



Getting Started

Version 4.13.1

Getting started with server systems

1

Getting started with client systems

2

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

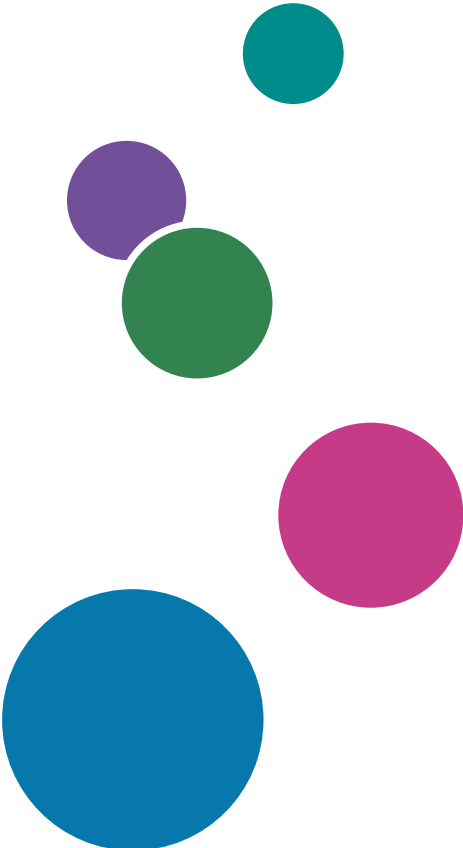


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Introduction

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 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 4.13 (Program Number 5648-F40).

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

Instruction manuals

These instruction manuals are included:

For information about InfoPrint Manager, see these documents:

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

-
- *RICOH InfoPrint Manager for AIX: Planning Guide*, G550-1060
 - *RICOH InfoPrint Manager for AIX: Getting Started*, G550-1061
 - *RICOH InfoPrint Manager for AIX: Procedures*, G550-1066
 - *RICOH InfoPrint Manager: High Availability Guidelines*, G550-20261
 - *RICOH InfoPrint Manager: Reference*, S550-1052
 - *RICOH InfoPrint Manager: PSF, Server, and Transform Messages*, G550-1053
 - *RICOH InfoPrint Manager: Secure Print: Installing and Configuring*, G550-20129
 - *RICOH InfoPrint Manager: SAP R/3 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 Reader, must be installed to view the PDF documentation.

For more information about RICOH printing products, see:

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

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

How to read the documentation


Displaying the instruction manual

Use this procedure to view the instruction manuals.


Displaying the instruction manual in PDF format

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

Displaying the instruction manual in HTML format

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

Displaying property help

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

Symbols

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

Important

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

Note

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

Bold

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

Italic

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

Monospace

Monospace type indicates computer input and output.

Abbreviations

AFP

Advanced Function Presentation

IP

Internet Protocol

PDF

Portable Document Format

PCL

Printer Command Language

GIF

Graphical Interchange Format

JPEG

Joint Photographic Experts Group

TIFF

Tagged Image File Format

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- POWER
- Print Services Facility
- pSeries
- S/390
- z/OS

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1. Getting started with server systems

- Installing InfoPrint Manager
- Installing InfoPrint Manager on remote systems
- Migrating to InfoPrint Manager Version 4.13
- Installing InfoPrint Manager for Linux service updates
- Uninstalling InfoPrint Manager for Linux
- Installing InfoPrint Transform Manager Feature
- Getting started with InfoPrint Manager
- Installing and using InfoPrint Manager Notifications
- Managing InfoPrint Manager licensing
- InfoPrint Manager User Interfaces
- Understanding InfoPrint Manager Security
- Understanding Destination Support Systems (DSS)
- Creating and managing actual destinations
- Large file support
- Using the LPD Gateway with InfoPrint Manager for Linux
- Using the IPP Gateway with InfoPrint Manager for Linux
- Enabling Secure Sockets Layer (SSL) in the Web Server for HTTPS protocol
- Configuring Tomcat to redirect all HTTP requests to HTTPS

Installing InfoPrint Manager

InfoPrint Manager consists of several software components. Software *Base components* are included when you purchase InfoPrint Manager for Linux, while *optional components* are additions to the base product that you can purchase and install through the Base DVD-ROM. These additions are also called *features*.

The *InfoPrint Manager for Linux: Base Server* DVD-ROM, LCD2-20035, contains all the software for installing an InfoPrint Manager server on a Linux system. All these components are installed with the server and allow you to administer print operations from the system on which the server is installed:

- **InfoPrint Manager Server**
- **InfoPrint Manager Administration and Operations (Interfaces)**
Allows you to administer print operations from the system that the server is installed on.
- **InfoPrint Manager Notifications server**
Lets the InfoPrint Manager server send status messages about InfoPrint objects to InfoPrint Manager Notifications clients.
- **InfoPrint Manager Notifications client**
Lets the InfoPrint Manager server show messages on the system that is installed on.
- **InfoPrint Manager Internet Printing Protocol (IPP) Gateway**
Lets you submit printing jobs using the IPP protocol via the InfoPrint Manager to printers.
- **InfoPrint Line Printer Daemon (LPD) Gateway**
Allows users to submit jobs through the LPD Gateway to an InfoPrint Manager server
- **InfoPrint Manager MVS Download**
Allows you to print MVS jobs on InfoPrint Manager printers.
- **InfoPrint Manager Transforms**
Allows you to run various transforms like: db2afp, d2afp, gif2afp, img2afp, jpeg2afp, line2afp, pcl2afp, pdf2afp, ps2afp, tiff2afp, xml2afp, and xml2pdf.

- **InfoPrint Manager Web Server**

Allows you to run and administrate web applications such as Pull Print or Web Interface. The Web Server is installed with the base server and it runs on the system only if it is set to start automatically.

- **InfoPrint Manager Web Interface**

Allows InfoPrint Manager to run administration and operations on a web browser user interface.

This DVD-ROM also contains the following InfoPrint Manager features:

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

★ Important

- To identify the Linux operating system versions supported, see the *RICOH InfoPrint Manager for Linux: Planning Guide, G550–20262*.
- You must run the InfoPrint Manager Installer from the most recent Service DVD-ROM.
- Installation must be conducted using the root user.
- The InfoPrint Manager installation program creates a new local user account used for the application to run. The default system user is **ipm1** and the default group is **sys**. The default password for the **ipm1** user account is **Inf0PrintManager**.

Start here for a new installation

This section describes how to complete an installation of the InfoPrint Manager product.

The InfoPrint Installer lets you install InfoPrint Manager for Linux 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)**. Generate your license keys needed for product registration at <https://dl.ricohsoftware.com>, using the EID and the fingerprint of the machine you intend to run InfoPrint Manager on. The EID is only used to identify what you have purchased. Register your license keys for the product each time you receive an email with an EID for InfoPrint Manager components that you have purchased.

InfoPrint Manager is automatically installed in **trial mode** on your server. Get the fingerprint of your server where InfoPrint Manager was installed using the License Key Management Application (LKMA) and then use the fingerprint together with your EID on the self-service website at <https://dl.ricohsoftware.com> to generate your license key. Download the license key from the self-service website and register the product using the LKMA. For more information about LKMA, see [Managing trial and perpetual licenses using the License Key Management Application \(LKMA\)](#), p. 52.

To get the fingerprint of the system where you plan to install InfoPrint Manager, before you start the installation you can run the utility available on the root of the base product DVD-ROM or ISO called **getfingerprint**.

Download the license key from the self-service website and copy it on the server where you are about to install InfoPrint Manager. Start the installation process and continue to the installer panels. When you are asked for the license key, input the path to where you copied it on the server. Continue the installation and complete the registration and installation process.

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 root user.
2. On a command shell terminal, run the **getfingerprint** utility available on the root of the base DVD-ROM or ISO of the product. The output of the command is the server fingerprint needed to generate the license key for your product.
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 on your server. You select this file when the installer or LKMA asks for the license key path.

Information about updates to this release of InfoPrint Manager is available online, where it is updated as necessary. The *RICOH InfoPrint Manager for Linux: Base Server DVD-ROM*, 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.ricohsoftware.com/swinfocenter>.

★ 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.

Preparing to use the InfoPrint Manager Installer

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

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 server is going to be a secondary server, you need the name of the primary server. See [Installing secondary InfoPrint servers, p. 42](#) for more information.
 - 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 email 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. 13](#).
4. The completed communications worksheet that you received from your Ricoh service representative.

★ Important

If you have a machine with more than one DVD-ROM unit, you must insert the *InfoPrint Manager for Linux: Base Server* DVD-ROM in the first unit detected by the operating system (`/dev/cdrom` or `/dev/sr0`).

Preparing the server

Use this procedure if you are installing InfoPrint Manager for Linux for the first time on a Linux server.

1. Log in to the Linux system as `root`.
2. Check to see that the size of your swap space is adequate. It is recommended that you have at least 2 gigabytes of swap space. A rule of thumb is to use a swap space of double system memory.

Consult your Linux documentation to learn how to optimize the size of your swap space. A smaller swap space does not prevent InfoPrint Manager from functioning, but does impact performance.

3. Insert the most recent **Service DVD** into the DVD-ROM reader.

★ Important

You should install InfoPrint Manager software using the most recent version of the InfoPrint Installer. Using an updated InfoPrint Installer lets you install and configure the latest InfoPrint Manager features. An updated InfoPrint Installer is found on the most recent **Service DVD-ROM**.

4. Make sure the Common Unix Printing System (CUPS) is installed and running on the system where you are about to install InfoPrint Manager for Linux.

