attributes that cause a job to be transformed

---

These attributes could affect header sheet generation, so they also negate the **Document Formats Ripped at Destination** setting and force jobs to be transformed. For more information about these attributes, see *RICOH InfoPrint Manager: Reference*.

- **account-text**
- **address1-text**
- **address2-text**
- **address3-text**
- **address4-text**
- **building-text**
- **department-text**
- **mvs-class**
- **mvs-destination**
- **mvs-forms**
- **name-text**
- **node-id-text**
- **programmer-text**

- **room-text**
- **subject-text**
- **title-text**
- **user-id-text**

## Processing concerns when using the PCL Secondary

InfoPrint Manager uses the PCL Secondary when PSF receives data and converts it to PCL for printing on a PCL printer. You use the PCL Secondary whenever you submit jobs through either a PSF Other-driver printer that does not set the **document-formats-ripped-at-destination** attribute or through a PSF Command printer. This section describes concerns that are specific to jobs sent through the PCL Secondary.

There are specific limitations that must be observed when sending jobs through the PCL Secondary:

- InfoPrint Manager only supports printing the following data streams as output of the PCL Secondary:
  - PPDS
  - PCL4
  - PCL5
  - PCL5c
  - PCL6
- The PCL Secondary only:
  - Produces PCL image data when there is image in the data sent to it.
  - Converts on a job basis and does not save AFP resources (whether fonts, overlays, or page segments) from previous jobs on the PCL printer.
- PCL Secondary level of support based on Intelligent Printer Data Stream Reference:
  - **Bar Code Support (BCOCA):** Most barcode commands are supported, except for orientation degrees. However, some orientation degrees are supported: **0, 90, 180, and 270**.
  - **Color Management Support (CMOCA):** Not supported.
  - **Graphic Support (GOCA):** Most graphic commands are supported, except for mapping options and orientation degrees. However, the mapping option **position-and-trim** and some orientation degrees are supported: **0, 90, 180, and 270**.
  - **Image Support (IOCA):** Most image commands are supported, except for **Bi-level** color, **JBIG2** compression algorithm, and orientation degrees. However, some orientation degrees are supported: **0, 90, 180, and 270**. Any color related functions are only supported for PCL6.
  - **Object Container Support:** Most Object Container commands are supported, except for **Bi-level** color, grayscale, and orientation degrees. However, some orientation degrees are supported: **0, 90, 180, and 270**. PCL Secondary depends on the transforms to convert image into AFP. Therefore, any limitations imposed by the transform also apply to the PCL Secondary.
  - **Text Support (PTOCA):** Most text commands are supported, except for: glyph layout controls, Unicode complex text, Write Text Controls, and orientation degrees. However, some orientation degrees are supported: **0, 90, 180, and 270**.
- The PCL Secondary does not support:

- Finishing Operations.
  - Saved Pages.
  - Alternate Offset Stacker.
  - Control Edge Marks.
  - Running parallel PCL Secondaries to transform jobs into PCL format, unless you create and print to different actual destinations.
  - Using any printer-resident resources (see [How the PCL Secondary uses fonts, p. 70](#)).
  - Reusing printer resources (including fonts) in subsequent jobs.
  - Full range for units per unit base additional function of BCOCA BCD2 subset.
  - Output bin switching between pages. The first printed output bin is used for all pages.
  - Full IS/3.
- When printing with double byte fonts, the value for the **printer-memory** actual destination attribute must be 65535 kilobytes.

### Configuring trays for PCL Secondary printers

Mapping input tray numbers between the PCL Secondary and the printer is different than mapping input trays between IPDS printers and the printer. For an IPDS printer, InfoPrint Manager gets the available trays from the printer. For the PCL Secondary, you must configure the trays you want to use because InfoPrint Manager cannot query the printer and must mimic an IPDS printer to capture formatting information:

#### Sample input tray mappings

AFPDS tray #1	tray #1
AFPDS tray #2	tray #4

#### Sample input bin mappings for PCL6

Bin#	Location
1	Auto Select, based on paper size
2	Manual Feed
3	Multiple Purpose Tray
4	Upper Cassette
5	Lower Cassette
6	Envelope Tray
7	Third Cassette

The PCL Secondary has limitations that apply to input trays that might limit your ability to do certain tasks. Because it supports an older version of the IPDS Load Copy Control (**LCC**) command, the PCL Secondary is limited in what it can do with copies. When printers support the older version of the **LCC** command, IPDS uses an Execute Order Homestate Select Input Media Source (**XOH-SIMS**) command each time a medium map changes. The PCL Secondary's older version of the **LCC** command limits you

to specifying one input tray for each **LCC** command. Because each **XOH-SIMS** command overrides the previous one, you cannot specify multiple copies of each page from different trays on the PCL printer. For a complete example of how this works, see the **psf-tray-characteristics** actual destination attribute description in *RICOH InfoPrint Manager: Reference*.

For example, if you were to try and print a job with a form definition that specifies multiple input trays for each page, you might be able to print successfully using an IPDS printer that supports these specifications, but be unable to print that same job to a PCL printer through the PCL Secondary. With the printer using the PCL Secondary, InfoPrint Manager uses an **XOH-SIMS** command each time the form definition changes the medium map.

### Configuring output bins for PCL Secondary

In the **InfoPrint Manager GUI** in the **Printer Properties** window on **Media/Bin/Trays** label, you can select a default output bin for the printer and modify the **Map output bin to number** table. The **Bin name** corresponds to the output bin number specified in the AFP data stream and the **Bin number** corresponds to the PCL output bin number. The maximum number of entries in the table is 6.

The PCL Secondary takes the value from the **Bin number** and places it in the PCL command to select the output bin as appropriate. Because the PCL printer manufacturers do not necessarily use a one-to-one matching between the value specified in the appropriate PCL command for output bin selection and physical output bin, you must know what value for output bin number set in the PCL command corresponds to what physical output bin.

#### ↓ Note

To do the correct mapping, look into the printer manufacturer specifications to find the number value for each physical input tray on the printer.

### Smarter IPDS Input tray

In an AFP data stream, you can select a media source using the name of the media. The MO:DCA reference defines standard media names to be used. This is done by specific construction of a FORMDEF that is later used to print the job. To use this feature for a new defined Custom media type, set the name specified when creating the new Custom media in the appropriate place in the FORMDEF.

### Media sizes for Input tray

The PCL Secondary process supports the following media sizes:

- 3.87 x 7.50 Env-Mon, HP
- 3.87 x 8.87 Com-9
- 3.94 x 5.83 JPOST
- 4.14 x 5.83 A6
- 4.12 x 9.50 Com-10
- 4.33 x 8.66 Int-DL
- 5.04 x 7.17 JIS B6
- 5.50 x 8.50 Invoice
- 5.85 x 8.27 A5
- 5.83 x 7.87 JPOSTD

- 6.38 x 9.02 Int-C5
- 6.93 x 9.85 Int-B5
- 7.16 x 10.12 JIS B5
- 7.25 x 10.50 Executive
- 8.27 x 11.70 A4
- 8.50 x 11.00 Letter
- 8.50 x 13.00 Folio
- 8.50 x 14.00 Legal
- 10.12 x 14.33 JIS B4
- 11.00 x 17.00 Ledger
- 11.69 x 16.54 A3

Except these, you have the possibility to specify additional media size within the GUI by defining a custom media size. InfoPrint Manager always sets the media to Letter if an unsupported PCL media size is specified (other than a custom size). Media defaults to Letter only if an unsupported PCL media size (not listed above) is selected and it is not defined as custom.

For more information on how to create a custom media size, see "Configuring media" in the *RICOH InfoPrint Manager for Windows: Procedures* guide.

### How the PCL Secondary uses fonts

The PCL Secondary supports only these types of fonts:

1. 300 pel AFP fonts
2. Relative-Metric AFP fonts
3. AFP Outline fonts
4. TrueType/OpenType fonts

You must install one of these font types on your system so they can be used by the PCL Secondary.

Because the PCL Secondary transfers data to the PCL printer character-by-character during job processing, you cannot examine the PCL data the same way you might examine standard text or PCL data. As a result, you cannot scan the output data for certain text strings.

Also, the PCL Secondary can neither communicate with the printer to see if the job completes printing nor query fonts on the printer after the print command has been issued.

Since each TrueType, Type1, and CID-Key fonts are written to disk, make sure that enough disk space is available; otherwise, jobs will fail to print. Here is the disk location: *Install Path/var/psf/Printer Name/TempFont*.

### Troubleshooting printing to the PCL Secondary

Potential answers to problems that can result from using the PCL Secondary through InfoPrint Manager:

#### **The graphics in my PCL file do not print, and I receive errors with the output.**

You might have submitted a file with graphics as either PCL4 or PPDS output. Neither of these data streams support graphics. To make sure that the Sense Type Model (**STM**) IPDS command created

by the PCL Secondary generates the Graphics Command-Set Vector, you should print the output as either PCL5, PCL5c, or PCL6 data.

## Creating actual destinations

For help in selecting the type of actual destination to create, see [Understanding Destination Support Systems \(DSS\)](#), p. 56.

The InfoPrint Manager Administration and InfoPrint Manager Operations Graphical User Interfaces (GUIs) are applications that let you easily manage your InfoPrint objects. Both GUIs are installed with the InfoPrint Manager server and can also be installed on remote systems that use the Windows operating systems.

The printer driven by [InfoPrint Manager Administration GUI](#), p. 105 provides wizards to help you create several types of actual destinations to be [driven by InfoPrint Manager](#), p. 71. The wizard also provides support for creating InfoPrint gateways, which allow users to submit jobs to InfoPrint Manager even if they do not have InfoPrint Select installed.

This chapter assumes that you have started the InfoPrint Manager interfaces and you are comfortable using them. See [InfoPrint Manager User Interfaces](#), p. 35 for information about the tasks you can perform with the InfoPrint Manager interfaces.

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## Creating a destination driven by InfoPrint Manager

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Use the InfoPrint Manager Administration GUI to create these types of actual destinations. The InfoPrint Manager Administration GUI provides wizard support for creating these types of printers:

- [PSF TCP/IP printer](#), p. 72
- [PSF Command printer](#), p. 74
- [PSF Other-Driver printer](#), p. 76
- [Passthrough printer](#), p. 78
- [BSD printer](#), p. 81
- [IPP printer](#), p. 83
- [DFE printer](#), p. 84
- [E-mail](#), p. 85

When you use the wizard to create any of the PSF printers (PSF TCP/IP, PSF Command, or PSF Other), the wizard sets default values for some of the attributes of the printer. The attributes and their associated default values are listed below.

### media-supported

Only set when the printer is not an SNMP printer. Default values vary depending on the printer model you select.

## Default printer values using the wizard

Printer	Values
All printer models	<ul style="list-style-type: none"> <li>• letter (8.5 x 11 inch)</li> <li>• legal (8.5 x 14 inch)</li> <li>• tabloid (11 x 17 inch)</li> <li>• ledger (11 x 17 inch)</li> <li>• A3 (297 x 419 mm)</li> <li>• A4 (8.27 x 11.69 inch)</li> <li>• jis-b4-white (257 x 364 mm)</li> <li>• jis-b5-white (182 x 257 mm)</li> </ul>

### sides-supported

Only set when the printer is not an SNMP printer. Set to **1** and **2**.

### plexes-supported

Only set when the printer is not an SNMP printer. Set to **simplex** and **tumble**.

### printer-resolutions-supported

Set to **240**, **300**, **480**, and **600**.

If you are running with the **Basic InfoPrint Manager GUI**, InfoPrint Manager sets the defaults shown in the following table also.

### Basic InfoPrint Manager Administration GUI defaults for PSF printers




Attribute	Default values
<b>printer-resolutions-ready</b>	600
<b>booklet-fold</b> (set only for InfoPrint 4000)	down
<b>optimize-for-multiple-copies</b> (set only for printers which support this)	true
<b>start-sheets-supported</b>	job-ticket
<b>printer-start-sheet</b>	job-ticket
<b>form-definition</b>	F100D
<b>accounting-exit</b>	accounting-log



## PSF TCP/IP printer

Create a PSF actual destination to represent an Intelligent Printer Data Stream (IPDS) printer. Use the TCP/IP attachment type for an IPDS printer that PSF controls directly through TCP/IP.

Before creating a PSF TCP/IP printer, complete this worksheet.

### PSF TCP/IP printer worksheet

Wizard Prompt	Description	Value
Name	<p>The name for the actual destination object (64 character limit).</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	
Server	<p>The InfoPrint server that controls this actual destination. By default, the server name is the same as the name of the system where the server is installed.</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	
Model	<p>Select the printer model from the pull-down list in the InfoPrint Manager Administration GUI. If the printer you are working with is not in the pull-down list, enter the name as it appears on the printer.</p>	
TCP/IP address	<p>The IP address used to access this printer.</p>	
TCP/IP port	<p>The port used by the printer for communication. The majority of IPDS printers default to port 5001. The value you use here must match the value set at the printer.</p>	
Logical destination	<p>The logical destination that directs jobs to this actual destination.</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	<p>__ Default __ Other:</p>

Wizard Prompt	Description	Value
Logical destination's server	<p>The InfoPrint server that contains the logical destination.</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	
Queue	<p>The queue that holds jobs destined for this actual destination.</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	__ Default __ Other:

To create this type of printer, use the **Create Printer Wizard** in the InfoPrint Manager Administration GUI. (On the menu bar, click **Printer** → **Create** → **PSF** → **TCP/IP**.)

 **Note**

If **TCP/IP** is not shown in the **Printer** → **Create** → **PSF** menu, use **Printer** → **Add/Remove Menu Items** to add it.

[PSF TCP/IP printer worksheet, p. 73](#) provides the information that the wizard prompts for. For assistance, see the InfoPrint Manager Administration GUI online help.


If you did not enable the printer with the **Create Printer Wizard**, use the InfoPrint Manager Administration GUI to enable it.





## PSF Command printer

Use the command attachment type for a PCL printer that receives data streams transformed by PSF from a print command.

Before creating a PSF Command printer, complete this worksheet.

### PSF command printer worksheet

Wizard Prompt	Description	Value
Name	<p>The name for the actual destination object (64 character limit).</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	
Server	<p>The InfoPrint server that controls this actual destination. The server name is the same as the name of the system where the server is installed.</p>	

Wizard Prompt	Description	Value
	<p> <b>Note</b></p> <p>This name is case-sensitive.</p>	
Model	Select the printer model from the pull-down list in the InfoPrint Manager Administration GUI. If the printer you are working with is not in the pull-down list, enter the name as it appears on the printer.	
SNMP TCP/IP address	The IP address used to access this printer. This value is used only for SNMP printers.	
Device	The AIX device name. This is not applicable for Windows.	Leave blank.
Printer command	<p>The command string used to send a job to the appropriate Windows printer. For example, <code>lpr -S serverName -P printerName</code>.</p> <p> <b>Note</b></p> <p>This command is case-sensitive.</p>	
Data stream	The data stream expected by the printing device (for example, PCL5 or PCL 6).	
Logical destination	<p>The logical destination that directs jobs to this actual destination.</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	__ Default __ Other:
Logical destination's server	<p>The InfoPrint server that contains the logical destination.</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	

Wizard Prompt	Description	Value
Queue	<p>The queue that holds jobs destined for this actual destination.</p> <p><b>Note</b></p> <p>This name is case-sensitive.</p>	__ Default __ Other:
<p><b>Note</b></p> <p>Prior to using this worksheet to create your InfoPrint Manager actual destination, you can use the standard Windows <b>Add Printer Wizard</b> to make the printer available.</p>		

To create this type of printer, use the **Create Printer Wizard** in the InfoPrint Manager Administration GUI. (On the menu bar, click **Printer** → **Create** → **PSF** → **Command**.)

**Note**

If the **Command** is not shown in the **Printer** → **Create** → **PSF** menu, use **Printer** → **Add/Remove Menu Items** to add it.

[PSF command printer worksheet, p. 74](#) provides the information as prompted by the wizard. For assistance, see the InfoPrint Manager Administration GUI online help.

If you did not enable the printer with the **Create Printer Wizard**, use the InfoPrint Manager Administration GUI to enable it.

## PSF Other-Driver printer

Create a PSF other-driver actual destination to represent a PCL printer that receives data streams transformed by PSF through a Windows port monitor.

**Note**

The InfoPrint Manager Administration GUI calls a **PSF other-driver** actual destination or printer, a **PSF other** printer.

Before you create a PSF other-driver printer, you must create a Windows port that InfoPrint Manager will use to communicate with the printer. Use the InfoPrint Manager Management Console to create a Windows port with these steps:

1. Click the Windows **Start** button and select **Programs** → **InfoPrint Manager** → **Management Console**.
2. Select **Edit** → **New** → **Windows Port**.
3. In the **Create Windows Port** dialog, select the appropriate port monitor for your printing environment from the pull-down list and click **OK**.



For example, if you are using an InfoPrint network-attached workgroup printer as a non-IPDS printer, you should use the InfoPrint TCP/IP Network Port Monitor.

**Note**

The port monitor that you select determines the next dialog to appear.

Before creating a PSF other-driver printer, complete this worksheet.

### PSF other-driver printer worksheet

Wizard Prompt	Description	Value
Name	<p>The name for the actual destination object (64 character limit).</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	
Server	<p>The InfoPrint server that controls this actual destination. The server name is the same as the name of the system where the server is installed.</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	
Model	<p>On either a Windows or an AIX server, select the printer model from the pull-down list in the InfoPrint Manager Administration GUI.</p> <p>If the printer you are working with is not in the pull-down list, enter the name as it appears on the printer; or if the printer is SNMP-enabled, you can select <b>Set by SNMP printer</b>.</p>	
SNMP TCP/IP address	The IP address used to access this printer. This value is used only for SNMP printers.	
Device or Windows port name	The name of the output device that the selected actual destination represents.	
Printer command	The printer command that submits a job to this remote destination.	On a Windows system, leave this column blank.
Data stream	The data stream output by PSF when a job is transformed.	
Logical destination	The logical destination that directs jobs to this actual destination.	__ Default __ Other:

Wizard Prompt	Description	Value
	<p>↓ Note</p> <p>This name is case-sensitive.</p>	
Logical destination's server	<p>The InfoPrint server that contains the logical destination.</p> <p>↓ Note</p> <p>This name is case-sensitive.</p>	
Queue	<p>The queue that holds jobs destined for this actual destination.</p> <p>↓ Note</p> <p>This name is case-sensitive.</p>	__ Default __ Other:

To create this type of printer, use the **Create Printer Wizard** in the InfoPrint Manager Administration GUI. (On the menu bar, click **Printers** → **Create** → **PSF** → **Other**.)

↓ Note

If **Other** is not shown in the **Printer** → **Create** → **PSF** menu, use **Printer** → **Add/Remove Menu Items** to add it.

[PSF other-driver printer worksheet, p. 77](#) provides the information that the wizard prompts for. When a PSF Other-Driver printer is created, a Windows Passthrough printer is created automatically. Therefore, the Windows Generic/Text printer driver is required. If you have not installed the Windows Generic/Text Printer driver before, you must install it by following the installation instructions in "[Passthrough printer](#)", .

See the InfoPrint Manager Administration GUI online help for more assistance.

If you did not enable the printer with the **Create Printer Wizard**, use the InfoPrint Manager Administration GUI to enable it.

## Passthrough printer

Create a Passthrough actual destination to represent a printer that receives untransformed data streams through a Windows port monitor; for example, to send PostScript data to a PostScript printer or to send PCL data to a PCL printer without transforming it. When creating a Passthrough printer, the **sides** actual destination attribute must be set to the default duplexing value set on the printer.

↓ **Note**

By default, the Passthrough DSS supports only these data streams:

- ASCII
- iso-6429
- PCL
- PostScript
- PPDS
- simple-text (text)

To create a Passthrough actual destination, complete these steps.

1. Install the Windows Generic/Text Only printer driver.
  - 1) Use the Windows **Add Printer Wizard** to create a local printer.
  - 2) When you have to select a port, select **FILE:**.
  - 3) When you have to select the manufacturer and model of the printer, select **Generic** from the list of manufacturers and **Generic/Text Only** from the list of models.
  - 4) Finish the wizard, selecting not to share the printer and not to print a test page.
  - 5) When you are finished, you can delete the printer; the driver will still be installed.
2. Attach the printer device as specified by its documentation.
3. Define a Windows port.

If you already have a Windows port defined, you are ready to create your Passthrough printer. If you need to create a Windows port, use the InfoPrint Manager Management Console to create a Windows port to communicate with the printer device as follows:

- 1) Open the **Start** menu and click **Programs** → **InfoPrint Manager** → **Management Console**.
- 2) Select **Edit** → **New** → **Windows Port**.
- 3) In the **Create Windows Port** dialog, select the appropriate port monitor for your printing environment from the pull-down list and click **OK**.  
If you are using another InfoPrint network-attached workgroup printer, use the InfoPrint TCP/IP Network Port Monitor.

↓ **Note**

The port monitor that you select determines the next dialog to appear.

- 4) Fill in the information that the dialog requires and click **OK**.
4. Create a Passthrough printer by completing the worksheet [Passthrough destination worksheet, p. 80](#) and using the **Create Printer Wizard** in the InfoPrint Manager Administration GUI. (On the menu bar, click **Printer** → **Create** → **Passthrough**.)

↓ **Note**

If **Passthrough** is not shown in the **Printer** → **Create** menu, use **Printer** → **Add/Remove Menu Items** to add it.




[Passthrough destination worksheet, p. 80](#) provides the information as prompted by the wizard. For assistance, see the InfoPrint Manager Administration GUI online help.



If you did not enable the printer with the **Create Printer Wizard**, use the InfoPrint Manager Administration GUI to enable it.

To print a test page, see [Printing a test job, p. 97](#).

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## Passthrough destination worksheet

Wizard Prompt	Description	Value
Name	<p>The name for the actual destination object. For example, the name you will use for the passthrough printer you just attached.</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	
Server	<p>The server that controls this actual destination. The server name is the same as the name of the system where the server is installed.</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	
Windows port name	<p>The name of the Windows port to assign to this destination. Enter the Windows port name that you want to use <b>exactly</b> as it appears to Windows. To determine what ports exist on your server, open the <b>Start</b> menu and click <b>Settings</b> → <b>Printers</b>. On the <b>Printers</b> dialog, click <b>File</b> and click <b>Server Properties</b>. The <b>Print Server Properties</b> dialog box appears where you can click <b>Ports</b> to display the list of available ports.</p>	
TCP/IP address	<p>The IP address used to access this printer. This value is used for SNMP printers only.</p>	
Logical destination	<p>The logical destination that directs jobs to this actual destination.</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	__ Default __ Other:



Wizard Prompt	Description	Value
Logical destination's server	<p>The InfoPrint server that contains the logical destination.</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	
Queue	<p>The queue that holds jobs destined for this actual destination.</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	__ Default __ Other:





## BSD printer

Create a BSD actual destination when you need to configure a terminating transform at the actual destination or when no other DSS is suitable. The BSD DSS gives you less control of the printer and reports less accurate job status than the other DSSs.

Before creating a BSD printer, complete this worksheet.

### BSD printer worksheet

Wizard Prompt	Description	Value
Name	<p>The name for the actual destination object.</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	
Server	<p>The InfoPrint server that controls this actual destination. The server name is the same as the name of the system where the server is installed.</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	
SNMP TCP/IP address	<p>The IP address used to access this printer. This value is used only for SNMP printers.</p>	
Printer command	<p>The command to issue to submit a job to this remote destination. Typically, this is a call to the <b>lpr</b> command. For example, <code>lpr -S serverName -P printerName</code>.</p>	

Wizard Prompt	Description	Value
	<p> <b>Note</b></p> <p>This command is case-sensitive.</p>	
Data stream	The data stream expected by the printed device (for example, PCL5 or PCL6).	
Logical destination	<p>The logical destination that directs jobs to this actual destination.</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	__ Default __ Other:
Logical destination's server	<p>The InfoPrint server that contains the logical destination.</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	
Queue	<p>The queue that holds jobs destined for this actual destination.</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	__ Default __ Other:

To create this type of printer, use the **Create Printer Wizard** in the InfoPrint Manager Administration GUI. (On the menu bar, click **Printer** → **Create** → **BSD**.)

 **Note**

If **BSD** is not shown in the **Printer** → **Create** menu, use **Printer** → **Add/Remove Menu Items** to add it.

[BSD printer worksheet, p. 81](#) provides the information as prompted by the wizard. For assistance, see the InfoPrint Manager Administration GUI online help.

 **Note**

When you use the **lpr** command with a BSD actual destination, the printer prints only **single-document** jobs. If you send a BSD actual destination a multiple-document job, only the last document in the job prints.




If you did not enable the printer with the **Create Printer Wizard**, use the InfoPrint Manager Administration GUI to enable it.



## IPP printer

Create an IPP actual destination to represent a printer that supports the Internet Printing Protocol (IPP). The printer must have an assigned uniform resource indicator (URI). When creating an IPP printer, the **sides** actual destination attribute must be set to the default duplexing value set on the printer.

Before creating an IPP printer, complete this worksheet.

### IPP destination worksheet

Wizard Prompt	Description	Value
Name	<p>The name for the actual destination object. This is the printer URL, for example, np17.prtm4.bladr.infoprint.com.</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	
Server	<p>The server that controls this actual destination. The server name is the same as the name of the system where the server is installed.</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	
URL	The universal resource locator (URL) for this destination.	
TCP/IP address	The IP address used to access this printer. This value is used for SNMP printers only.	
IP Address	An IPv4 and/or IPv6 address statically assigned to this system. Not needed if DHCP is in use.	
Logical destination	<p>The logical destination that directs jobs to this actual destination.</p> <p> <b>Note</b></p> <p>This name is case-sensitive.</p>	__ Default __ Other:

Wizard Prompt	Description	Value
Logical destination's server	The InfoPrint server that contains the logical destination.   <b>Note</b> This name is case-sensitive.	
Queue	The queue that holds jobs destined for this actual destination.   <b>Note</b> This name is case-sensitive.	__ Default __ Other:

To create this type of printer, use the **Create Printer Wizard** in the InfoPrint Manager Administration GUI. (On the menu bar, click **Printer** → **Create** → **IPP**.)

 **Note**

If **IPP** is not shown in the **Printer** → **Create** menu, use **Printer** → **Add/Remove Menu Items** to add it.

[IPP destination worksheet, p. 83](#) provides the information as prompted by the wizard. For assistance, see the InfoPrint Manager Administration GUI online help.



If you did not enable the printer with the **Create Printer Wizard**, use the InfoPrint Manager Administration GUI to enable it.

## DFE printer

Create a DFE actual destination to represent a DFE print server driving a Ricoh printer.

Before creating a DFE printer, complete this worksheet.

### DFE printer worksheet

Wizard Prompt	Description	Value
Name	The name for the actual destination object (64 character limit).   <b>Note</b> This name is case-sensitive.	
Server	The InfoPrint server that controls this actual destination.   <b>Note</b> This name is case-sensitive.	
Model	Allow the DFE print server to set this information or enter the	__ Set by DFE printer

Wizard Prompt	Description	Value
	name as it appears on the printer.	
TCP/IP address	The IP address used to access the DFE print server.	
User	The user name that the DFE DSS actual destination will use to connect to the Digital Front End (DFE) server, such as a Fiery DFE.	
Password	The password the DFE DSS actual destination will use to establish authorized access to the Digital Front End (DFE) server, such as a Fiery DFE.	

To create this type of printer, use the **Create Printer Wizard** in the InfoPrint Manager Administration GUI. (On the menu bar, click **Printer** → **Create** → **DFE**.)

#### ↓ Note

If **TCP/IP** is not shown in the **Printer** → **Create** → **PSF** menu, use **Printer** → **Add/Remove Menu Items** to add it.

[DFE printer worksheet, p. 84](#) provides the information that the wizard prompts for. For assistance, see the InfoPrint Manager Administration GUI online help.

If you did not enable the printer with the **Create Printer Wizard**, use the InfoPrint Manager Administration GUI to enable it.

## E-mail

Create an E-mail actual destination when you want InfoPrint Manager to E-mail your jobs.

Before creating an E-mail actual destination, complete this worksheet.

### E-mail Destination worksheet

Wizard prompt	Description	Value
Name	The name for the actual destination object.	
Server	The InfoPrint server that controls this actual destination.	
Logical destination	The logical destination that directs jobs to this actual destination.	<input type="checkbox"/> Default <input type="checkbox"/> Existing: _____ <input type="checkbox"/> Create: _____

Wizard prompt	Description	Value
	<p><b>Note</b></p> <p>We recommend that you create a separate logical destination object so that the same logical destination does not feed jobs to both a printer and one of these non-print destinations.</p>	
Logical destination's server	The InfoPrint server that contains the logical destination.	
Queue	The queue that holds jobs destined for this actual destination.	<p>If you selected a new LD, you get these three options:</p> <p>__ Default</p> <p>__ Existing: _____</p> <p>__ New: _____</p>

To create this type of printer, use the **Create Printer Wizard** in the InfoPrint Manager Administration GUI. (On the menu bar, click **Other** → **Create** → *destination\_type*, where *destination\_type* is E-mail.)

Referring to the worksheet [E-mail Destination worksheet](#), p. 85 provides the information that the wizard prompts for. See the InfoPrint Manager Administration GUI online help for more assistance.

**Note**

If the **Create E-mail** destination option is not shown in the **Other** menu, you can add it to the menu using the customize options in the InfoPrint Manager Administration GUI. Select the **Customize** option from the **Options** menu to open the Customize dialog. Click the **Other** tab and select the Menu checkbox for the **E-mail** destination. Click **OK** to apply your change and close the dialog. The **Create E-mail** destination option displays in the **Other** menu.

If you did not enable the printer with the **Create Printer Wizard**, use the InfoPrint Manager Administration GUI to enable it.

## Working with files larger than 2 gigabytes

With InfoPrint Manager, a file that is larger than 2 gigabytes is considered a large file.

This section includes:

- Which job submission clients are supported
- Which output methods are supported
- Which document formats are supported
- Which output formats are supported

## Job submission clients supported

Client	Windows	AIX	Linux
pdpr with AIX, Linux, and Windows	Supported	Supported	Supported
Download for z/OS	Supported	Supported	Supported
Hot folders	Supported	Supported	Supported
InfoPrint Select	Not supported	Not supported	Not supported
Submit Express	Not supported	Not supported	Not supported
IPP Gateway	Not supported	Not supported	Not supported
Windows Gateway	Not supported	Not supported	Not supported

## Output methods supported

The PSF DSS is the only DSS that supports large files. PSF DSS attachments that support large files include:

Client	Windows	AIX	Linux
TCP/IP	Supported	Supported	Supported
Command	Supported	Not supported	Not supported
Other	Supported	Not supported	Not supported

### Note

1. The **reverse-page-order** actual destination and document or default document attributes are not supported for large files.
2. Jobs that are processed by the Transform subsystem support files greater than 2 gigabytes in size if the command that is being called has support for files greater than 2 gigabytes in size.

## InfoPrint Manager document formats support for greater than 2 gigabyte files

Document format	Windows	AIX	Linux
MOD:CA	Supported	Supported	Supported
PostScript (see Notes 1 and 2)	Supported	Supported	Supported
PCL (see Note 1)	Supported	Supported	Supported

Document format	Windows	AIX	Linux
PDF	Supported	Supported	Supported
Line data	Supported	Supported	Supported
XML	Not supported	Not supported	Not supported
Xerox	Not supported	Not supported	Not supported
SAP	Supported	Supported	Supported
TIFF, JPEG, GIF	Not supported	Not supported	Not supported
ASCII	Not supported	Not supported	Not supported

 **Note**

1. Embedded PostScript and PCL objects in AFPDS are not supported if the **ps2afp** or **pcl2afp** transform produces AFP output that is greater than 2 gigabytes.
2. If you use the **ps2afp** transform stand-alone (command line with the -o option), it does not support files that are greater than 2 gigabytes in size.

## InfoPrint Manager output format support for greater than 2 gigabyte files

Output format	Windows	AIX	Linux
Booklet print	Not supported	Not supported	Not supported
Booklet print with integrated cover	Not supported	Not supported	Not supported
Side-by-side copies	Not supported	Not supported	Not supported
Slit-and-merge	Supported	Supported	Supported
Simple-n-up	Supported	Supported	Supported

## Preparing InfoPrint Manager to connect to your host system

InfoPrint Manager provides various methods to configure printing from host systems. The most powerful methods are: Distributed Print Function (DPF) and MVS Download. If you have not decided which method is best for your operation, see the *RICOH InfoPrint Manager for Windows: Planning Guide* for descriptions and comparisons of the methods. You need to know which method to use before you can create the connection between InfoPrint Manager and the host.

Both InfoPrint Manager host printing options use *host receivers* to link the server to the host. There are two types of host receivers, one for each host printing method. Each type of receiver performs different functions.

- **DPF host receiver**

Downloads print jobs and its resources from a PSF on your host system and submits them to an InfoPrint Manager PSF printer to be printed. On the host PSF, the DPF host receiver is like a TCP/IP-attached IPDS printer. You can submit jobs to the DPF host receiver using the methods used to send jobs to a TCP/IP-attached IPDS printer.

If your host operating system is MVS or VSE, the DPF host receiver stores all of the DPF Resources it receives in the DPF Resources database. If you have the **Save resources** function of the receiver turned on, all resources that are marked **public** on the host are shown in the DPF Resources view of the Management Console. Additional information about the **Save resources** function is available in the online help in the Management Console and in the *RICOH InfoPrint Manager for Windows: Planning Guide*.

- **MVS Download receiver**

Receives print files and JCL parameters from the MVS host. The receiver applies a Destination Control File (DCF) to the JCL parameters and generates a corresponding list of InfoPrint parameters. The list of InfoPrint parameters is then passed to the MVS Download Exit Program (or *Exit*) so InfoPrint Manager can process the job.

The Exit performs actions on the received file. A sample exit is provided with InfoPrint Manager: written in Microsoft Visual C++ Version 6.0. This sample submits the file to InfoPrint Manager using **pdpr** and logs any errors. The sample exit also stops the MVS Download receiver if the **pdpr** fails.

 **Note**

MVS Download receivers do not download AFP resources with print jobs. AFP resources must be available to InfoPrint Manager.

After you have created your actual destinations, use the procedure below to create the right type of host receivers on your InfoPrint Manager server.

- [Before you create a DPF host receiver, p. 89](#)
- [Before you create an MVS Download host receiver, p. 94](#)

---

## Troubleshooting host receivers

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All host receivers write their error messages to the server message log. If you start to have trouble with host printing, check the server error log for host receiver problems first. To see the server message log, open the Management Console and click **Server Log** in the left pane.

---

### Before you create a DPF host receiver

---

When you create a DPF host receiver, you have to specify which InfoPrint Manager actual destination the host receiver will send jobs to. If you have not already created the actual destinations you need, see [Creating actual destinations, p. 71](#).

**Note**

1. You must use the PSF DSS with DPF.
2. If you have interoperating InfoPrint Manager servers, the actual destination that the host receiver submits jobs to and the logical destination that the actual destination is associated with must reside on the same server.
3. If you currently use DPF in PSF for OS/2, see the *RICOH InfoPrint Manager for Windows: Planning Guide* for instructions on collecting the information from your OS/2 system. You can use the printer and spool information that you collect to configure your InfoPrint Manager actual destination.

## DPF working directories

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Each DPF host receiver must have two **working directories** associated with it; one for jobs and one for resources. These directories can only be used by one host receiver and should be reserved exclusively for that host receiver; they should not be used by any other programs or for any other purpose.

When you create a DPF host receiver, InfoPrint Manager will fill in default directory paths for the working directories. If you accept those directories, InfoPrint Manager will create them for you. However, to store your resources somewhere else (for example, on a different hard drive or a different partition), you must create the directory yourself, before you create the host receiver.

If you create your own directories, it is recommended that you create one directory named after the receiver, then two subdirectories inside it, one named **Jobs** and one named **Resources**. For example, to name your host receiver **hr\_ip4000**, you would create a directory named **hr\_ip4000**, then create the **Jobs** and **Resources** subdirectories under it. When you create your host receiver, you would type E:\hr\_ip4000\Jobs for the **Jobs directory** and E:\hr\_ip4000\Resources for the **Resources directory**.

---

## Creating a DPF host receiver

---

1. Complete these configuration worksheets. Only the **PSF actual destination** and **Port number** values are required to create a receiver; if you're not sure what to fill in for the rest of the items, you can accept the defaults and change the values in the receiver later.

**Note**

If you currently use DPF in PSF for OS/2, see the *RICOH InfoPrint Manager for Windows: Planning Guide* for instructions on collecting the information you need from your OS/2 system.

### DPF host receiver worksheet

Management Console Prompt	Description	Value
Logical unit alias name	Because DPF connects to InfoPrint Manager over TCP/IP, you will not use the LU alias, however, knowing it will help you figure out the TCP/IP connection.	
PSF actual destination	The name of the actual destination object that this receiver will send jobs to.  <div style="border: 1px solid #0070C0; border-radius: 10px; padding: 2px; display: inline-block;"> <span style="color: #0070C0;">↓</span> <b>Note</b> </div> This name is case-sensitive.	
Port number	The port that the host receiver will use to communicate with the host system.	
Description	Text to describe this receiver (optional).	
Submission priority	The relative importance of jobs submitted by this receiver. 1 is the highest priority; 100 is the lowest priority.	Default: 50
Inactivity limit	Number of seconds to wait for jobs from a connected host before disconnecting. When the inactivity timer runs out, the receiver drops the connection with the host system. If the timer is set to 9999, it will never run out.	Default: 9999
Save resources	If Save resources is selected, the DPF host receiver acknowledges the public/private settings on the DPF resources that are downloaded with print jobs. Resources that were marked public on the host are stored in the DPF Resources Database for reuse later. Resources that were marked private cannot be reused. If Save resources is not selected, all DPF resources that are downloaded are considered private.	___ yes ___ no

Management Console Prompt	Description	Value
Obtain printer characteristics at start up	If selected, the receiver checks the printer settings every time the receiver connects to a host PSF and communicates any changes to the host system.	___ yes ___ no
Enable SSL/TLS	If selected, the DPF receiver communicates with the mainframe through the SSL/TLS protocol.	___ yes ___ no
Suppress start sheets	Select to turn off the start sheets that InfoPrint Manager generates.	___ yes ___ no
Suppress end sheets	Select to turn off the trailer sheets that InfoPrint Manager generates.	___ yes ___ no
Suppress separator sheets	Select to turn off the separator sheets that InfoPrint Manager generates.	___ yes ___ no
Jobs directory	The directory that the host receiver stores print jobs in until they are printed. For more information, see <a href="#">DPF working directories, p. 90</a> .	
Resources directory	The directory that the host receiver stores job resources in. For more information, see <a href="#">DPF working directories, p. 90</a> .	

### DPF host receiver class set up worksheet

Receiver				
Class	Copies	Start page	Disposition	Retention Period
			<ul style="list-style-type: none"> <li>• Print</li> <li>• Retain</li> <li>• Print then Retain</li> </ul>	<ul style="list-style-type: none"> <li>• ___ Forever</li> <li>• ___ Days</li> <li>• ___ Hours</li> </ul>
			<ul style="list-style-type: none"> <li>• Print</li> <li>• Retain</li> <li>• Print then Retain</li> </ul>	<ul style="list-style-type: none"> <li>• ___ Forever</li> <li>• ___ Days</li> <li>• ___ Hours</li> </ul>
			<ul style="list-style-type: none"> <li>• Print</li> </ul>	<ul style="list-style-type: none"> <li>• ___ Forever</li> </ul>

Receiver				
			<ul style="list-style-type: none"> <li>• Retain</li> <li>• Print then Retain</li> </ul>	<ul style="list-style-type: none"> <li>• ___ Days</li> <li>• ___ Hours</li> </ul>
			<ul style="list-style-type: none"> <li>• Print</li> <li>• Retain</li> <li>• Print then Retain</li> </ul>	<ul style="list-style-type: none"> <li>• ___ Forever</li> <li>• ___ Days</li> <li>• ___ Hours</li> </ul>
			<ul style="list-style-type: none"> <li>• Print</li> <li>• Retain</li> <li>• Print then Retain</li> </ul>	<ul style="list-style-type: none"> <li>• ___ Forever</li> <li>• ___ Days</li> <li>• ___ Hours</li> </ul>

- Open the InfoPrint Manager Management Console and select **Edit** → **New** → **DPF Host Receiver**.
- Use the information from the worksheet to complete the dialog. Make sure you click **Class Set Up** to configure your receiver classes with the information from [DPF host receiver class set up worksheet, p. 92](#). Click **OK** when you are finished.  
For further information, see the Management Console help system.

**★ Important**

The first time you try to start this receiver and connect to your host system, make sure that the printer that it will submit jobs to is powered **ON** and is available.

- See [Settings on your host system, p. 93](#) to create a printer that will submit jobs to this host receiver from your host system.

## Settings on your host system

To your host system, the DPF host receiver looks like a PSF TCP/IP printer. Use the appropriate guidelines below to define a TCP/IP printer in your host PSF. Before you begin, make sure you know:

- The IP address of the system that your InfoPrint Manager server is installed on.
- The port number that you assigned to the DPF host receiver when you created it.

Keep in mind that various PSF and TCP/IP settings will affect the performance of your printing system. See the documentation for your host PSF to learn more about the parameters and settings that are available.

## PSF for z/OS

See *Print Services Facility for z/OS: Customization (S544-5622)* for information and instructions about defining a TCP/IP printer. When you have to enter the IP address of the printer, enter the IP address of your InfoPrint Manager server instead. When you define the printer, the port defaults to 5001; if your host receiver uses port 5001, you will not have to change it on your host system.

## PSF/VM

Define a Group 4 printer, using the IP address of your InfoPrint Manager server for the **IPADDR** keyword value and the port number of the DPF host receiver for the **PORTNO** keyword value.

Additional information about TCP/IP support and defining a Group 4 printer is available at [https://www-01.ibm.com/servers/resourcelink/svc00100.nsf/pages/zOSV2R3S5500427/\\$file/apss000\\_v4r6.pdf](https://www-01.ibm.com/servers/resourcelink/svc00100.nsf/pages/zOSV2R3S5500427/$file/apss000_v4r6.pdf).

## PSF for VSE

Edit the PSF Startup job so that you use the IP address of your InfoPrint Manager server for the **IPADDR** parameter and the port number of the DPF host receiver for the **PORTNO** parameter. If your DPF host receiver uses port 5001 (the default port in PSF for VSE), you do not have to specify a value for the **PORTNO** parameter.

Additional information about TCP/IP support for PSF for VSE is available at [https://www-01.ibm.com/servers/resourcelink/svc00100.nsf/pages/zOSV2R3S5500427/\\$file/apss000\\_v4r6.pdf](https://www-01.ibm.com/servers/resourcelink/svc00100.nsf/pages/zOSV2R3S5500427/$file/apss000_v4r6.pdf).

## PSF for iSeries

Use the CRTDEVPRT (Create Device Description (Printer)) command to define a TCP/IP printer on your iSeries system. Use the IP address of your InfoPrint Manager server for the **RMTLOCNAME** value and the port that your DPF host receiver uses for the **PORT** value. For example, this command defines a printer that can send IPDS data to a DPF host receiver using the TCP/IP protocol, assuming that the DPF host receiver uses port 5005, and the IP address of the InfoPrint Manager server is 9.34.946.882.

```
CRTDEVPRT DEVD(IPMDPF) DEVCLS(*LAN) TYPE(*IPDS) MODEL(0)
LANATTACH(*IP) AFP(*YES) PORT(5005) FONT(11)
RMTLOCNAME('9.34.946.882')
TEXT('Sample InfoPrint Manager DPF printer writer')
```

## Before you create an MVS Download host receiver

When you create an MVS Download receiver, you have to specify which InfoPrint Manager actual destination the host receiver will send jobs to. If you have not already created the actual destinations, see [Creating actual destinations, p. 71](#).

## Creating an MVS Download receiver

1. Complete this configuration worksheet.

**Note**

Once you create an MVS Download receiver, you cannot change any of its attributes. If you are not certain which options to select or which DCF and Exit to use, skip to step 4, p. 96. Create your MVS Download receivers after you have reviewed the rest of the MVS Download configuration information.

**MVS Download host receiver worksheet**

Management Console Prompt	Description	Value
Port Number	The port assigned for communication with z/OS or MVS. This value must be the same as the port assigned during configuration of the host system.	
Target Destination Name	<p>The InfoPrint Manager logical destination to which jobs are routed from this receiver by default. This default can be overridden with the appropriate z/OS or MVS job parameters and printer control file settings. In sample destination control file supplied with InfoPrint Manager, the value of MVS keyword <b>DEST</b> overrides whatever value you specify here.</p> <p><b>Note</b></p> <p>This name is case-sensitive.</p>	
Print Control File	The file that contains the appropriate attributes for jobs submitted to this receiver. You can use the default file, or you can point to a customized version of this default file.	
Exit Program Name	The program that processes jobs submitted to this receiver from the host and passes the jobs to the requested InfoPrint Manager destination. Typically, the default program <b>o390dsubm.exe</b> is used.	

Management Console Prompt	Description	Value
Retain command files	Indicate whether to save the command files for jobs that do not print correctly.	___ yes ___ no
Process one file at a time	Indicate whether InfoPrint Manager should wait for a previous job to complete before starting to process the next job.	___ yes ___ no

2. Open the InfoPrint Manager Management Console and select **Edit** → **New** → **MVS Download Receiver**.
3. Use the information from the worksheet to complete the dialog and click **OK**.  
For more information, see the Management Console help system.
4. To complete your MVS Download configuration, see *RICOH InfoPrint Manager for Windows: Procedures*, available on your Publications DVD-ROM, and in the RICOH Software Information Center at <https://help.ricohsoftware.com/swinfocenter>.

## Synchronizing InfoPrint Manager with an InfoPrint 4000 or an InfoPrint 4100

The cutter-trimmer-stacker (CTS) is a post-processing device used with high speed printers for paper handling. Perform this procedure with the help of your InfoPrint service engineer (SE) to make sure that your InfoPrint 4000 or InfoPrint 4100 and the CTS support the same media.

1. Use either InfoPrint Manager GUI to specify the media that the actual destination representing the InfoPrint 4000 or the InfoPrint 4100 supports.
  - 1) Open the InfoPrint Manager GUI.
  - 2) Click the InfoPrint 4000 or InfoPrint 4100 printer object in the tree window to select it.
  - 3) Select **Printer** → **Change Media** to open the **Change Media** dialog.
  - 4) Associate each tray with an appropriate media. Click **Help** for more information.
2. On the printer, define forms that correspond to the media you specified in the previous step. Consider the settings in this table as an example:

Medium Name	Printer_Form Name	Printing_Form Description
letter	na letter	2-up letter (8.5 by 11)
legal	na legal	2-up legal (8.5 by 14)
ledger	ledger	1-up (11 by 17)

3. Set up the CTS for the dimensions required by the supported media. For example, to support ledger-sized paper, set up the CTS for an 11-inch cut width and a 14-inch cut length. The CTS can support a limited set of cut lengths and only one center slitting option.

## Printing a test job

To submit a test job to a printer driven by InfoPrint Manager, you must first run the InfoPrint Manager Management Console. Then:

1. Select **Print Test Job** from the **Debug** menu. The **Print Test Job** dialog box opens.
2. Select the type of test job (AFP, PCL, PostScript, or ASCII) and the target destination.
3. Click **OK**.

This should produce printed output on the destination device. If it does not, you might want to check the status of the job in the InfoPrint Manager Administration GUI.

All versions of PSF include suitable test jobs. See the host PSF documentation for details on submitting test jobs.

## Understanding the LPD Gateway

The InfoPrint Manager for Windows Line Printer Daemon (LPD) is a utility that lets you submit print jobs from other operating systems using a Line Printer (LPR) client. The InfoPrint Manager LPD replaces the LPD that is supplied with the Windows operating system (TCP/IP Print Services), however, it submits the files it receives directly to an InfoPrint Manager destination, not to a Windows printer. It also supports the `-o` options that are available with some LPR clients (`-o` options allow you to specify advanced InfoPrint Manager print options such as `formdefs` and `pagedefs`).

Only one LPD can run on your InfoPrint Manager server system at a time. If you have TCP/IP Print Services installed, InfoPrint Manager disables it and enables the InfoPrint Manager LPD. If you would prefer to use TCP/IP Print Services, use the Management Console to change the service configuration. For further instructions, see the Management Console help.

### ★ Important

If you have a different LPD installed, InfoPrint Manager does **not** disable it, but installs and starts the InfoPrint Manager LPD. You must stop one of the LPDs before you try to submit a print job using an LPR client.

To submit print jobs to the InfoPrint Manager LPD, you can use any LPR client. However, to be able to specify advanced InfoPrint Manager options on the `-o` flag, you should use the **lprafp** sample code package. **lprafp** is an LPR client that is available for free download at <https://dl.riohsoftware.com/downloads/375bc3fe-3080-401f-91c4-2b8adb607f89>. The package includes executable forms of the **lprafp** client for the Windows and AIX (version 6.1 and later) platforms. You can compile this code to use it on other platforms as well. Ricoh does not provide support for the package.

### ↓ Note

The Microsoft LPR client supports a `-o` flag, but it is not the same as the InfoPrint Manager `-o` flag. Any values you pass to InfoPrint Manager using the Microsoft `-o` flag will be lost. In addition, some LPR clients provide print control functions, such as landscape print. The InfoPrint Manager LPD does not support these options.

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## Install and configure lprafp for Windows from the web

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For Windows operating system clients, the **lprafp** sample code package is available for free download at <https://dl.ricohsoftware.com/downloads/375bc3fe-3080-401f-91c4-2b8adb607f89>.

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## Preparing to submit print jobs

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When you submit jobs to the InfoPrint Manager LPD, it uses a mapping file to match the keywords you specify on the `-o` option with InfoPrint attributes. A sample mapping file comes with InfoPrint Manager for Windows; before you submit any print jobs to the InfoPrint Manager LPD, you should modify this file to meet your needs.

To modify the mapping file:

1. Open the file `<workspace_path>\lpd\lpdmap.txt` in a text editor such as Notepad.
2. Read all of the instructions in the mapping file before you make any changes.
3. Edit the mappings as necessary and save the file using the same name.

Because all LPR clients use different keywords, it is impossible to list them all. The mappings listed are "best guess" mappings and might not generate the results you need. The best way to see what values you need to add or change is to uncomment the line that reads: `* DEBUG` and save the file. (To uncomment the line, delete the `*`.) Submit a print job through the LPD and check the output. If the job fails or if it prints incorrectly, check the error messages in the server log in the Management Console. Use them to help determine which keywords are missing or mapped incorrectly. When you are finished, be sure to open the mapping file and comment the `DEBUG` line out again.

---

## Submitting print jobs

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When you submit print jobs using the LPR client, all you need to specify is the InfoPrint Manager server and the name of an InfoPrint destination (logical or actual). The InfoPrint Manager LPD submits the job to the InfoPrint print spool.

## Understanding the Virtual Printer Gateway

The InfoPrint Manager for Windows Virtual Printer (VP) is a specialized utility that enables the submission of raw print jobs to an InfoPrint Manager destination over a TCP/IP connection. This functionality is particularly useful when integrating InfoPrint Manager with other operating systems or software that generate raw print data.

The Virtual Printer (VP) listens for incoming TCP/IP connections on port 9100. When a client sends a print job, Virtual Printer (VP) receives the raw data and forwards it directly to an InfoPrint Manager destination, bypassing the Windows print subsystem entirely. This allows for seamless job submission from non-Windows systems or custom printing applications.

Only one instance of Virtual Printer (VP) can run at a time on a given InfoPrint Manager server. Attempting to run multiple instances may result in conflicts or failure to bind to port 9100.

Virtual Printer (VP) can use a mapping file to interpret and translate PDL commands embedded in the data stream. These PDL commands are mapped to corresponding InfoPrint Manager attributes, ensuring that job parameters like paper size, input trays, and duplex settings are correctly applied. A sample mapping file is provided with the InfoPrint Manager installation. This file must be reviewed and customized to align with your specific print environment and job requirements before submitting any jobs to the Virtual Printer (VP) Gateway.

For more information on modifying the mapping file and submitting print files through the VP, see *RICOH InfoPrint Manager for Windows: Procedures*.



## 2. Getting started with client systems

- InfoPrint Manager GUI software
- Using InfoPrint Select for Windows
- Using InfoPrint Select for Linux
- Windows gateway printer
- IPP gateway printer
- Using the InfoPrint Manager for AIX client
- Using the InfoPrint Manager Linux client
- Using the InfoPrint Submit Express Client
- Using the InfoPrint Manager Windows Client
- InfoPrint Manager hot folders
- Installing and configuring the AFP driver
- Configuring client systems to receive automatic updates
- Installing InfoPrint Manager Update

### InfoPrint Manager GUI software

When you install the InfoPrint Manager server, you automatically install the standard InfoPrint Manager Java GUIs: the InfoPrint Manager Administration GUI, the InfoPrint Manager Operations GUI, and the Web GUI. You can also install two additional GUIs: the Basic InfoPrint Manager Administration GUI and the Basic InfoPrint Manager Operations GUI. The Operations GUIs provide a subset of the functions available in the Administration GUIs.

You can also install the Java interfaces on a suitable Windows or Linux system. The system does not need to have the InfoPrint Manager server software installed.

The InfoPrint Manager Web Management Interface and the InfoPrint Manager Web Administration Interface are installed automatically when you install the InfoPrint Manager server. You don't have to install the interfaces separately on the remote Windows machines. The InfoPrint Manager Web Interface can be accessed by browsers anywhere on the network.

The InfoPrint Manager Web Administration Interface supports the same security features as the InfoPrint Administration and Operations GUIs and any existing FST security settings apply to the Web Interface as well. However, the read operations taken to display the objects in the Web Administration Interface web application are performed by a special user, `wsClient`. This user must be a member of the `WebServices` group. The `WebServices` group needs read access for the `List/Query (pdl)` operations on each InfoPrint Manager system the Web Administration Interface connects to. Any other operations are performed with the `specific user@hostname` user connecting to the web application. For more information about the FST security, see *RICOH InfoPrint Manager for Windows: Procedures*.

The InfoPrint Manager Web Management Interface lets you perform some of the administrative tasks on the server. You can use the InfoPrint Manager Web Management Interface to configure and administer your print environment. InfoPrint Manager Web Management Interface supports various tasks, such as enabling the LDAP security or managing the Web Server, the Web GUI, or the Pull Print environment.

The InfoPrint Manager Web Administration Interface contains a login panel where you can use the Web Administration or the LDAP credentials. The InfoPrint Manager administrator must define users in the web application using the User Management function. The user name defined for login is mapped with a FST user based on which InfoPrint Manager commands are executed. Use these credentials for accessing the Web Interface Administrator: `DefaultUser` for user name and password for password.

The InfoPrint Manager Web Management Interface contains a login panel where you can use these credentials for accessing the Web Management Interface: `DefaultUser` for user name and password for password.

Follow the procedures in this section to use InfoPrint Manager GUI software to administer or control your InfoPrint Manager server from a remote system.

## Using the basic view of the GUI

2

The basic view of the InfoPrint Manager GUI is a simplified version of the GUI that shows jobs assigned to printers without displaying queues. The basic printing environment is generally appropriate for commercial print shops printing large runs of image data (usually in PostScript or TIFF format).

In a basic printing environment, InfoPrint Manager assigns jobs to printers through early binding. Early binding is much like standing in a checkout line at a supermarket. Once you pick a line, you “bind” yourself to it, no matter what happens. Whether the cashier has a problem with the cash register (much like a paper jam occurring in the physical printer) or the customer in front of you requires a few price checks (much like adding new forms to the server), the only way to change your position is to physically move to another line (much like manually moving a job from one print queue to another).

If you want to use the basic view of the InfoPrint Manager GUI, complete these steps in the standard view of the GUI:

- Create a queue named **<servername>-default-queue**, where *<servername>* refers to the name of the server you are using, and attach up to ten printers.
  1. Select **Queue** → **Create**.
  2. Enter **<servername>-default-queue** in the **Name** field.
  3. Click **OK** to create the queue.
- Specify early binding as the default.
  1. Select the *<servername>-default-queue*.
  2. Select **Queue** → **Properties** to open the Queue Properties notebook.
  3. In the General tab, click **Yes** in the **Preassign jobs to actual destination** field.
  4. Click **OK** or **Apply** to make the change.

### ↓ Note

By default, the basic server saves the output files from jobs converted to raster image patterns. If you want this behavior, use the GUI to set the value of the attribute to **true** by selecting **Server** → **Properties**. In the General tab of the Server Properties notebook, make sure that the **Save ripped files** field is set to **Yes**.

## Installing the Operations GUI

If you are reinstalling or updating an existing version of the InfoPrint Manager Operations GUI, close all instances of the InfoPrint Manager Administration GUI and InfoPrint Manager Operations GUI that are running on this system before you continue with the installation to avoid problems with files that need to be replaced.

Make sure that the InfoPrint Manager server is at the same level or at a higher level of service than the InfoPrint Manager Operations GUI. Otherwise, you might receive error messages like: 5010-625 Cannot recognize attribute....

To install the **InfoPrint Manager Operations GUI** software:

1. Insert the *RICOH InfoPrint Manager: Common Clients* DVD-ROM, LCD4-5642, into the drive. The install program starts automatically.

**Note**

If your install program does not start automatically or if your browser stops responding:

- 1) Select **Start** → **Run**.
  - 2) Enter `D:\setup.html`, where D is your DVD-ROM drive.
  - 3) Click **OK**.
2. Select **Install InfoPrint Manager Clients** → **InfoPrint Manager GUIs**, and then click **Operations GUI**.
  3. Follow the instructions on the installation screens, paying attention to these guidelines:
    - The InfoPrint Manager Operations GUI is the recommended version. You can also choose to use the **Basic** version. For more information, see [Using the basic view of the GUI, p. 102](#).
    - The InfoPrint Manager Operations GUI requires approximately 24 MB of space on your hard drive, whether you install one view or both.
    - If you are installing over a previous version of InfoPrint Manager GUI software or you have already installed another GUI, a window will appear that gives you the option to modify the current installation. Select the **Modify** button, and leave the checkboxes checked for the components that are already installed.
    - If you are installing over a previous version of the InfoPrint Manager GUI software, click **yes** for any questions about replacing files. If you will be using this GUI to work with an InfoPrint Manager for Windows server, you do not need to change any of the selections from the default values.
    - If you change your system language, the interface displays properly in the new language.

## Installing the Administration GUI on Windows

If you are reinstalling or updating an existing version of the InfoPrint Manager Administration GUI, close all instances of the InfoPrint Manager Administration GUI and InfoPrint Manager Operations GUI that are running on this system before you continue with the installation to avoid problems with files that need to be replaced.

Make sure that the InfoPrint Manager server is at the same or at a higher level of service than the InfoPrint Manager Administration GUI. Otherwise, you might receive error messages like: 5010-625 Cannot recognize attribute....

Follow these steps to install the **InfoPrint Manager Administration GUI** software.

1. Insert the *RICOH InfoPrint Manager: Common Clients* DVD-ROM, LCD4-5642, into the drive. The install program will start automatically.

**Note**

If your install program does not start automatically or if your browser stops responding:

- 1) Select **Start** → **Run**.
  - 2) Enter `D:\setup.html`, where D is your DVD-ROM drive.
  - 3) Click **OK**.
2. Click **Install InfoPrint Manager Clients** → **InfoPrint Manager GUIs**, and then click **Administration GUI**.
  3. Follow the instructions on the installation screens, paying attention to these guidelines.
    - The InfoPrint Manager Administration GUI is the recommended version. You can also choose to use the **Basic** version. For more information, see [Using the basic view of the GUI, p. 102](#).
    - The InfoPrint Manager Administration GUI requires approximately 24 MB of space on your hard drive, whether you install one view or both.
    - If you are installing over a previous version of InfoPrint Manager GUI software or you have already installed another GUI, a window will appear that gives you the option to modify the current installation. Select the **Modify** button, and leave the checkboxes checked for the components that are already installed.
    - If you are installing a more recent version of the InfoPrint Manager GUI software, click **yes** to any questions about replacing files. If you use this GUI with an InfoPrint Manager for Windows server, you can use the default values.
    - If you change the system language, the interface displays the new language.

## Starting the Administration and Operations GUIs on Windows

When you first run the InfoPrint Manager GUI, you must provide the host name or IP address that the InfoPrint Manager server communicates with client systems through. You can specify a port number; the default port number is 6874 if you do not specify one.

For the most recent information about InfoPrint Manager, visit the RICOH Software Information Center at <https://help.ricohsoftware.com/swinfocenter>.

**Note**

If you receive a communication error when using Windows operation systems, you might have to include `java.exe` on the Exceptions tab of the Windows Firewall dialog.

## Starting from the GUI icons

To launch any of the InfoPrint Manager GUI programs, double-click on the Administration and Operations icons.

## Starting the GUIs

To launch the GUIs, double-click the appropriate icon on your desktop. For example, to launch the InfoPrint Manager Operations GUI, double-click **Operations InfoPrint** on your desktop.

If the icon is not on the desktop, click the Windows **Start** button and select **Programs** → **InfoPrint Manager** → **Administration InfoPrint** to launch the InfoPrint Manager Administration GUI or **Programs** → **InfoPrint Manager** → **Operations InfoPrint** to launch the InfoPrint Manager Operations GUI.

### Note

If you open the GUI and the colors look strange (they might appear in a plaid pattern), minimize the GUI and then maximize it. The colors should return to normal. This problem is most common on Windows systems running in 256 colors (8-bit color). To prevent the problem, you can increase the color depth of your system to 16 or 24-bit color.

## Installing the Administration and Operations GUIs on Linux

1. Log into the Linux system as root.
2. Insert the *RICOH InfoPrint Manager: Common Clients* DVD-ROM into the drive.
3. Mount the file system by typing:

```
mount /dev/cdrom /media/<mount_point>
```

4. Type:

```
cd /media/<mount_point>/linux
```

5. Install the Java required by the Operations and Administration GUI on Linux typing:

```
rpm -i ipr-base-java-4.15.m-n.x86_64.rpm
```

where m and n represent the service update level.

6. Install the Operations and Administration GUI on Linux typing:

```
rpm -i ipr-base-gui-4.15.m-n.x86_64.rpm
```

where m and n represent the service update level.

7. Unmount the `media/<mount_point>/` file system.
8. Remove the *RICOH InfoPrint Manager: Common Clients* DVD-ROM.

## Starting the Administration and Operations GUIs on Linux

1. Log into the Linux system.
2. On Red Hat Enterprise System go to **Applications** → **InfoPrint Manager** and select **Administration InfoPrint** to start the Administration GUI or **Operations InfoPrint** to start the Operations GUI.

3. On SUSE Linux Enterprise Server go to **Computer** → **More Application** → **InfoPrint Manager** and select **Administration InfoPrint** to start the Administration GUI or **Operations InfoPrint** to start the Operations GUI.

**Note**

You can also start the Administration and Operation GUI from command line by running the `ipguiadvadm` or `ipguiadv`.

To open the InfoPrint Manager Administration GUI using the `ipguiadvadm` script, add the location `/usr/lpp/pd/bin` in the system path.

2

## Starting the special version of the Operations GUI on AIX, Linux, or Windows

The special version of the InfoPrint Manager Operations GUI lets you lock the Operations GUI configuration file. This means that you can customize the Operations GUI configuration and then make sure that the configuration remains unchanged from session to session. The changes made during each session are not saved when the GUI is closed.

The special version is installed when the InfoPrint Manager Operations GUI is installed. However, no icon will be installed on your desktop.

To invoke the special version from the AIX command line, enter:

```
ipguiadv
```

To invoke the special version from Windows, you must navigate to the path where the GUI is installed and invoke the StandardOperSBC shortcut. By default, that path is `C:\Program Files\RICOH\Infoprint GUI`.

## Setting up the InfoPrint Manager Web Administration Interface

Set up and use InfoPrint Manager Web Administration Interface (Web GUI) to create the most common type of printer, PSF TCP/IP, and submit a job to complete a basic installation.

### Configuring the InfoPrint Manager Web Administration Interface from the management interfaces

You can configure the InfoPrint Manager Web Administration Interface (Web GUI) from the management interfaces: InfoPrint Manager Management Interface (MMI), InfoPrint Manager Management Console (MMC), InfoPrint System Management Interface Tool (SMIT), and InfoPrint Manager Web Management Interface (WMI).

### ★ Important

- Make sure that there is an entry for **IP address**, **hostname.domain**, and **hostname** in the `/etc/hosts` file on your AIX or Linux server. For example: `172.27.14.118 ironman.bldev.infoprint.com ironman` (Syntax: *IP-Address Full-Qualified-Hostname Short-Hostname*).
- When adding users to the InfoPrint Manager Access Control Lists (ACLs), the changes suggested in this section are needed for the FST Mode of security and for using InfoPrint Manager Administration GUI and InfoPrint Manager Operations GUI. If Active Directory / LDAP implementation is planned or completed, it is still useful to have the FST admin users in place as backup. However, those user IDs are not used once LDAP is enabled in InfoPrint Manager. Do not add the `DefaultUser` for Web GUI to the **admin** Group in InfoPrint Manager.

To set Web GUI user permissions and access levels, assign the user to a specific FST User profile within an ACL group configured in a management interface. Follow these steps to add users to Access Control Lists (ACLs) from InfoPrint Manager Management Console:

1. Go to **Applications** and start the **InfoPrint Manager Management Console**.
2. Select **Security** → **Groups** and add your ID for use with InfoPrint Manager Web Administration Interface.

To add users to Access Control Lists (ACLs) from the InfoPrint Manager Web Management Interface, see the InfoPrint Manager Web Management Interface Help.

To allow job submission and full file viewing in the InfoPrint Manager Web Administration Interface:

1. Stop the **Web Server** and right-click to select **Configure....**
2. On the **Web Interface** tab, select the **Allow Job Submission** and **View Full File** checkboxes.

### ↓ Note

- If you submit large AFP jobs to InfoPrint Manager, then the conversion of AFP to viewable PDF takes time. Try the **View Full File** option, then decide whether to leave it selected.
3. Restart the **Web Server**.

## Starting the InfoPrint Manager Web Administration Interface

To start the InfoPrint Manager Web Administration Interface:

1. Open a compatible browser. For a list of supported browsers, see “Verifying prerequisites” in *RICOH InfoPrint Manager for Windows: Planning Guide*.

### ★ Important

- When you upgrade from a previous version of InfoPrint Manager, make sure that you clear your browser cache on each of the connected client systems.
2. In the address bar, enter: `http://hostname:14080/IPM` where *hostname* is the InfoPrint Manager computer name or the IP address where you are running the InfoPrint Manager Web Administration Interface application.
  3. Use these credentials in the login panel: `DefaultUser` for user name and `password` for password.

 **Note**

- **DefaultUser** allows for verification that the InfoPrint Manager Web Administration Interface can be started and enables the InfoPrint Manager admin to add new InfoPrint Manager Web Administration Interface users when the FST Security mode is used. Adding users in the InfoPrint Manager Web Administration Interface is required when using the FST mode of security.
- **DefaultUser** is not authorized as an InfoPrint Manager admin for creating objects such as printers. Therefore, a new admin user needs to be added.

## Resetting the password for DefaultUser

- If you need to reset the **DefaultUser** password back to the initial default of **password** and no other user with admin rights can be logged into, then the only option is to delete the database and force the Web Server to recreate the **DefaultUser** with the default **password**.

 **Note**

All the other users along with their preferences and configurations are lost.

To delete the database:

1. Stop the Web Server.
2. Go to `c:\ProgramData\RICOH\InfoPrint Manager\var\pd\ipwebgui\data\` and delete the contents of the `data` folder.
3. Restart the Web Server.

## Adding a connection to an InfoPrint Manager server

To add a connection:

1. In the left-hand **Objects** panel, click the **Connections** icon.
2. Click the panel menu icon and select **Add Connection**.
3. In the **Add Connection** dialog, enter values in the fields as required.
  - 1) Enter the InfoPrint Manager server hosting machine as an IP address or as a DNS host name in the **IP Address or Host Name** field.
  - 2) Enter the server port number in the **Port** field. The default port number is 6874.
  - 3) In the **Connection Name** field, enter a name for the connection.
  - 4) Save the connection.
    - Click **ADD** to save the connection settings and add it to the connections list in the **Objects** panel.
    - Click **ADD and CONNECT** to save the connection settings, add it to the list, and enable the connection.

## Adding an admin user in the InfoPrint Manager Web Administration Interface

 **Important**

- The following instructions only apply if InfoPrint Manager is running in FST mode. They do not apply if InfoPrint Manager is running in AD/LDAP mode or federated authentication mode.

To add a new admin user:

1. Click **Settings** and select **User Management**.
2. Click the **+ New** button.
3. In the **Edit User Profile** dialog, fill in the fields.

**Note**

- In the **FST Mapping** field, map to an exact **FST User** from the **admin** or **oper** group as displayed in the **Security Groups** in the Windows Management Console, Linux Management Interface, or AIX SMIT panels.
- If mapping an administrator user ID to **ipm1** (or the InfoPrint Manager user, if different than the default of **ipm1**), add **@username** to differentiate each user. If identifying individual users is required, then map to the unique user ID.

4. For admins, check **Web GUI User Manager**.
5. Click **OK**.
6. Log out and log back in as the new admin user. You will be prompted to add a connection.

**Note**

- You might need to stop and restart the Web Server in the Windows Management Console, Linux Management Interface, or AIX SMIT.

## Creating a PSF TCP/IP printer from the InfoPrint Manager Web Administration Interface

To create a PSF TCP/IP printer (Actual Destination) for an IPDS printer, complete these steps:

1. In the left-hand **Objects** panel, click the **Printers** icon.
2. Click the menu icon and select **Create....**
3. For **Printer type**, select **PSF TCP/IP**.
4. In the **Name** field, enter the name of the printer you want to create.
5. For **Logical destination**, enter a name different from the printer **Name**.
6. In the **TCP/IP Address** field, enter the printer host name or IP address. If you do not have an IPDS printer available, use 127.0.0.2, to create a sample printer.
7. For **Model**, select **Set by SNMP printer**, as long as you have a connection to a real printer. Otherwise, choose a model for your sample printer.
8. In the **Queue** field, enter a new queue name.
9. In the **TCP/IP Port** field, enter 5001.
10. Select **CREATE and EDIT**.
11. If the printer is shared by another system that can drive IPDS printers (another InfoPrint Manager server or PSF z/OS), right-click your printer in the **Printers** list, go to **Properties** → **Configuration**, and change the **Release Time (Seconds)** to 10-60 seconds.

## Customizing the InfoPrint Manager Web Administration Interface

Columns, details, actions for jobs, printers, and so on, are customizable.

To modify column headings:

1. Right-click the columns heading row.
2. Click the displayed text (**Jobs Columns...**, for instance) and select and rearrange the columns as desired.

### Note

- You can also drag and drop the column headings to rearrange the columns.

To modify the details shown in the panels and the actions displayed for jobs or printers, go to **Settings** → **Interface Customization**.

To see a Queue tree view in the left-hand panel:

1. Click the **Queues** icon.
2. Click the menu button and select the **Tree View** option.

## Submitting a test job using the InfoPrint Manager Web Administration Interface

To submit any type of print file:

1. Log into the InfoPrint Manager Web Administration Interface.
2. Click the **Submit Jobs** icon.

### Note

- To submit a job, you must select a printer from the **Destination** list and add at least one file in the **Document List**.

3. Click **SUBMIT**.

## Importing a user configuration file using the InfoPrint Manager Web Administration Interface

You can import previously saved user configuration to apply to the profile. The configuration file has a proprietary format, saved as `<filename>.cfg`.

To import the configuration for a user:

1. Click the **Settings** button at the right of the banner.
2. Select **Configuration** → **Import...**
3. In the file upload dialog, select the file to import and click **Open**. You are prompted with a confirmation message. To continue the import process, click **OK**.
4. The information dialog notifies you that your configuration was modified; therefore you are logged out of your account. Click **DISMISS**. To perform further operations, you need to log in.

## Exporting a user configuration file using the InfoPrint Manager Web Administration Interface

You can export the configuration settings for a user, such as connections, opened tabs, sort criteria, filters. The configuration data is stored in a proprietary format using the CFG file extension.

To export the configuration for an existing user:

1. Click the **Settings** button at the right of the banner.
2. Select **Configuration** → **Export...**
3. In the **Save as** dialog, select the file to export and click **Save**.

## Setting a default configuration for all new InfoPrint Manager Web Administration Interface users

If a configuration file is set as default in the **ipm.ini** file, new users no longer need to manually import the configuration.

To set a default configuration:

1. Follow the steps of [Exporting a user configuration file using the InfoPrint Manager Web Administration Interface, p. 111](#).
2. Upload the exported configuration file to the InfoPrint Manager server if it is not already saved there.
3. In the **ipm.ini** file, add this entry:

```
default-configuration-file=c:\\temp\\cfg_file
```

where you use the actual path to the location of the exported configuration.

InfoPrint Manager Web Administration Interface checks at login if the user exists in the database. If the user does not have an entry in the database, InfoPrint Manager Web Administration Interface loads the default configuration for this user. As a result, the user does not need to create a connection or modify the InfoPrint Manager Web Administration Interface.

### Note

- To reset the user preferences, you must add the following line to the **ipm.ini** file:

```
reset-user-preferences-for=Administrator
```

after the first login. The user names must be comma-separated. Use the \* value to mean all users.

## Viewing a Job in the InfoPrint Manager Web Interface

Use this option to view the documents for the selected job.

### ★ Important

- The Job Viewer function in the Web Interface application depends on the correct host names. You might have to add entries to your hosts file on your client computer to correctly resolve the host name resolution.
- The Web Server needs to run on the system where the actual document is located.

### ↓ Note

- The **View Job** option is enabled only when the job is in pending, paused, held, unknown, or retained status.
- Job Viewer supports these data streams:
  - AFP
  - ASCII
  - line-data
  - PCL
  - PDF
  - PS
  - simple-text

For any other input streams, the view operation only works if the job was pre-ripped.

- To view a document content, you must be added to the JobViewer group and have rights to run the InfoPrint Manager list commands. The members of the JobViewer group are authorized to view the job print files if the **confidential-job** attribute value is set to false or to its default value. You can add users to the JobViewer group using the command line or the InfoPrint Manager Management Console. For more information, see the *Working with ACLs and groups* section in the *RICOH InfoPrint Manager for Windows: Procedures* book.
- The **View Job** option allows you:
  - to view the documents for the selected job;
  - to go through the pages of the document;
  - to jump to a specific page.
  - to view the whole document if this option is enabled in InfoPrint Manager Management Console. Also, if you have the PDF viewer plug-in installed, you can search for information in the whole document.
- Embedded PDF files can be viewed only when the job is viewed page by page. When viewing the full document, the embedded PDF files are not supported.

When you select a job, a dialog is displayed containing the document names, IDs, and a statement indicating if the document can be viewed or not.

You can select only one document at a time.

To view a job:

1. Select the job that you want to view in the main panel or in the **Jobs** panel.
2. Right-click the job and select **View job**.

3. In the **View Job** dialog, select the document you want to view and click **View**.
4. The document content is displayed in a new browser tab.
5. Use the viewer controls to move through the job.

#### ↓ Note

- The Job Viewer uses AFP fonts if it can find them in any of these places:
  1. Inline with the job
  2. In the directories specified by the AFP resource path job property
  3. In `install_path\reslib` if no directories are specified in configuration files.
- The Job Viewer uses the embedded form definition from the AFP document. If there is no embedded form definition, a default form definition is used: F1A10110.

## Setting up the InfoPrint Manager Web Management Interface

Set up and use InfoPrint Manager Web Management Interface (WMI GUI) to perform both configuration and system management tasks.

Use the information in this section as a reference for accessing specific panels in the interface. Use the online help provided with the interface for instructions and information about performing specific tasks.

### Starting the InfoPrint Manager Web Management Interface

To start the InfoPrint Manager Web Management Interface:

1. Open a compatible browser. For a list of supported browsers, see "Verifying prerequisites" in *RICOH InfoPrint Manager for Windows: Planning Guide*.
2. In the address bar, enter: `http://hostname:14080/wmi` where `hostname` is the InfoPrint Manager computer name or the IP address where you are running the InfoPrint Manager Web Management Interface application.
3. Use these credentials in the login panel: `DefaultUser` for user name and `password` for password.

### Changing the DefaultUser password


We recommend that you change the DefaultUser password as soon as possible.

To change the default password for DefaultUser:

1. In the left-hand **Security** panel, click **Default Security**.
2. Enter the current password in the **Current Password** field.
3. Enter the new password in the **New Password** field.
4. Confirm your new password by entering it again in the **Re-type New Password** field.
5. Click **SAVE**.

## Adding a server in InfoPrint Manager Web Management Interface

To add a server:

1. In the left-hand **Processes** panel, click **Server**.
2. Click , the create button, on the top right corner of the page.
3. In the **New Server** dialog, update values as needed. For information about a property, click the ? button next to it.
4. Click **OK**.