↓ Note

- InfoPrint Manager CUPS DSS uses the Linux CUPS printing system. Make sure that you have enough space for the /var file system so as the /var/spool/cups area, where temporary job information is saved, has sufficient capacity for your workload.
 - For a more detailed configuration of the CUPS printing system, see the CUPS documentation at <http://www.cups.org> and the “CUPS DSS and PSF-Other tuning” section in the *RICOH InfoPrint Manager for AIX and Linux: Configuring and Tuning Guide*.
5. InfoPrint Manager for Linux supports only LVM (Logical Volume Management) disk partitioning, which provides several advantages over the standard partitioning scheme. For more information, see “The Linux Logical Volume Manager ” section below.
 6. Make sure that all prerequisite packages are installed previous to installation start. A complete list of rpm packages required is available in the *Verifying Prerequisites* chapter in the *RICOH InfoPrint Manager for Linux: Planning Guide, G550-20262*.
 7. If your target operating system is SUSE Enterprise Server and you plan to use the root user to run InfoPrint Manager, the **Locale Settings for User root** must be set to **Yes** before installing for InfoPrint Manager.
 8. Open a terminal window.
If you are using the GNOME, you can open a terminal window by clicking the terminal icon contained in the task bar (the task bar appears at the bottom of the screen). By default, the terminal icon is contained in a popup menu above the text editor icon that appears on the task bar.

To determine the name of the DVD mount point, enter:

```
ls /media/*
```

9. Mount the DVD, if necessary. Enter:

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

If you want to view a help statement showing various install options, enter this command:

```
/media/<mount_point>/setup -h
```

10. Disable your antivirus software. Installing InfoPrint Manager 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:

- /usr/lpp/pd
- /var/pd

- /var/psf

Note

- If you plan to install InfoPrint Manager on SUSE Linux Enterprise Server, disable the CIS SUSE Linux Enterprise Benchmark application.

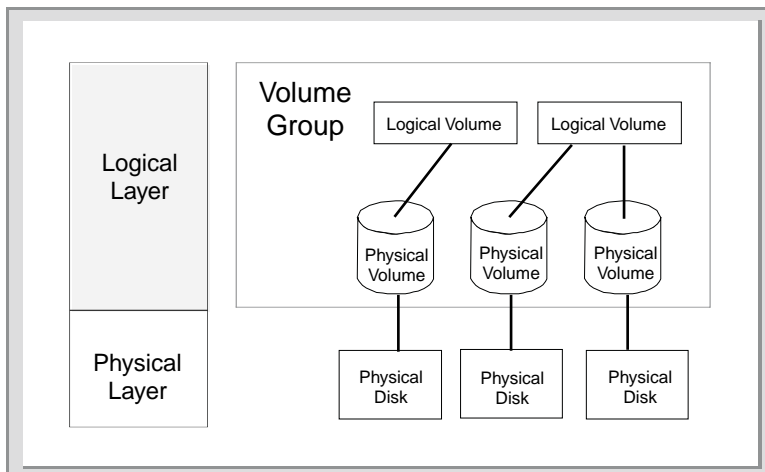
1

The Linux Logical Volume Manager

Linux uses something called the Logical Volume Manager (LVM) to manage, at a logical level, all the file systems and directories created in a Linux system. LVM is a disk management mechanism that is significantly different from traditional UNIX partitioning schemes. The LVM maps data between logical and physical storage, allowing data to be discontinuous, span multiple disks, flexible and dynamically expanded. One advantage is the ability to allocate extra space to a file system without the need to rebuild the disk. The LVM controls physical disk resources by providing a simplified logical view of the available storage space.

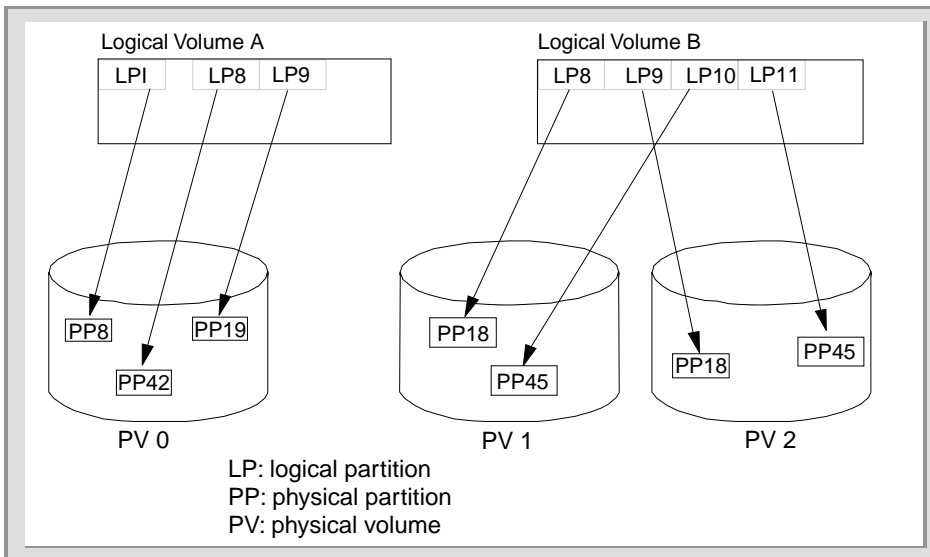
The logical storage structure that is the most common is called the volume group (VG). In Linux, storage allocation is performed at the volume group level. Data cannot span volume groups. When the Linux operating system is first installed, a volume group called `vg_<hostname>` is created. The `vg_<hostname>` contains the base operating system files for Linux.

Logical Volume Manager organization



Each individual disk drive is logically represented by a physical volume (PV). Each physical volume consists of several partitions called physical partitions (PP). The physical partitions are grouped into something called a logical volume that contains logical partitions. The logical volume, in turn, belongs to a volume group. Logical volumes contain the file systems.

Detail of the Volume Group logical structure



As you can see in the previous Figure, a volume group can have data that span more than one physical volume.

The logical volumes can use linear, striped, or mirrored volumes to store data. This file system uses database journaling techniques to maintain its structural consistency. This prevents damage to the file system when the system is halted abnormally. Other file systems that you might encounter on Linux might include `xtfs`, NFS (Network File System), and AFS (Andrew File System). The term *file system* is also used to describe the hierarchical structure (file tree) of files and directories.

You can create new volume groups. See *Linux Commands Reference* for more information. You can also manually create InfoPrint directory structures in a volume group by using the `allocatefs` command. See *RICOH InfoPrint Manager: Reference* for more information about the `allocatefs` command.

Installation options

- To install the InfoPrint Manager server locally, see [Installing InfoPrint Manager server software and features locally with the Installer](#), p. 18 and [Installing server software and trial versions of features locally \(unattended\)](#), p. 19.
- To perform a remote installation, see [Installing InfoPrint Manager on remote systems](#), p. 20.
- To upgrade from an older version of InfoPrint Manager, see [Migrating from a primary server to a secondary server](#), p. 35.
- To install additional features, service updates or a secondary InfoPrint server, see [Installing InfoPrint Manager for Linux service updates](#), p. 36 and [Installing secondary InfoPrint servers](#), p. 42.
- For more information about installing additional languages, see [Adding or removing languages](#), p. 40.

Installing InfoPrint Manager server software and features locally with the Installer

Note

- Before installing InfoPrint Manager, use `install -h` to see all available flags supported by the installer.

For greater flexibility, the InfoPrint Manager Installer does not create the file systems for `/var/pd`, `/var/psf`, and `/var/psf/segments` anymore. If a file system is found in the above locations, it will be used as is. Otherwise, a directory is created for each of the above locations. To create a file system for each of the above locations, use the `allocfs.sh` script from the root directory of your installation media.

The InfoPrint Manager Installer installs all the required dependencies (rpm packages) automatically. Make sure that **dnf** (Red Hat Enterprise Linux) or **zypper** (SUSE Linux Enterprise Server) can access the operating system repository before starting the InfoPrint Manager installation.

To install InfoPrint Manager server software or optional InfoPrint Manager for Linux features on the local Linux server using the InfoPrint Manager Installer:

1. Mount the InfoPrint Manager ISO file to a location of your choice.
2. Enter this command:

```
/path/to/mount/point/install.sh
```

Change `/path/to/mount/point` accordingly and follow the prompts on the screen.

3. On your keyboard, press **Enter** to read the terms of the **RIICOH InfoPrint Manager Software License Agreement**. Then enter **yes** or press **Enter** to accept the terms of the license agreement and proceed with the installation.
4. On your keyboard, press **Enter** to read the terms of the **RIICOH Software Maintenance Agreement**. Then enter **yes** or press **Enter** to accept the terms of the maintenance agreement and proceed with the installation.
5. Choose the InfoPrint Manager license that you want to install (trial or product). If you choose the product version, specify the actual complete path to the license file:

```
/path/to/license.key
```

Note

- You can use tab completion to enter the path.
6. Press **Enter** to select the default user and group to run InfoPrint Manager. The default user is **ipm1** and the default group is **sys**.
 7. If you want to create the user and the group yourself, use the format `ipmuser:ipmgroup`.
 8. Enter the digit preceding the language that you want to use with InfoPrint Manager server and features. Press **Enter** to use English. For more information about how to add languages for your operating system, see [Adding or removing languages, p. 40](#).
 9. Select the features that you want to install. Features add extra functions to InfoPrint Manager. Separate feature media might be required.