## Configuring InfoPrint Manager Web Management Interface

---

You can configure the InfoPrint Manager Web Management Interface options and the Web Server, Web GUI, and Pull Print settings.


1. Go to **Configuration** and click **Web Server**.
2. On the **Web Server Configuration** tab, specify the ports and the tracing level for the web server.
3. Click **Web GUI Configuration** to set up the connection to an InfoPrint Manager server.
4. Click **Pull Print Configuration** to set up your Pull Print system.
5. Click **Management Interface** to configure general settings for the current user.
6. Click **SAVE** to save your settings.

## Enabling LDAP/AD Security in InfoPrint Manager Web Management Interface

---

Specifies how InfoPrint Manager authenticates to the Lightweight Directory Access Protocol Server (LDAP). The information is used as authentication data for all existing LDAP connections.

To authenticate to the LDAP Server:

1. Click the **Security** tab in the left panel and select **LDAP/AD Security** to see all connections.
2. Click , the create button, on the top-right corner of the page.
3. In the **New Connection** dialog, update values as needed. For information about a property, click the ? button next to it.
4. Click **OK** to save the settings and close the dialog.
5. Click the **LDAP/AD Security** switch to enable the security feature.

## Enabling Federated Authentication in InfoPrint Manager Web Management Interface

---

The InfoPrint Manager Web Management Interface allows you to enable or disable federated authentication.

To enable or disable federated authentication:

1. Go to the InfoPrint Manager Web Management Interface.
2. Click the **Security** tab in the left pane.
3. Select the **Federated Authentication** option.
4. Use the switch at the top of the **Federated Authentication** dialog to enable or disable federated authentication.

**Note**

- When you enable federated authentication, the FST or LDAP/AD security continues to work as before.
- When you enable or disable federated authentication, the web server restarts automatically.

2

## Uninstalling the GUIs

To uninstall the InfoPrint Manager Administration and Operations GUIs:

1. Click the Windows **Start** button and select **Settings** → **Control Panel**.
2. Double-click **Add or Remove Programs**.
3. Select **InfoPrint Manager Administration GUI** or **InfoPrint Manager Operations GUI**.
4. Click **Remove**.
5. Follow the instructions on the InstallShield Uninstaller screens that display.

To uninstall the InfoPrint Manager: Web Interface feature:

1. Click the Windows **Start** button and select **Settings** → **Control Panel**.
2. Double-click **Add or Remove Programs**.
3. Select **InfoPrint Manager Web Interface Feature**.
4. Click **Remove**.
5. Follow the instructions on the InstallShield Uninstaller screens that display.

## Using InfoPrint Select for Windows

InfoPrint Select for Windows lets you submit and track jobs from a Windows workstation to a destination that is managed by InfoPrint Manager. Through InfoPrint Select for Windows, you can submit jobs to InfoPrint Manager from word processors, spreadsheets, and other desktop applications. You can print from applications or from the DOS command line.

InfoPrint Select for Windows lets you:

- Specify AFP and other InfoPrint job attributes when submitting a job to the server
- Cancel and hold jobs in a queue
- Check the status of destinations before submitting jobs
- Print using LDAP authentication for job submission

For more information about these specific functions, see [Printing from applications, p. 133](#) and consult the help system provided with InfoPrint Select.

This section contains procedures for using InfoPrint Select on the Windows platform. These topics are covered:

- [Installing InfoPrint Select for Windows, p. 116](#)
- [Configuring your InfoPrint Manager server to work with InfoPrint Select, p. 125](#)
- [Creating InfoPrint Select printers on Windows, p. 129](#)
- [Printing from applications, p. 133](#)
- [Commands you can use with InfoPrint Select for Windows, p. 135](#)
- [Using custom LDAP job authentication with InfoPrint Select for Windows, p. 121](#)
- [Using InfoPrint Select for Windows with Anyplace printing, p. 138](#)

## Installing InfoPrint Select for Windows

Before you install InfoPrint Select for Windows, consider these conditions:

- You must have administrative privileges to install InfoPrint Select for Windows.
- If you plan to install one or all of the InfoPrint Manager GUIs as well as InfoPrint Select for Windows, the sequence of the installs is important. Since InfoPrint Select might require a system reboot, you might want to install the InfoPrint Manager GUIs first.
- You must adjust the configuration of the InfoPrint Manager server for InfoPrint Select to function properly. See [Configuring your InfoPrint Manager server to work with InfoPrint Select, p. 125](#).
- If you want to use the LDAP authentication for submitting jobs, you must know your LDAP server settings.
- If you want your InfoPrint Select for Windows to discover the InfoPrint Manager server available in the network, you must add a SRV entry to your DNS server. This syntax can be used when you configure a BIND (Berkeley Internet Name Domain) DNS server:

```
srvce.prot.domain-name. ttl class rr priority weight port target
```

This section lists the parameters for this syntax:

### srvce

This parameter defines the symbolic service name prepended with a `_` (underscore), case insensitive. The parameter must be set to `_ipm`.

### prot

This parameter defines the protocol name prepended with a `_` (underscore), case insensitive. The parameter must be set to `_tcp`.

### domain-name

This parameter defines the base domain (or zone) name. If you leave this entry blank (without a dot) substitutes the current zone root (the `$ORIGIN`). You can add it as in the syntax (with a dot).

**ttl**

This standard parameter is optional.

**class**

This parameter is optional. Standard CLASS parameter. Normally IN for Internet class.

**rr**

This parameter defines the SRV RR field.

**priority**

This parameter defines the relative priority of this service (range 0 - 65535). Lowest is highest priority.

**weight**

This parameter is used when more than one service has the same priority (range 0 - 65535). The value 0 indicates that no weighting should be applied. If the weight is 1 or greater, it is a relative number in which the highest is most frequently delivered.

**port**

This parameter defines the port number assigned to the symbolic service but this is not a requirement. It is possible to define a **\_ipm** service with a port number of 12345 rather than the more normal port 6874 (a pdserver must listen on that port on host that provide this service).

**target**

This parameter defines the name of the host that provides this service. The parameter does not have to be in the same zone (domain). It can be a host name or a FQDN (with a dot).

This is an example for BIND (Berkeley Internet Name Domain) DNS server:

```
_ipm._tcp.customer.domain-name. IN SRV 0 5 6874 ipmserver.customer.domain-name.
```

**Note**

- Other implementations of the DNS (Domain Name System) protocols need the same parameters, but may be entered in different forms.
- If a host name is set in InfoPrint Select, no DNS record discovery is performed.

If you are using the non-LDAP InfoPrint Select client in a PAM/SSO environment, the LDAP user taken from the LDAP(PAM)/Active Directory system authentication session is used for the IPM user-related attributes.

To install InfoPrint Select on a Windows system from the *RICOH InfoPrint Manager: Common Clients* DVD-ROM:

1. Insert the *RICOH InfoPrint Manager: Common Clients* DVD-ROM into the drive.
2. Click **Install InfoPrint Select client**.
3. Follow the instructions on the installation screens to install the program.

**Note**

If you plan to install one or both of the InfoPrint Manager GUIs as well as InfoPrint Select, the sequence of the installations is important. Because InfoPrint Select might require a system reboot, you might want to install the InfoPrint Manager GUI first.

4. Select the job submission authentication method: **SSO**, **LDAP**, or **FST**.

1)

**SSO**

This authentication method uses Single Sign On Active Directory configuration to set the job owner information. This is the recommended job submission authentication method.

**LDAP**

This authentication method uses a custom LDAP configuration to set the job owner information. You can use this option if you need a specific LDAP attribute set as the job owner information or if you are not using Active Directory.

**FST**

This authentication method uses the standard FST information (user@host) to set the job owner information. The user@host information is taken from your local user account.

2) Depending on your selection, you must enter the required information:

**SSO**

Enter the host name or IP address of an InfoPrint Manager server, the port number it uses, and the default printer or logical destination you want to print to. The default port number is **6874**.

Click **Next** to continue with the InfoPrint Select installation.

**LDAP**

1. Enter the host name or IP address of the LDAP server and the port number that it uses for LDAP authentication in the next screen. The default port number is **389**. You can also set these values later when running the **InfoPrint Select LDAP Login** application.

Click **Next** to continue with the InfoPrint Select installation.

2. Select one of the authentication methods: **Simple** or **Digest**.

3. Enter the name of the SASL Realm. This option is available when you use the Digest method.

4. Select if you want to enable **No Encryption**, **Use Start TLS Extension**, or **Use SSL Encryption**.

Click **Next** to continue with the InfoPrint Select installation.

5. If you select **Simple** authentication method, enter the LDAP search base and the search attributes that you need. If you use anonymous login for the LDAP search, select the corresponding options. Otherwise, enter the Bind DN and the password used for the LDAP search. If you cannot save your user credentials, select the **Disable Save Credentials** option.

If you select the method **Digest**, leave the fields blank.

6. Select the letter case for the LDAP Login attribute. You can choose one of these options: *Case Sensitive*, *Convert to Lower Case*, or *Convert to Upper Case*. The default value is *Case Sensitive*.

**FST**

Enter the host name or IP address of an InfoPrint Manager server, the port number it uses, and the default printer or logical destination you want to print to. The default port number is **6874**.

Click **Next** to continue with the InfoPrint Select installation.

5. Select one of the two restart options: **Yes, I want to restart my computer now.** or **No, I will restart my computer later..**
6. Click **Finish** on the **Complete** window.

2

## Installing InfoPrint Select in silent mode

InfoPrint Select can be installed using silent mode. Silent mode eliminates the normal user interface and uses default values or response file values for all required inputs. This mode is generally used by System Administrators to push the installation onto their users' systems.

Use one of these commands from the command line or an automated script to install InfoPrint Select in silent mode:

### `InfoprintSelect.exe -quiet`

This method uses:

- No response file
- All the defaults
- Installs, repairs, or upgrades your installation of InfoPrint Select

#### Note

This method displays the splash screen and an initial progress bar.

### `InfoprintSelect.exe /s /f1"c:\setup.iss"`

This method uses a response file named `setup.iss`, which can be one of the samples provided, a modified version of a sample, or your own response file created with the `/r` option.

### `InfoprintSelect.exe /s /f1"c:\setup.iss" /f2"c:\output.log"`

This method uses a response file named `setup.iss` and logs the activity. If the installation is successful, this text appears in the `output.log`: `ResultCode=0`. The `setup.iss` can be one of the samples provided, a modified version of a sample, or your own response file created with the `/r` option.

↓ **Note**

When installing InfoPrint Select in Silent mode:

1. To create your own response file, invoke the installer in **record mode**: `InfoprintSelect.exe /r`  
This command produces a response file named `setup.iss` based on the inputs used during installation. To locate this newly created response file, search your system for `setup.iss`.

↓ **Note**

This `setup.iss` file is incomplete. You must add these lines at the beginning of the document:

```
[InstallShield Silent]
Version=v7.00
File=Response File
```

2. `InfoprintSelect.exe` is located in the `\win\InfoprintSelect` folder of the *Common Client* DVD-ROM.

After you have installed InfoPrint Select, sample response files can be found in `Select_install_dir\Install_Samples`. You can copy and modify these sample files as appropriate:

1. `setup.iss`, which is a sample response file used to install InfoPrint Select
2. `setup_repair.iss`, which is a sample response file used to repair an installation of InfoPrint Select
3. `setup_upgrade.iss`, which is a sample response file used to upgrade a previous version of InfoPrint Select
4. `setup_remove.iss`, which is a sample response file used to remove an installation of InfoPrint Select

↓ **Note**

When installing InfoPrint Select in silent mode, **InfoPrint Select Notification** and **Open Printer Selection** do not start automatically after the installation is complete. You must log out first and then log in for **InfoPrint Select Notification** and **Open Printer Selection** to start.

## Upgrading InfoPrint Select

To upgrade InfoPrint Select on a Windows system from the *RICOH InfoPrint Manager: Common Clients* DVD-ROM, LCD4-5642:

1. Insert the *RICOH InfoPrint Manager: Common Clients* DVD-ROM, LCD4-5642, into the drive to run the upgrade program.
2. Follow the instructions on the screens to upgrade the program.
3. After upgrading your InfoPrint Select version, the program asks to reboot your system. The default answer to this question is **Yes** because the new version of InfoPrint Select will not function properly until the system is rebooted. When you click **OK** or press **Enter**, your system reboots.
4. Upgrading InfoPrint Select can be done only for the currently installed version of InfoPrint Select. If your current version of InfoPrint Select is supporting LDAP, the upgraded version of InfoPrint Select is also supporting LDAP. If your current version of InfoPrint Select is not supporting LDAP, the upgraded version of InfoPrint Select is not supporting LDAP as well.

---

## Selecting enhanced or standard InfoPrint Select

---

Once you have successfully installed InfoPrint Select, you must determine whether you want the enhanced version of the client. If you apply the enhanced InfoPrint Select, users can enter job and document attributes with print jobs if the printer to which they send the job is an InfoPrint Select printer. You can decide not to provide this ability to end users since it requires an understanding of how to use attributes.

To apply the enhanced InfoPrint Select:

Click the **Start** button on your Windows system and select **Programs** → **InfoPrint Select** → **Activate Job Settings dialog**.

This action ensures that you can access the dialog panels that allow you to specify InfoPrint job attributes when submitting a job to the server.

---

## Removing enhanced InfoPrint Select

---

If you activate the enhanced InfoPrint Select and later decide that you would prefer to go back to the earlier version of InfoPrint Select, you can deactivate the enhanced InfoPrint Select by accessing the **Job Settings** window and checking the **Do not display this dialog again** check box.

---

## Uninstalling InfoPrint Select for Windows

---

To uninstall InfoPrint Select:

1. From the **Start** menu, select **Settings** → **Control Panel**.
2. Double-click **Add or Remove Programs**.
3. Select **InfoPrint Select**.
4. Click **Remove**.

 **Note**

Click the button only once, then wait for at least 30 seconds before you do anything else. If you do not wait for the first panel of the uninstaller to appear, it might get lost behind other windows. If you do not see the first panel of the uninstaller after 30 seconds, press and hold the **Alt** key, then press the **Tab** key to bring the window to the front.

5. Follow the instructions on the screen.

---

## Using custom LDAP job authentication with InfoPrint Select for Windows

---

The InfoPrint Select job submission client requires users to LDAP-authenticate before being allowed to submit jobs. LDAP authentication support allows only authenticated users to print, and to provide information about the users that printed a specific job. LDAP authentication allows InfoPrint Select to provide more accurate accounting information.

The LDAP-enabled InfoPrint Select client must be configured to use an LDAP server that has the GSS authentication option enabled. Only one version of the InfoPrint Select client can be installed at a time. If you install the LDAP version of InfoPrint Select and you want to switch back to the standard non-LDAP version, you can install it over the LDAP version. The installer allows you to install one version of InfoPrint Select over the other and automatically removes the old version. Subsequent updates apply to the current version that is installed.

When the UAC Windows system setting is active, you can change the LDAP configuration settings only when running as Administrator. To use this option, start the InfoPrint Select Login application by right clicking on the icon and selecting "Run as Administrator". The Local Security Policy settings could influence the permission to update the configuration settings. For more information consult the UAC and Local Security Policy Windows documentation.

If you cannot successfully log in to the LDAP server, the LDAP-enabled InfoPrint Select client does not allow you to submit jobs. If you are successfully logged in to the LDAP server, you are allowed to submit jobs to the InfoPrint Manager server. You must log in to the LDAP server the first time you submit a print job. The LDAP login session expires in any of these situations: when you log off, when you switch users, or when the session timeout set by the LDAP server administrator expires. That is, you do not have to log in again for each subsequent print job that you submit. The submitted jobs contain an **authenticated-login** attribute with the LDAP username that can be added to the server accounting logs by using the server or actual destination **additional-accounting-log-attributes** attribute.

The InfoPrint Select client is LDAP v3 compliant. It only supports an open directory LDAP model. This means that the LDAP server does not require the clients to establish connections over SSL and it does not ask clients to be authenticated when and if they connect to an LDAP server over SSL.

The SSL client mutual authentication is enabled when you do not want your directory system to be opened to the general public. It is a closed directory system where both the SSL and the client authentication are forced. The SSL client authentication means that the client must have a valid certificate verified by the server.

## LDAP-enabled InfoPrint Select authentication methods

---

### Simple

For Simple authentication, the login name, in the form of the retrieved DN, is sent with the password in clear text to the LDAP server.

### Digest

This method requires a Digest plugin installed on the LDAP server with its own user database. The LDAP server internally forwards authentication credentials to the Digest plugin (SASLDB). There is no search mechanism for DN in this case.

## Configuring LDAP-enabled InfoPrint Select client settings on Windows

---

For the InfoPrint Select LDAP client to submit authenticated jobs to InfoPrint Manager properly, you must configure your InfoPrint Select LDAP settings. Use the InfoPrint Select LDAP GUI as described in this procedure to configure the InfoPrint Select LDAP settings correctly:

1. Click **Start -> Programs -> InfoPrint Select**.

2. Select **InfoPrint Select LDAP Login**.
3. Enter the user name and password.  
**Optional:** Select **Save Credentials**.

#### ↓ Note

- The login and password are saved only if the authentication to the LDAP server was successful. After saving the credentials, the login and password are available in the InfoPrint Select LDAP login window the next time you log in. If the option **Disable Save Credentials** from the LDAP settings panel is selected, the option **Save credentials** is no longer available.

From the **InfoPrint Select LDAP login** dialog box, click **Settings**. This option lets you configure the credentials, connection, authentication, and search settings from the **LDAP Settings** window.

#### ↓ Note

- If the User Account Control (UAC) on your Windows machine is active and you want to change the InfoPrint Select LDAP settings, start the InfoPrint Select Login application using the "Run as administrator" option. To do this, right-click on the application icon and select "Run as Administrator".
- These settings, except for the credentials, can also be set at installation time in attended or silent mode.

## Credentials

### Login

The login information can be an e-mail address, an employee number, a badge serial number, a common name, a Lotus Notes canonical name, a user ID, a uid, or other data information.

The login information can be sent to the destination accounting log by adding the **authenticated-login** attribute to the list of values used by the **additional-accounting-log-attributes** attribute.

### Password

Enter your password.

### Upper/Lower case

Specifies the letter case of the login attribute. You can select one of these values: *Case Sensitive*, *Convert to Lower Case*, or *Convert to Upper Case*. The default value is *Case Sensitive*.

### Disable Save Credentials

Does not allow users to save credentials. The password from the LDAP settings window is not stored.

#### ↓ Note

The credentials, if available, are copied from/to the InfoPrint Select LDAP login window.

## LDAP Server

### Host

Enter the host name or IP address of the LDAP server.

### Port

Enter the port number that is used for communication. The default port number is **389**. The default SSL port number is **636**.

## Authentication

### Method

Select the method of authentication: **Simple** or **Digest**.

### SASL Realm

Enter the name of the SASL Realm. This option is available when you use the **Digest** method.

### Encryption

Enter an encryption method for the LDAP Server. To use the TLS or the SSL protocols, select the **Use Start TLS Extension** or the **Use SSL Encryption** option.

## DN Search Options

The Distinguished Name (DN) Search Options is only used for the **Simple** authentication method.

### Search Base

The search base entry is the location in a directory from which the LDAP search begins.

### Search Attribute

The search attribute is used for the search of the DN. The DN is used for logging on to the InfoPrint Select LDAP server.

Example:

- If you want to identify the DN using the intranet e-mail address (for example: john\_smith@example.com) as the LDAP login, the search attribute must be `mail`. The DN Search Options are configurable as needed and used only for simple authentication method.
  - If you enter your login as your common name (for example: "John Smith"), the search attribute must be set to `cn`.
  - Other various attributes for the DN search, like: e-mail address, employee number, badge serial number, common name, Lotus Notes canonical name, user ID, uid, and DN.

Depending on the custom configuration, the specific login attribute is used for the DN search. This attribute becomes the value of the **authenticated-login** job attribute in the accounting log.

Click **Test Authentication** if you want to test the connection to the LDAP server. If the connection is successful, a confirmation message is displayed: Successfully connected to the LDAP server.

If one of the LDAP settings is not properly configured, you receive one error message for each case:

- "Invalid user login credentials. Check your login credentials." You see this message when the authentication bind fails because the credentials are incorrect.
- "Incorrect LDAP host, port, or SSL/TLS settings. Check your host, port, and SSL/TLS settings." You see this message when the authentication bind fails because InfoPrint Select LDAP client cannot contact the LDAP server.
- "Invalid authentication method. Contact your system administrator." You see this message when the LDAP server does not recognize the authentication method that the InfoPrint Select LDAP client used.

- “LDAP login not found on server. Check your credentials or search options.” You see this message when InfoPrint Select LDAP does not find the user in the search directory.

You do not see an error message when the LDAP server does not allow anonymous authentication. In this case, the initial bind fails because no anonymous binding is allowed, and InfoPrint Select LDAP client authenticates directly with the login credentials that you entered.

### Anonymous Login

Enable/Disable anonymous login to the LDAP server.

### Bind DN

Enter the Distinguished Name (DN) of the account if the LDAP server does not allow anonymous queries.

### Password

The password for the Bind DN account.

#### ↓ Note

The Bind DN login and password information are stored in the registry. The password is stored in encrypted form. By default, the search of the DN is done by the anonymous binding to the LDAP server and it is based on the **Search Base**, and the **Search Attribute** values. The DN that results from the search is used for the authentication together with the specified password. If **Anonymous Search** is not enabled on your InfoPrint Select LDAP server, InfoPrint Select attempts to log in with the Bind DN and password and searches for the specified Login. If the authentication fails, an error occurs. If the search succeeds, InfoPrint Select attempts to log in with the DN associated with the Login. If the search fails, InfoPrint Select attempts to log in with the Login and password.

## Logging on to an LDAP server

InfoPrint Select lets you authenticate to an LDAP server to allow job submission and command line requests to an InfoPrint Manager server.

If you have installed the LDAP version of InfoPrint Select, do these steps to authenticate to an LDAP server:

1. Click to **Start -> Programs -> InfoPrint Select**.
2. Select **InfoPrint Select LDAP Login**.
3. Enter the user name and password. If you already have entered these values during the installation process, the field is automatically filled in.

#### ↓ Note

If you cannot authenticate to an LDAP server, check the credentials that you entered, and try to authenticate again.

## Configuring your InfoPrint Manager server to work with InfoPrint Select

For InfoPrint Select to submit print jobs to InfoPrint Manager properly, you must configure each InfoPrint Manager logical destination or actual destination to accept jobs from InfoPrint Select. Use the InfoPrint

Manager Administration GUI as described in this procedure to configure logical and actual destinations correctly. To use the command line instead of the GUI, use the **pdset** command to set the **client-driver-names** attribute.

**Note**

To submit jobs to actual destinations, the **logical-destinations-assigned** attribute must be set for the actual destination.

1. Log on to a system that has the InfoPrint Manager Administration GUI installed on it as a user with administrator privileges.

**Note**

To be able to complete this procedure, you must have the authority to use the **pdenable**, **pddisable**, and **pdset** commands. If you do not have that authority, your user id must be added to the access control lists (ACLs) on your InfoPrint Manager server.

2. Launch the InfoPrint Manager Administration GUI.
3. Select one of the actual or logical destinations that will receive print jobs from InfoPrint Select by clicking on it once.
4. On the menu bar, click **Actual** or **Logical** and select **Properties**.
5. In the **Properties** notebook, click **Drivers**.

**Note**

If you do not see the **Drivers** tab, click **Show more**, then click **Drivers**.

6. In the **New value** field next to **Windows client drivers**, type the name of one of the print drivers that users will use to submit jobs with InfoPrint Select.
7. Click **Add >>**.
8. Click **OK**.

## InfoPrint Select support for Windows Server versions

Refer to the *RICOH InfoPrint Manager for Windows: Planning Guide* for a complete list of supported versions.

## Using InfoPrint Select in a Windows Terminal Server (WTS) and Citrix Environment

InfoPrint Select can be used in a Windows Terminal Server and Citrix Environment; however, some functions should be disabled by the administrator.

### InfoPrint Select Notifications

By default, the installation of InfoPrint Select adds the InfoPrint Select Notification program to the **Startup** directory of all users. The default installation of InfoPrint Select Notification does not work on the WTS and Citrix clients. You can choose to either disable the InfoPrint Select Notification option or you can configure and manage the InfoPrint Select Notification Port through the `Select.ini` configuration file in [Select.ini file](#), for each user, to allow the use of InfoPrint Select Notification. If you

want to allow each user to use the InfoPrint Select Notification option, each user needs to be assigned a unique TCP/IP port on the WTS or Citrix server. The administrator must make sure that each user has a unique port assigned. If two users are assigned the same port, one user gets all notification messages for both users. The other user receives no notification messages.

## Enhanced InfoPrint Select and InfoPrint Select Error Messages

The administrator should not allow users to connect through the Console, Microsoft RDP, or Citrix ICA at the same time. The Print Spooler service resides on the Windows server and runs separately from the user environment. Because of this, InfoPrint Select can run into conflicts while determining the correct session associated with the user or process that requested to print a job and can encounter problems displaying the Enhanced InfoPrint Select and InfoPrint Select Error Messages windows.

### Select.ini file

Select creates an .ini file for each user ID to store that user's settings. The file is generated the first time Select is invoked by each user if it does not already exist. The file is stored in \RICOH\InfoPrint Select\Select.ini within the user application data folder specified by the %APPDATA% environment variable. The WTS and Citrix administrator should create or modify the existing file for all users. The file should look like this:

```
[User Preferences]
Notification Port=5157
Use default .att file=0
Default .att file=
[Submission Window]
Suppress=1
[Job Recovery]
Pause jobs if submission fails=0
Suppress submission errors=1
```

The key settings are:

- Notification Port=5157 - Must be set to a unique port number if Notifications are being used. If InfoPrint Select is not being used, it does not need to be changed.
- Suppress=1 - Suppresses the Job Settings Dialog.
- Suppress submission errors=1 - Suppresses error messages found during submission.
- Pause jobs if submission fails=0 - Optionally can set this to 1 to cause failed jobs to be retained on the WTS Windows spool for resubmission by the administrator.

#### ↓ Note

Windows creates a user profile the first time a user logs on to a computer. At subsequent logons, the system loads the user's profile, and then other system components configure the user's environment according to the information in the profile. Administrator should make sure users log on to the Windows system before logging on through the Citrix client and using the InfoPrint Select.

## Working with InfoPrint Select notifications

By default, when you submit a job using InfoPrint Select, a notification profile is sent with the job. If the InfoPrint Select Notification application is running when you submit a print job using InfoPrint Select, notifications are requested. These notifications are delivered by email. InfoPrint Select does not use the

standard email port for notifications to avoid conflict with other SMTP servers. If you have a conflict with the port that InfoPrint Select is using for notification, you can select another port by going to **Start** → **Programs** → **InfoPrint Select** → **Change the Notification port**, and entering another port.

The InfoPrint Select Notification application starts automatically when Windows first loads. To start the InfoPrint Select Notification application at another time, go to **Start** → **Programs** → **InfoPrint Select** → **InfoPrint Select Notification**.

2

You can access the InfoPrint Select Notification application by clicking the icon in the system taskbar or by clicking an existing message in the Windows Notification Area. After you click an existing message in the Windows Notification Area and the **InfoPrint Select Notification** dialog is displayed, all InfoPrint Select notifications in the Windows Notification Area are removed.

To clear the existing messages in the **InfoPrint Select Notification** dialog, click **OK**. When the **InfoPrint Select Notification** dialog is visible, any new notification message is displayed only in the dialog and no longer in the Windows Notification Area. If you minimize the **InfoPrint Select Notification** dialog, you still receive messages in the Windows Notification Area.

To close the InfoPrint Select Notification application, click **X** in the upper right corner of the **InfoPrint Select Notification** dialog and then click **OK** on the warning message, or right-click the icon in the system taskbar and then click **Quit**.

#### Note

If you receive a communication error when using the InfoPrint Select Notification application with the Windows operating system, you might have to include `ipnotify.exe` on the **Exceptions** tab of the **Windows Firewall** dialog.

## Setting up your own InfoPrint Select notification profile

The InfoPrint Select notification profile overrides any notification settings that you configure in a default job. If you do not want to use the InfoPrint Select notification profile, use the procedure:

1. On the Windows system that InfoPrint Select is installed on, go to **Control Panel** and select **System**.
2. In the System Properties window, click **Advanced system settings**.
3. On the Advanced tab, click **Environment Variables**.
4. In the **System variables** box on the **Environment Variables** dialog, click **New**.
5. In the **Variable Name** field, type `pdnotify` and in the **Variable Value** field, type `override_select`.
6. Click **OK**.
7. Verify that `pdnotify` appears in the list of **System variables** and not in the **User variables**. If it appears in the list of **User variables**, delete it and start again from step 4.
8. Click **OK** in the **Environment Variables** dialog.
9. Click **OK** in the System Properties window.
10. Restart your system to make the changes take effect.

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## Creating InfoPrint Select printers on Windows

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This section describes how to configure InfoPrint Select clients to allow print job submission from Windows applications to destinations managed by an InfoPrint Manager server.

- [Creating InfoPrint Select printers on Windows systems, p. 130](#)
  - [Adding your first InfoPrint Select printer on Windows systems, p. 130](#)
  - [Adding an additional InfoPrint Select printer on Windows systems, p. 132](#)

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## Collecting required information

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Before you can print to an InfoPrint Manager destination from a Windows application, you must add an InfoPrint Select printer to your Windows environment. Collect this information before you begin:

- The host name or IP address of the InfoPrint Manager server.
- The port number that the InfoPrint Manager server uses to communicate with client systems. The default is 6874.  
You can find this port number in the **Service Configuration** dialog in the Management Console.
- The names of destinations to use.
- The names of the drivers to associate with each destination.
- Where the driver files are located (on a DVD-ROM, on a network server, or on your local system).
- The name of the server where your actual or logical destination is located in (this value is optional).

Verify that the InfoPrint Manager server destinations have been configured correctly. For more information, see [Configuring your InfoPrint Manager server to work with InfoPrint Select, p. 125](#).

### Choosing the Right PPD

If you plan to use InfoPrint Select to print PostScript jobs to an AIX DSS (InfoPrint Manager for AIX only), BSD DSS, or Passthrough DSS (InfoPrint Manager for Windows only) printer, be sure to use the PostScript printer driver that came with your printer when you create an InfoPrint Select printer on your desktop. These drivers include PostScript Printer Definitions (PPDs) that are specific to your printer.

### Drivers and finishing

If you are submitting an AFP job to an IPDS printer, you can use the AFP driver that is described in [Installing and configuring the AFP driver, p. 204](#).

The automatic data stream transforms that PSF printers use do not always support finishing (stapling). Some PostScript drivers, however, will support some finishing options. The finishing options that are supported include saddle and edge stitch, as well as corner stitch in MO:DCA (Mixed Object Document Content Architecture), using both landscape and portrait modes.

If you are using InfoPrint Select to submit PCL or PostScript jobs to a PSF printer (destination), you might discover that you cannot specify finishing options when you submit a job, even if the print driver you use supports those options. It is recommended that you either use a different method to submit those print jobs or that you submit them to an InfoPrint printer that does not transform the data

stream (such as a Passthrough printer on InfoPrint Manager for Windows or an AIX printer on InfoPrint Manager for AIX).

If you cannot use a different submission method and cannot submit your jobs to a different type of InfoPrint printer, the only way to request finishing options on PCL and PostScript jobs submitted to a PSF destination is to specify the finishing attributes for the job. You have several options:

- You can create an attributes file for InfoPrint Select to use that contains the finishing attributes for your job. Then when you submit your job, you designate the file containing your finishing attributes as your attributes file (see [Specifying InfoPrint attributes](#), p. 133 for more information).
- You can also specify the finishing options separately under the **Other** tab in the InfoPrint Select **Job Settings** dialog using the attributes entry (see [Specifying InfoPrint attributes](#), p. 133 for more information).
- You can use a default job.

A *default job* is a list of attributes that is applied to every job that a particular logical destination receives. You can use the InfoPrint Manager Administration GUI to modify the default job for the logical destination that InfoPrint Select sends jobs to so that it requests the appropriate finishing options. However, this method is not recommended for two reasons:

1. Every job that you send to that logical destination will be finished the same way. For example, if you set the **Finishing options** attribute of the default job to **staple-top-left**, every job that is submitted to that printer will be stapled.
2. A logical destination can only have one default job, and a default job can only have one finishing option set. To use different finishing options, you must create multiple logical destinations, each with different options set on the default jobs. Then, you must create a different printer on your desktop to submit jobs to each logical destination.

#### ↓ Note

Actual destinations do not have default jobs.

## Creating InfoPrint Select printers on Windows systems

This section includes:

- [Adding your first InfoPrint Select printer on Windows systems](#), p. 130
- [Adding an additional InfoPrint Select printer on Windows systems](#), p. 132

### Adding your first InfoPrint Select printer on Windows systems

Before adding an InfoPrint Select printer to your Windows system, you must:

- Collect the information described in [Collecting required information](#), p. 129.
- Configure the server as described in [Configuring your InfoPrint Manager server to work with InfoPrint Select](#), p. 125.

To add an InfoPrint Select printer to your Windows system:

1. From the Windows desktop, click **Start** → **Control Panel** → **Devices and Printers**.
2. Select **Add a printer**. The **Add Printer** window displays. Select **Add a local printer**.

3. On the **Choose a printer port** page, click **Use an existing port**, then scroll down the list of ports until you find the port and select it. Click **Next**.
4. Click **Have Disk**.
  - 1) Click **Browse**.

**Note**

If you are using a printer driver other than those provided with InfoPrint Manager or InfoPrint Select, specify that printer driver now.

- 2) Click **Open**.
- 3) Click **OK** to close the **Install From Disk** window.
5. Select the manufacturer and model of your printer and click **Next**.
6. If the driver for your printer is already installed, the **Use Existing Driver** dialog that appears. Click **Next**. The **Type a printer name** dialog appears.
7. Enter a name for the printer in the field provided. This is the name the printer is known to your Windows applications and the Windows desktop. Click **Next**.
8. Click **Finish**.
9. On the menu bar of the **Printers** window, click **Organize** and select **Properties**.
10. In the **Print Properties** window, click **Ports**.
11. Highlight the **InfoPrint Select** port that you want to configure and click **Configure Port**.
12. In the **InfoPrint Port Configuration** window, make sure that the **Print Server** field displays InfoPrint Manager.
13. In the **Host Name** field, type the host name of your InfoPrint Manager server.
14. In the **Host Port** field, type the port number that your InfoPrint Manager server uses to communicate with client systems. The default port is 6874.

**Note**

You can find this port number in the **Service Configuration** dialog in the Management Console.

15. In the **Server name** field, specify the name of the InfoPrint Manager server (**pdserver**) where your destination is located in. If the InfoPrint Manager server name is not known, specify the default value of \* to list all the printers on all the InfoPrint Manager servers. Specifying the server name reduces the number of printers listed, which reduces the time it takes to configure a port.

**Note**

If you know the name of the printer to use, type it in the **Printer name** field and go to step 18 of this procedure. If you do not know the name of the printer, leave this value blank and you will receive a list of printers from which to select.

16. Click **Refresh Printer Selection List**.
17. Select the appropriate printer from the list.
18. Click **OK**.
19. Click **Close**.

To add additional InfoPrint Select printers to your environment, follow the procedure described in [Adding an additional InfoPrint Select printer on Windows systems, p. 132](#).

### Adding an additional InfoPrint Select printer on Windows systems

Before adding an InfoPrint Select printer to your Windows system, you must:

- Collect the information described in [Collecting required information, p. 129](#).
- Configure the server as described in [Configuring your InfoPrint Manager server to work with InfoPrint Select, p. 125](#).

To print to an additional InfoPrint Select printer, you must add an additional InfoPrint Select port.

To add an additional InfoPrint printer to your Windows system, follow these steps:

1. From the Windows desktop, click **Start** → **Control Panel** → **Devices and Printers**.
2. Select **Add a printer**. The **Add Printer** window displays. Select **Add a local printer**.
3. Click **Create a new port** and highlight **InfoPrint Select** from the pull-down list. Click **Next**.
4. In the dialog that opens, type a name for the new port, such as InfoPrint-2, and click **OK**. (Use a name that no other port uses.)
5. To configure the new port just added, continue with the procedure documented in [Adding your first InfoPrint Select printer on Windows systems, p. 130](#).

---

## Changing the InfoPrint Manager target printer

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To change the target InfoPrint Manager printer, follow these steps:

1. Access the **Select Target Printer** dialog by clicking the icon in the system taskbar.

#### ↓ Note

- The **Select Target Printer** dialog starts automatically when Windows first loads. To start the InfoPrint Manager Printers dialog at another time, go to **Start** → **Programs** → **InfoPrint Select** → **Open Printer Selection**.
2. Select the Windows printer from the **Windows Printer** list.
  3. Select the InfoPrint Manager printer from the **Target Printer Selection** table.
  4. Click **OK**.

If you have several printers, you can filter them by typing part of the location or name in the **Target Printer Location/Name** field. To clear your custom selection and use the default target printer defined at the Windows printer creation time, select **Use default** from the **Target Printer Selection** table.

#### ★ Important

- The printer chosen through the **Select Target Printer** dialog is user-specific. If you did not select any printer, the default printer selected at Windows creation time is used.
- To refresh the InfoPrint Manager printer list, click the **Refresh** button.

## Printing from applications

Things to be considered when printing from applications with InfoPrint Select:

### Printing Considerations

InfoPrint Select works with the print facility of each application, so printing from every program is a little different. A typical application might allow you to specify a printer other than the default, the number of copies, or a range of pages.

If the printer selected (or your default printer) is an InfoPrint Manager Select printer, your job is sent to the InfoPrint server.

## Checking printer status

To check the status of your printer before committing a print job:

1. Access the **Select Target Printer** dialog by clicking the icon in the system taskbar.

#### Note

- The **Select Target Printer** dialog starts automatically when Windows first loads. To start the InfoPrint Manager Printers dialog at another time, go to **Start** → **Programs** → **InfoPrint Select** → **Open Printer Selection**.
2. In the **Select Target Printer** dialog, select the printer that you want to check from the **Target Printer Selection** list.
  3. Right-click your selection and select **View Printer Status**.

The **Enabled** and **Status** columns reflect the current state of actual and logical destinations that could be used to process the job. If there is a backup printer defined for your printer, it will be listed in the **Backup Printer** column. A backup printer is a backup actual destination. To add a backup actual destination, your administrator can set the **backup-destinations** attribute for the printer that you want to backup. See *RICOH InfoPrint Manager: Reference* for more information.

## Specifying InfoPrint attributes

The enhanced InfoPrint Select client lets you send InfoPrint attributes with your print jobs. Once you activate the attributes dialog (see [Selecting enhanced or standard InfoPrint Select, p. 121](#)), the **Job Settings** window appears when you submit a job. By clicking on the **Scheduling** tab, you can modify the default scheduling values on the InfoPrint server from your InfoPrint Select client. By clicking on the **Other** tab, you can:

- Specify an attribute file that you have created with particular values that will be passed onto the InfoPrint server (for example, `C:\combo.att`).
- Specify an individual attribute that will be passed onto the InfoPrint server (for example, **job-name=Job1**).
- **Suppress job submission error messages** that lets you disable submission error message boxes. This enables unattended operation.

- **Re-spool jobs if submission fails** that lets you automatically re-spool failed job submissions. Re-spooled jobs will be placed in the windows print queue in a paused state. The reason for the paused state will be shown in the "Comments" column of the printer dialog if the user has administrator privileges. To resubmit the print job you need to highlight the job in the printer dialog, then **Restart** and **Resume** the job. This allows the Windows printing mechanism to resend the data from the beginning.

The `combo.att` file cited above is a sample file which contains this:

```
printer-models-requested = InfoPrint4000
printer-locations-requested = 'Building 025'
job-priority = 25
job-retention-period = 01:30
```

For more information about additional attributes and the syntax for specifying them, see both the InfoPrint Select online help and the *RICOH InfoPrint Manager: Reference* manual.

#### ↓ Note

1. Before specifying any InfoPrint attributes, For specific information and syntax rules, see *RICOH InfoPrint Manager: Reference*.
2. InfoPrint Select **Other** tab does not contain a syntax checker, so verify that the format of attributes, specified in either an attributes file or as individual attributes, are in the correct format. If there are syntax errors, you will receive the same messages provided for syntax errors on commands sent from a command line.
3. If you specify the same InfoPrint attribute from different locations with different values, please note that this hierarchy is how InfoPrint Manager determines what to send with the job:
  - 1) Values specified in the **Attributes** field on the **Other** tab.
  - 2) Values specified in the **Attributes file** field on the **Other** tab.
  - 3) Any values specified on either the **General**, **Scheduling**, or **Messages** tab.

## Viewing and canceling jobs

After you have submitted your job, InfoPrint Select lets you access the InfoPrint Manager server queues to view the status of jobs and hold, cancel, or release jobs. Use this procedure:

1. Access the **Select Target Printer** dialog by clicking the icon in the system taskbar.

#### ↓ Note

- The **Select Target Printer** dialog starts automatically when Windows first loads. To start the InfoPrint Manager Printers dialog at another time, go to **Start** → **Programs** → **InfoPrint Select** → **Open Printer Selection**.
2. In the **Select Target Printer** dialog, select the printer that you want to check from the **Target Printer Selection** list.
  3. Right-click your selection and select **View Jobs**.
  4. From the *printer\_name* **InfoPrint Manager Jobs** dialog, you can hold, cancel, or release jobs in the queue on the InfoPrint Manager server.

The **InfoPrint Manager Jobs** dialog displays a list of all the jobs you have submitted to print. The most recently submitted job is at the top of the list. For each job, the list includes the job name, the date and time it was submitted, its global ID, the page count, the job originator, and the LDAP user.

The default is to list only the jobs that you have submitted. If you want all jobs listed, go to the **View** menu and select **Show all users jobs**.

You can also check the properties of a specific job. Click a job to select it, then select **Job Properties** from the Job menu or click the **Job Properties** toolbar button. Information about the selected job is shown on the six tabs on the dialog. The fields on the **Job Properties** dialog are not editable.

---

## Commands you can use with InfoPrint Select for Windows

---

Typically, InfoPrint Select is used to let users print to InfoPrint Manager destinations from existing Windows applications (usually through the **Print** option on the **File** menu). In addition, you can use several InfoPrint commands that can be issued at a Command Prompt on the client system.

### Note

If you are using the InfoPrint commands and want to receive notifications, you can install the Notification Client from the *RICOH InfoPrint Manager: Common Clients* DVD-ROM, LCD4–5642.

Information about security and how users can be authorized to InfoPrint Manager is found in the topic “Managing Security” in the *RICOH InfoPrint Manager for Windows: Procedures* guide.

InfoPrint Manager lets authorized users (normally all users) use these InfoPrint commands:

#### **pdls**

Lists selected attribute values for a job, destination, or other InfoPrint object

#### **pdpr**

Submits a job to a logical or actual destination. If LDAP job authentication is enabled, you must authenticate using your LDAP credentials before submission.

#### **pdq**

Queries the status of selected jobs, of all jobs submitted to a logical destination, or of all jobs assigned to an actual destination

InfoPrint Manager lets authorized users (the job owner is usually authorized) use these InfoPrint commands:

#### **pdmod**

Modifies the attributes of submitted jobs or of the documents in them

#### **pdrm**

Deletes jobs

InfoPrint Manager allows only authorized users to use these InfoPrint commands:

#### **pdaccount**

Collects summary accounting information for a specified time period in a comma delimited format about 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.

**pdcreate**

Creates logical destinations, queues, actual destinations, default jobs, default documents, media, auxiliary sheets, and resource contexts.

**pdclean**

Removes all jobs from a server, logical destination, queue, or actual destination.

**pddelete**

Deletes servers, logical destinations, queues, actual destinations, default jobs, default documents, media, auxiliary sheets, resource contexts, and jobs.

**pddisable**

Prevents destinations from accepting jobs and logs from logging.

**pdenable**

Enables destinations to accept jobs and logs to log.

**pdpause**

Pauses a job, actual destination, queue, or all the queues and actual destinations in a server.

**pdpromote**

Advances a job to the head of the queue.

**pdreorder**

Reassigns a job to an actual destination or to the unassigned jobs area in the same server or in another server, and lets you schedule it immediately before or after another job.

**pdresubmit**

Resubmits a job, all the jobs submitted to a logical destination, or all the jobs in a queue to another logical destination.

**pdresume**

Enables paused objects to resume operation.

**pdset**

Sets or changes the values of attributes describing InfoPrint objects.

**pdshutdown**

Stops servers or actual destinations.

**pdspace**

Backspaces or forward spaces a PSF physical printer.

**pddeviceop**

Perform device operation on device associated with specified actual destination.

**Note**

For more information about InfoPrint commands and attributes, see *RICOH InfoPrint Manager: Reference*.

## Querying destination attributes

To determine whether the logical destination `london` is ready to receive jobs, enter:

```
pdls -c destination -r "destination-state" london
```

2

## Submitting a job

To submit the file `myjob.ps` to the logical destination `london` and request two-sided printing, enter:

```
pdpr -d london -x "sides=2" myjob.ps
```

**Note**

The *RICOH InfoPrint Manager: Reference* lists all the attributes and values that you can specify on the **pdpr** command.

## Querying jobs

To query all the jobs that you submitted to logical destination `london`, enter:

```
pdq -d london
```

InfoPrint returns information similar to this:

Job ID	Name	State	Intervening Jobs	Dest. Req.	Dest. Assigned
13	Serv1:1104221000 report.ps	printing	0	london	caxton
14	Serv1:1104221023 myjob.ps	pending	8	london	morris

## Specifying the destination name

To print from the command line to a single destination without having to specify the **-p** flag or its argument with each job, you can define the destination name on your system:

1. Click on **My Computer** icon and select **Properties**.
2. On the **Advanced** tab, click **Environment Variables**.
3. Click **New** under **System Variables** to create a new system variable, and the destination name to it.
4. In the **Variable** field, type: PDPRINTER and in the **Value** field type: destination\_name.
5. Click **OK**.
6. Restart your system to make the changes take effect.

## Using InfoPrint Select for Windows with Anyplace printing

If you use InfoPrint Select for Windows and want to use specific tray, paper, or finishing information with Anyplace printing, you must install the InfoPrint Manager PDF Driver provided on the *RICOH InfoPrint Manager: Common Clients* media.

To install the InfoPrint Manager PDF Driver, make sure that you:

1. Copy InfoPrint Manager PDF Driver from the install media to the local system.
2. Extract the archive on a location of your choice.
3. Use the Windows **Add Printer** wizard as described here:
  - 1) First, open the **Add Printer** wizard:
    1. Click **Start** → **Run**.
    2. In the **Open** box, type:

control printers

, and then click **OK**.

The **Devices and Printers** window opens.

3. Click **Add a printer**. The **Add a Printer** wizard opens.
- 2) Tell the wizard that you want to add a local printer:
  1. Click **The printer that I want isn't listed**.
  2. Then, click **Add a local printer or network printer with manual settings**.
  3. Click **Next**.
- 3) Select the InfoPrint Select port.
- 4) Tell the wizard where to find the printer driver files that you extracted:
  1. Click **Have Disk**. The **Install From Disk** dialog box opens.
  2. In the **Install From Disk** dialog box, click **Browse**, and then locate the folder to which you extracted the printer driver files.
  3. When you have located the correct folder, click **Open**.
  4. The path of your folder appears in the **Copy manufacturer's files from box** in the **Install From Disk** dialog box. Click **OK**.
- 5) Supply the wizard with the last pieces of information that are necessary to install the printer driver files:
  1. The printers that you can install are listed in the **Install Printer Software** dialog box. Select the printer that you are trying to connect, and then click **Next**.
  2. If you are prompted to use an existing driver, select **Replace existing driver**, and then click **Next**. When you select to replace the existing driver, Windows tries to replace the current files on your system with the new ones that you downloaded.

3. On the next page, click **Next** if you want to accept the suggested printer name and use the printer as your default printer. Otherwise, change these settings to what you prefer, and then click **Next**.
4. If you see the **Printer Sharing** page next in the wizard, you can share your printer so that other computers on your home network can use it to print. Click **Share name**, and then specify a name for the shared printer. Otherwise, click **Do not share this printer**. After you have made your selection, click **Next**. You might be asked to enter optional location information for the printer. Type the location of the printer (for example, Home Office), and then click **Next**.

---

## Using InfoPrint Select for Windows with serverless printing

---

You can use InfoPrint Select to send a job that needs no additional processing to a printer without passing through the InfoPrint Manager server. This function is known as serverless printing or direct IP printing. It allows users to print when there is no need to route the jobs through the InfoPrint Manager server or when the print server is temporarily unavailable. The function provides efficiency by reducing network traffic via direct print connectivity.

One of the advantages of this function is that accurate accounting is still provided. InfoPrint Select sends the job directly to the printer. After successfully printing the job, InfoPrint Select sends the information to the InfoPrint Manager server so that accounting data can be updated. If the InfoPrint Manager server is temporarily unavailable, then InfoPrint Select stores the accounting information and delivers it when the server becomes available.

This InfoPrint Select function is activated via the registry key `Computer\HKEY_LOCAL_MACHINE\SOFTWARE\RICOH\InfoPrint Select\Configuration` by a local InfoPrint Manager administrator.

1. To enable sending jobs directly to the printer, use the `UseServerlessPrint` registry key of the `REG_DWORD` type, value 1.
2. To enable sending jobs directly to the printer only when the InfoPrint Manager server is unavailable, set the `UseServerlessPrint` registry to 0, and use the `UseDirectPrint` registry key of the `REG_DWORD` type, value 1.

### Note

- If both `UseDirectPrint` and `UseServerlessPrint` registry keys are set to 1, then `UseDirectPrint` is ignored.

For more information about setting the registry keys using the Update Server application, see [Installing and Configuring the Update Server on a Windows system, p. 207](#) and [Configuring the automatic download of registry updates, p. 223](#).

**★ Important**

- To print directly to the printer, InfoPrint Select must retrieve the IP address of the printer from the properties of the InfoPrint Manager actual destination defined as the target printer. Click the **Open Printer Selection** application icon and select the InfoPrint Manager printer from the **Target Printer Selection** table.
- Logical destinations are not supported as target printers for serverless printing with InfoPrint Select for Windows.
- Serverless printing with InfoPrint Select for Windows does not support pull printing jobs.
- Printer devices must support the PDL language.

## Using InfoPrint Select for Linux

InfoPrint Select for Linux lets you submit and track jobs from a Linux workstation to a destination that is managed by InfoPrint Manager. Through InfoPrint Select for Linux, you can submit jobs to InfoPrint Manager from word processors, spreadsheets, and other desktop applications. You can print from applications or from the command line.

InfoPrint Select for Linux lets you:

- Specify AFP and other InfoPrint job attributes when submitting a job to the server
- Print using LDAP authentication for job submission

---

## Installing and upgrading InfoPrint Select for Linux

---

There are two versions of the InfoPrint Select client for Linux: the non-LDAP InfoPrint Select client and the LDAP-enabled InfoPrint Select client. The LDAP-enabled InfoPrint Select client and the non-LDAP InfoPrint Select client are packaged in different .rpm packages. The LDAP-enabled InfoPrint Select client requires LDAP authentication for job submission. You must authenticate with an LDAP server to execute job submissions from the InfoPrint Select client. If you install the LDAP version of the InfoPrint Select client, you cannot switch back to the non-LDAP version (except if you uninstall and reinstall the non-LDAP version).

If you are using the non-LDAP InfoPrint Select client in a PAM/SSO environment, the LDAP user taken from the LDAP (PAM)/Active Directory system authentication session is used for the InfoPrint Manager user-related attributes.

Before installing the InfoPrint Select client, make sure you have the following prerequisites installed on your system:

- libatk-1.0.so.0
- libc.so.6
- libc.so.6(GLIBC\_2.0)
- libc.so.6(GLIBC\_2.1)
- libc.so.6(GLIBC\_2.1.3)
- libc.so.6(GLIBC\_2.2)
- libdl.so.2

- libgcc\_s.so.1
- libgcc\_s.so.1(GCC\_3.0)
- libgdk\_pixbuf-2.0.so.0
- libgdk-x11-2.0.so.0
- libglib-2.0.so.0
- libgmodule-2.0.so.0
- libgobject-2.0.so.0
- libgtk-x11-2.0.so.0
- liblber-2.4.so.2
- libldap-2.4.so.2
- libm.so.6
- libpango-1.0.so.0
- libpangox-1.0.so.0
- libpangoft-1.0.so.0
- libpthread.so.0
- libpthread.so.0(GLIBC\_2.0)
- libpthread.so.0(GLIBC\_2.1)
- libpthread.so.0(GLIBC\_2.1.1)
- librt.so.1
- libstdc++.so.6
- libstdc++.so.6(CXXABI\_1.2)
- libstdc++.so.6(GLIBCPP\_3.2)

## To install the InfoPrint Select clients:

### From Terminal:

1. If you are installing from the *RICOH InfoPrint Manager: Common Clients ISO* file:
  - 1) Mount the *RICOH InfoPrint Manager: Common Clients ISO* file.
  - 2) Copy the installer package for the version of the InfoPrint Select client you want to install to a temporary location. For example: /tmp.
  - 3) Open a command terminal.
  - 4) Install the non-LDAP InfoPrint Select client package by typing:

```
sudo rpm -i ipr-select-4.15.m-n.x86_64.rpm
```

or

Install the LDAP-enabled InfoPrint Select client package by typing:

```
sudo rpm -i ipr-select-ldap-4.15.m-n.x86_64.rpm
```

Where m and n represent the service update level.

- 5) If you are upgrading the non-LDAP InfoPrint Select client from a previous version, you need to type:

```
sudo rpm -U ipr-select-4.15.m-n.x86_64.rpm
```

If you are upgrading the LDAP-enabled InfoPrint Select client from a previous version, you need to type:

```
sudo rpm -U ipr-select-ldap-4.15.m-n.x86_64.rpm
```

Where m and n represent the service update level.

2. If you are installing from the web:

- 1) Download the non-LDAP InfoPrint Select client package or the LDAP-enabled InfoPrint Select client package.
- 2) Install the non-LDAP InfoPrint Select client package by typing:

```
sudo rpm -i ipr-select-4.15.m-n.x86_64.rpm
```

or

Install the LDAP-enabled InfoPrint Select client package by typing:

```
sudo rpm -i ipr-select-ldap-4.15.m-n.x86_64.rpm
```

Where m and n represent the service update level.

- 3) If you are upgrading the non-LDAP InfoPrint Select client from a previous version, you need to type:

```
rpm -U ipr-select-4.15.m-n.x86_64.rpm
```

If you are upgrading the LDAP-enabled InfoPrint Select client from a previous version, you need to type:

```
rpm -U ipr-select-ldap-4.15.m-n.x86_64.rpm
```

Where m and n represent the service update level.

These environment variables must be set for the non-LDAP Linux Command Line client, installed with the InfoPrint Select client, to work. The install process puts two shell configuration files (`ipr-cmd.csh` and `ipr-cmd.sh`) in the `/etc/profile.d` directory to set them. Edit these files and provide values for:

### PDHOST

The name of the host where the InfoPrint Manager server is located.

### PD\_SOCKET

The TCP/IP socket number of the port for the InfoPrint Manager server. The default socket is **6874**. Use **6874** unless your system has been specifically set up differently or you have more than one InfoPrint Manager server running on the host.

### PDPRINTER (optional)

The default logical destination in the InfoPrint Manager server that you want to use. The commands use this value if you do not specify a logical destination on the command line.

#### Note

Users can override these settings with their own settings.

**★ Important**

1. If you want to use the CUPS (Common Unix Printing System) web interface version 1.1.x, you must manually set the `/usr/lib/cups/backend/sepms` rights to 755 using the following command:

```
chmod 755 /usr/lib/cups/backend/sepms
```

2. If you want to use KDE libraries, make sure `kdlibs 3.5.7` or higher is installed on your machine.

To use InfoPrint Select for Linux, you must create an InfoPrint Select printer using one of the methods described in [Creating InfoPrint Select printers on Linux](#), p. 148.

## Uninstalling InfoPrint Select for Linux

1. Log in as **root**.
2. To uninstall the InfoPrint Select client:
  1. For the non-LDAP version, type:

```
rpm -e ipr-select-4.15.m-n
```

2. For the LDAP-enabled version, type:

```
rpm -e ipr-select-ldap-4.15.m-n
```

Where `m` and `n` represent the service update level.

## Using InfoPrint Select with SELinux set in enforcing mode (RHEL only)

This section describes special considerations for working with InfoPrint Select with SELinux set in enforcing mode on a Red Hat Enterprise Linux (RHEL) system.

### Running InfoPrint Select with SELinux set in enforcing mode

To allow InfoPrint Select clients to work when SELinux is set in enforcing mode, you need to complete the following procedure:

1. Install `checkpolicy` and `policycoreutils` rpm files if not already installed:

```
yum install policycoreutils-python
```

2. Change InfoPrint Select directories and files SELinux context:

```
semanage fcontext -a -t cupsd_rw_etc_t '/opt/Ricoh/InfoPrint-Manager/config(/.*)?'
semanage fcontext -a -t cupsd_tmp_t '/opt/Ricoh/InfoPrint-Manager/pipes(/.*)?'
restorecon -RvF /opt/Ricoh/InfoPrint-Manager/config /opt/Ricoh/InfoPrint-Manager/pipes
```

3. Turn on `allow_yppbind` SELinux boolean:

```
setsebool -P allow_yppbind=on
```

4. Generate SELinux policy module:

```
cd /tmp
cp /opt/Ricoh/InfoPrint-Manager/selinux/ipmselect.te /tmp
```

```
/usr/bin/checkmodule -M -m -o ipmselect.mod ipmselect.te
/usr/bin/semodule_package -o ipmselect.pp -m ipmselect.mod
```

5. Install the new SELinux policy module:

```
semodule -i ipmselect.pp
```

6. Remove temporary files:

```
rm -f ipmselect.pp ipmselect.mod ipmselect.te
```

## 2

## Reverting the SELinux changes for InfoPrint Select

To revert the SELinux changes for InfoPrint Select, follow the procedure:

1. Restore files and directories SELinux context:

```
semanage fcontext -d -t cupsd_rw_etc_t '/opt/Ricoh/InfoPrint-Manager/config(/.*)?'
semanage fcontext -d -t cupsd_tmp_t '/opt/Ricoh/InfoPrint-Manager/pipes(/.*)?'
restorecon -RvF /opt/Ricoh/InfoPrint-Manager/config /opt/Ricoh/InfoPrint-Manager/pipes
```

2. Turn off allow\_yplib SELinux boolean:

```
setsebool -P allow_yplib=off
```

3. Uninstall the SELinux policy module:

```
semodule -r ipmselect.pp
```

## Configure SELinux to print warnings instead of enforcing

To configure SELinux to print warnings instead of enforcing, set SELinux=permissive in /etc/selinux/config. For more information, see the webpage [Security Enhanced Linux](#).

## Using LDAP Job Authentication with InfoPrint Select for Linux

The LDAP-enabled InfoPrint Select client requires users to LDAP-authenticate when they first submit a job. LDAP authentication support allows only authenticated users to print and provides information about the users that printed a specific job. LDAP authentication allows InfoPrint Manager to provide more accurate accounting information.

The LDAP-enabled InfoPrint Select client must be configured to use an LDAP server that has the GSS authentication option enabled. Only one version of the InfoPrint Select client can be installed at a time, so if the non-LDAP version has been installed, it must be uninstalled before the LDAP version can be installed. Subsequent updates apply to the current version that is installed. There is a configuration file containing the LDAP authentication settings. You can edit the configuration settings only if you have **root** privileges. Multiple users are allowed to log in and authenticate from the same box.

If you cannot successfully log in to the LDAP server, the LDAP-enabled InfoPrint Select client does not allow you to submit jobs. If you are successfully logged in to the LDAP server, you are allowed to submit jobs to the InfoPrint Manager server. You must log in to the LDAP server the first time you submit a print job. The LDAP login session expires in either of these situations: when you log off or when the session timeout set by the LDAP server administrator expires. You do not have to log in again for each subsequent print job that you submit. The submitted jobs contain an authenticated-login attribute with the

LDAP username that can be added to the server accounting logs by using the server or actual destination **additional-accounting-log-attributes** attribute. You can modify the connection settings, and the application updates the configuration file.

The LDAP-enabled InfoPrint Select client is LDAP v3 compliant. It only supports an open directory LDAP model. This means that the LDAP server does not enforce the clients to establish connections over SSL, and it does not ask clients to be authenticated when and if they connect to an LDAP server over SSL.

The SSL client mutual authentication is enabled when you do not want your directory system to be opened to the general public. It is a closed directory system where both the SSL and the client authentication are forced. The SSL client authentication means that the client must have a valid certificate verified by the server.

## LDAP-enabled InfoPrint Select for Linux authentication methods

### Simple

For Simple authentication, the login name, in the form of the retrieved DN, is sent with the password in clear text to the LDAP server.

### Digest

This method requires a Digest plugin installed on the LDAP server with its own user database. The LDAP server internally forwards authentication credentials to the Digest plugin (SASLDB). There is no search mechanism for DN in this case.

## Configuring LDAP-enabled InfoPrint Select client settings on Linux

For the LDAP-enabled InfoPrint Select client to submit authenticated jobs to InfoPrint Manager properly, you must configure your LDAP-enabled InfoPrint Select client settings. The LDAP settings window lets you configure the credentials, connection, authentication, and search settings. From the LDAP login window, click **Settings** to open the LDAP settings window. The **Settings** button is enabled only if you use the **root** account to log in.

### Credentials

#### Login

The login information can be an e-mail address, an employee number, a badge serial number, a common name, a Lotus Notes canonical name, a user ID, a uid, or other data information.

The login information can be sent to the destination accounting log by adding the **authenticated-login** attribute to the list of values used by the **additional-accounting-log-attributes** attribute.

#### Password

Enter your password.

#### Upper/Lower case

Specifies the letter case of the login attribute. You can select one of these values: *Case Sensitive*, *Convert to Lower Case*, or *Convert to Upper Case*. The default value is *Case Sensitive*.

#### Disable Save Credentials

Does not allow users to save credentials. The login and password from the LDAP settings window are not stored.

**Note**

The credentials, if available, are copied from/to the InfoPrint Select LDAP login window.

## LDAP Server

### Host

Enter the host name or IP address of the LDAP server.

### Port

Enter the port number that is used for communication. The default port number is **389**. The default SSL port number is **636**.

## Authentication

### Method

Select the method of authentication: **Simple** or **Digest**.

### SASL Realm

Enter the name of the SASL Realm. This option is available when you use the **Digest** method.

### Encryption

Enter an encryption method for the LDAP Server. To use the TLS or the SSL protocols, select the **Use Start TLS Extension** or the **Use SSL Encryption** option.

## DN Search Options

The Distinguished Name (DN) Search Options is only used for the **Simple** authentication method.

### Search Base

The search base entry is the location in a directory from which the LDAP search begins.

### Search Attribute

The search attribute is used for the search of the DN. The DN is used for logging on to the InfoPrint Select LDAP server.

Example:

- If you want to identify the DN using the intranet e-mail address (for example: john\_smith@example.com) as the LDAP login, the search attribute must be `mail`. The DN Search Options are configurable as needed and used only for simple authentication method.
  - If you enter you login as your common name (for example: "John Smith"), the search attribute must be set to `cn`.
  - Other various attributes for the DN search, like: e-mail address, employee number, badge serial number, common name, Lotus Notes canonical name, user ID, uid, and DN.

Depending on the custom configuration, the specific login attribute is used for the DN search. This attribute becomes the value of the **authenticated-login** job attribute in the accounting log.

Click **Test Authentication** if you want to test the connection to the LDAP server. If the connection is successful, a confirmation message is displayed: *Successfully connected to the LDAP server.*

If one of the LDAP settings is not properly configured, you receive one error message for each case:

- “Invalid user login credentials. Check your login credentials.” You see this message when the authentication bind fails because the credentials are incorrect.
- “Incorrect LDAP host, port, or SSL/TLS settings. Check your host, port, and SSL/TLS settings.” You see this message when the authentication bind fails because InfoPrint Select LDAP client cannot contact the LDAP server.
- “Invalid authentication method. Contact your system administrator.” You see this message when the LDAP server does not recognize the authentication method that the InfoPrint Select LDAP client used.
- “LDAP login not found on server. Check your credentials or search options.” You see this message when InfoPrint Select LDAP does not find the user in the search directory.

You do not see an error message when the LDAP server does not allow anonymous authentication. In this case, the initial bind fails because no anonymous binding is allowed and InfoPrint Select LDAP client authenticates directly with the login credentials that you entered.

### Anonymous Login

Enable/Disable anonymous login to the LDAP server.

### Bind DN

Enter the Distinguished Name (DN) of the account if the LDAP server does not allow anonymous queries.

### Password

The password for the Bind DN account.

#### Note

The Bind DN login and password information are stored in the registry. The password is stored in encrypted form. By default, the search of the DN is done by the anonymous binding to the LDAP server, and it is based on the **Search Base** and the **Search Attribute** values. The DN that results from the search is used for the authentication together with the specified password. If **Anonymous Search** is not enabled on your InfoPrint Select LDAP server, InfoPrint select attempts to log in with the Bind DN and password and searches for the specified Login. If the authentication fails, an error occurs. If the search succeeds, InfoPrint Select attempts to log in with the DN associated with the Login. If the search fails, InfoPrint Select attempts to log in with the Login and password.

The password information is not stored. The credentials are copied from the LDAP-enabled InfoPrint Select client login window if you already set them.

Depending on the custom configuration, the specific login attribute is used for the DN search. This attribute becomes the value of the **authenticated-login** job attribute in the accounting log.

Click **Test Authentication** if you want to test the connection to the LDAP server. If the connection is successful, a confirmation message is displayed: *Successfully connected to the LDAP server.*

If one of the LDAP settings is not properly configured, you receive one error message for each case:

- *Invalid user login credentials. Check your login credentials.* You see this message when the authentication bind fails because the credentials are incorrect.

- *Incorrect LDAP host, port, or SSL/TLS settings.* Check your host, port, and SSL/TLS settings. You see this message when the authentication bind fails because LDAP-enabled InfoPrint Select client cannot contact the LDAP server.
- *Invalid authentication method.* Contact your system administrator. You see this message when the LDAP server does not recognize the authentication method that the LDAP-enabled InfoPrint Select client used.
- *LDAP login not found on server.* Check your credentials or search options. You see this message when the LDAP-enabled InfoPrint Select client does not find the user in the search directory.
- You do not see an error message when the LDAP server does not allow anonymous authentication. In this case, the initial bind fails because no anonymous binding is allowed, and the LDAP-enabled InfoPrint Select client authenticates directly with the login credentials that you entered.

## Creating InfoPrint Select printers on Linux

This section describes how to configure InfoPrint Select clients to allow print job submission from Linux applications to destinations managed by an InfoPrint Manager server.

There are three methods to create InfoPrint Select printers on Linux:

1. Add a printer using the CUPS (Common Unix Printing System) web interface:
  - 1) Open a web browser.
  - 2) To access the CUPS web interface, enter `http://localhost:631` in the browser address bar.
  - 3) Enter CUPS administrator credentials and on the **Administration** tab, click **Add Printer**.
  - 4) From the **Other Network Printers** section, select InfoPrint Select and click **Continue**.
  - 5) Set the correct `DEVICE_URI` in the Connection field and click Continue, where `DEVICE_URI` is:

```
se1pms://<server_hostname>[:<port>]/<destination>
```

### Note

If no port is specified, the default port number is 6874.

- 6) Set the Name, Description and Location values for the CUPS printer and click **Continue**.
- 7) Select the printer manufacturer from the drop-down list and click **Continue**. Choose the printer model and click **Add Printer**.
- 8) Set the default options for the printer and click **Set Default Options**.

2. Add a printer using `/usr/sbin/lpadmin` command:

- 1) Open a command terminal.
- 2) Execute the following command:

```
/usr/sbin/lpadmin -p <cups_printer_name> -v"<DEVICE_URI>"  
-m <printer_model.ppd> -D <printer_description> -E
```

3. Add a printer using the Linux **Add a Printer Wizard**:

- 1) Go to **System** → **Administration** → **Printing**.
- 2) Click **New**.

- 3) From the list of **Devices** select **Network Printer** → **InfoPrint Select** and enter the device URI information: `se1pms://server_hostname[:port]/destination`.

**Note**

If no port is specified, the default port number is 6874.

- 4) Click **Forward**.
- 5) Select a printer from the database and click **Forward**.
- 6) Select a printer model and a driver from the **Model** and **Drivers** lists and click **Forward**.
- 7) In the **Installable Options** panel click **Forward**.
- 8) In the **Describe Printer** panel enter **Printer Name**, **Description** (optional), and **Location** (optional) and click **Apply**.

## Printing from applications

Things to be considered when printing from applications with InfoPrint Select:

### Printing Considerations

InfoPrint Select works with the print facility of each application, so printing from every program is a little different. A typical application might allow you to specify a printer other than the default, the number of copies, or a range of pages.

If the printer selected (or your default printer) is an InfoPrint Manager Select printer, your job is sent to the InfoPrint server.

## Checking printer status

To check the status of a printer, select **View IPM Printer Status** from the InfoPrint Select menu. A list of all the InfoPrint Manager destinations used by the InfoPrint Select printers is displayed.

The InfoPrint Manager Printers dialog displays information about all the InfoPrint Manager destinations used by the InfoPrint Select printers, including the names of all the printers assigned to the logical printer, the printer type (logical or physical), whether the printer is enabled or disabled, current status (for example, **printing** or **needs attention**), problem messages (optional), SNMP information, and backup printers. The default is to not display problem messages. To display problem messages, go to the View Menu pull-down and select **Show problem messages**. Note that problem messages might not appear in your language.

**Note**

Depending on the CUPS printer configuration, the same InfoPrint Manager destination can be displayed multiple times.

The **Enabled** and **Status** columns reflect the current state of actual and logical destinations that could be used to process the job. If there is a backup printer defined for your printer, it will be listed in the **Backup Printer** column. A backup printer is a backup actual destination. To add a backup actual destination, your administrator can set the **backup-destinations** attribute for the printer that you want to backup. See the *InfoPrint Manager Reference* for more information.

## Viewing and canceling jobs

You have the ability to query jobs that you have submitted. Select retains the job information and displays your jobs in the InfoPrint Manager Jobs dialog. To check the status of a print job that you have submitted for printing, select **View IPM Queue** from the InfoPrint Select menu. A list of jobs is displayed. If you want to see just the jobs submitted to a specific printer, go to the **View** menu bar pull-down, select **Printer Selection**, and choose a printer.

The InfoPrint Manager Jobs dialog displays a list of all the jobs you have submitted to print. The most recently submitted job is at the top of the list. For each job, the list includes the job name, the date and time it was submitted, its global ID, the page count, the job originator, and the LDAP user.

The default is to list only the jobs that you have submitted. If you want all jobs listed, go to the **View** menu bar pull-down and select **Show all users jobs**.

You can also check the properties of a specific job. Click a job to select it, then select **Job Properties** from the Job menu bar pull-down or click the **Job Properties** toolbar button. Information about the selected job is shown on the six tabs on the dialog. The fields on the Job Properties dialog are not editable.

### Job Properties dialog

The Job Properties dialog opens when you click **Properties** on the toolbar or you select **Properties** from the Job menu bar pull-down. You can display information about a selected job by selecting one of the tabs on the dialog. The fields on this dialog are not editable.

### Summary

The Summary page displays overall job settings for the print job. **These values are not editable.**

#### Job name

Indicates the name of the job. The job name is assigned on the Job Settings dialog.

#### State

Indicates the state of the job. These job states are possible:

Canceled	The job has been canceled.
Held	The job is being held in the queue.
Paused	The job has been paused.
Pending	The job is waiting in the queue to be printed.
Pre-processing	The job is being created.
Processing	The job has been scheduled to print on a physical printer.
Retained	The job has already printed or was removed from the queue and has a non-zero retention period.
Terminating	The job has been canceled and is in the process of terminating.
Unknown	The state is not known.

### Reason for job state

Indicates the reasons that this job is in the held, terminating, or retained state. If this field is blank, this job is not in one of these states.

### Position in queue

Indicates the number of jobs in the queue before this job.

### Number of pages

Indicates the number of pages in the job.

### Originator

Displays an originator name if it was specified in the job-originator attribute. This name can appear on the start sheet printed with your jobs. If an attribute was not specified, the field will be blank.

### Authenticated login

Specifies the LDAP user ID if the job is LDAP authenticated.

## Processing

The Processing page displays values for processing the print job. **These values are not editable.**

### Copies

Indicates the number of job copies that have been selected for printing.

### Retention period

Displays the period of time following job completion, in hours and minutes, that this job is retained before being discarded. After this job completes, it is retained until this time limit expires or until the Discard Time limit expires.

## Progress

The Progress page displays information about the progress of the print job. **These values are not editable.**

### Submission time

Indicates the time at which this job was added to the queue.

### Submission complete

Indicates whether information regarding the documents in this job have been received by the server from the client. The value is either true or false.

### Started printing time

Indicates the time that this job was sent to the printer.

### Processing time

Indicates the amount of time (in hours and minutes) that this job has been at the printer device. If printing has completed, this field displays the total amount of time used to print this job.

### Copies complete

Indicates the number of copies that have completed printing. If this value is blank, the job might not have started to print or this information is not available to Select.

## Completion time

Indicates the time when this job completed printing.

## Modification time

Indicates the date and time that the job was last modified. It can indicate that an administrator has performed some action on your job after you submitted it.

## Name of last modifier

Indicates the name of the person or the name of the application that most recently modified the job. If a person submitted or modified the job, the value is the login ID for that user.

## Scheduling

The Scheduling page displays the settings for print job scheduling. **These values are not editable.**

### Print After

Indicates the date or time when jobs submitted to this printer will begin to be scheduled.

### Discard After

Indicates the date or time when jobs submitted to this printer will be deleted, whether they have printed.

### Job batch

Indicates the value for the job-batch attribute if one was specified.

### Priority

Indicates the scheduling priority of this job. A print job can have a priority of 1-100, where 100 is the highest priority. General users can set a priority of up to 50; administrators can set a priority of up to 100.

## Status

The Status page displays information about print job status. **These values are not editable.**

### Queue assigned

Indicates the name of the queue where this job is located. If this field is blank, the job is not currently residing in a queue because it is in the retained or timed-out state.

### Printers used

Shows a list of the physical printers used to print this job.

### Previous job state

Indicates the previous state of the job.

### Owner

Indicates the value of the job-owner attribute. If you did not specify a value for this attribute when you submitted the job, this field displays the user ID and address of the person who submitted the job, as determined by Select.

### Default job

If you specified the `initial-value-job` attribute with your job to control job attributes and values, this field displays the value you specified for that attribute.

### Printer's default job

Indicates the name of the initial value job designated by the logical printer to provide default job attribute values for this job. If you do not specify an initial value job with the job, or if the specified initial value job does not include a value for the attribute, Select uses the attribute value from the printer initial value job. If there is no such value, Select uses the system default.

### Document summary

The Document summary page displays document settings for the print job. **These values are not editable.**

#### Document format

Indicates the format of the document.

#### Sides

Indicates the Sides setting for the print job. Possible values are: 1, 2, or use server default.

#### Plex

Indicates how the output images for this job are placed on the media by the printer. Possible values are: simplex, duplex, and use server default.

#### Orientation

Indicates the way job contents will be placed on the output media. Possible values are:

default	The <code>data_stream</code> and Select defaults determine the orientation.
portrait	Jobs will be printed without additional rotation.
landscape	Jobs will be rotated 90 degrees when they are printed.
reverse-portrait	Jobs will be rotated 180 degrees when they are printed.
reverse-landscape	Jobs will be rotated 270 degrees when they are printed.

#### Default medium

Indicates the medium on which the documents in this job are printed if a medium is not specified by other methods. The medium can be specified by document contents, other job attributes or printer attributes.

#### Other options

If you specified attributes to directly pass flags and parameters to the printer device, this field displays the information you specified.

#### Printer's default document

Indicates the name of the initial value document designated by the logical printer to provide default document attribute values for this job. A default attribute value from this initial value document is used if the attribute value was not specified when the job was submitted or provided by an initial value document designated by a print file document in the job.

## Using the Job Settings dialog

You can change several settings related to the print job by using the Job Settings dialog. The changes you make in the Job Settings dialog affect only the current job. The Job Settings dialog is disabled by default. To activate the Jobs Settings dialog, select **Activate Job Settings Dialog** from the InfoPrint Select menu. The tabs/pages associated with this dialog are:

### General Attributes page

Use this page to choose a job name and display the name and address of the job owner. You can set these values:

#### Job name

Indicates the name of the job you are submitting. By default, the application from which you are submitting the job specifies the job name. To specify a different name for the job, enter the new name in the field. Depending on the Select configuration, this name can print on the start sheet for the job.