These features are available on the ISO media and can be installed with the trial license or with the product license:

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

This feature is available on separate media and can be installed only with the product license:

- InfoPrint Manager Japanese PostScript Font Feature.

10. Choose if you want to create an **ipin_response** file for an unattended installation. If you enter **yes**, the installation stops after the file is created and you will be asked for the name of the remote system. Leave blank for the name of the local system.

↓ Note

- The **ipin_response** file is saved in the home directory of the user running the installer. If an **ipin_response** file already exists, you will be asked to overwrite the file or choose another name. Only the file name can be changed as the file is always saved in the home directory.

↓ Note

- All the steps so far do not require that the `install.sh` utility is run by the **root** user.

11. If you are reinstalling InfoPrint Manager, you can opt to keep the objects currently defined in your InfoPrint Manager server. There are pre-existing objects (printers for example) that are configured for use with InfoPrint Manager. Enter **yes** to retain these objects and the configuration associated with them.
12. Enter the full path to the directory containing the InfoPrint Manager installation files, namely the path to the mount point or to a different directory containing the full directory structure of the ISO media.

↓ Note

- You can use tab completion to enter the path.

The InfoPrint Manager installation begins. After the installation is complete, log off and log in again for each logged in user.

To reinstall InfoPrint Manager, use the **-r, -R --reinstall** flags.

For troubleshooting information about the installation process, see the specific `/var/log/pd/install/<infoprint manager version>/*.log` files.

Installing server software and trial versions of features locally (unattended)

↓ Note

- Before installing InfoPrint Manager, use `install -h` to see all available flags supported by the installer.

For greater flexibility, the InfoPrint Manager Installer does not create the file systems for `/var/pd`, `/var/psf`, and `/var/psf/segments` anymore. If a file system is found in the above locations, it will

be used as is. Otherwise, a directory is created for each of the above locations. To create a file system for each of the above locations, use the `allocfs.sh` script from the root directory of your installation media.

The InfoPrint Manager Installer installs all the required dependencies (rpm packages) automatically. Make sure that **dnf** (Red Hat Enterprise Linux) or **zypper** (SUSE Linux Enterprise Server) can access the operating system repository before starting the InfoPrint Manager installation.

To install InfoPrint Manager server software or optional InfoPrint Manager for Linux features on the local Linux server unattended:

1. Follow steps 1-9 of the installation procedure described in [Installing InfoPrint Manager server software and features locally with the Installer, p. 18](#).
2. Enter **yes** when asked if you want to create an **ipin_response** file for an unattended installation. Enter the name of the remote system and leave blank for the name of the local system.
3. Use your Linux editor of choice to edit the **ipin_response** file. Accept the License Agreement by setting **acceptLicense** to 1.
4. Use this command to start the unattended installation:

```
/path/to/mount/point/install.sh -a /path/to/ipin_response/file \  
-s /path/to/mount/point
```

Change `/path/to/mount/point` and `/path/to/ipin_response/file` accordingly.

The InfoPrint Manager installation begins. After the installation is complete, log off and log in again for each logged in user.

For troubleshooting information about the installation process, see the specific `/var/log/pd/install/<infoprint manager version>/*.log` files.

Installing InfoPrint Manager on remote systems

You can configure a server to support remote and unattended installations of the InfoPrint Manager software. Follow the instructions below in [Configuring the InfoPrint Manager software server, p. 20](#) to set up the software server initially. Once you have an InfoPrint Manager software server configured, your options include:

1. “Pull” the software to a remote system from an InfoPrint Manager software server. See [Pull InfoPrint Manager to a remote system, p. 22](#).
2. Unattended installation of InfoPrint Manager using the “pull” method and a response file. See [Pull InfoPrint Manager to a remote system \(unattended\), p. 22](#).
3. Unattended installation of InfoPrint Manager using the “push” method and a response file. See [Push InfoPrint Manager to a remote system \(unattended\), p. 25](#).

Configuring the InfoPrint Manager software server

To install software on remote systems, you must first create an InfoPrint Manager software server.

The `mk_ip_remote` script located on the *InfoPrint Manager for Linux Base Server* DVD-ROM, LCD2-20035, creates the software server for you automatically. The newest version of this script is located on

the most recent Service DVD-ROM. Always use the newest version of the `mk_ip_remote` script that is available.

1. To run this script:

1) Determine the name of the DVD mount point, enter:

```
ls /media/*
```

Make sure that the InfoPrint Manager DVD-ROM is inserted in the DVD-ROM drive and that the drive is mounted to `/media/cdrom`.

If you have an InfoPrint Manager Service DVD-ROM, you should insert the Service DVD-ROM first, and follow the directions below.

2) Mount the DVD, if necessary. Enter:

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

3) If you would like to see the options that are available with this script, enter this command:
`/cdrom/mk_ip_remote -h`.

4) Copy the script to the temporary directory on the Linux system by entering:`cp /cdrom/mk_ip_remote /tmp`. Do not run the script from the DVD-ROM.

5) Run the script by entering: `/tmp/mk_ip_remote`, and follow the instructions on the screen. The script copies all the files necessary for InfoPrint Manager to the `/ip_remote` directory, unless other options were specified.

To install from tar files, you have to create tar files from the ISO images of the base server and features you have. Modify the `mk_ip_remote` script to list the base, features, and service names of your tar file and then run the script with the `-t` parameter.

Here are the contents of a modified `mk_ip_remote` file:

```

#-----
#
# If you are using tar files, edit the following list to update the
# names of the tar files, as appropriate. Make SURE that the name of
# the APAR tar file is the LAST one in the list.
#-----
TARFILELIST=" \
    base_cd.tar \
    hispeed_cd.tar \
    medspeed_cd.tar \
    wrkgrp_cd.tar \
    u805636s.tar \
"

```

When you are asked **"Do you have any additional feature cds?"** insert a feature DVD-ROM, type `y`, and press `Enter`. Otherwise, type `n` and press `Enter`.

After `mk_ip_remote` completes successfully, you will have a directory called `/ip_remote` that can easily be made accessible to all the systems in your network through the Network File System (NFS).

2. When the InfoPrint Manager software server is in place, `root` users on remote systems can mount `/ip_remote` as an NFS file system. Once mounted, the InfoPrint Manager software can be "pushed" or "pulled" from the server.

Pull InfoPrint Manager to a remote system

Follow these instructions to pull InfoPrint Manager to a remote system on which you want to install InfoPrint Manager.

1. Set up the InfoPrint Manager software server by following the instructions in [Configuring the InfoPrint Manager software server, p. 20](#).
2. From the remote system, log in as **root** and perform these steps:
 1. Create the `/ip_remote` directory on the target system: `mkdir /ip_remote`.
 2. Mount the InfoPrint Manager software server as an NFS file system:

```
mount Infoprint_Manager_software_server_hostname:/ip_remote /ip_remote
```

3. Begin the installation process by entering this command:

```
/ip_remote/install.sh
```

For troubleshooting information about the installation process, see the specific `/var/log/pd/install/<infoprint manager version>/*.log` files.

Pull InfoPrint Manager to a remote system (unattended)

Use this procedure to pull the InfoPrint Manager software from the InfoPrint Manager software server to a remote unattended machine:

1. Set up the InfoPrint Manager software server by following the instructions described in [Configuring the InfoPrint Manager software server, p. 20](#).
2. Follow steps 1-9 of the installation procedure described in [Installing InfoPrint Manager server software and features locally with the Installer, p. 18](#).
3. Enter **yes** when asked if you want to create an **ipin_response** file for an unattended installation. Enter the name of the remote system and leave blank for the name of the local system.
4. Use your Linux editor of choice to edit the **ipin_response** file. Accept the License Agreement by setting **acceptLicense** to 1.
5. Copy the **ipin_response** file to a location on the remote system such as the `/tmp` directory.
6. From the remote system, log in as **root** and follow these steps:
 1. Create the `/ip_remote` directory on the target system: `mkdir /ip_remote`.
 2. Mount the InfoPrint Manager software server as an NFS file system:

```
mount Infoprint_Manager_software_server_hostname:/ip_remote /ip_remote
```

7. Specify this command to start the remote pull installation:

```
/ip_remote/install.sh -a /path/to/ipin_response/file
```


Note

- If you have elected to give the `/ip_remote` file system a different mount point, you must use the optional `-s` flag to identify it.

The InfoPrint Manager installation begins by reading the values from the `ipin_response` file. After the installation is complete, log off and log in again for each logged in user.

For troubleshooting information about the installation process, see the specific `/var/log/pd/install/<infoprint manager version>/*.log` files.