#### Owner

Indicates the user name and address of the job sender. This field cannot be changed.

To submit a confidential job, select the **Confidential job** checkbox. If you select the **Confidential job** checkbox, the document cannot be viewed in the JobViewer.

On this page you can check the **Do not display this dialog again** checkbox to disable this dialog. If you check this box, the dialog does not display when you send print jobs. The Job Settings dialog is disabled by default. If you decide that you want to enable this dialog, select **Activate Job Settings Dialog** from the InfoPrint Select menu.

### Scheduling Attributes

You can use this page to control when your print job is printed. You can set these values:

#### Print After

Set the date, time or partial time when jobs submitted to this printer will begin to be scheduled. To fill in the desired date and time:

1. Click in the Print after checkbox to place a check in the box.
2. Select the unit you want to change (year, month, day, hour minute) in the Change pull-down menu on the right.
3. Use the + and - buttons to adjust the desired Print after time.

#### Discard After

Set the date, time or partial time when jobs submitted to this printer will be deleted, whether they have printed. To fill in the desired date and time:

1. Click in the Discard after checkbox to place a check in the box.
2. Select the unit you want to change (year, month, day, hour minute) in the Change pull-down menu on the right.
3. Use the + and - buttons to adjust the desired Discard after time.

## Retention Period

Set the amount of time that the job will be retained at the server before it is deleted. To fill in the desired date and time:

1. Select the unit you want to change (hours, 10-minutes, minutes) in the Change pull-down menu on the right.
2. Use the + and - buttons to adjust the desired retention period.

## Priority

Type the desired priority value into the field. The Priority field displays a number representing the scheduling priority of this job. A print job can have a priority of 1-100, where 100 is the highest priority. General users can set a priority of up to 50; administrators can set a priority of up to 100.

## Hold

When you check the **Hold** checkbox, the print job is held on the server, and the **job-hold** attribute is set to **True** or **Yes**.

## Messages page

You can use this page to create a job comment or a message for the print operator. You can set these values:

### Job comment

Use this field to record any comments about your print job.

### Message to operator

Use this field to include a message that Select sends to an operator when it adds your job to the queue. You might want to include information that describes any special handling that your job requires.

## Other Attributes page

Use this page to choose additional job and document attributes for a print job. Attributes are used for advanced printing and production printing to specify how and when jobs submitted to this printer will print.

### Attributes File

Type the name of the file containing additional job and document attributes for the print job. If you click **Browse...**, the Open Dialog is displayed and you can search for an attributes file. You can use one of the sample attributes files as a guide in creating your own customized set of attributes.

### Attributes

You can type additional attributes and their values in this field, in the format **attribute = value** (for example, `job-priority = 25`)

### Printer options

Use this field to directly pass flags and options to the printer device. Select appends the information you supply to the printer-command attribute for the printer. If the printer device is controlled by the BSD device support system, Select appends the information you supply to the printer-command attribute for the printer.

### Checkboxes

**Suppress job submission error messages:** Check this box to suppress job submission error messages to allow unattended operation.

**Re-spool jobs if submission fails:** Check this box to automatically re-spool failed job submissions. Re-spooled jobs are placed in the print queue in a **hold** state.

### Example attribute file

```
printer-models-requested = InfoPrint4000
printer-locations-requested = 'Building 025'
job-priority = 25
job-retention-period = 01:30
```

#### Note

1. Before specifying any InfoPrint attributes, for specific information and syntax rules, see *RICOH InfoPrint Manager: Reference*.
2. The InfoPrint Manager Select for Linux client **Other** tab does not contain a syntax checker, so verify that the format of attributes, specified in either an attributes file or as individual attributes, are in the correct format. If there are syntax errors, you will receive the same messages provided for syntax errors on commands sent from a command line.
3. If you specify the same InfoPrint attribute from different locations with different values, InfoPrint Manager determines what values to send with the job using the following hierarchy:
  - 1) Values specified in the **Attributes** field on the **Other** tab.
  - 2) Values specified in the **Attributes file** field on the **Other** tab.
  - 3) Any values specified on either the **General**, **Scheduling**, or **Messages** tab.

## Working with InfoPrint Select Notifications

By default when you submit a job using InfoPrint Select, a notification profile is sent with the job. If you have the InfoPrint Manager Message window running when you submit a print job using InfoPrint Select, notifications are requested. If the InfoPrint Manager Message window is not running, notifications are not requested.

To change the port SMTP sends notifications to, go to the **Settings** menu and select **Configure notification port**. You see the InfoPrint Manager Message port dialog. In the Notification port field, type in the number of the new port you want SMTP to use for notifications. The default is 5157.

To activate the InfoPrint Manager Message window, select **InfoPrint Select Notifications** from the InfoPrint Select menu.

To turn off the InfoPrint Manager Message window, click **X** in the upper right corner of the window and then click **OK** on the warning message.

## Configuration file

The InfoPrint Manager Select for Linux creates a configuration file for each user ID to store that user's settings. The file is generated the first time the Select is invoked by each user if it does not already exist.

The file is saved in the home folder under `opt/Ricoh/InfoPrint-Manager/config/<user>_select.conf`.

## The configuration file

```
[User Preferences]
Notification Port=5157
Use default .att file=1
Default .att file=
[IPM Printers]
Show problem messages=0
[Submission Window]
Suppress=1
[Job Recovery]
Pause jobs if submission fails=0
Suppress submission errors=1
```

The key settings are:

- Notification Port=5157 - Must be set to a unique port number if Notifications are being used. If Select Notifications are not being used, it does not need to be changed.
- Suppress=1 - Suppresses the Job Settings Dialog
- Suppress submission errors=1 - Suppresses error messages found during submission.
- Pause jobs if submission fails=0 - Optionally can set this to 1 to cause failed jobs to be retained for re-submission by the administrator.

## Commands you can use with InfoPrint Select for Linux

Typically, InfoPrint Select is used to let users print to InfoPrint Manager destinations from existing Linux applications. In addition, you can use several InfoPrint Manager commands that can be issued from the Command Line on the client system.

Information about security and how users can be authorized to InfoPrint Manager is found in the topic "Managing Security" in the *RICOH InfoPrint Manager for Windows: Procedures* guide.

InfoPrint Manager lets authorized users (normally all users) use these InfoPrint Manager commands:

### **pdls**

Lists selected attribute values for a job, destination, or other InfoPrint Manager object

### **pdpr**

Submits a job to a logical or actual destination. If LDAP job authentication is enabled, you must authenticate using your LDAP credentials before submission.

### **pdq**

Queries the status of selected jobs, of all jobs submitted to a logical destination, or of all jobs assigned to an actual destination

InfoPrint Manager lets authorized users (the job owner is usually authorized) use these InfoPrint Manager commands:

### **pdmod**

Modifies the attributes of submitted jobs or of the documents in them

**pdrm**

Deletes jobs

InfoPrint Manager allows only authorized users to use these InfoPrint Manager commands:

**pdaccount**

Collects summary accounting information for a specified time period in a comma delimited format about 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.

**pdcreate**

Creates logical destinations, queues, actual destinations, default jobs, default documents, media, auxiliary sheets, and resource contexts.

**pdclean**

Removes all jobs from a server, logical destination, queue, or actual destination.

**pddelete**

Deletes servers, logical destinations, queues, actual destinations, default jobs, default documents, media, auxiliary sheets, resource contexts, and jobs.

**pddisable**

Prevents destinations from accepting jobs and logs from logging.

**pdenable**

Enables destinations to accept jobs and logs to log.

**pdpause**

Pauses a job, actual destination, queue, or all the queues and actual destinations in a server.

**pdpromote**

Advances a job to the head of the queue.

**pdreorder**

Reassigns a job to an actual destination or to the unassigned jobs area in the same server or in another server, and lets you schedule it immediately before or after another job.

**pdresubmit**

Resubmits a job, all the jobs submitted to a logical destination, or all the jobs in a queue to another logical destination.

**pdresume**

Enables paused objects to resume operation.

**pdset**

Sets or changes the values of attributes describing InfoPrint Manager objects.

**pdshutdown**

Stops servers or actual destinations.

### pdspace

Backspaces or forward spaces a PSF physical printer.

### pddeviceop

Perform device operation on device associated with specified actual destination.

#### ↓ Note

For more information about InfoPrint Manager commands and attributes, see the *RICOH InfoPrint Manager: Reference*.

## Filtering destinations

To find a destination near you that can print two-sided PostScript jobs, enter:

```
pdls -c destination -f "destination-realization==actual
&& document-format-supported==postscript && sides-supported==2"
-r "destination-location" \*:
```

The `-f` flag specifies that you want to either filter on or list only actual destinations that support PostScript format and two-sided printing. The `-r` flag specifies that you want to request where the actual destinations are located in. The asterisk means that you want to check every server. The blank after the colon means that you want to check every destination in every server.

InfoPrint returns information similar to this:

```
caxton: destination-location = 3rd floor E
elzevir: destination-location =
morris: destination-location = 1st floor W
```

You decide to print your job on `morris`. To determine a logical destination that routes jobs to `morris`, enter:

```
pdls -c destination -f
"destination-associated-destinations==morris" \*:
```

## Querying destination attributes

To determine whether `morris` is ready to receive jobs, enter:

```
pdls -c destination morris
```

The `enabled` and `destination-state` values indicate whether `morris` is ready to receive jobs.

## Submitting a print job

To submit the file `myjob` to the logical destination `london`, requesting two-sided printing on the actual destination `morris`, enter:

```
pdpr -d london -x "destination-name-requested=morris sides=2" myjob
```

## Querying jobs

To list all the jobs that you submitted to logical destination 1 london, enter:

```
pdq -d 1 london
```

InfoPrint Manager returns information similar to this:

Job ID	Name	Intervening State	Destination Jobs	Destination Requested	Destination Assigned
13	Ser-v1:1104221000	printing	0	london	caxton
14	Ser-v1:1104221023	pending	8	london	morris

## Modifying job attributes

After submitting my job, you decide that you want to print two copies and that you want to retain it for one hour after it prints. When you queried the jobs submitted to 1 london, you saw that the local **Job ID** is **14** and that the job is still pending, so it can be modified. To change the number of copies to two and add a retention period of one hour, enter:

```
pdmod -n 2 -x "job-retention-period=1:00" 14
```

## Modifying destination attributes

To restrict the Printer3 actual destination so that it does not accept very large jobs, complete these tasks:

1. Before you can modify the attributes of the Printer3 actual destination, you must disable it by entering:

```
pddisable Printer3
```

2. To specify a new maximum job size of 5 meg for Printer3, enter:

```
pdset -c destination -x "job-size-range-ready=0:500000" Printer3
```

3. To reenble the actual destination, enter:

```
pdenable Printer3
```

## Shutting down an actual destination

The printer device represented by the actual destination caxton is out of order. To shut down caxton until the printer device can be repaired and to associate a message with caxton, enter:

```
pdshutdown -c destination -m "Service called Tuesday at 3PM" caxton
```

## Using InfoPrint Select for Linux with Anyplace printing

If you use InfoPrint Select for Linux and want to use specific tray, paper, or finishing information with Anyplace printing, you must install the InfoPrint Manager PDF Driver provided on the *RICOH InfoPrint Manager: Common Clients* media.

To install the InfoPrint Manager PDF Driver:

1. Log in to the Linux system as `root`.
2. If you are installing from the *RICOH InfoPrint Manager: Common Clients* media:
  - 1) Insert the DVD-ROM into the drive.
  - 2) Mount the file system by typing:

```
mount /dev/cdrom /media/<mount_point>
```

- 3) Type:

```
cd /media/<mount_point>/linux
```

- 4) Install the InfoPrint Manager PDF Driver package.

Type:

```
rpm -i ipr-base-pdf-driver.m-n.x86_64.rpm
```

Where `m` and `n` represent the service update level.

- 5) Unmount the `media/cdrom` file system.
  - 6) Remove the DVD-ROM.
3. Test the system.
  4. Follow the instructions from [Creating InfoPrint Select printers on Linux, p. 148](#) and InfoPrint Manager PDF `ppd` to add an InfoPrint Select printer.

## Windows gateway printer

A Windows gateway printer is a Windows shared printer that you create on your InfoPrint Manager server system. This allows users anywhere in the network to submit print jobs through InfoPrint Manager. Users must follow the instructions in [Adding a Windows gateway printer to a workstation, p. 161](#) to add the Windows gateway printer to their desktops. Use the Management Console to create and administer a Windows gateway printer. The Management Console help includes instructions.

### Note

When InfoPrint Manager is uninstalled, all Windows Gateway printers are deleted. Therefore, you must have your users manually delete the Windows Gateway printer from their desktops after the uninstall.

## Adding a Windows gateway printer to a workstation

To add a Windows gateway printer to a workstation, follow these steps:

1. Locate the share name of the Windows gateway printer.

2. Follow the standard procedure for adding a network printer to your desktop. This procedure depends on the operating system that you use. For example, on Windows systems, use the **Add Printer Wizard** to create a printer that will be managed by network print server. When you are prompted for the name of the printer to connect to, enter the share name of the Windows gateway printer.
3. Once the connection to the Windows gateway printer is created, you can print to it just as you would print to any other printer.

**Note**

1. This procedure assumes that you have already created the Windows gateway printer on the InfoPrint Manager server system.
2. When the InfoPrint Manager server is uninstalled, any Windows gateway printer that exists on the server is deleted. However, connections to those Windows gateway printers that have been added to workstations are still present; they are still displayed in the Printers window, and you can still try to print to them from applications. Because the Windows gateway printer on the InfoPrint Manager server no longer exists, those print jobs will fail. If you try to print to one of these Windows gateway printer, you will get an application-dependent message that does not identify this problem. To resolve this problem, delete the Windows gateway printer from your desktop and create a new one once your print system administrator has created a new one.

## IPP gateway printer

InfoPrint Manager for Windows provides an Internet Printing Protocol (IPP) gateway. The IPP gateway lets users anywhere in the network who have IPP client software installed to submit print jobs through InfoPrint Manager, even to printers that are not IPP-enabled. Users must follow the instructions provided with the IPP client to add a printer to their desktops. Use the InfoPrint Manager Web Management Interface (WMI) to enable the IPP gateway.

An **IPP gateway printer** is a printer that you create on a client workstation using IPP client software. Users submit print jobs to that printer, and they are sent to InfoPrint Manager through the InfoPrint Manager IPP gateway. The IPP gateway can then send the job on to any InfoPrint Manager printer, even those that are not IPP-enabled.

These are the IPP to InfoPrint Manager attribute mappings in the IPP gateway:

IPP attribute	InfoPrint Manager attribute
print-color-mode	color-bits-per-plane
media	default-medium
printer-resolution	default-printer-resolution
finishings	job-finishings
number-up	number-up
page-ranges	page-select
print-quality	print-quality
sides	sides

IPP attribute	InfoPrint Manager attribute
copies	copy-count
orientation-requested	content-orientation

## Adding an IPP gateway printer to a workstation

2

Instruct your end users to follow the steps below to add a printer that uses the IPP gateway to their desktops. This procedure assumes that IPP client software is installed on the workstation. If the IPP client software is not installed, the Printer Working Group (the organization that is leading the development of IPP) provides a list of IPP client software that you can use to find an appropriate client at <http://www.pwg.org/ipp/>.

1. Locate the address of the printer that you want to print to.
2. Follow the instructions provided with your IPP client software for adding a printer to your desktop.

After you have added the printer to your desktop, you can print to it just as you would print to any other printer.

## Using the InfoPrint Manager for AIX client

The InfoPrint Manager for AIX client is installed on all InfoPrint Manager for AIX servers with the *RICOH InfoPrint Manager for AIX: Base Server*. Do not install InfoPrint Manager for AIX client on a system where you already installed InfoPrint Manager for AIX server. To install InfoPrint Manager for AIX client on any AIX servers that do not have InfoPrint Manager for AIX, you can use either the *RICOH InfoPrint Manager: Common Clients DVD-ROM, LCD4-5642* or the *RICOH InfoPrint Manager for AIX: Base Server DVD-ROM, LCD4-5654*. This client can be used to send commands to InfoPrint Manager for AIX or Windows servers. The InfoPrint Manager for AIX client supports files greater than 2 GB in size.

The InfoPrint Manager for AIX client lets you enter InfoPrint Manager commands on the AIX command line. It also lets you enter **enq**, **lp**, **lpr**, and **qprt** commands. It has no graphical user interface.

### ★ Important

If you are using the AIX client in a PAM/SSO environment, the LDAP user taken from the LDAP(PAM)/Active Directory system authentication session is used for the InfoPrint Manager user-related attributes.

### ↓ Note

For the latest information about installing the InfoPrint Manager for AIXclient, see the installation procedures in either InfoPrint Manager for AIX or InfoPrint Manager for Windows, both available from the RICOH Software Information Center at <https://help.ricohsoftware.com/swinfocenter>.

## Installing the InfoPrint Manager for AIX client

### ★ Important

The InfoPrint Manager for AIX client and the InfoPrint Manager server are available in these languages:

- English
- French
- German
- Italian
- Japanese
- Spanish

You should associate the AIX client with an InfoPrint Manager server running in your language.

To install the InfoPrint Manager for AIX client on an AIX system where you have not installed the server:

1. Log onto AIX as `root`.
2. Insert the *RICOH InfoPrint Manager: Common Clients* DVD-ROM, LCD4-5642, into the drive.
3. If this is the first time you are installing software on this AIX system, create the `/cdrom` file system.
  - 1) Start the System Management Interface Tool (SMIT).
    - To start the AIX windows version of SMIT, enter this command:

```
smit cdrfs
```

- To start the ASCII version of SMIT, enter this command:

```
smitty cdrfs
```

The DVDROM File Systems panel is displayed.

### SMIT DVDROM File Systems panel

```

          DVDROM File Systems
Move cursor to desired item and press Enter.
  Add a DVDROM File System
  Change / Show Characteristics of a DVDROM File System
  Remove a DVDROM File System
1=Help          F2=Refresh      F3=Cancel      F8=Image
F9=Shell       F10=Exit       Enter=Do

```

- 2) Select Add a DVDROM File System.

### SMIT Add a DVDROM File System panel

```

          Add a DVDROM File System
Type or select values in entry fields.
Press Enter AFTER making all desired changes.
          ^Entry Fields|
* DEVICE Name
* MOUNT Point
  Mount AUTOMATICALLY at system restart?
1=Help          F2=Refresh      F3=Cancel      F4=List
F5=Reset       F6=Command     F7=Edit       F8=Image
F9=Shell       F10=Exit       Enter=Do

```

- 3) In the `DEVICE` name field, enter the identifier of your DVD-ROM drive.
- 4) In the `MOUNT POINT` field, enter `/cdrom`.
- 5) Click `OK` (AIX and Windows version) or press `Enter` (ASCII version).
- 6) Click `Cancel` (AIX and Windows version) or press `F10` (ASCII version) to exit from `SMIT`.

4. To mount the DVD-ROM, enter:

```
mount /cdrom
```

5. Enter this command to install the AIX client:

```
/cdrom/setup -c -n ServerName  
-p PortNumber -P DestinationName -L locale
```

where:

*ServerName*

is the name of the host where the InfoPrint Manager server that you want to communicate with (**PDHOST**) is running.

*PortNumber*

is the number of the port for the InfoPrint Manager server, usually 6874 (**PD\_SOCKET**). Remember to select one that is running in your language.

*DestinationName*

is the default logical destination that the AIX client submits jobs to. The `-P DestinationName` flag is optional.

*locale*

is the locale of the AIX client. The default is `en_US` (U. S. English). The `-L locale` flag is optional.

6. When the command completes processing, you should shutdown and restart your AIX server so that all changes can take effect.

---

## Commands you can use from the InfoPrint AIX client

---

InfoPrint Manager lets authorized users (normally all users) use these InfoPrint commands:

### **pdls**

Lists selected attribute values for a job, destination, or other InfoPrint object

### **pdpr**

Submits a job to a logical or actual destination

### **pdq**

Queries the status of selected jobs, of all jobs submitted to a logical destination, or of all jobs assigned to an actual destination

InfoPrint Manager lets authorized users (the job owner is usually authorized) use these InfoPrint commands:

## **pdmod**

Modifies the attributes of submitted jobs or of the documents in them

## **pdrm**

Deletes jobs

InfoPrint Manager allows only authorized users to use these InfoPrint commands:

## **pdaccount**

Collects summary accounting information for a specified time period in a comma delimited format about 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.

## **pdcreate**

Creates logical destinations, queues, actual destinations, default jobs, default documents, media, auxiliary sheets, and resource contexts.

## **pdclean**

Removes all jobs from a server, logical destination, queue, or actual destination.

## **pddelete**

Deletes servers, logical destinations, queues, actual destinations, default jobs, default documents, media, auxiliary sheets, resource contexts, and jobs.

## **pddeviceop**

Performs a device operation on a device associated with a specified actual destination.

## **pddisable**

Prevents destinations from accepting jobs and logs from logging.

## **pdenable**

Enables destinations to accept jobs and logs to log.

## **pdpause**

Pauses a job, actual destination, queue, or all the queues and actual destinations in a server.

## **pdpromote**

Advances a job to the head of the queue.

## **pdreorder**

Reassigns a job to an actual destination or to the unassigned jobs area in the same server or in another server, and lets you schedule it immediately before or after another job.

## **pdresubmit**

Resubmits a job, all the jobs submitted to a logical destination, or all the jobs in a queue to another logical destination.

## **pdresume**

Enables paused objects to resume operation.

**pdset**

Sets or changes the values of attributes describing InfoPrint objects.

**pdshutdown**

Stops servers or actual destinations.

**pdspace**

Backspaces or forward spaces a PSF physical printer.

**Note**

For more information about InfoPrint commands and attributes, see *RICOH InfoPrint Manager: Reference* or the man pages. Command man pages have the same name as the command.

---

## Examples using the InfoPrint AIX client

---

The *RICOH InfoPrint Manager: Reference* and the command man pages show several examples of each command that you can issue from the InfoPrint AIX client. This section contains examples using the commands to perform some common tasks.

---

### Filtering destinations

---

To find a destination near you that can print two-sided PostScript jobs, enter:

```
pdls -c destination -f "destination-realization==actual
    && document-format-supported==postscript && sides-supported==2"
    -r "destination-location" \*:
```

The `-f` flag specifies that you want to either filter on or list only actual destinations that support PostScript format and two-sided printing. The `-r` flag specifies that you want to request where the actual destinations reside. The asterisk means that you want to check every server. The blank after the colon means that you want to check every destination in every server. The backslash prevents the shell from interpreting the asterisk as a special character.

InfoPrint returns information similar to this:

```
caxton: destination-location = 3rd floor E
elzevir: destination-location =
morris: destination-location = 1st floor W
```

You decide to print your job on `morris`. To determine a logical destination that routes jobs to `morris`, enter:

```
pdls -c destination -f
    "destination-associated-destinations==morris" \*:
```

---

### Querying destination attributes

---

To determine whether `morris` is ready to receive jobs, enter:

```
pdls -c destination -r "destination-state" morris
```

## Submitting a print job

To submit the file `myjob` to the logical destination `london`, requesting two-sided printing on the actual destination `morris`, enter:

```
pdpr -d london -x "destination-name-requested=morris sides=2" myjob
```

## Querying jobs

To query all the jobs that you submitted to logical destination `london`, enter:

```
pdq -d london
```

InfoPrint returns information similar to this:

Job ID	Name	State	Intervening Jobs	Dest. Req.	Dest. Assigned
13	Serv1:1104221000 report	printing	0	london	caxton
14	Serv1:1104221023 myjob	pending	8	london	morris

## Modifying job attributes

After submitting `myjob`, you decide that you want to print two copies and that you want to retain it for one hour after it prints. When you queried your jobs submitted to `london`, you saw that the local job ID is 14 and that the job is still pending, so it can still be modified. Enter:

```
pdmod -n 2 -x "job-retention-period=1:00" 14
```

## Modifying destination attributes

To restrict the `Printer3` actual destination so that it does not accept very large jobs, complete these tasks:

1. Before you can modify the attributes of a destination, you must disable it. Enter:

```
pddisable Printer3
```

2. To specify a new maximum job size of 5 MB, enter:

```
pdset -c destination -x "job-size-range-ready=0:5000000" Printer3
```

3. To reenble the actual destination, enter:

```
pdenable Printer3
```

## Shutting down an actual destination

The printer device represented by the actual destination `caxton` is out of order. To shut down `caxton` until the printer device can be repaired and to associate a message with `caxton`, enter:

```
pdshutdown -c destination -m "Service called Tuesday at 3PM" caxton
```

## Using the InfoPrint Manager Linux client

The InfoPrint Manager for Linux client enables users of Linux on Intel-based machines to issue InfoPrint Manager commands over a TCP/IP-connected network to an InfoPrint Manager for AIX or an InfoPrint Manager for Windows server. Using a UNIX command line or shell script, you can issue a variety of commands to the InfoPrint Manager server. The Linux client supports files greater than 2 GB in size.

### Installing the InfoPrint Manager Linux clients

Before installing the InfoPrint Manager Linux Command Line Client, make sure you have the following prerequisites installed on your system:

- libc.so.6
- libc.so.6 (GLIBC\_2.0)
- libc.so.6 (GLIBC\_2.1)
- libc.so.6 (GLIBC\_2.1.3)
- libc.so.6 (GLIBC\_2.2)
- libgcc\_s.so.1
- libgcc\_s.so.1 (GCC\_3.0)
- libm.so.6
- libstdc++.so.6
- libstdc++.so.6 (CXXABI\_1.2)
- libstdc++.so.6 (GLIBCPP\_3.2)

To install the InfoPrint Manager: Linux Clients:

1. Log into the Linux system as `root`.
2. If you are installing from the *RICOH InfoPrint Manager: Common Clients* DVD-ROM, LCD4-5642:
  - 1) Insert the DVD-ROM into the drive.
  - 2) Mount the file system by typing:

```
mount /dev/cdrom /media/<mount_point>
```

- 3) Type:

```
cd /media/cdrom/linux
```

- 4) Install the Linux Command Line Client package.

Type:

```
rpm -i ipr-cmd-4.15.m-n.x86_64.rpm
```

where `m` and `n` represent the service update level.

- 5) If you are upgrading the InfoPrint Manager: Linux Command Line Client from a previous version, you need to type:

```
rpm -U ipr-cmd-4.15.m-n.x86_64.rpm
```

where *m* and *n* represent the service update level.

#### ★ Important

After the upgrade is complete, you must log off and then log in again.

- 6) Unmount the `media/cdrom` file system.
  - 7) Remove the DVD-ROM.
3. If you are installing from the web:
    - 1) Download the Linux Command Line Client package.
    - 2) Install the Linux Command Line Client package.

Type:

```
rpm -i ipr-cmd-4.15.m-n.x86_64.rpm
```

where *m* and *n* represent the service update level.

4. These environment variables must be set for the InfoPrint Manager: Linux Command Line Client to work. The install process puts two shell configuration files (`ipr-cmd.csh` and `ipr-cmd.sh`) in the `/etc/profile.d` directory to set them. Edit these files and provide values for:

#### PDHOST

The name of the host where the InfoPrint Manager server is located.

#### PD\_SOCKET

The TCP/IP socket number of the port for the InfoPrint Manager server. The default socket is **6874**. Use **6874** unless your system has been specifically set up differently or you have more than one InfoPrint Manager server running on the host.

#### PDPINTER (optional)

The default logical destination in the InfoPrint Manager server that you want to use. The commands use this value if you do not specify a logical destination on the command line.

#### ↓ Note

Users can override these settings with their own settings.

5. Test the system:
  - 1) Log off and log back on to pickup the changes.
  - 2) Issue one of the commands, followed by the **-h** flag to display the syntax of that command and verify the installation.

For example:

```
pdls -h
```

## Uninstalling the InfoPrint Manager Linux client

1. Log in as **root**.
2. To uninstall the Linux Command Line Client, type: **rpm -e ipr-cmd-4.15.m-n**, where *m* and *n* represent the service update level.

---

## Commands you can use from the InfoPrint Linux client

---

InfoPrint Manager lets authorized users (normally all users) use these InfoPrint commands:

### **pdls**

Lists selected attribute values for a job, destination, or other InfoPrint object

### **pdpr**

Submits a job to a logical or actual destination.

### **pdq**

Queries the status of selected jobs, of all jobs submitted to a logical destination, or of all jobs assigned to an actual destination

InfoPrint Manager lets authorized users (the job owner is usually authorized) use these InfoPrint commands:

### **pdmod**

Modifies the attributes of submitted jobs or of the documents in them

### **pdrm**

Deletes jobs

InfoPrint Manager allows only authorized users to use these InfoPrint commands:

### **pdaccount**

Collects summary accounting information for a specified time period in a comma delimited format about 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.

### **pdcreate**

Creates logical destinations, queues, actual destinations, default jobs, default documents, media, auxiliary sheets, and resource contexts.

### **pdclean**

Removes all jobs from a server, logical destination, queue, or actual destination.

### **pddelete**

Deletes servers, logical destinations, queues, actual destinations, default jobs, default documents, media, auxiliary sheets, resource contexts, and jobs.

### **pddeviceop**

Perform device operation on device associated with specified actual destination.

### **pddisable**

Prevents destinations from accepting jobs and logs from logging.

### **pdenable**

Enables destinations to accept jobs and logs to log.

### pdpause

Pauses a job, actual destination, queue, or all the queues and actual destinations in a server.

### pdpromote

Advances a job to the head of the queue.

### pdreorder

Reassigns a job to an actual destination or to the unassigned jobs area in the same server or in another server, and lets you schedule it immediately before or after another job.

### pdresubmit

Resubmits a job, all the jobs submitted to a logical destination, or all the jobs in a queue to another logical destination.

### pdresume

Enables paused objects to resume operation.

### pdset

Sets or changes the values of attributes describing InfoPrint objects.

### pdshutdown

Stops servers or actual destinations.

### pdspace

Backspaces or forward spaces a PSF physical printer.

### Note

For more information about InfoPrint commands and attributes, see *RICOH InfoPrint Manager: Reference* or the man pages. Command man pages have the same name as the command.

## Examples using the InfoPrint Linux client

The *RICOH InfoPrint Manager: Reference* contains several examples of each command that you can issue from the InfoPrint Linux client. This section contains examples using the commands to perform some common tasks.

### Filtering destinations

To find a destination near you that can print two-sided PostScript jobs, enter:

```
pdls -c destination -f "destination-realization==actual
    && document-format-supported==postscript && sides-supported==2"
    -r "destination-location" \*:
```

The `-f` flag specifies that you want to either filter on or list only actual destinations that support PostScript format and two-sided printing. The `-r` flag specifies that you want to request where the actual

destinations are located in. The asterisk means that you want to check every server. The blank after the colon means that you want to check every destination in every server.

InfoPrint returns information similar to this:

```
caxton: destination-location = 3rd floor E
elzevir: destination-location =
morris: destination-location = 1st floor W
```

You decide to print your job on `morris`. To determine a logical destination that routes jobs to `morris`, enter:

```
pdls -c destination -f
"destination-associated-destinations==morris" \*:
```

## Querying destination attributes

To determine whether `morris` is ready to receive jobs, enter:

```
pdls -c destination morris
```

The `enabled` and `destination-state` values indicate whether `morris` is ready to receive jobs.

## Submitting a print job

To submit the file `myjob` to the logical destination `london`, requesting two-sided printing on the actual destination `morris`, enter:

```
pdpr -d london -x "destination-name-requested=morris sides=2" myjob
```

## Querying jobs

To list all the jobs that you submitted to logical destination `london`, enter:

```
pdq -d london
```

InfoPrint Manager returns information similar to this:

Job ID	Name	Intervening State	Destination Jobs	Destination Requested	Destination Assigned
13	Ser-v1:1104221000	printing	0	london	caxton
14	Ser-v1:1104221023	pending	8	london	morris

## Modifying job attributes

After submitting `myjob`, you decide that you want to print two copies and that you want to retain it for one hour after it prints. When you queried the jobs submitted to `london`, you saw that the local **Job ID** is **14** and that the job is still pending, so it can be modified. To change the number of copies to two and add a retention period of one hour, enter:

```
pdmod -n 2 -x "job-retention-period=1:00" 14
```

## Modifying destination attributes

To restrict the Printer3 actual destination so that it does not accept very large jobs, complete these tasks:

1. Before you can modify the attributes of the Printer3 actual destination, you must disable it by entering:

```
pddisable Printer3
```

2. To specify a new maximum job size of 5 meg for Printer3, enter:

```
pdset -c destination -x "job-size-range-ready=0:500000" Printer3
```

3. To reenble the actual destination, enter:

```
pdenable Printer3
```

## Shutting down an actual destination

The printer device represented by the actual destination caxton is out of order. To shut down caxton until the printer device can be repaired and to associate a message with caxton, enter:

```
pdshutdown -c destination -m "Service called Tuesday at 3PM" caxton
```

## Using the InfoPrint Submit Express Client

### Setting up InfoPrint Submit Express

Make sure the InfoPrint Submit Express being set up is at the same level as the InfoPrint Manager server.

#### Note

For more details about Windows requirements, see *RICOH InfoPrint Manager for Windows: Planning Guide*, *RICOH InfoPrint Manager for Linux: Planning Guide*, and *RICOH InfoPrint Manager for AIX: Planning Guide*.

### Installing InfoPrint Submit Express from the InfoPrint Manager Common Clients DVD-ROM or ISO file

This section contains information that you need to install InfoPrint Submit Express.

#### Installing InfoPrint Submit Express on a Windows system

1. Insert the *RICOH InfoPrint Manager: Common Clients* DVD-ROM into the drive.

**Note**

If your install program does not start automatically or if your browser stops responding:

1. Select **Start** ->**Run**.
2. Enter *D:\setup.html*, where *D* is your DVD-ROM drive.
3. Click **OK**.
2. Follow the instruction on the screen.
3. Click **Install Submit Express** to start the install program.
4. Follow the instructions as directed from the installer. The default install directory is `c:\Program Files\RICOH\Infoprint Submit Express`.

2

### Installing a service update for InfoPrint Submit Express

To install a service update, insert the service update DVD-ROM into the drive. The install program starts automatically.

1. Click to install **Submit Express**.
2. Follow the instructions as directed from the installer.

### Installing associated software and printer drivers

If you wish to create PostScript jobs for InfoPrint Manager, you should install printer drivers and PostScript Printer Description files (PPDs) on each of the systems that you use for this purpose. Printer drivers are needed on the workstations that are used to submit jobs to the InfoPrint Manager server to make sure that the correct driver is used. In addition, if you have users who are producing PostScript files on their workstations that they want printed on the InfoPrint Manager printers, you need to load InfoPrint Manager printer drivers onto these workstations.

To install a PostScript driver, go to the [Adobe Systems](#) website and download the correct level of PostScript driver for your system and PostScript printing needs.

## Setting up shared file support

InfoPrint Manager uses a directory or folder called **ipdata** for sharing files with Submit Express. (With InfoPrint Manager for Windows, this folder is created automatically.)

The name **ipdata** comes from InfoPrint or IP and data for the files it will contain. You use **ipdata** to provide a two-way connection between the Submit client machine from which the job tickets have been submitted and the InfoPrint Manager server that sends them to the printer. Sharing files can save time and money. For example, you can have an InfoPrint Manager server RIP (raster image process) a file and save the results in **ipdata**. You can then reprint the ripped file instead of re-ripping the job again.

Working with **ipdata** is slightly different on the InfoPrint Manager Server on an AIX system, a Linux system, and a Windows System:

- With InfoPrint Manager for AIX, see [Setting up InfoPrint Manager for AIX to use an ipdata file system, p. 176](#) and then see [Configuring the InfoPrint Submit Express client for InfoPrint Manager for AIX, InfoPrint Manager for Linux, and InfoPrint Manager for Windows, p. 178](#).

- With InfoPrint Manager for Linux, see [Setting up InfoPrint Manager for Linux to use an ipdata file system](#), p. 177 and then see [Configuring the InfoPrint Submit Express client for InfoPrint Manager for AIX, InfoPrint Manager for Linux, and InfoPrint Manager for Windows](#), p. 178.
- With InfoPrint Manager for Windows, see [Setting up InfoPrint Manager for Windows to use the ipdata folder](#), p. 177 and then see [Configuring the InfoPrint Submit Express client for InfoPrint Manager for AIX, InfoPrint Manager for Linux, and InfoPrint Manager for Windows](#), p. 178.

### Setting up InfoPrint Manager for AIX to use an ipdata file system

On an InfoPrint Manager for AIX system, NFS or other file sharing is required between workstations and the InfoPrint Manager server. If you plan to connect your AIX server to Windows workstations and your InfoPrint Manager AIX server is running on an AIX supported version, the IBM package Samba for AIX is required. Samba for AIX supports a NetBIOS connection. To access current information supporting the Samba for AIX package, go to [https://developer.ibm.com/articles/au-aix\\_samba/](https://developer.ibm.com/articles/au-aix_samba/).

#### Note

Samba is incompatible with IBM Fast Connect. Any existing version of Fast Connect must be uninstalled.

### Setting up Samba for InfoPrint Manager for AIX

1. First, you need to install Samba for AIX. Samba binaries for AIX are available in the IBM AIX Expansion pack DVD. Follow the installation instructions available with the Samba for AIX distribution.
2. Samba has two daemons, **nmbd** and **smbd**, that need to be running in order for Samba to work correctly. These can be started from the command line as follows:
  - # nmbd
  - # smbd
3. To set these daemons to start automatically during system reboot, add the entries into `/etc/inittab`, as follows:
  - mkitab nmb:2:once:/usr/sbin/nmbd
  - mkitab smb:2:once:/usr/sbin/smbd

### Configuring the InfoPrint Manager for AIX Server to support shared files

If you have installed Samba for AIX and you use Submit Express from Microsoft Windows workstations, you can configure InfoPrint Manager on your AIX system with user access and a shared directory that InfoPrint Manager will use for saving processed or rasterized files. Where applicable, this directory is also used when users preview Postscript files from the InfoPrint Manager Submit application.

To configure:

1. From the `dterm` window, type `SMIT`.
2. Select **InfoPrint Printing System**.
3. Select **InfoPrint Utilities**.
4. Now select **Configure Samba for InfoPrint Manager for AIX**.
5. Select **Enable Clients Shared File System**.

An animated icon of a running man will raise his arms when the setup is complete. Your AIX system will now have a shared directory (**/ipdata**) that some InfoPrint applications use for saving files and sharing data. An AIX userid called **ipuser** is created with no password. To set a password for **ipuser**, use the SMIT panels to modify the password.

- Now, you need to configure the Submit client (see [Configuring the InfoPrint Submit Express client for InfoPrint Manager for AIX, InfoPrint Manager for Linux, and InfoPrint Manager for Windows, p. 178](#)).

### Setting up InfoPrint Manager for Linux to use an ipdata file system

On an InfoPrint Manager for Linux system, NFS or other file sharing is required between workstations and the InfoPrint Manager server. If you plan to connect your Linux server to Windows workstations and your InfoPrint Manager Linux server is running on an Linux supported version, the Samba for Linux is required. Samba for Linux supports a NetBIOS connection. To access current information supporting the Samba for Linux package, go to <https://www.samba.org/samba/docs/>.

### Setting up Samba for InfoPrint Manager for Linux

- First, you need to install Samba for Linux.
  - For Red Hat Enterprise Linux, run as root: `yum install samba`
  - For SUSE Enterprise Linux, run as root: `zypper install samba`
- To start samba server, run as root: `service smb start`
- To automatically start samba daemon during system reboot, run as root: `service smb on`

### Configuring the InfoPrint Manager for Linux Server to support shared files

If you have installed Samba for Linux and you use Submit Express from Microsoft Windows workstations, you can configure InfoPrint Manager on your Linux system with user access and a shared directory that InfoPrint Manager will use for saving processed or rasterized files. Where applicable, this directory is also used when users preview PostScript files from the InfoPrint Manager Submit application.

To configure:

- Start the InfoPrint Manager Management Interface (IPMMI), go to **Applications** → **InfoPrint Manager** → **Management Interface** on Red Hat Enterprise Linux (RHEL) or **Computer** → **More Applications** → **InfoPrint Manager** → **Management Interface** on SUSE Linux Enterprise Server (SLES).
- Click **Options**.
- Select **Enable Clients Shared File System**.
- Specify the **Volume group for /ipdata** and the **Space for /ipdata (Mbytes)**.
- Now, you need to configure the Submit client (see [Configuring the InfoPrint Submit Express client for InfoPrint Manager for AIX, InfoPrint Manager for Linux, and InfoPrint Manager for Windows, p. 178](#)).

### Setting up InfoPrint Manager for Windows to use the ipdata folder

To work with **ipdata** on your InfoPrint Manager Server, you need to determine the best location for **ipdata** (see [Moving the ipdata folder, p. 178](#)) and then you need to set it up for sharing (see [Sharing the ipdata folder, p. 178](#)). You can leave the ipdata folder in its default location, or you can move it to another location.

### Create a user id for ipuser

1. Navigate to the **Control Panel**.
2. Click **Administrative Tools**.
3. Click **Computer Management**.
4. Open the **Local Users and Groups** and highlight the **Users** folder.
5. With the **Users** folder highlighted, open the **Action** menu and select **New user**. The **New User** dialog appears.
6. Enter ipuser in the **User name:** field, and optionally, complete the other fields on the dialog.
7. Click **Create** to create ipuser.
8. Close the **New User** dialog, the **Computer Management** dialog, the **Administrative Tools** dialog, and the **Control Panel**.

### Moving the ipdata folder

1. Skip this procedure to leave the ipdata folder in the default location.
2. Open the InfoPrint Manager Management Console.
3. Stop the InfoPrint Manager Server by clicking **Stop Server** on the Management Console toolbar.
4. Click **Edit** → **Service Configuration** to open the **Service Configuration** dialog box. In the **Paths** section, change the value for **Shared client path** to the desired location. For example, f:\myfiles.
5. Start the InfoPrint Manager Server by clicking **Start Server** on the Management Console toolbar.

### Sharing the ipdata folder

Before you set up the ipdata folder for sharing, check with your system administrator to determine the sharing policies for your location. Use this procedure to set up the ipdata folder so that it can be shared between Submit Express and the InfoPrint Manager Server:

1. Using **Windows Explorer**, navigate to the ipdata folder.
2. Highlight the ipdata folder, right-click it, and select **Sharing** from the drop-down menu.
3. The **Folder Properties** dialog displays. On this dialog, enter **ipdata** as the name for the shared folder in the entry field labeled **Share this folder**.
4. Click **Permissions** to open the **Permissions for ipdata** dialog and set the access between your server and client machines and select **Allow** for **Full Control**.
5. Click **OK** to enable the sharing for your folder.
6. Now, you need to configure the Submit client (see [Configuring the InfoPrint Submit Express client for InfoPrint Manager for AIX, InfoPrint Manager for Linux, and InfoPrint Manager for Windows](#), p. 178).

### Configuring the InfoPrint Submit Express client for InfoPrint Manager for AIX, InfoPrint Manager for Linux, and InfoPrint Manager for Windows

This section describes how to configure your InfoPrint Submit Express Client for use with either InfoPrint Manager for AIX, InfoPrint Manager for Linux, or InfoPrint Manager for Windows servers.

From the client system where you have installed InfoPrint Submit Express, map a network drive to the directory that your resources are in.

1. Open Windows Explorer.
2. Click **Tools** → **Map Network Drive**.
3. In the **Map Network Drive** dialog, select a drive letter that you are not currently using from the drop-down menu in the **Drive** field.
4. In the **Folder** field, type the path `\\servername\ipdata` where `servername` is the host name of the system where InfoPrint Manager is installed.
5. Click **Reconnect at logon**.
6. Click **Connect using a different user name**.
7. In the **Connect As** dialog, type the user name `ipuser` and password (if required).
8. Click **OK** in the **Connect As** dialog.
9. Click **Finish** in the **Map Network Drive** dialog.

In addition, in InfoPrint Submit Express you need to change the folders for the shared file system. Follow these steps:

1. Start InfoPrint Submit Express by clicking on the desktop icon.
2. Go to **Options** → **Settings** to open the Settings window.
3. Click **Folders** to display the Folders page.
4. Specify the fully qualified path name in the Client uses entry field.

## Starting Submit Express

1. Click **InfoPrint Submit Express** that was automatically added to the desktop after installation or, on Windows, from the **Start** menu, go to **Programs** and click **InfoPrint Submit Express**.
2. When you start the program the first time, a message displays.
3. Click **OK** and InfoPrint Submit Express opens.
4. Go to the **Options** menu, and select **Settings**.
5. Enter the name or the IP address for your InfoPrint Manager Server.
6. Let the port number default.
7. Click **Preferences**.
8. Select your preferences for **Decimal notation** and **Units** of measure.
9. Click **OK** to return to the main InfoPrint Submit Express window.
10. Click **Page**.
11. Select your preferences for **Image Fit**, **Untrimmed page size**, and **Finished page size**.

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## Using Submit Express to process a job

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Submit Express is used through the life cycle of a job. A print shop uses Submit Express on a Windows workstation to create a job ticket for the job, submit the job to the InfoPrint Manager server for printing, and track the job.

### 2

## Job tickets

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An InfoPrint job consists of a job ticket and all the files associated with that job. A job ticket contains all the specifications for a job. The job ticket refers to the customer's job data and resources and pulls them together in a job bundle. You can create a job ticket by using Submit Express.

You can print any part of the data by submitting a print job.

## Migrating job tickets from previous versions of InfoPrint Submit

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There are two ways to migrate job tickets from previous versions of InfoPrint Submit to the current version of Submit Express.

Using the **Ticket** → **Open** method:

1. Click **Ticket** → **Open** to open the job ticket that you created with the previous level of Submit. A dialog will open, asking you to select the language that was used to create the job ticket file.
2. Select a language from the drop-down list.
3. Click **OK**. The job ticket will be converted to the new format and will be opened.

Using the **Ticket** → **Reformat job tickets** method:

1. Click **Ticket** → **Reformat job tickets** to open the **Reformat job tickets** dialog box.
2. Click **Add Files** to select job tickets or groups of job tickets.
3. Click **OK**. A message appears asking you if you want to overwrite the older version of your job tickets.
4. Click **Yes** to reformat the job tickets.

### Important notes about migrating job tickets:

1. In previous versions of Submit, job tickets were language-dependent, that is, you had to use the same language in Submit as the language your job tickets were created in. With Submit Express, the job tickets you create are language-independent, so you can transfer job tickets among sites using other languages.
2. To open job ticket files that were created in Japanese or Chinese, you must have installed Submit Express on the Japanese or Chinese system; otherwise, some characters will not display correctly.
3. At migration, the values are imported from the old job ticket as they existed in the old .jtk file, even if those values violate some constraints among related fields, as listed below. The first time you access the newly migrated job ticket and you change any field from the set of related fields, associated values will be recalculated according to the existing constraints from the current version of Submit. Job ticket related fields are:

- **Layout**
  - **Sides**
  - **Untrimmed page size**
  - **Finished page size**
  - **Front side** (vertical and horizontal)
  - **Back side** (vertical and horizontal)
4. Untrimmed page size values are not saved in the .jtk file in any previous version of Submit, so they will always be calculated depending on the paper and available dimensions defined on the server for the appropriate paper.

## Working with print jobs

When using Submit Express to create the job ticket, you identify and organize the printable files and other resources that make up the job. Processing a job ticket includes these steps:

1. Creating a job ticket
2. Adding files, sheets, hardcopy, and documents to the job ticket
3. Selecting the layout of the job, the desired server and printer, and other attributes of the job
4. Setting print options, such as saving the RIP file or holding the job at the printer
5. Submitting the job
6. Tracking the job by displaying messages

### ★ Important

Submit Express sets the user@host information for the job (FST mode). It does not use LDAP/ Active Directory information.

### Creating files for printing

You generate the printable files that you submit to InfoPrint Manager, file by file, from the application that you use for authoring. For example, you can use the Adobe PostScript driver and InfoPrint PostScript Printer Description files (PPDs) to convert files to PostScript. Or, you can use InfoPrint Scan to create printable files from hardcopy.

### Creating a job ticket

Once you have installed the Submit Express application, you can begin creating job tickets that support the orders you receive from customers.

When you create a job ticket, at a minimum you must provide these information:

- The server to connect to
- At least one selected item for a document
- A selected printer in the Printer field of the Print page

## Describing your job

Using a Submit Express Job Ticket window, you can describe your job. The description can include a job name, an ID, a specific description of the job, the customer name, and other information that will assist you as you refer to the job ticket.

To begin working on a new ticket, you start Submit Express. The Job Ticket window displays.

As you create the job ticket, use the **Help** menu from the Job Ticket window or the **Help** button on the dialogs to guide you.

You can create a new job ticket using the **Ticket → New** option on the Menu bar, or you can open a previously created job ticket using the **Ticket → Open** option on the Menu bar.

You can use the **Ticket → Submit** option on the Menu bar to print the job or portion of the job as shown in the tree view of the ticket. (To print just the ticket itself, use the **Ticket → Print Ticket** option.)

The **Ticket** menu contains general tasks that you can do as you work with job tickets.

## Specifying how you want the job to print

You can describe the layout of your document and specify alignment values. You can use the fields on the **Page** tab to adjust the untrimmed and finished page size for a file or document. If the image is smaller than the page, you use the fields on the **Align** tab to adjust the position of the image on the page.

## Working with files in a job ticket

You build job tickets by adding documents, files and sheets, that refer to the files that you are printing. You add these items to the job ticket using the selections from the **Item** menu. The files you choose might be printable text files or graphic files. Graphic files might include printable files that were created from hard copy by using InfoPrint Scan. Files might be on your hard disk or in a shared directory on another system.

After you add one or more files to the job ticket, the **Files** tab becomes available on the job ticket dialog.

Once you have added files and one or more documents to a job ticket, you can choose whether to print the documents and files by checking or unchecking the boxes that are displayed in the tree view of the job ticket.

## Scheduling your job and setting options

The **Schedule** tab on the Settings dialog lets you indicate how you want your job to be processed. Because the time it takes to print a job includes both the processing (RIPing) and the actual printing, you might want to control these activities separately to optimize the flow of paper through your printers. You might want your job to be held in the print queue before being RIPed and printed. You might want to RIP it now, but print it later. You can specify how long you would like your job to be retained on the server so that it can be printed again.

## Submitting a print job

When you select **Submit Job** from the **Ticket** menu, the active job ticket is sent to the server for processing. A progress dialog is shown as files are transferred to the server. You can view the status of the job at the server by selecting **Options → Job status...**

If you select `Print` in the `RIP Options` box on the `Schedule` tab, the job will be added to the print queue and will RIP and print automatically. An operator will not have to release the job.

### Saving the RIP output

The raster image processor (RIP) file is generated during the print process. Because PostScript to RIP processing can be costly, you might want to save your RIP files for reprinting jobs to avoid having to RIP them again. To use the **Save RIPed file** option, you must set up the **Shared Folder** in **Client uses** field on the **Folders** tab of the **Settings** dialog.

When you add a file to your job ticket, click the **Save RIPed file** check box option on the **Advanced** tab to specify that the RIPed file is to be saved. The RIP file is saved in the shared folder location you previously specified on the server you are currently working on (for example, `K:\rip\myjob.jtk\`). When a job is submitted to the server and **Save RIPed file** is checked, the RIP file is re-RIPed. You can re-use an already ripped version of the file from the shared folder by checking the **Use RIPed** on the **Files** tab.

#### ↓ Note

If you save your RIPed files, you must *manually* remove them from the server.

### Verifying that PostScript jobs are ready to print

If your InfoPrint server receives a PostScript job from a personal computer system, you must make sure that the Type 1 fonts required to print are either:

- Contained in the job (inline)
- Available on the server

If the fonts are contained inline, you should have no problem in printing the output. However, if the fonts are not available on the server, by default a job will be cancelled.

## Using Submit Express to send jobs to a continuous forms printer

This topic applies to all InfoPrint continuous forms printers, such as the InfoPrint 4100 and the InfoPrint 5000. It assumes that you have already created a PSF actual destination to represent a continuous forms printer and printed a test job. It further assumes that you have installed Submit Express, and are at least somewhat familiar with how to use it.

Many of these procedures use the InfoPrint Manager Administration GUI. If you need additional information or assistance with the GUI, see the online help system.

### General configuration information

There are some settings on the InfoPrint Manager server that you can consider setting based on your print environment.

- If you will be printing multiple copies of your print jobs, set the **Optimize for Copies** option on the actual destination.
  1. In the InfoPrint Manager Administration GUI, select the actual destination that represents the printer.

2. Click **Printer** → **Change Tuning**.

↓ **Note**

If **Change Tuning** doesn't appear on the printer menu, use **Add/Remove menu items** to add it.

3. Change **Optimize for Copies** to **yes**.

↓ **Note**

The default value for **Optimize for Copies** is **yes** for actual destinations representing these printer models created using the basic InfoPrint Manager Administration GUI:

**destination-model=InfoPrint4100-HD1-HD2**  
**destination-model=InfoPrint4100-HD3-HD4**  
**destination-model=InfoPrint4100-HD5-HD6**  
**destination-model=InfoPrint4100-MD1-MD2**  
**destination-model=InfoPrint4100-PD1-PD2**  
**destination-model=InfoPrint4100-TD1-TD2**  
**destination-model=InfoPrint4100-TD3-TD4**  
**destination-model=InfoPrint4100-TD5-TD6**  
**destination-model=InfoPrint5000-AD1-AD2**  
**destination-model=InfoPrint5000-AD3-AD4**  
**destination-model=InfoPrint5000-AD3-AD4-XR3**  
**destination-model=InfoPrint5000-AS1**  
**destination-model=InfoPrint5000-AS3**  
**destination-model=InfoPrint5000-KM3**  
**destination-model=InfoPrint5000-KM3/MD4**  
**destination-model=InfoPrint5000-MP-MC1-MC2**  
**destination-model=InfoPrint5000-MP-MD3-MD4**  
**destination-model=InfoPrintProC900AFP**

- If you are printing to an InfoPrint 5000 and you print mostly small jobs, increase the **Maximum concurrent jobs** value for the actual destination to **120**. That way, up to 120 jobs can be processing at the same time, which reduces lag time between jobs and helps to eliminate clutching.

1. In the InfoPrint Manager Administration GUI, select the actual destination that represents the printer.
2. Click **Printer** → **Change Tuning**.

↓ **Note**

If **Change Tuning** doesn't appear on the printer menu, use **Add/Remove menu items** to add it.

3. Change **Maximum concurrent jobs** to **120**.

## Configuring media

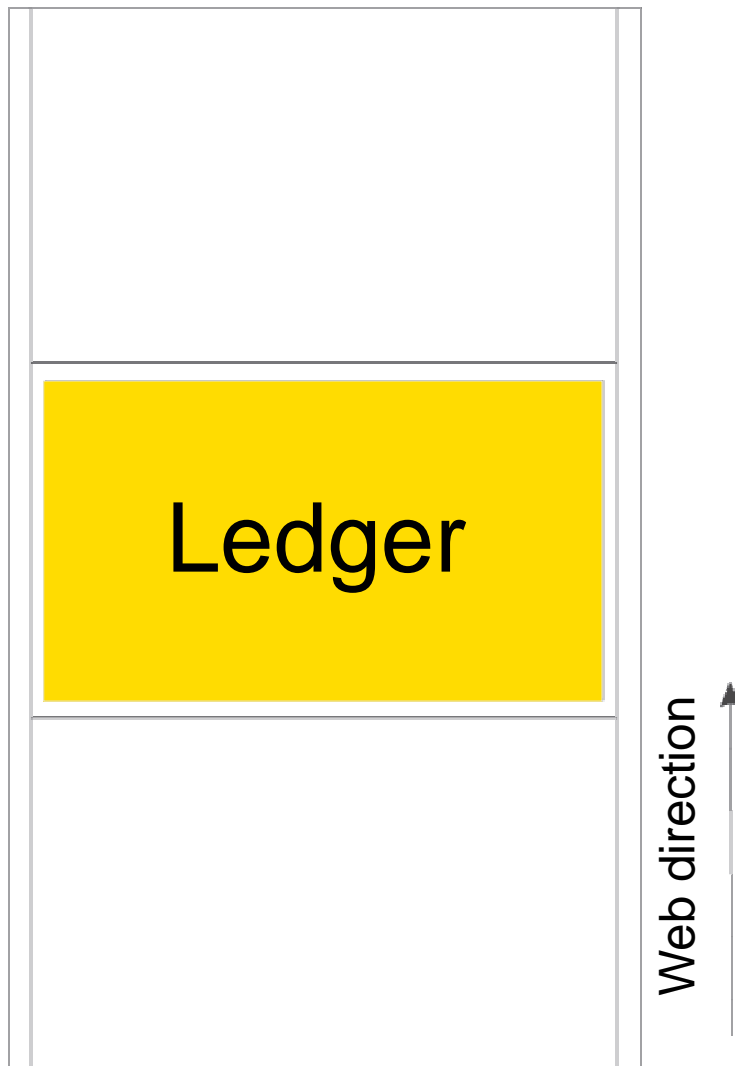
### Preparation

Before you configure any media, make a list of all of the different layout types that jobs will use. In the list, include the page lengths, n-up specifications, job orientation (portrait or landscape), and any other information that you have. Give each type of job a name. You will use this name on the printer and in InfoPrint Manager. Images of some common layout types, along with their specifications, are provided below to help you create your list.

### Simple 1-up, with finished page size ledger

In this layout, the printer form is wider than it is long. Even if you specify a value for **Page placement** (X and Y shift) in Submit Express, the form definition will override it.

### Ledger-sized document printed 1-up, landscape orientation



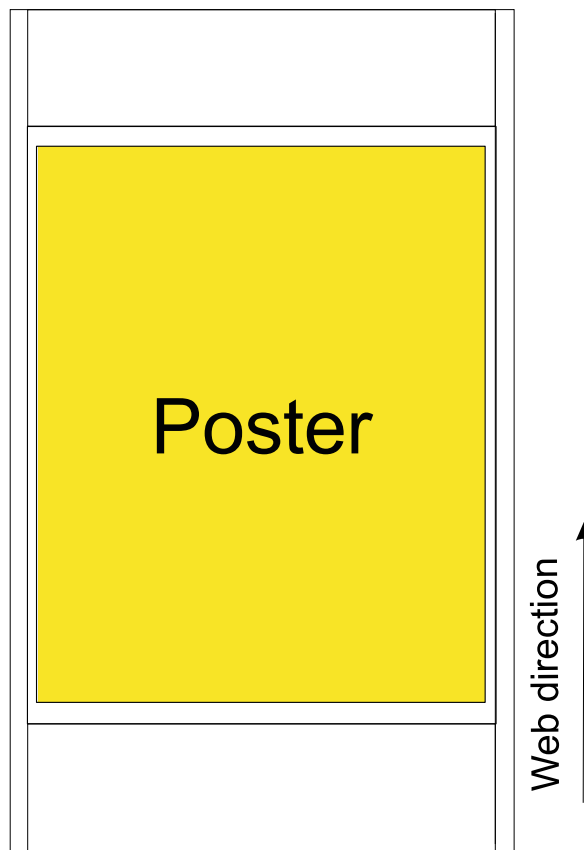
## InfoPrint Manager and Submit Express values for Ledger-sized document printed 1-up, landscape

Option	Value
Finished page (document) size	17 x 11 inches
Form size (Untrimmed page size: width and length)	17 x 11 inches
Media size (in InfoPrint Manager)	17 x 11 inches
Layout	Simple 1-up
Form definition	F100LAND
PDF orientation	Landscape
Postscript orientation	Landscape

### Simple 1-up, with finished page size poster

In this layout, the printer form size is longer than it is wide. If the finished document size is smaller than 17 x 25 inches (for example, 16 x 24 inches), you should make the finished page size equal to the document size.

### Poster-sized document printed 1-up, portrait orientation



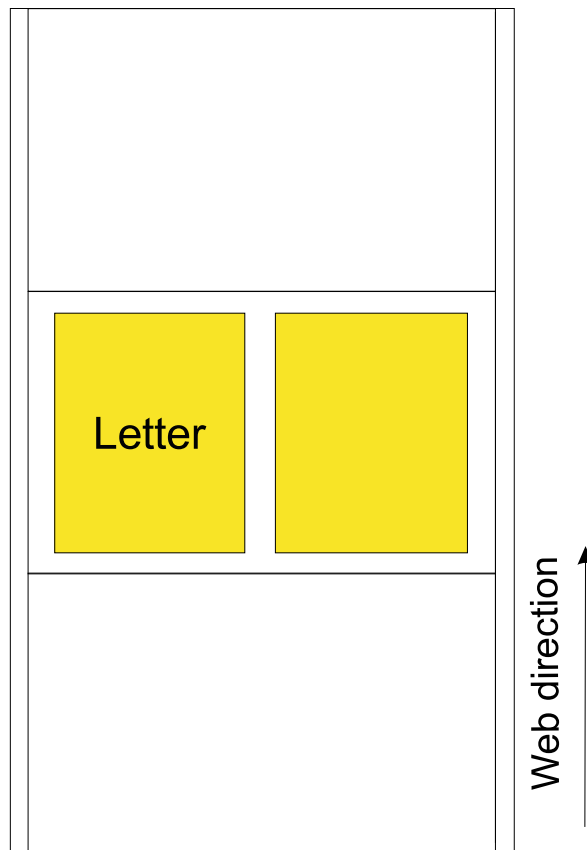
### InfoPrint Manager and Submit Express values for 17 x 25 inch document printed 1-up, portrait

Option	Value
Finished page (document) size	17 x 25 inches
Form size (Untrimmed page size: width and length)	17 x 25 inches or larger
Media size (in InfoPrint Manager)	17 x 25 inches or larger
Layout	Simple 1-up
Form definition	blank
PDF orientation	Portrait
Postscript orientation	Portrait

### Side-by-side copies 2-up, with finished page size letter

In this layout, the printer form is wider than it is long. Because you do not specify a form definition, you can use the **Page placement** (X and Y shift) option in Submit Express.

### Letter-sized document printed 2-up, portrait orientation



### InfoPrint Manager and Submit Express values for letter-sized document printed 2-up, portrait

Option	Value
Finished page (document) size	8.5 x 11 inches
Form size (Untrimmed page size: width and length)	17 x 11 inches or larger
Media size (in InfoPrint Manager)	17 x 11 inches or larger
Layout	Side by side copies 2-up
Form definition	blank
PDF orientation	Portrait
Postscript orientation	Portrait

#### Side-by-side copies 2-up, with finished page size legal

In this layout, the printer form is wider than it is long. Because you do not specify a form definition, you can use the **Page placement** (X and Y shift) option in Submit Express.

#### ↓ Note

This layout looks the same as the layout for *side-by-side copies 2-up with finished page size letter*. See [Poster-sized document printed 1-up, portrait orientation, p. 186](#) for an illustration of the layout.

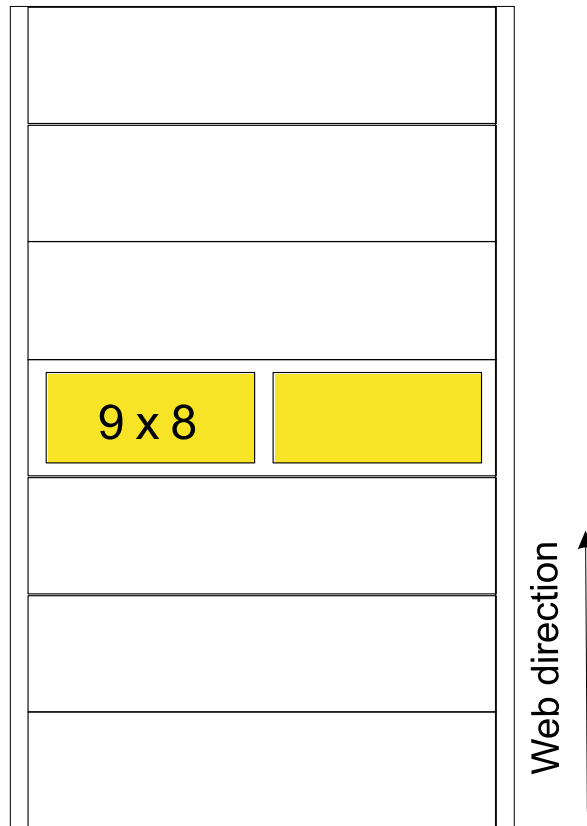
### InfoPrint Manager and Submit Express values for legal-sized document printed 2-up, portrait

Option	Value
Finished page (document) size	8.5 x 14 inches
Form size (Untrimmed page size: width and length)	17 x 14 inches or larger
Media size (in InfoPrint Manager)	17 x 14 inches or larger
Layout	Side-by-side copies 2-up
Form definition	blank
PDF orientation	Portrait
Postscript orientation	Portrait

#### Side-by-side copies 2-up, with finished page size 9 x 8 inches

In this layout, the printer form size is wider than it is long. Because you do not specify a form definition, you can use the **Page placement** (X and Y shift) option in Submit Express.

## Nine by eight inch document printed 2-up, landscape orientation



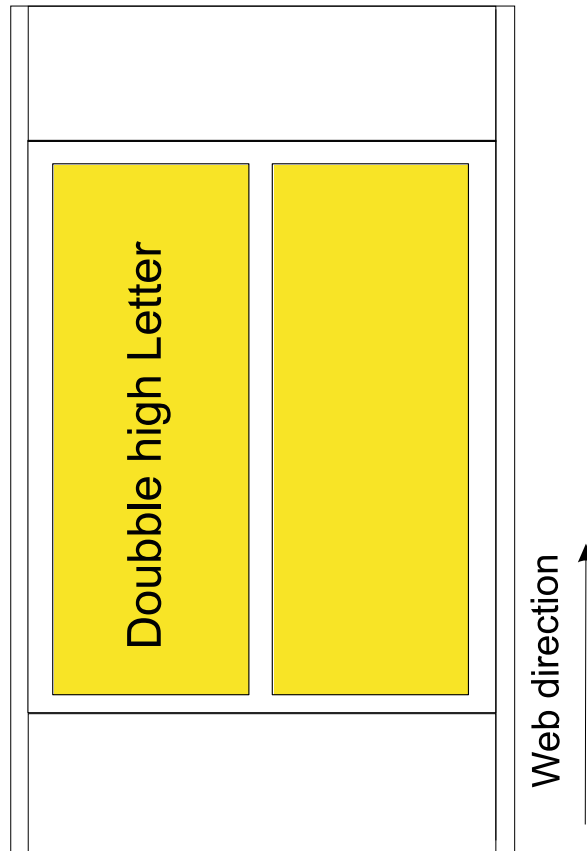
## InfoPrint Manager and Submit Express values for 9 x 8 inch document printed 2-up, landscape

Option	Value
Finished page (document) size	9 x 8 inches
Form size (Untrimmed page size: width and length)	18 x 8 inches or larger
Media size (in InfoPrint Manager)	18 x 8 inches or larger
Layout	side-by-side copies 2-up
Form definition	blank
PDF orientation	Landscape
Postscript orientation	Landscape

## Side-by-side copies 2-up, with finished page size double-high letter

In this layout, the printer form is longer than it is wide. Because you don't specify a form definition, you can use the **Page placement** (X and Y shift) option in Submit Express.

## Double-high letter document printed 2-up, portrait orientation



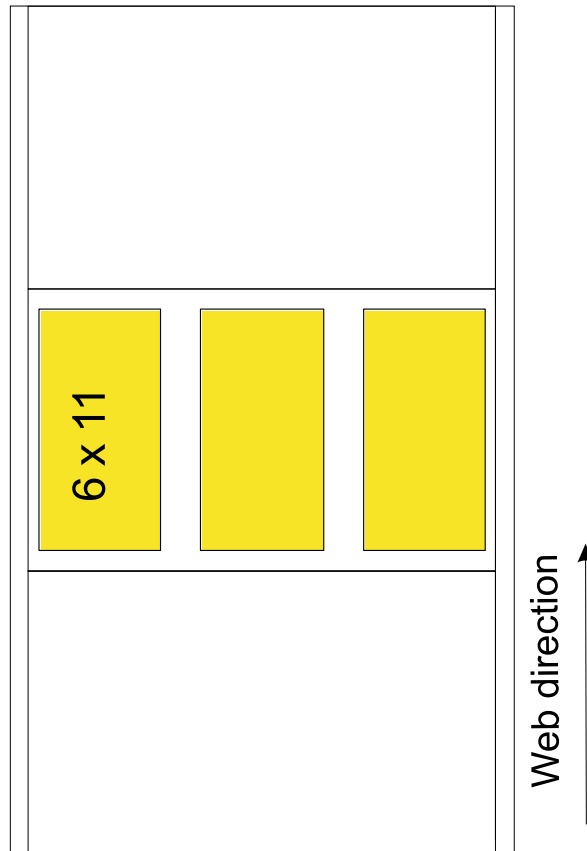
### InfoPrint Manager and Submit Express values for double-high letter-sized document printed 2-up, portrait

Option	Value
Finished page (document) size	8.5 x 22 inches
Form size (Untrimmed page size: width and length)	17 x 22 inches or larger
Media size (in InfoPrint Manager)	17 x 22 inches or larger
Layout	side-by-side copies 2-up
Form definition	blank
PDF orientation	Portrait
Postscript orientation	Portrait

### Side-by-side copies 3-up, finished page size 6 x 11 inches

In this layout, the printer form is wider than it is long. Because you don't specify a form definition, you can use the **Page placement** (X and Y shift) option in Submit Express.

### Six by eleven inch document printed 3-up, portrait orientation



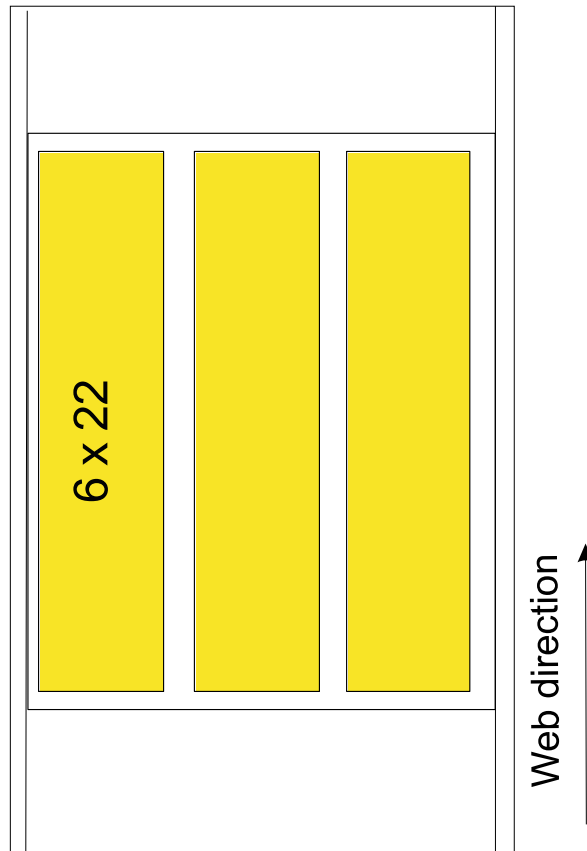
### InfoPrint Manager and Submit Express values for 6 x 11 inch document printed 3-up, portrait

Option	Value
Finished page (document) size	6 x 11 inches
Form size (Untrimmed page size: width and length)	18 x 11 inches or larger
Media size (in InfoPrint Manager)	18 x 11 inches or larger
Layout	Side-by-side copies 3-up
Form definition	blank
PDF orientation	Portrait
Postscript orientation	Portrait

### Side-by-side copies 3-up, with finished page size double-high

In this layout, the printer form is longer than it is wide. Because you do not specify a form definition, you can use the **Page placement** (X and Y shift) option in Submit Express.

## Six by twenty-two inch document printed 3-up, portrait orientation



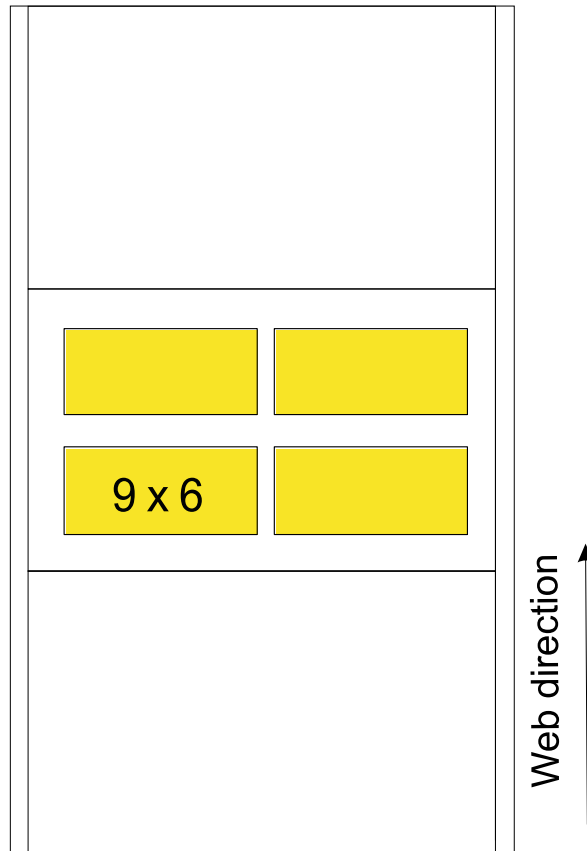
### InfoPrint Manager and Submit Express values for double-high document printed 3-up, portrait

Option	Value
Finished page (document) size	6 x 22 inches
Form size (Untrimmed page size: width and length)	18 x 22 inches or larger
Media size (in InfoPrint Manager)	18 x 22 inches or larger
Layout	Side-by-side copies 3-up
Form definition	blank
PDF orientation	Portrait
Postscript orientation	Portrait

### Side-by-side copies 4-up, with finished paper size 9 x 6 inches

In this layout, the printer form is wider than it is long. Because you do not specify a form definition, you can use the **Page placement** (X and Y shift) option in Submit Express.

### Nine by six inch document printed 4–up, landscape orientation



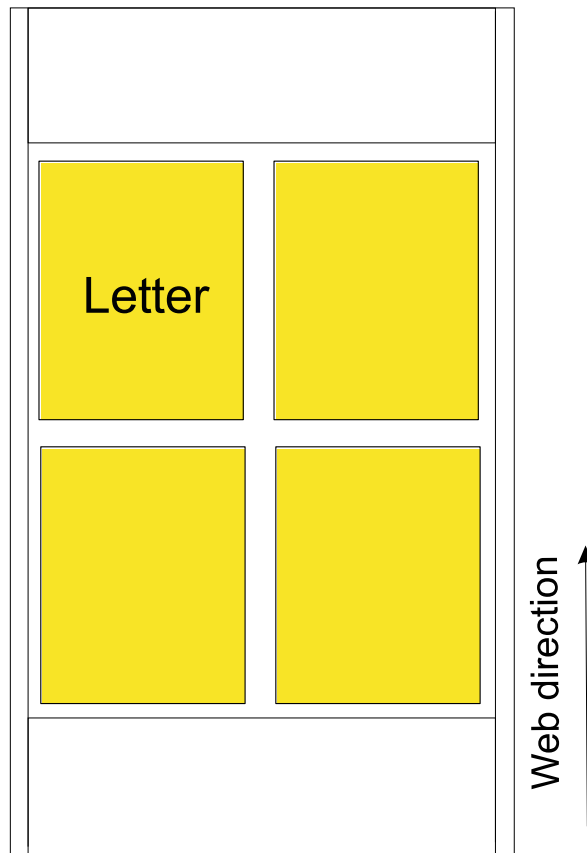
### InfoPrint Manager and Submit Express values for 9 x 6 inch document printed 4–up, landscape

Option	Value
Finished page (document) size	9 x 6 inches
Form size (Untrimmed page size: width and length)	18 x 12 inches or larger
Media size (in InfoPrint Manager)	18 x 12 inches or larger
Layout	side-by-side copies 4–up
Form definition	blank
PDF orientation	Landscape
Postscript orientation	Landscape

### Side-by-side copies 4–up, with finished paper size letter

In this layout, the printer form is longer than it is wide. Because you do not specify a form definition, you can use the **Page placement** (X and Y shift) option in Submit Express.

## Letter-sized document printed 4-up, portrait orientation



### InfoPrint Manager and Submit Express values for letter-sized document printed 4-up

Option	Value
Finished page (document) size	8.5 x 11 inches
Form size (Untrimmed page size: width and length)	17 x 22 inches or larger
Media size (in InfoPrint Manager)	17 x 22 inches or larger
Layout	side-by-side copies 4-up
Form definition	blank
PDF orientation	Landscape
Postscript orientation	Landscape

#### On the printer

Define snapshots on the printer for each type of job that you identified. Use the names that you created above. If your list does not include dimensions, add them as you create each snapshot.

 **Note**

All InfoPrint continuous forms printers round form lengths to the nearest  $1/6$  inch. Therefore, it is recommended that you use lengths in increments of  $1/6$  inch. Use [Decimal equivalents of common fractions, p. 195](#) as a guide.