Sample ipin_response file

```

////////////////////////////////////
//
// RICOH InfoPrint Manager™ License
//
////////////////////////////////////

// The following setting is used to determine whether you accept the
// license agreement of either Trial or Register license type and the
// software maintenance agreement. Read the license and software
// maintenance agreements, from Ricoh Company, Ltd. and other companies,
// carefully. To review the licenses in other languages, refer to the
// Publications CD or the web page available at
// https://help.ricohsoftware.com/swinfocenter/ricoh-software-licenses/
// swlicenses.ditamap/$/license_infoprintmanager .
// The value of 1 indicates "Accept" and 0 indicates "Decline".
// Declining the license and software maintenance agreements will cause
// the product not to install.
acceptLicense=0

// The following setting is used to determine whether you intend to
// install InfoPrint Manager using Trial or Register license type, where 1
// indicates "Trial" and 0 indicates "Register".
// The trial licenses are always installed during installation of RICOH
// InfoPrint Manager.
trialLicense=1

// The following setting is used only when a Register license type is
// selected and it is used to determine the location of the license file
// used for registration of the InfoPrint Manager product. Make sure your
// license file is available on the specified location during the
// installation process.
// Example: licenseKey=/path/to/license.key
#licenseKey=

////////////////////////////////////
//
// RICOH InfoPrint Manager user and group
//
////////////////////////////////////

// Choose under which user and group (optional) InfoPrint Manager will
// run. Default user is ipm1, but it can be root or other system user or
// network user. If no group is specified, the default is group sys. The
// format for a different user and group is:
// ipm_user=ipmuser:ipmgroup

```

```
ipm_user=ipm1

// Create the user at install, default true.
create_user=true

////////////////////////////////////
//
// RICOH InfoPrint Manager Language
//
////////////////////////////////////

// Set the language, by default is en_US
iprLocale=en_US
#iprLocale=fr_FR
#iprLocale=es_ES
#iprLocale=de_DE
#iprLocale=it_IT
#iprLocale=Ja_JP

////////////////////////////////////
//
// RICOH InfoPrint Manager Features
//
////////////////////////////////////

// The following variables define the InfoPrint Manager components or
// features you want to install. 1 indicates "yes" and 0 indicates
// "no".
wantSAP=0
wantJPSF=0
wantPullPrint=0
wantAFP2PDF=0

// The following parameters define the host and the port of the InfoPrint
// Manager command processor server (and its backup) that the Pull Print
// Feature is using to communicate with the InfoPrint Manager servers.
// Example: PRIMARY_HOST_PORT=localhost:6874
#PRIMARY_HOST_PORT=
#PRIMARY_BACKUP_HOST_PORT=

////////////////////////////////////
//
// RICOH InfoPrint Manager Remote Installation
//
////////////////////////////////////

// Make sure that remote host name matches the current hostname setting if you
// are performing an unattended REMOTE install.
hostname=gv-centos8.saguaroprint.ro

////////////////////////////////////
//
// RICOH InfoPrint Manager re-install
//
////////////////////////////////////

// If you are running a reinstall of InfoPrint Manager, you will probably
// want to retain your previously defined configuration objects. To do
// this, set wantKeepObjects to 1. If you want to have a new minimal
// configuration, set to 0.
wantKeepObjects=1
```

Push InfoPrint Manager to a remote system (unattended)

★ Important

The push installation method requires ssh access to all the remote systems on which you want to install InfoPrint Manager. For security reasons, only SSH public key authentication is allowed.

The following SSH requirements must be met before installing InfoPrint Manager:

- **public key authentication** must be enabled and functional for the `root` user on all the remote systems
- **fingerprint of the server's public key** must be already accepted.

The following SSH restrictions are enforced by the InfoPrint Manager installer on the command line:

<code>ClearAllForwardings</code>	enabled
<code>ForwardAgent</code>	disabled
<code>ForwardX11</code>	disabled
<code>KbdInteractiveAuthentication</code>	disabled
<code>PasswordAuthentication</code>	disabled

To make an unattended remote push installation of InfoPrint Manager:

1. Set up the InfoPrint Manager software server by following the instructions described in [Configuring the InfoPrint Manager software server, p. 20](#).
2. Follow steps 1-9 of the installation procedure described in [Installing InfoPrint Manager server software and features locally with the Installer, p. 18](#).
3. Enter **yes** when asked if you want to create an **ipin_response** file for an unattended installation. Enter the name of the IP address for the remote system and leave blank for the name of the local system.
4. Use your Linux editor of choice to edit the **ipin_response** file. Accept the License Agreement by setting **acceptLicense** to 1.

↓ Note

- Create an **ipin_response** file for each host where InfoPrint Manager will be installed.
5. Copy the **ipin_response** file to a location on the remote system such as the `/ip_remote/auto` directory. For example, assume `/ip_remote/auto` has these contents:

```
/ip_remote/auto/server1
/ip_remote/auto/linus.east
/ip_remote/auto/node5
```

↓ Note

- The response file names above are just examples. The response files can have any file name that you want.
6. As the `root` user, run the following command to perform the InfoPrint Manager installation on all remote systems configured in the `/ip_remote/auto` directory:

```
/ip_remote/remote_install -m
```

Note

- The `remote_install` script creates an installation log file for each remote system configured in the `/ip_remote/auto` directory. The logs are created in the `var/log/pd/install/<infoprint manager version>/` directory. The log files contain all the executed ssh commands and the response from the remote system.
- If you are performing an upgrade, the old install log files from the remote system are automatically backed up.
- If you have chosen to give the `/ip_remote` file system a different mount point, you must use the optional `-s` flag to identify it.
- For troubleshooting information about the installation process, see the specific `var/log/pd/install/<infoprint manager version>/*.log` files.

Migrating to InfoPrint Manager Version 4.13

Start here for an upgrade installation

This section describes how to begin an **upgrade** installation of a pre-existing InfoPrint Manager system. If you are not performing an upgrade installation, see [Installation options, p. 17](#) for other options.

Important

Migrating to InfoPrint Manager Version 4.13 from an older version requires environment-wide updates. If you plan to migrate a server, be sure to allocate time and resources to make these upgrades:

- Upgrade all management and job submission client applications on all networked workstations to the Version 4.13 level.
- Upgrade all InfoPrint Manager servers that interoperate to the Version 4.13 level.

If you have previously installed InfoPrint Manager software on your Linux system, you might have invested considerable time defining your printing system configuration. The InfoPrint Installer gives you the option to migrate your InfoPrint Manager product configuration to InfoPrint Manager Version 4.13, but you need to reinstall any features that you use with InfoPrint Manager. Be sure to select all of the appropriate features when presented with the feature selection screen during the migration.

Important

- Follow the instructions below to prepare your system for migration, then continue to [Installing InfoPrint Manager, p. 11](#).

Preparing to migrate to InfoPrint Manager Version 4.13

★ Important

- Before running the InfoPrint Installer to migrate to InfoPrint Manager Version 4.13, make a complete backup of your current printing system. To be completely safe, it is recommended that you also make a backup of each volume group before proceeding.
- You will need to reinstall all of the features that you installed with the previous version of InfoPrint Manager.
- Be sure to select all of the appropriate features.
- Do not forget to also migrate any secondary servers to the Version 4.13 level.

The migration process interrupts any active print jobs that have been submitted. Before migrating, you should allow all active, paused, or pending jobs to complete processing. If you cannot complete processing, be sure to delete all active, paused, and pending jobs before migrating.

During the process of installing the InfoPrint Manager software, your Linux operating system software might be updated to make sure that InfoPrint Manager will function properly. The InfoPrint Manager Installer installs all the required dependencies (rpm packages) automatically. Make sure that **dnf** (Red Hat Enterprise Linux) or **zypper** (SUSE Linux Enterprise Server) can access the operating system repository before starting the InfoPrint Manager installation.

Backing up InfoPrint Manager for Linux

If you want to back up InfoPrint Manager for Linux, you should back up these directories:

- `/ipdata` (if used)
- `/usr/lpp/psf/config`
- Any file systems that begin with the path `/var/pd/*`
- `/var/pddir`
- Any file systems that begin with the path `/var/psf/*`
- `/var/spool/lpd`

In addition, these individual files should be backed up:

- `/var/lib/pd/fst.ports`
- `/etc/rc.pd.servers`
- `/etc/services`

When you install InfoPrint Manager for Linux, InfoPrint Manager backs up several files in the `/tmp/InfoPrintManager-<IPM_VERSION>-baklist-<DATE>.tar.gz` archive. The archive operation output is recorded to `/tmp/InfoPrintManager-<IPM_VERSION>-baklist-<DATE>.log`. If you are reinstalling InfoPrint Manager, both files are moved to the `/var/pd/baklist` directory.

This list provides the full default path names for commonly modified files:

- `/usr/lpp/pd/bin/ipm_print`

- /usr/lpp/pd/bin/ipm_print.hp
- /usr/lpp/pd/bin/ipm_print.sun
- /usr/lpp/pd/bin/ipm_query
- /usr/lpp/pd/bin/ipm_query.hp
- /usr/lpp/pd/bin/ipm_query.sun
- /usr/lpp/pd/bin/ipm_dev_query
- /usr/lpp/pd/bin/ipm_job_cancel
- /usr/lpp/pd/bin/ipm_job_query
- /usr/lpp/pd/bin/ipm_submit
- /usr/lpp/psf/acif/asciinp.c
- /usr/lpp/psf/acif/asciinpe.c
- /usr/lpp/psf/acif/apkexits.h
- /usr/lpp/psf/acif/apka2e.c
- /usr/lpp/psf/acif/apkinp.c
- /usr/lpp/psf/acif/apkind.c
- /usr/lpp/psf/acif/apkout.c
- /usr/lpp/psf/acif/apkres.c
- /usr/lpp/psf/acif/Makefile
- /usr/lpp/psf/ps2afp/ps2afp.cfg
- /usr/lpp/psf/ps2afp/ps2afpd.cfg
- /usr/lpp/psf/ps2afp/3160d.cfg
- /usr/lpp/psf/ps2afp/apped.cfg
- /usr/lpp/psf/ps2afp/ps2afp.ps
- /usr/lpp/psf/ps2afp/ps2afpe.ps
- /usr/lpp/psf/ps2afp/c/ps2afp.cfg
- /usr/lpp/psf/ps2afp/c/ps2afpd.cfg
- /usr/lpp/psf/ps2afp/muxd.cfg
- /usr/lpp/psf/ps2afp/no.compat.ops
- /usr/lpp/psf/ps2afp/no.copies
- /usr/lpp/psf/ps2afp/a/no.compat.ops
- /usr/lpp/psf/ps2afp/a/no.copies
- /usr/lpp/psf/ps2afp/err.handler.off
- /usr/lpp/psf/ps2afp/err.handler.on
- /usr/lpp/psf/ps2afp/a/err.handler.off
- /usr/lpp/psf/ps2afp/a/err.handler.on
- /usr/lpp/psf/ps2afp/font.subs.off

- /usr/lpp/psf/ps2afp/font.subs.on
- /usr/lpp/psf/ps2afp/a/font.subs.off
- /usr/lpp/psf/ps2afp/a/font.subs.on
- /usr/lpp/psf/ps/preload.ps
- /usr/lpp/psf/bin/ainmsg
- /usr/lpp/psf/bin/ainuxind
- /usr/lpp/psf/exits/ainuexit.h
- /usr/lpp/psf/exits/ainuxacc.c
- /usr/lpp/psf/exits/ainuxaud.c
- /usr/lpp/psf/exits/ainuxhdr.c
- /usr/lpp/psf/exits/ainuxhdrx.c
- /usr/lpp/psf/exits/ainuxind.c
- /usr/lpp/psf/exits/ainuxout.c
- /usr/lpp/psf/exits/ainuxsep.c
- /usr/lpp/psf/exits/ainuxsepx.c
- /usr/lpp/psf/exits/ainuxt1r.c
- /usr/lpp/psf/exits/ainuxt1rx.c
- /usr/lpp/psf/exits/ainuxhdrp.c
- /usr/lpp/psf/exits/ainuxaccp.c
- /usr/lpp/psf/exits/ainuxaudp.c
- /usr/lpp/psf/exits/ainuxt1rp.c
- /usr/lpp/psf/exits/ainuxsepp.c
- /usr/lpp/psf/exits/ainuxacc2.c
- /usr/lpp/psf/exits/ainuxaud2.c
- /usr/lpp/psf/exits/ainuxhdr2.c
- /usr/lpp/psf/exits/ainuxjobcompletion.c
- /usr/lpp/psf/exits/ainuxsep2.c
- /usr/lpp/psf/exits/ainuxt1r2.c
- /usr/lpp/psf/exits/ainacclog.c
- /usr/lpp/psf/exits/ainaudlog.c
- /usr/lpp/psf/exits/ainupod1.c
- /usr/lpp/psf/exits/ainupod2.c
- /usr/lpp/psf/exits/ainupod3.c
- /usr/lpp/psf/exits/ainurpt.h
- /usr/lpp/psf/exits/ainurpt1.c
- /usr/lpp/psf/exits/ainurpt2.c

- /usr/lpp/psf/exits/ainurpt3.c
- /usr/lpp/psf/exits/ainurpt4.c
- /usr/lpp/psf/exits/ainurpt5.c
- /usr/lpp/psf/exits/ainurpt6.c
- /usr/lpp/psf/exits/ainurpt7.c
- /usr/lpp/psf/exits/ainurpt8.c
- /usr/lpp/psf/exits/ainurpt9.c
- /usr/lpp/psf/exits/Makefile
- /usr/lpp/psf/exits/pduxblkh.c
- /usr/lpp/psf/exits/pduxblks.c
- /usr/lpp/psf/exits/pduxblkt.c
- /usr/lpp/psf/utis/lpr/LPR
- /usr/lpp/psf/utis/lpr/Makefile
- /usr/lpp/psf/utis/lpr/getopts.c
- /usr/lpp/psf/utis/lpr/getopts.h
- /usr/lpp/psf/utis/lpr/lprafp.c
- /usr/lpp/psf/utis/lpr/lprafp.h
- /usr/lpp/psf/gif2afp/gif2afp.cfg
- /usr/lpp/psf/gif2afp/gif2afp.1120cfg
- /usr/lpp/psf/gif2afp/gif2afp.1125cfg
- /usr/lpp/psf/gif2afp/gif2afp.1130cfg
- /usr/lpp/psf/gif2afp/gif2afp.1140cfg
- /usr/lpp/psf/gif2afp/gif2afp.1145cfg
- /usr/lpp/psf/gif2afp/gif2afp.2710cfg
- /usr/lpp/psf/gif2afp/gif2afp.2770cfg
- /usr/lpp/psf/gif2afp/gif2afp.2785cfg
- /usr/lpp/psf/gif2afp/gif2afp.3160cfg
- /usr/lpp/psf/gif2afp/gif2afp.3170-005cfg
- /usr/lpp/psf/gif2afp/gif2afp.3170-3Acfg
- /usr/lpp/psf/gif2afp/gif2afp.3300cfg
- /usr/lpp/psf/gif2afp/gif2afp.4000cfg
- /usr/lpp/psf/gif2afp/gif2afp.4000-708cfg
- /usr/lpp/psf/gif2afp/gif2afp.4000-ID5-6cfg
- /usr/lpp/psf/gif2afp/gif2afp.4100cfg
- /usr/lpp/psf/gif2afp/gif2afp.4320cfg
- /usr/lpp/psf/gif2afp/gif2afp.4322cfg

- /usr/lpp/psf/gif2afp/gif2afp.4332cfg
- /usr/lpp/psf/jpeg2afp/jpeg2afp.cfg
- /usr/lpp/psf/jpeg2afp/jpeg2afp.1120cfg
- /usr/lpp/psf/jpeg2afp/jpeg2afp.1125cfg
- /usr/lpp/psf/jpeg2afp/jpeg2afp.1130cfg
- /usr/lpp/psf/jpeg2afp/jpeg2afp.1140cfg
- /usr/lpp/psf/jpeg2afp/jpeg2afp.1145cfg
- /usr/lpp/psf/jpeg2afp/jpeg2afp.2710cfg
- /usr/lpp/psf/jpeg2afp/jpeg2afp.2770cfg
- /usr/lpp/psf/jpeg2afp/jpeg2afp.2785cfg
- /usr/lpp/psf/jpeg2afp/jpeg2afp.3160cfg
- /usr/lpp/psf/jpeg2afp/jpeg2afp.3170-005cfg
- /usr/lpp/psf/jpeg2afp/jpeg2afp.3170-3Acfg
- /usr/lpp/psf/jpeg2afp/jpeg2afp.3300cfg
- /usr/lpp/psf/jpeg2afp/jpeg2afp.4000cfg
- /usr/lpp/psf/jpeg2afp/jpeg2afp.4000-708cfg
- /usr/lpp/psf/jpeg2afp/jpeg2afp.4000-ID5-6cfg
- /usr/lpp/psf/jpeg2afp/jpeg2afp.4100cfg
- /usr/lpp/psf/jpeg2afp/jpeg2afp.4320cfg
- /usr/lpp/psf/jpeg2afp/jpeg2afp.4322cfg
- /usr/lpp/psf/jpeg2afp/jpeg2afp.4332cfg
- /usr/lpp/psf/pcl2afp/pcl2afpd.cfg
- /usr/lpp/psf/pcl2afp/pcl2afp.cfg
- /usr/lpp/psf/tiff2afp/tiff2afp.cfg
- /usr/lpp/psf/tiff2afp/tiff2afp.1120cfg
- /usr/lpp/psf/tiff2afp/tiff2afp.1125cfg
- /usr/lpp/psf/tiff2afp/tiff2afp.1130cfg
- /usr/lpp/psf/tiff2afp/tiff2afp.1140cfgg
- /usr/lpp/psf/tiff2afp/tiff2afp.1145cfg
- /usr/lpp/psf/tiff2afp/tiff2afp.2710cfg
- /usr/lpp/psf/tiff2afp/tiff2afp.2770cfg
- /usr/lpp/psf/tiff2afp/tiff2afp.2785cfg
- /usr/lpp/psf/tiff2afp/tiff2afp.3160cfg
- /usr/lpp/psf/tiff2afp/tiff2afp.3170-005cfg
- /usr/lpp/psf/tiff2afp/tiff2afp.3170-3Acfg
- /usr/lpp/psf/tiff2afp/tiff2afp.3300cfg

- /usr/lpp/psf/tiff2afp/tiff2afp.4000cfg
- /usr/lpp/psf/tiff2afp/tiff2afp.4000-708cfg
- /usr/lpp/psf/tiff2afp/tiff2afp.4000-ID5-6cfg
- /usr/lpp/psf/tiff2afp/tiff2afp.4100cfg
- /usr/lpp/psf/tiff2afp/tiff2afp.4320cfg
- /usr/lpp/psf/tiff2afp/tiff2afp.4322cfg
- /usr/lpp/psf/tiff2afp/tiff2afp.4332cfg
- /usr/lpp/psf/sap2afp/00000000.tab
- /usr/lpp/psf/sap2afp/11000000.tab
- /usr/lpp/psf/sap2afp/13030000.tab
- /usr/lpp/psf/sap2afp/15000000.tab
- /usr/lpp/psf/sap2afp/40010000.tab
- /usr/lpp/psf/sap2afp/40040000.tab
- /usr/lpp/psf/sap2afp/41000000.tab
- /usr/lpp/psf/sap2afp/41010000.tab
- /usr/lpp/psf/sap2afp/41020000.tab
- /usr/lpp/psf/sap2afp/41030000.tab
- /usr/lpp/psf/sap2afp/41040000.tab
- /usr/lpp/psf/sap2afp/41050000.tab
- /usr/lpp/psf/sap2afp/6400fonts.tab
- /usr/lpp/psf/sap2afp/80000000.tab
- /usr/lpp/psf/sap2afp/83000000.tab
- /usr/lpp/psf/sap2afp/84000000.tab
- /usr/lpp/psf/sap2afp/85000000.tab
- /usr/lpp/psf/sap2afp/86000000.tab
- /usr/lpp/psf/sap2afp/barcode.tab
- /usr/lpp/psf/sap2afp/defcp.tab
- /usr/lpp/psf/sap2afp/defcp.tab.870
- /usr/lpp/psf/sap2afp/defcp.tab.cyr
- /usr/lpp/psf/sap2afp/defcp.tab.japan
- /usr/lpp/psf/sap2afp/defcp.tab.korea
- /usr/lpp/psf/sap2afp/defcp.tab.spchinese
- /usr/lpp/psf/sap2afp/defcp.tab.tdchinese
- /usr/lpp/psf/sap2afp/defcp.tab.unicode
- /usr/lpp/psf/sap2afp/fonts.tab
- /usr/lpp/psf/sap2afp/fonts.tab.unicode