### Decimal equivalents of common fractions

Fraction of an inch	Decimal equivalent
$1/6$	0.167
$2/6 = 1/3$	0.333
$3/6 = 1/2$	0.5
$4/6 = 2/3$	0.667
$5/6$	0.833

2

#### In InfoPrint Manager

1. Open the InfoPrint Manager Administration GUI.
2. Verify that all of the menu items and details views columns that you will need are displayed.
  - 1) Click **Options** → **Customize**.
  - 2) On the **Printer** tab, make sure the **Change media** check box is selected in the **Menu** column and that **Media ready** is listed in the **Details to show** box.
  - 3) On the **Job** tab, make sure that the **Change media** and **Change copies** check boxes are selected in the **Menu** column. Make sure that **Media** is listed in the **Details to show** box.
3. Define the new media.
  - 1) Click **Server** → **Media** → **Create**.
  - 2) In the **Create Media** dialog, fill in the **Name**, **Server**, and **Untrimmed width and length (inches)** fields as specified below. You can fill in the other fields if you like, but these three are the only required fields. See the online help for additional information about the other fields.

#### **Name**

One of the media types from your list.

#### **Server**

The name of the InfoPrint Manager server that sends jobs to your printer.

#### **Untrimmed width and length (inches)**

Specify width and length values that are slightly shorter than the ones you gave in the snapshot on the printer. The PostScript transform and some printers (such as the Infoprint 4100) round off some values, so setting the width and length to slightly shorter values accommodates that rounding. The values should be at least .02 inches (1 mm) less than the values in the corresponding snapshot.

- 3) Click **OK**.
- 4) Repeat step 3 for the rest of the media types you need to define.

4. Set the **Media allowed** values for the printer.
  - 1) Select the actual destination in the tree view of the GUI
  - 2) Click **Printer** → **Change media**.
  - 3) In the **Change Media** dialog, click **Media Allowed**.
  - 4) Add the new media types that you just defined to the **Values** list.
  - 5) Remove any types that shouldn't be allowed from the **Values** list.
  - 6) Click **OK**.
5. Decide whether to have more than one media type ready on the printer at the same time. If you only have one type ready, only jobs that request that media will be printed. Other jobs will wait in the queue until you change the media type that is ready. Once you have decided, set the **Media ready** value to the type or types that you want to print on.
  - 1) Select the actual destination in the tree view of the GUI
  - 2) Click **Printer** → **Change media**.
  - 3) On the **Media Ready** tab, type **1** for the **Input bin number**, then select the **Media type** and **Input tray** for each media that you want to make ready.
  - 4) Click **OK**.

## Using Submit Express to send jobs

1. Open Submit Express and build a job ticket as usual.
2. Click **Options** → **Refresh** to update the list of media types from the server.
3. After all of the documents have been added, click **Print**.
4. Select the appropriate **Printer type** from the drop-down list, then select the media type that you want to use from the **Paper** drop-down list.
5. Click **Layout**.
6. Select the appropriate page layout (for example, **side by side copies 2-up** or **simple 3-up**) from the **Layout** drop-down list.
7. Click **Align**.
8. Set the dimensions in the **Finished page size** box to the exact dimensions of the pages in the job.

### ↓ Note

You can set these dimensions in either inches or millimeters. Use **Options** → **Preferences** to change the unit of measure.

The values in the **Untrimmed page size** box map to the partition area in the printer's printable area.

9. By default, the page placement (X and Y offset) value is **Upper left**, so the document will be placed in the upper left corner of the form. If you want the document to be positioned differently, select a different page placement value.
10. Submit the job as usual.

## Troubleshooting

If you submit a job that requests a media type that isn't listed as **ready** in the server, the job icon will turn red. To print the job:

1. Change the snapshot on the printer.
2. In the InfoPrint Manager GUI, highlight the printer, then click **Printer** → **Change Media**.
3. On the **Media Ready** tab of the **Change Media** dialog, change the values to the media you want to use.
4. Click **OK**.

Once the **Media Ready** value is reset, jobs that request the changed media type will start to print.

## Using the InfoPrint Manager Windows Client

The InfoPrint Manager Windows command line client enables users of Windows to issue InfoPrint Manager commands over a TCP/IP-connected network to an InfoPrint Manager server. Using a Windows command line or batch script, you can issue a variety of commands to the InfoPrint Manager server. The Windows client supports files larger than 2 GB in size.

To install the Windows client on a Windows machine, you can use the *RICOH InfoPrint Manager: Common Clients* DVD-ROM, LCD4-5642.

Access to the InfoPrint Manager server and to the InfoPrint Manager commands is controlled on the system where the server is installed. For information about providing access, see *RICOH InfoPrint Manager for Windows: Procedures*.

### Note

For the latest information about installing the InfoPrint Manager Windows client, go to the RICOH Software Information Center at <https://help.ricohsoftware.com/swinfocenter>.

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## Installing the Command Line Client for Windows

---

Before you install the Command Line Client for Windows, consider these conditions:

- You must have administrative privileges to install InfoPrint Command Line Client for Windows.
- If you plan to install one or all of the InfoPrint Manager GUIs as well as the Command Line Client for Windows, the sequence of the installs is important. Since the Command Line Client for Windows might require a system reboot, you might want to install the InfoPrint Manager GUI(s) first.
- You must adjust the configuration of the InfoPrint Manager server for the Command Line Client for Windows to function properly.

To install InfoPrint Manager Command Line Client on a Windows system from the *RICOH InfoPrint Manager: Common Clients* DVD-ROM:

1. Insert the *RICOH InfoPrint Manager: Common Clients* DVD-ROM into the drive.
2. Click **Install InfoPrintCLC client (64-bit)**.
3. Follow the instructions on the installation screens to install the program.

**Note**

If you plan to install one or both of the InfoPrint Manager GUIs as well as InfoPrint CLC, the sequence of the installations is important. Because InfoPrint CLC might require a system reboot, you might want to install the InfoPrint Manager GUIs first.

4. Select one of the two restart options: **Yes, I want to restart my computer now.** or **No, I will restart my computer later..**
5. Click **Finish** on the **Complete** window.

2

## Upgrading the Command Line Client for Windows

To upgrade the Command Line Client on a Windows system from the *RICOH InfoPrint Manager: Common Clients* DVD-ROM, LCD4-5642:

1. Insert the *RICOH InfoPrint Manager: Common Clients* DVD-ROM, LCD4-5642, into the drive to run the upgrade program.
2. Follow the instructions on the screens to upgrade the program.
3. After upgrading the Command Line Client version, the program asks to reboot your system. The default answer to this question is **Yes** because the new version of the Command Line Client does not function properly until the system is rebooted. When you click **OK** or press **Enter**, your system reboots.

## Uninstalling the Command Line Client for Windows

To uninstall the Command Line Client for Windows:

1. From the **Start** menu, select **Settings** → **Control Panel**.
2. Double-click **Add or Remove Programs**.
3. Select **InfoPrint Command Line Client for Windows**.
4. Click **Remove**.

**Note**

Click the button only once, then wait for at least 30 seconds before you do anything else. If you do not wait for the first panel of the uninstaller to appear, it might get lost behind other windows. If you do not see the first panel of the uninstaller after 30 seconds, press and hold the **Alt** key, then press the **Tab** key to bring the window to the front.

5. Follow the instructions on the screen.

## Commands you can use with Command Line Client for Windows

Typically, Command Line Client is used to let users print to InfoPrint Manager destinations from existing Windows applications (usually through the **Print** option on the **File** menu). In addition, you can use several InfoPrint Manager commands that can be issued at a Command Prompt on the client system.

### Note

If you are using the InfoPrint Manager commands and want to receive notifications, you can install the Notification Client from the *RICOH InfoPrint Manager: Common Clients DVD-ROM, LCD4-5642*.

Information about security and how users can be authorized to InfoPrint Manager is found in the topic "Managing Security" in the *RICOH InfoPrint Manager for Windows: Procedures guide*.

InfoPrint Manager lets authorized users (normally all users) use these InfoPrint Manager commands:

#### **pdls**

Lists selected attribute values for a job, destination, or other InfoPrint Manager object

#### **pdpr**

Submits a job to a logical or actual destination. If LDAP job authentication is enabled, you must authenticate using your LDAP credentials before submission.

#### **pdq**

Queries the status of selected jobs, of all jobs submitted to a logical destination, or of all jobs assigned to an actual destination

InfoPrint Manager lets authorized users (the job owner is usually authorized) use these InfoPrint Manager commands:

#### **pdmod**

Modifies the attributes of submitted jobs or of the documents in them

#### **pdrm**

Deletes jobs

InfoPrint Manager allows only authorized users to use these InfoPrint Manager commands:

#### **pdaccount**

Collects summary accounting information for a specified time period in a comma delimited format about 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.

#### **pdcreate**

Creates logical destinations, queues, actual destinations, default jobs, default documents, media, auxiliary sheets, and resource contexts.

#### **pdclean**

Removes all jobs from a server, logical destination, queue, or actual destination.

**pddelete**

Deletes servers, logical destinations, queues, actual destinations, default jobs, default documents, media, auxiliary sheets, resource contexts, and jobs.

**pddisable**

Prevents destinations from accepting jobs and logs from logging.

**pdenable**

Enables destinations to accept jobs and logs to log.

**pdpause**

Pauses a job, actual destination, queue, or all the queues and actual destinations in a server.

**pdpromote**

Advances a job to the head of the queue.

**pdreorder**

Reassigns a job to an actual destination or to the unassigned jobs area in the same server or in another server, and lets you schedule it immediately before or after another job.

**pdresubmit**

Resubmits a job, all the jobs submitted to a logical destination, or all the jobs in a queue to another logical destination.

**pdresume**

Enables paused objects to resume operation.

**pdset**

Sets or changes the values of attributes describing InfoPrint Manager objects.

**pdshutdown**

Stops servers or actual destinations.

**pdspace**

Backspaces or forward spaces a PSF physical printer.

**pddeviceop**

Perform device operation on device associated with specified actual destination.

**Note**

For more information about InfoPrint Manager commands and attributes, see the *RICOH InfoPrint Manager: Reference*.

## InfoPrint Manager hot folders

An InfoPrint Manager *hot folder* is a directory that is associated with a logical destination. When you copy or move a file to the hot folder, InfoPrint Manager automatically submits the file to that logical destination. The default job and document attributes that are set for that logical destination are applied to jobs submitted through the hot folder.

If all of the systems that will be submitting jobs to hot folders are Windows systems, you can use standard Windows folder sharing to make the hot folder accessible to both the InfoPrint Manager server and to users. If you will be submitting jobs to hot folders from other systems (such as AIX), you will have to install and configure separate software to transfer the files. The procedures below assume that jobs will be submitted only from other Windows systems.

**Note**

Make sure you know what kinds of files the InfoPrint Manager destination will accept. The files that you put in the hot folder should already be print data streams (such as PCL or PostScript), not the standard "working" files that many desktop programs create. For example, if you are writing a report using word processing software, you cannot simply save the file and copy that file to the hot folder to be printed. You need to convert it into a print data stream first. One way to do that conversion is to create a printer on your desktop that uses a PostScript or PCL driver and the **FILE:** port. If you send a job to that printer, the output won't be printed; it will be saved in a file (called `my_report.ps`, for example). Then, you can copy the new file into the hot folder to be sent to InfoPrint Manager.

## Configuring your system to work with hot folders

Use this procedure to configure your system to work with hot folders:

1. Decide what Windows system you want to create the hot folder on. Make sure that the InfoPrint Manager server and all users who will use it can access that system.

**Note**

- 1) It is strongly recommended that you create your hot folder on the same system that your InfoPrint Manager server is installed on for these reasons:
  - Performance will be better because the files have to be transferred over the network only once.
  - 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.
  - If you need to restart the system that the InfoPrint Manager server is installed on, the InfoPrint Manager server will automatically have access to the hot folder when it restarts. If the hot folder is on a different system, you must log on to the InfoPrint Manager server system to re-establish the connection.
- 2) If you plan to have more than one hot folder, you can create all of them in the same parent directory. That way, users can access all of them through a single mapped drive.
2. Use the regular Windows process to create a directory (add a folder to an existing directory). Name the folder something distinctive, so you know that it is a hot folder, and possibly, what logical destination it submits jobs to or what department should submit jobs to it.
3. Set up sharing on the folder so that the InfoPrint Manager server and users who will submit jobs to it have **write** access to it.
4. Open the InfoPrint Manager Administration GUI.
5. Find or create the logical destination that you want the hot folder to submit jobs to and select it.

- In the Properties notebook for the logical destination, click **General** and find the **Hot folder location** field. Type the directory path that the InfoPrint Manager server system will use to access the hot folder.

If the hot folder is in a different partition or on a different hard drive than your InfoPrint Manager server, this path will include the drive letter for that partition or drive and the directory path to the hot folder. For example, D:\hotfolders\copy\_postscript\_here. For further instructions, see the InfoPrint Manager Administration GUI online help.

#### ↓ Note

A hot folder can be associated with only one logical destination, and a logical destination can be associated with only one hot folder.

- Set the default document and default job attributes for the logical destination. Unless the job submitter overrides them, these attribute values will be used for all jobs submitted through the hot folder. For instructions, see the InfoPrint Manager Administration GUI online help.

When you tell users how to submit jobs to the hot folder, be sure to tell them what types of files the InfoPrint Manager destination can accept and how to generate those files.

## Mapping a network drive

On the end user system, use the standard Windows method to map a network drive (available in Windows Explorer) to the InfoPrint Manager hot folder. If there are multiple hot folders in the same directory, you only have to map one network drive to the parent directory; you will be able to access all of the subdirectories through it.

## Submitting jobs through a hot folder

To submit a job through a hot folder, simply copy or move the print file to the hot folder.

#### ↓ Note

If you experience problems with hot folders submitting incomplete jobs to the InfoPrint Manager server, use [Specifying hot folder poll method, p. 203](#) when you have multiple-document jobs or single-document jobs with Network File System shares, else use the method described in [Submitting multiple-document jobs, p. 204](#).

#### ★ Important

To save the file, copy it. Files are deleted from the hot folder after submission.

## Specifying job attributes

By default, jobs submitted through a hot folder use the attribute values in the default document and default job associated with the logical destination; and also by default, hot folder jobs are submitted to InfoPrint Manager with job notifications turned off. To receive notifications about jobs that you submit through hot folders, you must specify a **notification-profile** with an explicit **delivery-address** in the .att file. To specify other attributes or use different values for existing attributes, complete these steps.

1. Either on your system or in the hot folder itself, create a text file to use as your attributes file. Name the attributes file `filename.att` or `filename.att.utf8`, where `filename` is the same as the file name of the print file. For example, if the print file is `report.pdf`, the attributes file is `report.pdf.att` or `report.pdf.att.utf8`.
2. In the attributes file, specify the InfoPrint attributes and values to use for this job. For example, to print three single-sided copies of `report.pdf`, `report.pdf.att` looks like this:

```
copy-count = 3
sides = 1
```

#### ★ Important

Use `filename.att` if the file is saved using ISO88591 or SHIFT-JIS code pages. Use `filename.att.utf8` if the file is encoded using the UTF-8 code page.

#### ↓ Note

The attributes file is in the same format as a `-X` file passed to a `pdpr` command.

For information about job and document attributes, see *RICOH InfoPrint Manager: Reference*.

3. If you created the attributes file on your system, copy or move the file to the hot folder. The InfoPrint Manager logical destination recognizes the `.att` file extension as an attributes file and knows not to try to print it.
4. Copy or move the print file to the hot folder. The InfoPrint Manager logical destination sees the print file and looks for an attributes file with the same file name. Both of the files are taken and your attributes are used.

## Specifying hot folder poll method

There are two hot folder poll methods. By default, the **file access monitoring method** is used when jobs are submitted through a hot folder. This method is used for single or multiple-document jobs. If you have hot folders with large single or multiple-document jobs, or both, copied over the network in a Network File Share folder, you need to use the **file size monitoring method**. This method will check the file size during the poll interval before submitting the job to InfoPrint Manager. The default method will not work for files being copied over the network in a NFS folder.

You can specify the hot folder poll method with this procedure:

1. Open the InfoPrint Manager Administration GUI.
2. Find the logical destination that you want the hot folder to submit jobs to and select it.
3. In the **Properties** notebook for the logical destination, click **Hot folder poll method** and select the hot folder poll method suitable for you. If you use the **File size monitoring** method, key in the poll interval value in the **Hot folder poll interval field**. The default value is 30.
4. Copy the documents you want to print into the hot job folder.

#### ↓ Note

If you copy multiple files in a single operation on a Windows system, the order of document submission will be in alphabetical order. If the print order matters, rename the files according to the intended submission order or use the [Submitting multiple-document jobs, p. 204](#) method.

## Staging jobs

You can stage jobs to InfoPrint Manager with this procedure:

1. Make a copy of the print file on your local system.  
You will end up with 2 files: **report.pdf** and **copy of report.pdf**.
2. Rename the copy of the print file so that it has the same name as the original print file and the extension .stg.  
Rename **copy of report.pdf** to **report.pdf.stg**.
3. Copy the new file to the hot folder.  
Copy **report.pdf.stg** and paste it in the hot folder.

### ↓ Note

The InfoPrint Manager logical destination ignores files with the .stg extension.

4. Change the extension back to the original extension when you want the job to print.  
Rename **report.pdf.stg** back to **report.pdf**. InfoPrint Manager will pick up the renamed file and send it to print.

## Submitting multiple-document jobs

You can use staging to print jobs that contain multiple documents. In this case, you stage an entire directory. The InfoPrint Manager logical destination prints the documents as one job, in the order that you copied the files into the directory.

1. Navigate to the hot folder (using Windows Explorer, for example).
2. In the hot folder directory, create a new folder named *jobname.stg*, where *jobname* is any name you choose.

### ↓ Note

The InfoPrint Manager logical destination ignores directories with the .stg extension.

3. Copy the documents you want to print into the subdirectory in the **same** order that you want to print them.

### ↓ Note

If you copy multiple files in a single operation, they might not be copied in the same order that you selected them. If the print order matters, copy the files one at a time.

4. To override the default attributes, create an attributes file called *jobname.att*, where *jobname* is the same as the subdirectory name, and copy it into the subdirectory.
5. Rename the subdirectory from *jobname.stg* to *jobname*. The InfoPrint Manager logical destination then accepts all of the files in the subdirectory as a single job.

## Installing and configuring the AFP driver

The InfoPrint AFP Driver software lets you produce Advanced Function Presentation (AFP) output from desktop applications so you can use the powerful features of AFP in a wider range of environments. Used with InfoPrint Select or a Windows gateway printer, the AFP Driver provides a high degree of

control over the appearance of your printed documents. This section contains procedures for unpacking and installing the InfoPrint AFP Driver on a Windows system.

English versions of the AFP drivers for all Windows platforms are provided on the *RICOH InfoPrint Manager: Common Clients* DVD-ROM, LCD4-5642. You can also download the English and other language versions of the AFP driver from the Ricoh website at <https://dl.ricohsoftware.com/downloads/aa9a248e-101c-4aa6-b109-1cf7403f3b4f>. Translated drivers might not be identical to the English version because they are updated on a different schedule.

Use the procedures below to unpack and install the AFP drivers on your Windows system.

#### ↓ Note

- If you plan to use this driver to submit print jobs using InfoPrint Select, install this driver on the same system that InfoPrint Select is installed on. If you plan to use this driver to submit print jobs using a Windows gateway printer, install the driver on the system that your InfoPrint Manager server is installed on.

## Installing the AFP driver files

1. Insert the *RICOH InfoPrint Manager: Common Clients* DVD-ROM, LCD4-5642, that came with your InfoPrint Manager package into your DVD-ROM drive. The install program starts automatically.

#### ↓ Note

If your install program does not start automatically or if your browser stops responding:

1. Select **Start** → **Run**.
2. Enter `D:\setup.html`, where *D* is your DVD-ROM drive.
3. Click **OK**.
2. Click **Install InfoPrint Products** and then click **AFP Print Driver**.
3. Select the appropriate operating system.
4. The License Agreement displays. Click **Accept**, then click Next.
5. Follow the instructions to unpack the files into the desired directory. We recommend that you place the driver files in an easy to find directory, such as `C:\afpdriver`.

## Configuring the AFP driver

Once the files have been installed, you must complete the process of configuring the AFP driver by creating a printer that uses the driver. If you are installing the driver on a client workstation that has InfoPrint Select installed on it, see the InfoPrint Select readme file for instructions on creating a Select printer that uses this driver. If you are installing this driver on the system that your InfoPrint Manager server is installed on, follow the appropriate procedure below.

↓ **Note**

1. The Windows printers that result from these procedures do not send print jobs to actual printer devices; they generate files. To create a Windows printer that sends jobs to one of your printer devices, change the procedure as necessary.
2. Once you complete this procedure, you can delete the printer that you created. The driver will still be installed.

## 2

## Setting up the InfoPrint AFP Driver on a Windows system

To set up the InfoPrint AFP Driver on a Windows system follow these instructions:

1. Click the Windows **Start** button and select **Settings** → **Printers and Faxes**.
2. In the Printers window, click **Add a printer** to start the **Add Printer Wizard**.
3. On the first panel of the wizard, click **Next**.
4. In the **Local or Network printer** dialog, select **Local** and click **Next**.
5. In the **Select Printer Port** dialog, select **FILE:** and click **Next**.
6. In the next dialog, click **Have disk** without selecting a printer or a manufacturer.
7. In the **Install from disk** dialog, type the path to the directory that you copied the AFP driver files into (for example, `C:\afpdriver`) and click **OK**.
8. Select the printer that you plan to use this driver with from the list and click **Next**.

↓ **Note**

If your printer does not appear in the list, select **InfoPrint AFP *nnn***, where *nnn* is the resolution of your printer.

9. In the next dialog, accept the name of the printer and do not set it to be your default printer. Click **Next**.
10. Leave the printer **Not shared** and click **Next**.
11. Do not print a test page and click **Next**.
12. Click **Finish**.
13. If a dialog displays telling you that the driver has not passed Windows Logo testing, simply select **Continue Anyway** to finish installing the driver.

## Configuring client systems to receive automatic updates

The InfoPrint Manager client systems can be configured to receive automatic updates over the network.

As an administrator, you can set up an update server for multiple client machines to retrieve the available updates. The updates can be product updates or individual files. After the server system is configured, the client systems receive notifications when an update is available. The operator can install these updates immediately or postpone until a later time.

★ **Important**

Currently, only InfoPrint Select for Windows and InfoPrint Manager PDF driver can be configured to receive automatic updates.

## Installing and Configuring the Update Server on a Windows system

InfoPrint Manager lets you configure an automatic updating environment for the client systems.

The updating environment consists of two main components: the update and the client systems. When an update system is configured, all the client machines can connect to the update server to install the available updates, such as product updates or individual file updates. Setting up an automatic update system allows all systems to be up to date.

To install the update server.

1. Insert the *RICOH InfoPrint Manager: Common Clients* DVD-ROM into your DVD-ROM drive.
2. Click **InfoPrintManagerUpdateServer.exe** to install the update server.
3. Select the installation path. The default installation directory is `c:\Program Files\RIKOH\InfoPrint Manager Update Server\`.

To configure the update server settings:

1. Go to the configuration directory for the update server.

### Note

The default configuration directory is `c:\ProgramData\RIKOH\InfoPrint Manager Update Server\`.

2. Open the `ipm_updateserver.cfg` file using a text editor to change the parameters.

### product-path

Specifies the location of all product kits, file updates and registry updates that can be automatically downloaded and installed by client machines. The default path is `C:\ProgramData\Ricoh\InfoPrint Manager Update Server\Products`.

### listen-port

Specifies the port on which the update server communicates with the update client. The specified port must be opened in the firewall on both server and client machines. For the server machines, the port number must be configured in the incoming section. For the client machines, the port number must be configured in the outgoing section. The default port number is 10000.

### client-check-for-updates-interval

Specifies the time interval in seconds that passes between two subsequent checks for new product updates by the automatic update client machines that communicate with this automatic update server machine. The default interval is 84600 seconds.

### number-postpones-by-user

Specifies how many times the user on the client machine can postpone a product installation or update (0 means unlimited number of postpones). Once the product installation postponing number has been exceeded, the update will be silently installed. During the silent install, InfoPrint Select is not available until installation ends. The default value is 0.

### Products Order

Specifies the update order of listed products. Product updates order priority is separated by comma. The first product in the list has the highest priority.

Example of ipm\_updateserver.cfg file:

```
[Global Settings]
product-path=C:\ProgramData\Ricoh\InfoPrint Manager Update Server\Products
#the port used by the update server for incoming connections.
listen-port=10000

#the time between the update client checks for updates on the update server machine.
client-check-for-updates-interval=84600

#0 means infinite
number-postpones-by-user=0

#product installation order
products-order = InfoPrint Select, InfoPrint Manager PDF Driver
```

3. Restart InfoPrint Manager Update Service from Windows Services for configuration settings to take effect.
4. Create one or more DNS entries to provide the automatic update service to client machines.

### Record Type

Service Location (SRV)

### Service

\_ipmupdateserver

### Protocol

\_tcp

### Priority

A number between 0 and 65535 that indicates the priority for the host that is specified in host offering this service. The host with the lowest preference number have a higher priority. The host with the highest preference number have a lower priority.

### Weight

Not used. Use 0.

### Port Number

It must be identical to listen-port from ipm\_updateserver.cfg

### Host Offering this Service

IP address of the update server.

#### Note

When trying to connect to an InfoPrint Manager Update Server, if more than one \_ipmupdateserver SRV records are found, the **Priority** field is evaluated for each SRV record. The client machine connects to the InfoPrint Manager Update Server with the higher priority. If the InfoPrint Manager Update Server does not respond, the client machine attempts to connect to the next server until one of the configured InfoPrint Manager Update Servers respond or until the end of the list is reached.

## Configuring the Update Server on a Windows system with SSL/TLS

By default, InfoPrint Manager Update clients communicate with InfoPrint Manager Update Server without using any encryption. If it is required a secured communication (SSL/TLS), InfoPrint Manager Update Server can be configured using these steps:

1. Copy the `ipmssl.cfg` file from `<install_dir>\cfg-samples\ssl\` to `<configuration_dir>\ssl` directory.
2. Edit the `ipmssl.cfg` file using a text editor to enable and configure the SSL/TLS communication.

### Note

For additional information on how to configure SSL/TLS communication, see the chapter "Enabling Transport Layer Security encryption for InfoPrint Manager server for Windows" in *RICOH InfoPrint Manager for Windows: Procedures*.

3. Restart InfoPrint Manager Update Server.

### Note

When configured with TLS/SSL InfoPrint Manager Update Server issues a notification message in system log every time it starts.

## Configuring the update clients on a Windows system with SSL/TLS

When InfoPrint Manager Update Server uses a certificate signed by a globally known third-party Certificate Authority (CA) and you are not using Mutual Authentication, no configuration is required on client machines.

If your organization is using a custom CA authority or if Mutual Authentication is enabled on InfoPrint Manager Update Server, see these steps to update clients with SSL/TLS:

1. Copy the `ipmssl.cfg` file from `<install_dir>\cfg-samples\ssl\` to `<configuration_path>\ssl` directory.
2. Edit the `ipmssl.cfg` file using a text editor.

### Note

For additional information on how to configure SSL/TLS communication, see the chapter "Enabling Transport Layer Security encryption for InfoPrint Manager clients for Windows" in *RICOH InfoPrint Manager for Windows: Procedures*.

3. Reboot the computer or restart the InfoPrint Manager Update Service.

## Running InfoPrint Manager Update Server service control utility on Windows

You can control the operation of InfoPrint Manager Update using the `ipmupdateserverctl` tool.

Only users that have administrator privileges or users in the `ipmupdategroup` group can issue commands to InfoPrint Manager Update Server.

The `ipmupdateserverctl` utility calculates the files checksum and control files and directories permissions in the InfoPrint Manager Update Server `product-path` directory. The `product-path`

directory is specified in the `C:\ProgramData\RICOH\InfoPrint Manager Update Server\ipm_updateserver.cfg` file.

These arguments are allowed for `ipmupdateserverctl`:

### freeze

`ipmupdateserverctl` notifies `ipmupdateserver` to temporarily stop any requests for InfoPrint Manager Update clients. When `ipmupdateserver` acknowledges the operation, it removes all checksums and allows you to modify the files and directories in `ipmupdateserver` database.

#### ↓ Note

If you freeze `ipmupdateserver` database and then restart `ipmupdateserver`, the service starts without providing any updates for InfoPrint Manager Update clients. You must freeze and unfreeze the database to continue providing updates.

### unfreeze

`ipmupdateserverctl` calculates the checksum for every file in the `ipmupdateserver` database and removes the modify access permissions for files and directories. Then, it notifies `ipmupdateserver` to resume any requests for InfoPrint Manager Update clients.

### status

`ipmupdateserverctl` queries and displays the status of `ipmupdateserver`.

#### ↓ Note

If you are running Command Prompt using an administrator account, make sure that you select the **Run as Administrator** option.

## Configuring the automatic download of InfoPrint Select for Windows

The update server can be configured to download automatically InfoPrint Select for Windows on the client machines.

1. Start Command Prompt.

#### ↓ Note

You must have administrator privileges or the account you use must be in the `ipmupdategroup` group. If you are running Command Prompt using an administrator account, make sure that you select the **Run as Administrator** option.

2. Type `ipmupdateserverctl freeze` and press the Enter key to enter **Maintenance** mode.

#### ↓ Note

The **Maintenance** mode unlocks the product path folder and you can add and remove any files contained in the product path subdirectories. While in **Maintenance** mode, the InfoPrint Manager Update Server does not accept any new connections from the client systems.

3. Copy `ipm_select.cfg` from `<install_dir>\cfg-samples\` to `<configuration_dir>`.

#### ↓ Note

The default installation directory is `c:\Program Files\RICOH\InfoPrint Manager Update Server` and the default configuration directory is `c:\ProgramData\RICOH\InfoPrint Manager Update Server\`.

4. To specify the global settings and create filters, edit the `ipm_select.cfg` file. See [Sample ipm\\_select.cfg file](#), p. 212 for more details about the configuration file.
5. Copy the InfoPrint Select kit from the *RICOH InfoPrint Manager: Common Clients DVD-ROM* to `<configuration_dir>\Products\InfoPrint Select\Windows\<product_version>\Kit\`.
6. Copy the installation scripts from `<install_dir>\cfg-samples\scripts\` to `<configuration_dir>\Windows\<product_version>\Kit\`.

**Note**

- The installation scripts are `install_InfoPrint_Select_new.cmd`, `install_InfoPrint_Select_repair.cmd`, `install_InfoPrint_Select_update.cmd`.
7. Create the response files with these names: `setup_new.iss`, `setup_update.iss`, `setup_repair.iss`.

To create your own response files:

1. To create your own response file, invoke the InfoPrint Select installer in **record mode**: `InfoprintSelect.exe /r`. This command produces a response file named `setup.iss` based on the inputs used during installation. The `setup.iss` file is located by default in %WINDIR% folder.
2. `InfoprintSelect.exe` is located in the `\win\InfoprintSelect` folder of the *RICOH InfoPrint Manager: Common Clients DVD-ROM*.

**setup\_new.iss**

A sample response file used to install

**setup\_update.iss**

A sample response file used to upgrade a previous version of InfoPrint Select.

**setup\_repair.iss**

A sample response file used to repair an installation of InfoPrint Select.

8. Run `ipmupdateserverctl unfreeze` to exit the **Maintenance** mode.

**Note**

When installing InfoPrint Select in silent mode, **InfoPrint Select Notification** and **Open Printer Selection** do not start automatically after the installation is complete. You must log out first and then log in for **InfoPrint Select Notification** and **Open Printer Selection** to start.

## Sample ipm\_select.cfg file

```

#####
# SECTIONS : [BASE PRODUCT SETTINGS] , [DEFAULT INSTALL OPTIONS] ,[FILTER SETTINGS],[DEPENDENT APPLICATIONS]
# KEYWORDS : ProductName, Platform, CurrentVersion, local-registry-version-key,install-new-cmdline,
local-registry-version_value, install-update-cmdline, install-repair-cmdline,
# ProductAvailable, FilterIP, FilterHost,Dependencies
# FORMAT : keyword = value
# NOTE : a line is marked as commented out by adding # at the beginning of the line
# NOTE : the keywords FilterIP, FilterHost are applicable only to the [FILTER SETTINGS] section - do not use them for other sections
# NOTE : tabs and spaces are allowed at the beginning or at the end of keywords or values
# NOTE : [FILTER SETTINGS] and [DEPENDENT APPLICATIONS] are optional sections
# NOTE : ProductAvailable keyword values: YES/NO
# NOTE : Mandatory keywords for any cfg file: ProductName, Platform, CurrentVersion, local-registry-version-key,
install-new-cmdline,install-update-cmdline, install-repair-cmdline, ProductAvailable
#####
[BASE PRODUCT SETTINGS]
ProductName = InfoPrint Select
Platform = Windows
CurrentVersion = 4.9.0.0
local-registry-version-key = SOFTWARE\RICOH\Infoprint Select\Configuration
local-registry-version_value = Version

[DEFAULT INSTALL OPTIONS]
install-new-cmdline = install_InfoPrint_Select_new.cmd
install-update-cmdline = install_InfoPrint_Select_update.cmd
install-repair-cmdline = install_InfoPrint_Select_repair.cmd
ProductAvailable = YES

#[FILTER SETTINGS]
#Multiple filters sections can be declared
# One of FilterIP or FilterHost fields is mandatory.
# CurrentVersion and ProductAvailable are mandatory fields
#FilterIP=xx.xx.*;yy.*
#FilterHost=.domain1;host@domain2
#CurrentVersion=4.9.0.25
#ProductAvailable=NO

#Application to be closed on settings updates
[DEPENDENT APPLICATIONS]
Dependencies=

```

### ProductName

The name of the product to be updated.

### Platform

The operating system of the product.

### Current Version

The version number of the base product.

### local-registry-version-key

The registry key of the product.

### local-registry-version\_value

The registry key value of the product.

### install-new-cmdline

Install the update as a new installation of the product.

### install-update-cmdline

Install the update as a product patch. The product remains installed.

### install-repair-cmdline

Install the update using the repair process. The product remains installed but the core files and registry files are reinstalled too.

### ProductAvailable

Specifies if the update is available or not for client systems. It can be specified globally or in a specific filter. The filter section takes priority over the global section.

## FilterIP

Specifies the IP addresses or ranges of IP addresses selected for the update.

\* matches zero or more allowed characters.

? matches any allowed character exactly one time.

When using \* or ? globs the IP address strings are compared literally.

For example, the IPv6 address fc00::100 matches filter fc00::1\* but not the filter fc00::01\*. Since the operating system never returns an IPv6 address in the format fc00::0100, but fc00::100, the filter fc00::01\* never matches.

Example: 1.2.3.4;1.2.3.\*;1.2.3.1\*;1.2.3.1\*1;1.2.3.?.1.2.3.1?;1.2.3.1?1;1.2.3.4/32;1.2.3.4/24;1.2.3.0/255.255.255.0;fc00::100;fc00::\*;fc00::1\*;fc00::1\*1;fc00::?.1.2.3.1?;fc00::1?1;fc00::100/64 where:

### 1.2.3.4

Matches only:

1.2.3.4

### 1.2.3.\*

Matches any IPv4 address from:

1.2.3.0 to 1.2.3.255

### 1.2.3.1\*

Matches only these IPv4 address:

- 1.2.3.1
- 1.2.3.10 to 1.2.3.19
- 1.2.3.100 to 1.2.3.199

### 1.2.3.1\*1

Matches only these IPv4 address:

- 1.2.3.101
- 1.2.3.111
- 1.2.3.121
- 1.2.3.131
- 1.2.3.141
- 1.2.3.151
- 1.2.3.161
- 1.2.3.171
- 1.2.3.181
- 1.2.3.191

### **1.2.3.?**

Matches the IPv4 range:

1.2.3.0 to 1.2.3.9

### **1.2.3.1?**

Matches the IPv4 range:

1.2.3.10 to 1.2.3.19

### **1.2.3.1?1**

Matches only these IPv4 address:

- 1.2.3.101
- 1.2.3.111
- 1.2.3.121
- 1.2.3.131
- 1.2.3.141
- 1.2.3.151
- 1.2.3.161
- 1.2.3.171
- 1.2.3.181
- 1.2.3.191

### **1.2.3.4/32**

Matches only:

1.2.3.4

### **1.2.3.4/24**

Matches the IPv4 range:

1.2.3.0 to 1.2.3.255

### **1.2.3.0/255.255.255.0**

Matches the IPv4 range:

1.2.3.0 to 1.2.3.255

### **fc00::100**

Matches only:

fc00::100

### **fc00::\***

Match the IPv6 range:

fc00:: to fc00::ffff:ffff:ffff:ffff

### **fc00::1\***

Matches only these IPv6 addresses:

- fc00::1
- fc00::10 to fc00::1f
- fc00::100 to fc00::1ff
- fc00::1000 to fc00::1fff

**fc00::1 \* 1**

Matches only :

fc00::1001 to fc00::1ff1

**fc00::?**

Matches the IPv6 range:

fc00::0 to fc00::f

**fc00::1 ?**

Matches only:

fc00::10 to fc00::1f

**fc00::1 ? 1**

Matches only these IPv6 addresses:

- fc00::101
- fc00::111
- fc00::121
- fc00::131
- fc00::141
- fc00::151
- fc00::161
- fc00::171
- fc00::181
- fc00::191
- fc00::1a1
- fc00::1b1
- fc00::1c1
- fc00::1d1
- fc00::1e1
- fc00::1f1

**fc00::100/64**

Matches the IPv6 range:

fc00:: to fc00::ffff:ffff:ffff:ffff

Specifies the host names selected for the update.

\* matches zero or more allowed characters.

? matches any allowed character exactly one time.

When using \* or ? globs the host name strings are compared literally.

Example: `host.example.org;*.example.org;.example.org;host?.example.org` where:

### **host.example.org**

Matches only the host name `host.example.org`.

### **\*.example.org**

Matches any host name that ends with `.example.org`.

### **.example.org**

Matches any host name that ends with `.example.org`.

### **host\*.example.org.**

Matches any host name that starts with `host`, followed by any number of characters (valid for host name) and ends with `.example.org`.

Examples:

- `host123.example.org`
- `host2A.example.org`
- `host-name.example.org`

### **host?.example.org.**

Matches any host name that starts with `host`, followed by one character and ends with `.example.org`.

Examples:

- `host1.example.org`
- `host2.example.org`
- `hostM.example.org`

## **Dependencies**

Specifies which application is closed during the update process.

## **Configuring the automatic download of InfoPrint Manager PDF Driver for Windows**

---

InfoPrint Manager PDF driver can be configured to be downloaded automatically on the client systems.