- /usr/lpp/psf/sap2afp/image.tab
- /usr/lpp/psf/sap2afp/image.tab.141ap
- /usr/lpp/psf/sap2afp/image.tab.141dt
- /usr/lpp/psf/sap2afp/image.tab.141lr
- /usr/lpp/psf/sap2afp/image.tab.85ap
- /usr/lpp/psf/sap2afp/image.tab.85dt
- /usr/lpp/psf/sap2afp/image.tab.85lr
- /usr/lpp/psf/sap2afp/pagedef.tab
- /usr/lpp/psf/sap2afp/pagedef.tab.cyr
- /usr/lpp/psf/sap2afp/pagedef.tab.japan
- /usr/lpp/psf/sap2afp/pagedef.tab.korea
- /usr/lpp/psf/sap2afp/pagedef.tab.spchinese
- /usr/lpp/psf/sap2afp/pagedef.tab.tdchinese
- /usr/lpp/psf/sap2afp/printer.tab
- /usr/lpp/psf/sap2afp/userenv
- /etc/rc.lpd.daemons
- /etc/rc.lcid
- /etc/rc.mvsd
- /etc/rc.mvsd.daemons
- /etc/rc.ipmws
- /etc/rc.ipmws.daemons
- /etc/rc.ippgw
- /etc/rc.ippgw.daemons
- /etc/rc.notd
- /etc/rc.iprsap
- /etc/rc.iprsap.daemons
- /etc/rc.pd
- /etc/rc.pd.servers

Once you have completed installing the latest InfoPrint Manager version, you can extract your customized files from the archive to begin moving your customized changes into the new files that reside in the directories listed above.

Note

Because the new configuration files may have different source material, it is not recommended to copy the files from the archive over the new configuration files.

Upgrading Linux print drivers with InfoPrint Manager for Linux Version 4.13

If you are installing InfoPrint Manager for Linux Version 4.13, you should upgrade your Linux drivers (PPD files for Linux) for these printers. For the most recent information, go to the Ricoh website at <https://www.ricoh-usa.com/en/support-and-download> and follow the instructions to download the resources you need.

These PPD files are referenced when you create either a Linux DSS printer or a PSF other-driver DSS printer through InfoPrint Manager and when you specify particular trays from which to pull paper using InfoPrint Manager attributes.

↓ Note

If these printers are network-attached through the internal adapter, you might have to install the back end programs for the printers. For more information on the installation process, go to the RICOH Software Information Center at <https://help.ricohsoftware.com/swinfocenter>.

You can use these steps to access these PPD files from the Web:

1. Go to the Ricoh website at <https://www.ricoh-usa.com/en/support-and-download>.
2. Enter your product details in the **Search for downloads** box or select the appropriate category and subcategory in the **Select to find downloads for your equipment** field.
3. Click on the Linux driver button.
4. On the resulting Linux driver page, follow the instructions to download and install the driver files. If this page displays a **Readme File** link, click it to find the directions.

Migrating optional InfoPrint Manager features

Any optional features of InfoPrint Manager that are installed on the system will be removed when the base server software is migrated to Version 4.13. This is done because optional features of older versions might be incompatible with the Version 4.13 server. The use of older version optional features with a Version 4.13 server is not supported.

You will be able to migrate the objects and configurations associated with InfoPrint Manager, but you will need to reinstall the features.

Migrating secondary servers

If you are using InfoPrint Manager secondary servers, you will need to upgrade the secondary servers to the Version 4.13 level. Run `setup` from the most recent service DVD-ROM. When a screen asking **Do you want to keep your existing objects?** appears, click **Yes**.

Large file support

If you want InfoPrint to support files larger than 2.14 gigabytes, there is a procedure that you can follow to configure your server. See [Large file support, p. 110](#) for instructions. If you are conducting a new installation, you will have the option of enabling your InfoPrint system to process large files during the installation procedure.

Finishing preparing

After you finish preparing your system for migration, follow the instructions in the topic [Installing InfoPrint Manager, p. 11](#) to install Infoprint Manager Version 4.13.

Migrating from a primary server to a secondary server

You can easily migrate an independent primary InfoPrint Manager server to interoperate with another primary InfoPrint Manager server. To do this, the independent server must become a secondary server:

1. Stop each InfoPrint Manager server process that you want to migrate with this command:

```
stop_server -F ServerName
```

where **ServerName** is the name of the server process that will become the future secondary server.

2. Remove the `/var/pddir/default_cell` directory on the future secondary system with this commands:

```
rm -fr /var/pddir/default_cell
```

3. If an `/ipdata` directory is allocated on the future secondary system (and the primary system is using a different `/ipdata`), remove `/ipdata` from the future secondary system.

- If the `/ipdata` directory has its own filesystem, type:

```
umount /ipdata; rmfs -r /ipdata
```

- If the `/ipdata` directory does not have its own filesystem, type:

```
rm -rf /ipdata
```

On the primary system, perform these steps:

Invoke the InfoPrint Manager Management Interface by starting `startipmmi` command from a terminal window or click **Management Interface** icon on your menu:

- Select **Link from Primary Server to Secondary Server**.
- Provide the information about your secondary system as prompted.

★ Important

If the new primary server requires job ticketing, the required field **Is /ipdata used for job ticketing?** should be set to **yes**, otherwise it should be set to **no**.

Or use the command-line script:

- 1) Open a Linux terminal window.
- 2) Run the command: **cd /usr/lpp/pd/install.**
- 3) To configure the secondary servers via NFS, you need to link from the Primary Server to Secondary Server using the following command:

```
./link2srvr.sh [-h secondary_hostname] -[c|p] -[r|t]
```

where

- **h secondary_hostname** specifies the Secondary Server Host Name

- **c|p** where c specifies that /ipdata needs to be shared and P when it does not
- **r|t** where r specifies to retain secondary servers previously defines, while t does not retain secondary server previous data

4. On the future secondary system, see [Installing secondary InfoPrint servers, p. 42](#)

↓ Note

The user running InfoPrint Manager on all primary and secondary servers must be the same. The default system user is `ipm1`, which is automatically created by the installer. The user UID must have the same value on all AIX and/ or Linux servers to successfully interoperate them.

The `/etc/nsswitch.conf` file for the hosts database must have the keyword `files (hosts: files dns)` on the first position.

Recovering from primary to secondary migration errors

The only way to recover from a primary server to secondary server migration failure is to restore your system from backups.

Installing InfoPrint Manager for Linux service updates

For information regarding the installation of the base InfoPrint Manager software and the installation of the clients, see the appropriate section for your client operating system in this book. The following procedures are essential for applying service updates to your InfoPrint Manager for Linux product. If you did not install InfoPrint Manager from the most recent service DVD-ROM, it is important that you install the latest service at this time.

★ Important

If you have installed InfoPrint Manager for Linux using any of the remote installation procedures described in [Installing InfoPrint Manager on remote systems, p. 20](#), you should use the `mk_ip_remote` script to copy all of the service code to the InfoPrint Manager Software Server, and then enter this command from a Linux command line:

```
/ip_remote/ip_update -s /ip_remote
```

Obtaining the current service level

Once you have installed InfoPrint Manager for Linux, you need to regularly apply the latest product updates. The updates are published on DVD-ROM and also posted to the World Wide Web. To obtain the current service level for InfoPrint Manager for Linux, access the InfoPrint Manager service update page at <https://dl.riohsoftware.com/>. To download and install the service updates from the Web instead of from the DVD-ROM, simply follow the instructions that are posted online with the updates.

Installing server software and features from the current Service DVD-ROM

To install the latest service updates for InfoPrint Manager using the InfoPrint Manager Installer and the latest Service DVD-ROM, do this:

1. Log into the Linux system as **root**.
2. Insert the *InfoPrint Manager Service DVD-ROM* into the DVD-ROM drive.
3. Make sure that no jobs are currently active on this server (any active jobs will be interrupted by the service process).
4. Mount the InfoPrint Manager ISO file to a location of your choice.

At this point, you are ready to begin following the directions provided in [Applying service, p. 37](#).

Applying service

Prior to applying service, it is strongly recommended that you back up your InfoPrint Manager system completely as described in [Backing up InfoPrint Manager for Linux, p. 27](#). Backups may be required to restore your system in the event that this service must be rejected in the future. See [Rejecting service, p. 37](#) for details on this process.

Once you have completed the steps described in [Installing server software and features from the current Service DVD-ROM, p. 36](#), you are ready to begin using the InfoPrint Manager Installer. Follow all the steps of the procedure described in [Installing InfoPrint Manager server software and features locally with the Installer, p. 18](#).

Rejecting service

If you have problems with a service update for InfoPrint Manager software, it is possible to revert to the last applied level installed on the system. To do so, however, you must make sure that a backup of all previously mentioned InfoPrint Manager objects was made at a time when the printing system was at its previous level.

To reject a service, you need to uninstall InfoPrint Manager for Linux preserving data and install the level of code you previously had:

1. Log on to your system as **root**.
2. Insert the InfoPrint Manager service DVD-ROM into your DVD-ROM drive. This lets you access the latest version of the setup script that you should always use to reject an InfoPrint Manager for Linux service update.
3. Make sure that no jobs are currently active on this server. Any active jobs will be interrupted by the service process.
4. Enter this command:

```
/path/to/mount/point/install.sh -u
```

Change `/path/to/mount/point` accordingly.

5. Follow all the steps of the installation procedure described in [Installing InfoPrint Manager server software and features locally with the Installer, p. 18](#).

If you encounter problems with your InfoPrint Manager system after rejecting service, restore the directories and files listed in [Backing up InfoPrint Manager for Linux, p. 27](#). These InfoPrint Manager directories and files can contain environment variables, objects, or any changed portions of the product.

Uninstalling InfoPrint Manager for Linux

There are two ways to uninstall InfoPrint Manager for Linux. You can uninstall the application preserving the data, allowing you to reinstall InfoPrint Manager for Linux for further utilization or without data preservation, completely removing all files and file systems, in which case all InfoPrint Manager data will be lost. We strongly recommend that you back up your system in case of uninstallation, as it allows you to restore the system in case you need to.

To uninstall InfoPrint Manager for Linux with data preservation, allowing you to reinstall it keeping the existing objects:

1. Login as **root**.
2. Mount the InfoPrint Manager ISO file to a location of your choice.
3. Run one of these commands:

```
/path/to/mount/point/install.sh -u
```

or

```
/path/to/mount/point/install.sh --uninstall
```

4. Confirm that you want to uninstall InfoPrint Manager.
5. InfoPrint Manager will be uninstalled, keeping all data required for it to run in case of a reinstallation.

To uninstall InfoPrint Manager for Linux without data preservation, losing the ability to get to the application current state:

1. Login as **root**.
2. Mount the InfoPrint Manager ISO file to a location of your choice.
3. Run the command:

```
/path/to/mount/point/install.sh --uninstall-and-clean
```

4. Confirm that you want to uninstall InfoPrint Manager.
5. Confirm that you agree to remove all files and directories from the directories installed by InfoPrint Manager.
6. InfoPrint Manager will be uninstalled, losing all data required for it to run in case of a reinstallation.

Installing InfoPrint Transform Manager Feature

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*.

Getting started with InfoPrint Manager

This section provides information about post-installation activities on your InfoPrint Manager for Linux server.

Starting InfoPrint Manager

After you have completed the installation of InfoPrint and any optional features and rebooted the system, the InfoPrint Manager server starts automatically. You can then start the InfoPrint Manager Management Interface (IPMMI) to view the initial configuration of your system.

You can start the IPMMI either from the front panel or from the command line.

From the GNOME menu on an Linux system:

1. Click on **Applications** and go to the **InfoPrint Manager** menu.
2. Click on **Management Interface..**

To start the InfoPrint Manager Management Interface from the Linux command line, enter `startipmmi`.

Enabling or disabling autostart

The InfoPrint Manager server starts automatically when the system reboots. You can enable or disable the autostart of any InfoPrint servers present on your Linux system.

Enabling autostart

To enable the autostart function on a server:

1. Open an editor of your choice and edit file `/etc/rc.pd.servers`.
2. For each server you want to autostart at reboot add a line in the file:
`startsrv -F -p <port> -l <language> <server_name>`

where

- `port` - the communication port where InfoPrint Manager server listens for client requests.
- `language` - list the language on which Infoprint Manager server starts (default `en_US`).
- `server_name` - the name of the InfoPrint manager server instance.

Example

```
startsrv -F -p 6888 -l en_US server1
```

3. Save your changes on the file `/etc/rc.pd.servers`.
4. Next time you reboot, the servers listed will automatically start.

Note

You can also enable the autostart function on a server using the InfoPrint Manager Management Interface.

Disabling autostart

To disable autostart of a server, do these steps:

1. Open an editor of your choice and edit file `/etc/rc.pd.servers`.
2. For each server you want to disable autostart, delete or comment the line with #:
`#startsrv -F -p <port> -l <language> <server_name>`

where

- `port` - the communication port where InfoPrint Manager server listens for client requests.
- `language` - list the language on which Infoprint Manager server starts (default `en_US`).
- `server_name` - the name of the InfoPrint manager server instance.

Example

```
#startsrv -F -p 6888 -l en_US server1
```

3. Save you changes on the file `/etc/rc.pd.servers`.
4. Next time you reboot, the servers deleted or commented out with will not automatically start.

Note

You can also disable the autostart function on a server using the InfoPrint Manager Management Interface.

Adding or removing languages

The InfoPrint Manager Installer installs by default message catalogs for all supported languages of InfoPrint Manager Linux servers. For InfoPrint Manager server to function properly, you must install English (`en_US`) language on your operating system, no matter in what language you plan to run the server.

You can use an InfoPrint Manager supported language only if your Linux system has that language support installed. The following topics provide the procedures for adding Linux support for a language.

Software prerequisites for translated versions of InfoPrint Manager

You must install language support from the Linux operating system DVD-ROM, if it is not already installed, on to each Linux system that will run an InfoPrint server in a non-English supported language. InfoPrint Manager supports English, French, German, Italian, Spanish, and Japanese.

★ Important

- For compatible communication between InfoPrint Manager servers running on different platforms (AIX, Linux and Windows) and all its clients available on AIX, Linux, Mac, and Windows, the recommendation is to use the Linux terminal in the default code page (UTF-8) when issuing commands (e.g. pdpr, pdls, a.s.o).
- For customers running InfoPrint Manager for Linux in Japanese, the InfoPrint installer defines the Ja_JP locale (which is using the Shift JIS code page). This is needed for keeping the compatibility between InfoPrint Manager components running on AIX or Windows.

Use the `locale -a` command to see if the base Linux support is installed for your language. If it is not installed, you must install it before proceeding further.

To install a language on an Linux operating system, use this procedure:

On RedHat Enterprise Linux

To install a new language from the GNOME interface, follow the steps:

1. Login as root.
2. Go to **System** → **Administration** → **Language**.
3. Select one of the supported Infoprint Manager languages.
4. Click **OK**.
5. System language installation starts, you might be asked for the Linux operating system DVD-ROM.

To install a new language from the command line terminal, follow the steps:

1. Login as root.
2. Run command `system-config-language`.
3. Select one of the supported Infoprint Manager languages.
4. Click **Yes**.
5. System language installation starts, you might be asked for the Linux operating system DVD-ROM.

On SUSE Linux Enterprise Linux

To install a new language from the GNOME interface, follow the steps:

1. Login as root.
2. Go to **Computer** → **Control Center** → **Language**.
3. On the **Primary Language** select one of the supported Infoprint Manager languages.
4. Open the **Language Detail** menu by clicking **Details** button.
5. On **Locale Settings for User root** you must set it to **Yes** for InfoPrint Manager to work.
6. Click **OK** to complete the **Language Details**.
7. Click **OK** on the **Languages** menu.
8. System language installation starts, you might be asked for the Linux operating system DVD-ROM.

To install a new language from the command line terminal, follow the steps:

1. Login as root.

2. Run command `yast`.
3. Go to **System** → **Language**.
4. On the **Primary Language** select one of the supported InfoPrint Manager languages.
5. Open the **Language Detail** menu by clicking **Details** button.
6. On **Locale Settings for User root** you must set it to **Yes** for InfoPrint Manager to work.
7. Click OK to complete the **Language Details**.
8. Click OK on the **Languages** menu.
9. System language installation starts, you might be asked for the Linux operating system DVD-ROM.

↓ Note

For more information about installing different languages on your operating system, access the specific operating system documentation.

Installing secondary InfoPrint servers

InfoPrint Manager lets you configure multiple AIX systems to work together to meet your printing needs. To install secondary servers, in an InfoPrint environment, you will be using the Network File System (NFS) to enable communication between servers. To make this work correctly, you must use one of these two procedures:

- [Installing secondary InfoPrint servers using NFS \(no job ticketing\)](#), p. 42.
- [Installing secondary InfoPrint servers using NFS \(with job ticketing\)](#), p. 44.

★ Important

If the primary server is a Linux machine and the secondary servers are AIX, you must run this command on each AIX server:

```
nfs -p -o nfs_use_reserved_ports=1
```

↓ Note

If you are using Domain Name Server (DNS) or Network Information Service (NIS) name resolution services, be sure to update these services with all of the new server information before proceeding. DNS and NIS are centralized services used to resolve hostnames into IP addresses. When a new machine is added to the network, these services must be advised of the hostname and IP address of the new system. These services might be used on your LAN. If you are unsure about your network's name resolution services, contact your network administrator.

Installing secondary InfoPrint servers using NFS (no job ticketing)

Setting up the primary server

To set up multiple InfoPrint servers that do not require full job ticketing services, complete these steps:

1. Complete the installation of the primary InfoPrint server using the most recent Service DVD-ROM.
2. Complete the following configuration procedure on the primary InfoPrint server:

Invoke the InfoPrint Manager Management Interface by starting `startipmmi` command from a terminal window or click **Management Interface** icon on your desktop or menu:

- Select **Link from Primary Server to Secondary Server**.
- Provide the information about your secondary system as prompted.