1. Start Command Prompt.

**Note**

You must have administrator privileges or the account you use must be in the `ipmupdategroup` group. If you are running Command Prompt using an administrator account, make sure that you select the **Run as Administrator** option.

2. Type `ipmupdateserverctl freeze` and press the Enter key to enter **Maintenance** mode.

**Note**

The **Maintenance** mode unlocks the product path folder and you can add and remove any files contained in the product path subdirectories. While in **Maintenance** mode, the InfoPrint Manager Update Server does not accept any new connections from the client systems.

3. Copy `ipm_driver.cfg` from `<install_dir>\cfg-samples\` to `<configuration_dir>`.

**Note**

The default installation directory is `c:\Program Files\RICOH\InfoPrint Manager Update Server` and the default program directory is `c:\ProgramData\RICOH\InfoPrint Manager Update Server\`.

4. To specify the global settings and create filters, edit the `ipm_driver.cfg` file. See [Sample ipm\\_driver.cfg](#), p. 218 for more details about the configuration file.
5. Unzip the contents of `InfoprintManagerPDFdriver.zip` file from the *RICOH InfoPrint Manager: Common Clients DVD* to `<configuration_dir>\Products\InfoPrint Manager PDF Driver\Windows\<product_version>\Kit\`
6. Copy Visual Studio Redistributable kit from the *RICOH InfoPrint Manager: Common Clients DVD* to `<configuration_dir>\Products\InfoPrint Manager PDF Driver\Windows\<product_version>\Kit\`.

**Note**

You can skip this step if Visual Studio Redistributable 2013 is already installed on the client system.

7. Run `ipmupdateserverctl unfreeze` to exit the **Maintenance** mode.

## Sample ipm\_driver.cfg file

```

#####
# SECTIONS : [BASE PRODUCT SETTINGS] , [DEFAULT INSTALL OPTIONS] , [FILTER SETTINGS],[DEPENDENT APPLICATIONS]
# KEYWORD  : ProductName, Platform, CurrentVersion, install-new-cmdline, install-update-cmdline, install-repair-cmdline,
#           ProductAvailable, FilterIP, FilterHost
# NOTE     : a line is commented out if it is marked by # at the beginning of the line
# NOTE     : the keywords FilterIP, FilterHost apply only to the [FILTER SETTINGS] section
# NOTE     : ProductAvailable keyword values: YES/NO
# NOTE     : Mandatory keywords for any cfg file: ProductName, Platform, CurrentVersion, local-registry-version-key,
install-new-cmdline,install-new-cmdline, install-update-cmdline, install-repair-cmdline,ProductAvailable
#####
[BASE PRODUCT SETTINGS]
ProductName           = InfoPrint Manager PDF Driver
Platform              = Windows
CurrentVersion        = 4.9.0.0
local-registry-version-key = SYSTEM\ControlSet001\Control\Print\Environments\Windows x64\Drivers\Version-3\InfoPrint Manager PDF Driver
local-registry-version_value = DriverVersion

[DEFAULT INSTALL OPTIONS]
#mp601.spr specifies the host name or ip address for the printer in use
install-new-cmdline   = install_PDF_Driver.cmd mp601.spr
install-update-cmdline = install_PDF_Driver.cmd mp601.spr
install-repair-cmdline = install_PDF_Driver.cmd mp601.spr
ProductAvailable=YES

#[FILTER SETTINGS]
#Multiple filters sections can be declared
# One of FilterIP or FilterHost fields is mandatory.
# CurrentVersion and ProductAvailable are mandatory fields
# filter version is mandatory for every section
#FilterIP=xx.xx.*.yy.*
#FilterHost=.domain1:host@domain2
#CurrentVersion=4.9.0.25
#ProductAvailable=NO

```

### ProductName

The name of the product to be updated.

### Platform

The operating system of the product.

### Current Version

The version number of the base product.

### local-registry-version-key

The registry key of the product.

### local-registry-version\_value

The registry key value of the product.

### install-new-cmdline

Install the update as a new installation of the product.

### install-update-cmdline

Install the update as a product patch. The product remains installed.

### install-repair-cmdline

Install the update using the repair process. The product remains installed but the core files and registry files are reinstalled too.

### ProductAvailable

Specifies if the update is available or not for client systems. Can be specified globally or in a specific filter. The filter section take priority over the global section.

### FilterIP

Specifies the IP addresses or ranges of IP addresses selected for the update.

\* matches zero or more allowed characters.

? matches any allowed character exactly one time.

When using \* or ? globs the IP address strings are compared literally.

For example IPv6 address fc00::100 matches filter fc00::1\* but not the filter fc00::01\*. Since the operating system never returns an IPv6 address in the format fc00::0100, but fc00::100, the filter fc00::01\* never matches.

Example:

```
1\2\3\4;1\2\3\.*;1\2\3\1*;1\2\3\1*1;1\2\3\1*1;1\2\3\.?;1\2\3\1?;
1\2\3\1?1;1\2\3\4/32;1\2\3\4/24;1\2\3\0/255\255\255\0;
fc00::100;fc00::*;fc00::1*;fc00::1*1;fc00::?:fc00::1?;
fc00::1?1;fc00::100/64
```

where:

#### 1.2.3.4

Matches only:

1.2.3.4

#### 1.2.3.\*

Matches any IPv4 address from:

1.2.3.0 to 1.2.3.255

#### 1.2.3.1\*

Matches only these IPv4 address:

- 1.2.3.1
- 1.2.3.10 to 1.2.3.19
- 1.2.3.100 to 1.2.3.199

#### 1.2.3.1\*1

Matches only these IPv4 address:

- 1.2.3.101
- 1.2.3.111
- 1.2.3.121
- 1.2.3.131
- 1.2.3.141
- 1.2.3.151
- 1.2.3.161
- 1.2.3.171
- 1.2.3.181
- 1.2.3.191

#### 1.2.3.?

Matches the IPv4 range:

1.2.3.0 to 1.2.3.9

### **1.2.3.1?**

Matches the IPv4 range:

1.2.3.10 to 1.2.3.19

### **1.2.3.1?1**

Matches only these IPv4 address:

- 1.2.3.101
- 1.2.3.111
- 1.2.3.121
- 1.2.3.131
- 1.2.3.141
- 1.2.3.151
- 1.2.3.161
- 1.2.3.171
- 1.2.3.181
- 1.2.3.191

### **1.2.3.4/32**

Matches only:

1.2.3.4

### **1.2.3.4/24**

Matches the IPv4 range:

1.2.3.0 to 1.2.3.255

### **1.2.3.0/255.255.255.0**

Matches the IPv4 range:

1.2.3.0 to 1.2.3.255

### **fc00::100**

Matches only:

fc00::100

### **fc00::\***

Match the IPv6 range:

fc00:: to fc00::ffff:ffff:ffff:ffff

### **fc00::1\***

Matches only these IPv6 addresses:

- fc00::1

- fc00::10 to fc00::1f
- fc00::100 to fc00::1ff
- fc00::1000 to fc00::1fff

**fc00::1 \* 1**

Matches only :

fc00::1001 to 1ff1

**fc00::?**

Matches the IPv6 range:

fc00::0 to fc00::f fc00::1?

**fc00::1 ?**

Matches only:

fc00::10 to fc00::1f

**fc00::1 ? 1**

Matches only these IPv6 addresses:

- fc00::101
- fc00::111
- fc00::121
- fc00::131
- fc00::141
- fc00::151
- fc00::161
- fc00::171
- fc00::181
- fc00::191
- fc00::1a1
- fc00::1b1
- fc00::1c1
- fc00::1d1
- fc00::1e1
- fc00::1f1

**fc00::100/64**

Matches the IPv6 range:

fc00:: to fc00::ffff:ffff:ffff:ffff

**FilterHost**

Specifies the host names selected for the update.

\* matches zero or more allowed characters.

? matches any allowed character exactly one time.

When using \* or ? globs the host name strings are compared literally.

Example: `host.example.org;*.example.org;.example.org;host?.example.org` where:

### **host.example.org**

Matches only the host name `host.example.org`.

### **\*.example.org**

Matches any host name that ends with `.example.org`.

### **.example.org**

Matches any host name that ends with `.example.org`.

### **host\*.example.org.**

Matches any host name that starts with `host`, followed by any number of characters (valid for host name) and ends with `.example.org`.

Examples:

- `host123.example.org`
- `host2A.example.org`
- `host-name.example.org`

### **host?.example.org.**

Matches any host name that starts with `host`, followed by one character and ends with `.example.org`.

Examples:

- `host1.example.org`
- `host2.example.org`
- `hostM.example.org`

## **Dependencies**

Specifies which application is closed during the update process.

## **Configuring the automatic download of file updates**

You can configure the update server to use a certain package of updated files.

1. Start Command Prompt.

### **Note**

You must have administrator privileges or the account you use must be in the `ipmupdategroup` group. If you are running Command Prompt using an administrator account, make sure that you select the **Run as Administrator** option.

2. Type `ipmupdateserverctl freeze` and press the Enter key to enter **Maintenance** mode.

**Note**

The **Maintenance** mode unlocks the product path folder and you can add and remove any files contained in the product path subdirectories. The InfoPrint Manager server is also temporarily disabled.

- To copy all the updated files and the installation location file, create a subdirectory under `<configuration_dir>\Products\<product_dir>\Windows\<nn.nn.nn.nn>\Files\<update_set>`, where `nn.nn.nn.nn` is the version number.

**Note**

- The default configuration directory is `c:\ProgramData\RICOH\InfoPrint Manager Update Server\`.
- `update_set` represents a folder named of your choice. You must create this folder before copying the files.

**Example:** `<configuration_dir>\Products\<product_dir>\Windows\<nn.nn.nn.nn>\Files\Update_Patch_December`

- Copy all the updated files to the new subdirectory. You can create multiple folders, depending on how many file sets you want to update.
- Create a plain text file called `ipmupdate.path` in the new subdirectory. The `ipmupdate.path` file must contain only the location, on the client machine, where the new files must be copied.

**Example:** `c:\ProgramData\RICOH\InfoPrint Manager Update Server\Products\InfoPrint Select\Windows\<nn.nn.nn.nn>\Files\Update_Patch_December.`

- Run `ipmupdateserverctl unfreeze` to exit the **Maintenance** mode.

2

## Configuring the automatic download of registry updates

To facilitate the installation on multiple machines, you can export the registry settings from a correctly configured system.

- Start Command Prompt.

**Note**

You must have administrator privileges or the account you use must be in the `ipmupdategroup` group. If you are running Command Prompt using an administrator account, make sure that you select the **Run as Administrator** option.

- Type `ipmupdateserverctl freeze` and press the Enter key to enter **Maintenance** mode.

**Note**

- The **Maintenance** mode unlocks the product path folder and you can add and remove any files contained in the parent folder. The InfoPrint Manager server is also temporarily disabled.
- Copy the registry file with updated settings to the Registry folder.

↓ **Note**

- The correct registry settings can be exported as a .reg file from Computer\HKEY\_LOCAL\_MACHINE\SOFTWARE\RICOH\Infoprint Select\Configuration.
  - The default registry folder path is <configuration\_dir>\Products\<product\_dir>\Windows\<product\_version>\Registry\.
4. Run `ipmupdateserverctl unfreeze` to exit the **Maintenance** mode.

## 2

## Installing and Configuring the Update Server on a Linux system

The InfoPrint Manager client systems can be set up to update automatically. For these client systems to be automatically updated, you must configure an update server.

InfoPrint Manager lets you configure an automatic updating environment for the client systems. The updating environment consists of two main components: the update server and the client system configuration. When an update server is configured, all the client machines can connect to the update server to install the available updates. Setting up an automatic update system allows all systems to be up to date with the latest patches.

Before starting to configure the update server settings, you need to install the update server.

1. Insert the *RICOH InfoPrint Manager: Common Clients* DVD-ROM into your DVD-ROM drive.
2. Install `ipr-ipmupdateserver-nn.nn.nn-nn.x86_64.rpm` to install the update server, where *nn.nn.nn* is the version number.

To configure the update server settings:

1. Go to the installation directory for the update server.

↓ **Note**

InfoPrint Manager Update Server configuration directory is `/etc/ipmupdateserver`.

2. Open the `ipm_updateserver.cfg` file using a text editor to change the parameters.

### product-path

Specifies the location of all product kits, file updates and registry updates that can be automatically downloaded and installed by client machines.

### listen-port

Specifies the port on which the update server communicates with the update client. The specified port must be opened in the firewall on both server and client machines. For the server machines, the port number must be configured in the incoming section. For the client machines, the port number must be configured in the outgoing section. The default port number is 10000.

### client-check-for-updates-interval

Specifies the time interval in seconds that passes between two subsequent checks for new product updates by the automatic update client machines that communicate with this automatic update server machine. The default interval is 84600 seconds.

### number-postpones-by-user

Specifies how many times the user on the client machine can postpone a product installation or update (0 means unlimited number of postpones). Once the product installation postponing number has been exceeded, the update will be silently installed. During the silent install, InfoPrint Select is not available until installation ends. The default value is 0.

### Products Order

Specifies the update order of listed products. Product updates order priority is separated by comma. The first product in the list has the highest priority.

Example of `ipm_updateserver.cfg` file:

```
[Global Settings]
product-path=/etc/ipmupdateserver/ipm_updateserver.cfg
#the port on which the update server listens to.
listen-port=10000
#the time between the update client checks for updates on the update server machine.
client-check-for-updates-interval=84600
#0 means infinite
number-postpones-by-user=0
#product installation order
Products Order = InfoPrint Select, InfoPrint Manager PDF Driver
```

3. Restart InfoPrint Manager Update Service for configuration settings to take effect.
4. Create one or more DNS entries to provide the automatic update service to client machines.

### Record Type

Service Location (SRV)

### Service

`_ipmupdateserver`

### Protocol

`_tcp`

### Priority

A number between 0 and 65535 that indicates the priority for the host that is specified in Host offering this service. The host with the lowest preference number have a higher priority. The host with the highest preference number have a lower priority.

### Weight

Not used. Use 0.

### Port Number

It must be identical to `listen-port` from `ipm_updateserver.cfg`

### Host Offering this Service

IP address of the update server.

## Configuring the Update Server on a Linux system with SSL/TLS

By default, InfoPrint Manager Update clients communicate with InfoPrint Manager Update Server without using any encryption. If it is required a secured communication (SSL/TLS), InfoPrint Manager Update Server can be configured using these steps:

1. Copy the `ipmssl.cfg` file from `/usr/share/doc/ipr-ipmupdateserver-4.15.0/cfg-samples/ssl/` to `/etc/ipmupdateserver/ssl` directory.
2. Edit the `ipmssl.cfg` file using a text editor to enable and configure the SSL/TLS communication.

### ↓ Note

For additional information on how to configure SSL/TLS communication, see the chapter "Enabling Transport Layer Security encryption for InfoPrint Manager servers for Linux" in *RICOH InfoPrint Manager for Linux: Procedures*.

3. Restart InfoPrint Manager Update Server.

### ↓ Note

When configured with TLS/SSL InfoPrint Manager Update Server issues a notification message in system log every time it starts.

## Running InfoPrint Manager Update Server service as a different user

The InfoPrint Manager update server can be set up to run as a different user update automatically.

By default, InfoPrint Manager Update Server is run using the `ipmupdate` user.

To run the service as a different user follow these steps:

1. Create a different user than `ipmupdate` to run InfoPrint Manager Update Server service, if it is not already created.

### ↓ Note

The shell for the user can also be `/sbin/nologin`, `/bin/false` not necessarily `/bin/bash` or any interactive shell

2. Make sure that `ipmupdategroup` is the primary group for the new user. If not, execute this command to change the primary group:

```
usermod -g ipmupdategroup new-user
```

Where `new-user` is the user newly created.

3. Stop the service using this command:

```
systemctl stop ipmupdateserver
```

4. Disable the service using this command:

```
systemctl disable ipmupdateserver
```

5. Change the owner for directory `/var/log/ipmupdateserver`:

```
chown -R new-user:ipmupdategroup /var/log/ipmupdateserver
```

Where `new-user` is the user newly created.

**Note**

If SSL/TLS is used by `ipmupdateserver`, make sure that the new user can read the SSL key and certificate files. Also, make sure that the new user can read configuration files found in `/etc/ipmupdateserver` directory.

6. Create directory `/etc/systemd/system/ipmupdateserver.service.d` using this command:  
`mkdir /etc/systemd/system/ipmupdateserver.service.d`
7. Add the user directive to the `/etc/systemd/system/ipmupdateserver.service.d/override.conf` file:

```
[Service]
User=new-user
```

8. Reload the system using this command:  
`systemctl daemon-reload`
9. Re-enable the service using this command:  
`systemctl enable ipmupdateserver`
10. To start the InfoPrint Manager Update Server service, run `systemctl start ipmupdateserver`.

**Note**

Do not remove the `ipmupdate` user as it will be created the next time you update InfoPrint Manager Update Server rpm package.

## Running InfoPrint Manager Update Server service control utility on Linux

You can control the operation of InfoPrint Manager Update using the `ipmupdateserverctl` tool.

Only users in the `ipmupdategroup` group can run `ipmupdateserverctl` executable to issue commands to InfoPrint Manager Update Server.

The `ipmupdateserverctl` utility calculates the files checksum and control files and directories permissions in the InfoPrint Manager Update Server `product-path` directory. The `product-path` directory is specified in the `/etc/ipmupdateserver/ipm_updateserver.cfg` file.

By default, InfoPrint Manager Update Server runs as **ipmupdate** user. The `ipmupdate` user has no password set. To log in as `ipmupdate` user, you must set a password. For security reasons, we recommend that you do not set a password for `ipmupdate` user, change the shell for the `ipmupdate` user to `/sbin/nologin` and use a different user to control the InfoPrint Manager Update Server service using the `ipmupdateserverctl` utility.

To add a user to group `ipmupdategroup`, run this command:

```
usermod -a -G ipmupdategroup another-user
```

where `another-user` is the user that controls the InfoPrint Manager Update Server service.

These arguments are allowed for `ipmupdateserverctl`:

### freeze

`ipmupdateserverctl` notifies `ipmupdateserver` to temporary stop any requests for InfoPrint Manager Update clients. When `ipmupdateserver` acknowledges the operation, it removes all checksums and allows you to modify the files and directories in `ipmupdateserver` database.

↓ **Note**

If you freeze `ipmupdateserver` database and then restart `ipmupdateserver`, the service starts without providing any updates for InfoPrint Manager Update clients. You must freeze and unfreeze the database to continue providing updates.

### unfreeze

`ipmupdateserverctl` calculates the checksum for every file in the `ipmupdateserver` database and removes the modify access permissions for files and directories. Then, it notifies `ipmupdateserver` to resume any requests for InfoPrint Manager Update clients.

### status

`ipmupdateserverctl` queries and displays the status of `ipmupdateserver`.

## Configuring the automatic download of InfoPrint Select for Windows from a Linux update server

1. Run `ipmupdateserverctl freeze` to enter **Maintenance** mode.

↓ **Note**

The **Maintenance** mode unlocks the product path folder and you can add and remove any files contained in the parent folder. The InfoPrint Manager server is also temporarily disabled.

2. Copy `ipm_select.cfg` from `/usr/share/doc/ipr-ipmupdateserver-nn.nn.nn/cfg-samples/ipm_select.cfg` to `/etc/ipmupdateserver/`.
3. Edit the `ipm_select.cfg` file to specify the global settings and create filters.
4. Copy the InfoPrint Select kit from the *RICOH InfoPrint Manager: Common Clients DVD* to `/var/lib/ipmupdateserver/Products/InfoPrint Select/Windows/nn.nn.nn.nn/Kit`.
5. Copy the response files and installation scripts from `/usr/share/doc/ipr-ipmupdateserver-nn.nn.nn/cfg-samples/scripts/` to `/var/lib/ipmupdateserver/Products/InfoPrint Select/Windows/nn.nn.nn.nn/Kit`, where *nn.nn.nn.nn* is the version number.

↓ **Note**

- The installation scripts are `install_InfoPrint_Select_new.cmd`, `install_InfoPrint_Select_repair.cmd`, `install_InfoPrint_Select_update.cmd`.
  - The response files are `setup_new.iss`, `setup_update.iss`, `setup_repair.iss`.
6. Run `ipmupdateserverctl unfreeze` to exit **Maintenance** mode.

## Sample ipm\_select.cfg file

```
##-----
# SECTIONS : [BASE PRODUCT SETTINGS] , [DEFAULT INSTALL OPTIONS] ,[FILTER SETTINGS],[DEPENDENT APPLICATIONS]
# KEYWORDS : ProductName, Platform, CurrentVersion, local-registry-version-key,install-new-cmdline,
local-registry-version_value, install-update-cmdline, install-repair-cmdline,
#
# ProductAvailable, FilterIP, FilterHost,Dependencies
# FORMAT : keyword = value
# NOTE : a line is marked as commented out by adding # at the beginning of the line
# NOTE : the keywords FilterIP, FilterHost are applicable only to the [FILTER SETTINGS] section - do not use them for other sections
# NOTE : tabs and spaces are allowed at the beginning or at the end of keywords or values
# NOTE : [FILTER SETTINGS] and [DEPENDENT APPLICATIONS] are optional sections
# NOTE : ProductAvailable keyword values: YES/NO
# NOTE : Mandatory keywords for any cfg file: ProductName, Platform, CurrentVersion, local-registry-version-key,
install-new-cmdline,install-update-cmdline, install-repair-cmdline, ProductAvailable
##-----
[BASE PRODUCT SETTINGS]
ProductName = InfoPrint Select
Platform = Windows
CurrentVersion = 4.9.0.0
local-registry-version-key = SOFTWARE\RICOH\Infoprint Select\Configuration
local-registry-version_value = Version

[DEFAULT INSTALL OPTIONS]
install-new-cmdline = install_InfoPrint_Select_new.cmd
install-update-cmdline = install_InfoPrint_Select_update.cmd
install-repair-cmdline = install_InfoPrint_Select_repair.cmd
ProductAvailable = YES

#[FILTER SETTINGS]
#Multiple filters sections can be declared
# One of FilterIP or FilterHost fields is mandatory.
# CurrentVersion and ProductAvailable are mandatory fields
#FilterIP=xx.xx.*;yy.*
#FilterHost=.domain1;host@domain2
#CurrentVersion=4.9.0.25
#ProductAvailable=NO

#Application to be closed on settings updates
[DEPENDENT APPLICATIONS]
Dependencies=
```

### ProductName

The name of the product to be updated.

### Platform

The operating system of the product.

### Current Version

The version number of the base product.

### local-registry-version-key

The registry key of the product.

### local-registry-version\_value

The registry key value of the product.

### install-new-cmdline

Install the update as a new installation of the product.

### install-update-cmdline

Install the update as a product patch. The product remains installed.

### install-repair-cmdline

Install the update using the repair process. The product remains installed but the core files and registry files are reinstalled too.

### ProductAvailable

Specifies if the update is available or not for client systems. It can be specified globally or in a specific filter. The filter section takes priority over the global section.

### FilterIP

Specifies the IP addresses or ranges of IP addresses selected for the update.

\* matches zero or more allowed characters.

? matches any allowed character exactly one time.

When using \* or ? globs the IP address strings are compared literally.

For example, the IPv6 address fc00::100 matches filter fc00::1\* but not the filter fc00::01\*. Since the operating system never returns an IPv6 address in the format fc00::0100, but fc00::100, the filter fc00::01\* never matches.

Example: 1.2.3.4;1.2.3.\*;1.2.3.1\*;1.2.3.1\*1;1.2.3.?.1.2.3.1?;1.2.3.1?1;1.2.3.4/32;1.2.3.4/24;1.2.3.0/255.255.255.0;fc00::100;fc00::\*;fc00::1\*;fc00::1\*1;fc00::?.1.2.3.1?;fc00::1?1;fc00::100/64 where:

#### 1.2.3.4

Matches only:

1.2.3.4

#### 1.2.3.\*

Matches any IPv4 address from:

1.2.3.0 to 1.2.3.255

#### 1.2.3.1\*

Matches only these IPv4 address:

- 1.2.3.1
- 1.2.3.10 to 1.2.3.19
- 1.2.3.100 to 1.2.3.199

#### 1.2.3.1\*1

Matches only these IPv4 address:

- 1.2.3.101
- 1.2.3.111
- 1.2.3.121
- 1.2.3.131
- 1.2.3.141
- 1.2.3.151
- 1.2.3.161
- 1.2.3.171
- 1.2.3.181
- 1.2.3.191

**1.2.3.?**

Matches the IPv4 range:

1.2.3.0 to 1.2.3.9

**1.2.3.1?**

Matches the IPv4 range:

1.2.3.10 to 1.2.3.19

**1.2.3.1?1**

Matches only these IPv4 address:

- 1.2.3.101
- 1.2.3.111
- 1.2.3.121
- 1.2.3.131
- 1.2.3.141
- 1.2.3.151
- 1.2.3.161
- 1.2.3.171
- 1.2.3.181
- 1.2.3.191

**1.2.3.4/32**

Matches only:

1.2.3.4

**1.2.3.4/24**

Matches the IPv4 range:

1.2.3.0 to 1.2.3.255

**1.2.3.0/255.255.255.0**

Matches the IPv4 range:

1.2.3.0 to 1.2.3.255

**fc00::100**

Matches only:

fc00::100

**fc00::\***

Match the IPv6 range:

fc00:: to fc00::ffff:ffff:ffff:ffff

**fc00::1\***

Matches only these IPv6 addresses:

- fc00::1
- fc00::10 to fc00::1f
- fc00::100 to fc00::1ff
- fc00::1000 to fc00::1fff

**fc00::1 \* 1**

Matches only :

fc00::1001 to fc00::1ff1

**fc00::?**

Matches the IPv6 range:

fc00::0 to fc00::f

**fc00::1 ?**

Matches only:

fc00::10 to fc00::1f

**fc00::1 ? 1**

Matches only these IPv6 addresses:

- fc00::101
- fc00::111
- fc00::121
- fc00::131
- fc00::141
- fc00::151
- fc00::161
- fc00::171
- fc00::181
- fc00::191
- fc00::1a1
- fc00::1b1
- fc00::1c1
- fc00::1d1
- fc00::1e1
- fc00::1f1

**fc00::100/64**

Matches the IPv6 range:

fc00:: to fc00::ffff:ffff:ffff:ffff

**FilterHost**

Specifies the host names selected for the update.

\* matches zero or more allowed characters.

? matches any allowed character exactly one time.

When using \* or ? globs the host name strings are compared literally.

Example: `host.example.org;*.example.org;.example.org;host?.example.org` where:

#### **host.example.org**

Matches only the host name `host.example.org`.

#### **\*.example.org**

Matches any host name that ends with `.example.org`.

#### **.example.org**

Matches any host name that ends with `.example.org`.

#### **host\*.example.org.**

Matches any host name that starts with `host`, followed by any number of characters (valid for host name) and ends with `.example.org`.

Examples:

- `host123.example.org`
- `host2A.example.org`
- `host-name.example.org`

#### **host?.example.org.**

Matches any host name that starts with `host`, followed by one character and ends with `.example.org`.

Examples:

- `host1.example.org`
- `host2.example.org`
- `hostM.example.org`

## Dependencies

Specifies which application is closed during the update process.

## Configuring the automatic download of InfoPrint Manager PDF Driver for Windows from a Linux update server

1. Run `ipmupdateserverctl freeze` to enter **Maintenance** mode.

### Note

The **Maintenance** mode unlocks the product path folder and you can add and remove any files contained in the parent folder. The InfoPrint Manager server is also temporarily disabled.

2. Copy `ipm_driver.cfg` from `/usr/share/doc/ipr-ipmupdateserver-nn.nn.nn/cfg-samples/` to `/etc/ipmupdateserver/`, where *nn.nn.nn* is the version number.

3. Edit the `ipm_driver.cfg` file to specify the global settings and create filters. See [Sample ipm\\_driver.cfg](#), p. 218 for more details about the configuration file.
4. Unzip the contents of `InfoprintManagerPDFdriver.zip` file from the *RICOH InfoPrint Manager: Common Clients DVD* to `/var/lib/ipmupdateserver/Products/InfoPrint Manager PDF Driver/Windows/<product_version>/Kit/`.
5. Copy Visual Studio 2013 Redistributable kit from from the *RICOH InfoPrint Manager: Common Clients DVD* to `/var/lib/ipmupdateserver/Products/InfoPrint Manager PDF Driver/Windows/product_version/Kit/`.
6. Run `ipmupdateserverctl unfreeze` to exit **Maintenance** mode.

### Sample ipm\_driver.cfg file

```
#####
# SECTIONS : [BASE PRODUCT SETTINGS] , [DEFAULT INSTALL OPTIONS] , [FILTER SETTINGS],[DEPENDENT APPLICATIONS]
# KEYWORD  : ProductName, Platform, CurrentVersion, install-new-cmdline, install-update-cmdline, install-repair-cmdline,
#           ProductAvailable, FilterIP, FilterHost
# NOTE     : a line is commented out if it is marked by # at the beginning of the line
# NOTE     : the keywords FilterIP, FilterHost apply only to the [FILTER SETTINGS] section
# NOTE     : ProductAvailable keyword values: YES/NO
# NOTE     : Mandatory keywords for any cfg file: ProductName, Platform, CurrentVersion, local-registry-version-key,
install-new-cmdline,install-new-cmdline, install-update-cmdline, install-repair-cmdline,ProductAvailable
#####
[BASE PRODUCT SETTINGS]
ProductName           = InfoPrint Manager PDF Driver
Platform              = Windows
CurrentVersion        = 4.9.0.0
local-registry-version-key = SYSTEM\ControlSet001\Control\Print\Environments\Windows x64\Drivers\Version-3\InfoPrint Manager PDF Driver
local-registry-version_value = DriverVersion

[DEFAULT INSTALL OPTIONS]
#mp601.spr specifies the host name or ip address for the printer in use
install-new-cmdline   = install_PDF_Driver.cmd mp601.spr
install-update-cmdline = install_PDF_Driver.cmd mp601.spr
install-repair-cmdline = install_PDF_Driver.cmd mp601.spr
ProductAvailable=YES

#[FILTER SETTINGS]
#Multiple filters sections can be declared
# One of FilterIP or FilterHost fields is mandatory.
# CurrentVersion and ProductAvailable are mandatory fields
# filter version is mandatory for every section
#FilterIP=xx.xx.*;yy.*
#FilterHost=.domain1;host@domain2
#CurrentVersion=4.9.0.25
#ProductAvailable=NO
```

#### ProductName

The name of the product to be updated.

#### Platform

The operating system of the product.

#### Current Version

The version number of the base product.

#### local-registry-version-key

The registry key of the product.

#### local-registry-version\_value

The registry key value of the product.

#### install-new-cmdline

Install the update as a new installation of the product.

#### install-update-cmdline

Install the update as a product patch. The product remains installed.

**install-repair-cmdline**

Install the update using the repair process. The product remains installed but the core files and registry files are reinstalled too.

**ProductAvailable**

Specifies if the update is available or not for client systems. Can be specified globally or in a specific filter. The filter section take priority over the global section.

**FilterIP**

Specifies the IP addresses or ranges of IP addresses selected for the update.

\* matches zero or more allowed characters.

? matches any allowed character exactly one time.

When using \* or ? globs the IP address strings are compared literally.

For example IPv6 address fc00::100 matches filter fc00::1\* but not the filter fc00::01\*. Since the operating system never returns an IPv6 address in the format fc00::0100, but fc00::100, the filter fc00::01\* never matches.

Example:

```
1\2\3\4;1\2\3\.*;1\2\3\1*;1\2\3\1*1;1\2\3\.?;1\2\3\1?;
1\2\3\1?1;1\2\3\4/32;1\2\3\4/24;1\2\3\0/255\255\255\0;
fc00::100;fc00::*;fc00::1*;fc00::1*1;fc00::?;fc00::1?;
fc00::1?1;fc00::100/64
```

where:

**1.2.3.4**

Matches only:

1.2.3.4

**1.2.3.\***

Matches any IPv4 address from:

1.2.3.0 to 1.2.3.255

**1.2.3.1\***

Matches only these IPv4 address:

- 1.2.3.1
- 1.2.3.10 to 1.2.3.19
- 1.2.3.100 to 1.2.3.199

**1.2.3.1\*1**

Matches only these IPv4 address:

- 1.2.3.101
- 1.2.3.111
- 1.2.3.121
- 1.2.3.131

- 1.2.3.141
- 1.2.3.151
- 1.2.3.161
- 1.2.3.171
- 1.2.3.181
- 1.2.3.191

### **1.2.3.?**

Matches the IPv4 range:

1.2.3.0 to 1.2.3.9

### **1.2.3.1?**

Matches the IPv4 range:

1.2.3.10 to 1.2.3.19

### **1.2.3.1?1**

Matches only these IPv4 address:

- 1.2.3.101
- 1.2.3.111
- 1.2.3.121
- 1.2.3.131
- 1.2.3.141
- 1.2.3.151
- 1.2.3.161
- 1.2.3.171
- 1.2.3.181
- 1.2.3.191

### **1.2.3.4/32**

Matches only:

1.2.3.4

### **1.2.3.4/24**

Matches the IPv4 range:

1.2.3.0 to 1.2.3.255

### **1.2.3.0/255.255.255.0**

Matches the IPv4 range:

1.2.3.0 to 1.2.3.255

### **fc00::100**

Matches only:

fc00::100

### **fc00::\***

Match the IPv6 range:

fc00:: to fc00::ffff:ffff:ffff:ffff

### **fc00::1 \***

Matches only these IPv6 addresses:

- fc00::1
- fc00::10 to fc00::1f
- fc00::100 to fc00::1ff
- fc00::1000 to fc00::1fff

### **fc00::1 \* 1**

Matches only :

fc00::1001 to 1ff1

### **fc00::?**

Matches the IPv6 range:

fc00::0 to fc00::f fc00::1?

### **fc00::1 ?**

Matches only:

fc00::10 to fc00::1f

### **fc00::1 ? 1**

Matches only these IPv6 addresses:

- fc00::101
- fc00::111
- fc00::121
- fc00::131
- fc00::141
- fc00::151
- fc00::161
- fc00::171
- fc00::181
- fc00::191
- fc00::1a1
- fc00::1b1
- fc00::1c1
- fc00::1d1

- fc00::1e1
- fc00::1f1

**fc00::100/64**

Matches the IPv6 range:

fc00:: to fc00::ffff:ffff:ffff:ffff

## 2

**FilterHost**

Specifies the host names selected for the update.

\* matches zero or more allowed characters.

? matches any allowed character exactly one time.

When using \* or ? globs the host name strings are compared literally.

Example: `host.example.org;*.example.org;.example.org;host?.example.org` where:

**host.example.org**

Matches only the host name `host.example.org`.

**\*.example.org**

Matches any host name that ends with `.example.org`.

**.example.org**

Matches any host name that ends with `.example.org`.

**host\*.example.org.**

Matches any host name that starts with `host`, followed by any number of characters (valid for host name) and ends with `.example.org`.

Examples:

- `host123.example.org`
- `host2A.example.org`
- `host-name.example.org`

**host?.example.org.**

Matches any host name that starts with `host`, followed by one character and ends with `.example.org`.

Examples:

- `host1.example.org`
- `host2.example.org`
- `hostM.example.org`

**Dependencies**

Specifies which application is closed during the update process.

## Configuring the automatic download of file updates from a Linux update server

You can configure the update server to use a certain package of updated files.

1. Run `ipmupdateserverctl freeze` to enter **Maintenance** mode.

**Note**

The **Maintenance** mode unlocks the product path folder and you can add and remove any files contained in the parent folder. The InfoPrint Manager server is also temporarily disabled.

2. Create a subdirectory under `/var/lib/ipmupdateserver/Products/InfoPrint Select/Windows/nn.nn.nn.nn/Files/update_set` to copy all the updated files and the installation location file.

**Note**

- `update_set` represents a folder named of your choice. You must create this folder before copying the files.
- `nn.nn.nn.nn` represents the version number.

**Example:** `/var/lib/ipmupdateserver/Products/InfoPrint Select/Windows/nn.nn.nn.nn/Files/Update_Patch_December`

3. Copy all the updated files to the new subdirectory. You can create multiple folders, depending on how many file sets you want to update.
4. Create a plain text file called `ipmupdate.path` in the new subdirectory. The `ipmupdate.path` file must contain only the location, on the client machine, where the new files must be copied.

**Example:**

```
C:\WINDOWS\SYSTEM32
```

5. Run `ipmupdateserverctl unfreeze` to exit **Maintenance** mode.

## Configuring the automatic download of registry updates from a Linux update server

To facilitate the installation on multiple machines, you can export the registry settings from a correctly configured machine.

1. Run `ipmupdateserverctl freeze` to enter **Maintenance** mode.

**Note**

The **Maintenance** mode unlocks the product path folder and you can add and remove any files contained in the parent folder. The InfoPrint Manager server is also temporarily disabled.

2. Copy the registry file with updated settings to the Registry folder.

**Note**

- The new registry settings can be exported as a `.reg` file using **regedit.exe**. Export the registry key `HKEY_LOCAL_MACHINE\SOFTWARE\RICOH\InfoPrint Select\Configuration`.
- The default Registry directory is `/var/lib/ipmupdateserver/Products/InfoPrint Select/Windows/nn.nn.nn.nn/Registry` where `nn.nn.nn.nn` is the version number.

3. Run `ipmupdateserverctl unfreeze` to exit **Maintenance** mode.

## Installing InfoPrint Manager Update

The InfoPrint Manager client systems can be automatically updated using an update application.

InfoPrint Manager Update is installed on all the client machines where any update is required. Installing the InfoPrint Manager Update application allows the update server to connect to the client machine and install any available update.

2

To install the automatic update client:

1. Insert the *RICOH InfoPrint Manager: Common Clients* DVD-ROM into your DVD-ROM drive.
2. Click **InfoPrintManagerUpdate.exe** to install the update client.
3. Select the destination folder. The default destination folder is `C:\Program Files\RICOH\InfoPrint Manager Update`.
4. Click **Finish** to complete the installation process.

When a product update is available, you are prompted to install or to postpone the update process. Postponing an update will close the update installer and it will retry after 24 hours. If the update process fails, contact the system administrator.

---

# 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 (`pio`), 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*.

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**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.

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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.

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## 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

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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**

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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**

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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**

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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**

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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*.

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**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*.

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**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**

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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.

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## 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

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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**

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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**

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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.

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## **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.

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## 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 that 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)**

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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.

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## 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.

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## **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**

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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.

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**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**

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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**

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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.

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## 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

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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

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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**

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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.