★ Important

Because the required field **Is /ipdata used for job ticketing?** defaults to **yes**, you need to change this value to **no**.

Or use the command-line script:

- 1) Open a terminal window.
- 2) Run the command: `cd /usr/lpp/pd/install`
- 3) To configure the secondary servers via NFS, you need to link from the Primary Server to Secondary Server using the following command:

```
./link2srvr.sh [-h secondary_hostname] -p -[r|t]
```

where

- **h secondary_hostname** specifies the Secondary Server Host Name
- **p** suppresses the mounting of **/ipdata**
- **r|t** where **r** specifies to retain secondary servers previously defines, while **t** does not retain secondary server previous data

Setting up the secondary servers

Complete the following procedure on each secondary server:

If InfoPrint Manager is not installed run the InfoPrint Installer from the most recent Service DVD-ROM on each system. When you are presented with the primary server question screen, select **No** and click **Next**. You will be asked for the IP address of your primary InfoPrint Manager server. For more information about installing InfoPrint Manager, see [Installing InfoPrint Manager, p. 11](#).

If InfoPrint Manager is already installed, invoke the InfoPrint Manager Management Interface by starting the `startipmmi` command from a terminal window or click **Management Interface** icon on your desktop or menu:

- Select **Link from Secondary Server to Primary Server**.
- Provide the information about your primary system as prompted.

Or use the command-line script:

1. Open a terminal window.
2. Run the command: `cd /usr/lpp/pd/install`.
3. To configure the secondary servers via NFS, you need to link from the Secondary Server to Primary Server using the following command:

```
./link2prim.sh [-o] [-h primary_hostname] [-p]
```

where:

- **o** to indicate that Primary Server does not hold **/ipdata** shared folder

- **h primary_hostname** specifies the Secondary Server Host Name
- **p** to suppress the mounting of **/ipdata**

Installing secondary InfoPrint servers using NFS (with job ticketing)

To set up multiple InfoPrint servers with job ticketing fully enabled:

1. Complete the installation of the primary InfoPrint server from the most recent Service DVD-ROM.
2. Follow the procedure on the primary InfoPrint server as described in [Setting up the primary server, p. 44](#).
3. Follow the procedure on the secondary InfoPrint server as described in [Setting up the secondary servers, p. 45](#).

Note

You must set up the primary server before setting up the secondary server.

Setting up the primary server

1. Complete the installation of the primary InfoPrint server using the most recent Service DVD-ROM.
2. Complete the following configuration procedure on the primary InfoPrint server:

Invoke the InfoPrint Manager Management Interface by starting `startipmmi` command from a terminal window or click **Management Interface** icon on your desktop or menu:

- Select **Link from Primary Server to Secondary Server**.
- Provide the information about your secondary system as prompted.

Or use the command-line script:

- 1) Open a terminal window.
- 2) Run the command: `cd /usr/lpp/pd/install`
- 3) To configure the secondary servers via NFS, you need to link from the Primary Server to Secondary Server using the following command:

```
./link2srvr.sh [-h secondary_hostname] -c -[r|t]
```

where

- **h secondary_hostname** specifies the Secondary Server Host Name
- **c** specifies that **/ipdata** is needed
- **r|t** where **r** specifies to retain secondary servers previously defines, while **t** does not retain secondary server previous data

Important

If the **/ipdata** file system was not allocated on the primary server, you must perform the necessary steps to make **/ipdata** accessible to all InfoPrint servers before proceeding. This is necessary, for example, if you have elected to use a PC to store shared information instead of your primary server.

Setting up the secondary servers

Perform these steps for each secondary server:

1. Complete the installation of the each secondary InfoPrint server using the most recent Service DVD-ROM.
2. Complete the following configuration procedure on the secondary InfoPrint server:
Invoke the InfoPrint Manager Management Interface by starting **startipmmi** command from a terminal window or click **Management Interface** icon on your desktop or menu:
 - Select **Link from Secondary Server to Primary Server**.
 - Provide the information about your secondary system as prompted.

Or use the command-line script:

- 1) Open a Linux terminal window.
- 2) Run the command: `cd /usr/lpp/pd/install`.
- 3) To configure the primary servers via NFS, you need to link from the Secondary Server to Primary Server using the following command:

```
./link2prim.sh [-h primary_hostname]
               [-n ipdata_hostname]
```

where

- **h primary_hostname** specifies the Secondary Server Host Name
- **n ipdata_hostname** specifies the Host Name of the server holding the **/ipdata** shared folder

Installing additional features on an existing InfoPrint Manager for Linux system

If you have previously installed InfoPrint Manager on your Linux server, you can use the InfoPrint Manager Installer to add extra product features. This scenario can be used either locally or remotely. For more information about local installations, see [Installing InfoPrint Manager server software and features locally with the Installer, p. 18](#). For more information about remote installations, see [Installing InfoPrint Manager on remote systems, p. 20](#).

★ Important

You must use the most recent Service DVD-ROM to install features.

Installing and using InfoPrint Manager Notifications

InfoPrint Manager Notifications is the default application that you can use to receive messages about InfoPrint objects. InfoPrint objects, for example, can be print jobs, destinations, queues, and servers. Using Notifications, InfoPrint Manager can send you a message when a job is finished printing, or it can let you know if there is a problem with the printer. There are also other notification methods. For more information, see "Using InfoPrint Manager Notifications" in *RICOH InfoPrint Manager for Linux: Procedures*.

InfoPrint Select

If you have installed InfoPrint Select and use it to submit your print jobs to InfoPrint Manager, messages about your jobs continue to be sent to Select Notification, even if you install InfoPrint Manager Notifications. You can still use InfoPrint Manager Notifications to receive messages about other objects.

1

The InfoPrint Manager Notifications server and Notifications client software are both automatically installed on the same system that runs your InfoPrint Manager server software. In addition, you can install the Notifications client on any other Windows, Linux or AIX system that is connected to the same network. Follow the procedures in this chapter to install and use the InfoPrint Manager Notifications client to receive messages from your InfoPrint Manager server.

For InfoPrint Manager Notifications to function properly, only one InfoPrint Manager Notifications server can be running in the same InfoPrint Manager namespace. For information about handling the Notification server in InfoPrint Manager multiple-server environments, see [Multi-server environments](#), p. 50. InfoPrint Manager should automatically start a Notification server on port 8200, but you should verify that it is running. Each Notification client defaults to receive notifications from a server named `notification` on port 8200.

★ Important

Your site network administrator should add the name `notification` as an alias for the InfoPrint Manager Notifications server to the site's Domain Name Service (DNS) server. Once this is done, the default settings in all of the Notification clients should work. If you ever move the Notification server to another host, you only need to update the notification alias on the DNS server for the default settings in all the Notification clients to work.

If you do not use a DNS server alias, you need to set up each Notification client to point to the hostname of the InfoPrint server that is running the Notification server.

For the InfoPrint Manager Notifications client to receive notification messages from the InfoPrint Manager server, the delivery address setting in the Notification client must match the delivery address in the notification profile of the InfoPrint Manager destination, job or other object.

Installing the software on an AIX system

The InfoPrint Notification client is installed on all InfoPrint AIX servers with the *InfoPrint Manager for AIX Base Server*, LCD4-5654.

↓ Note

If you are using the InfoPrint Manager Notifications client to receive notifications from an InfoPrint Manager AIX server, you must start the client from the system that it is installed on. You cannot telnet into the AIX system where the notification client is installed from another system and try to start the Notification client.

To install the InfoPrint Notification client on an AIX system where you have not installed the InfoPrint server:

1. Make sure that you have the latest service installed from the Service DVD-ROM.
2. Log onto AIX as `root`.
3. Insert the *InfoPrint Manager: Common Clients* DVD-ROM, LCD4-5642, into the drive.
4. 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 graphic version of SMIT, enter this command:

```
smit cdrfs
```

- To start the ASCII version of SMIT, enter this command:

```
smitty cdrfs
```

The DVD-ROM File Systems panel is displayed.

SMIT DVD-ROM File Systems panel

```

                                CDROM File Systems
Move cursor to desired item and press Enter.
  Add a CDROM File System
  Change / Show Characteristics of a CDROM File System
  Remove a CDROM File System
1=Help          F2=Refresh          F3=Cancel          F8=Image
F9=Shell        F10=Exit           Enter=Do

```

2. Select Add a CDROM File System.

SMIT Add a DVD-ROM File System panel

```

                                Add a CDROM 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?    no      +
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 `/cdrrom`.
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.
5. To mount the DVD-ROM, enter: `mount /cdrrom`
6. Enter this command to install the notification client: `/cdrrom/setup -y -n ServerName -L locale` where:

ServerName

is the name of the host where the InfoPrint server you want to communicate with (**PDHOST**) is running.

locale

is the locale of the notification client. The default is `en_US` (U. S. English). The `-L locale` flag is optional.

Installing the software on a Linux system

Log in to the Linux system as root.

Note

If you are using the InfoPrint Manager Notifications client to receive notifications from a InfoPrint Manager Linux server, you must start the client from the system that it is installed on. You cannot telnet into the Linux system where the Notification client is installed from another system and try to start the Notification client.

To install the InfoPrint Manager Notifications client on a Linux system where you have not installed the InfoPrint Manager server you must first mount the InfoPrint Manager Common Clients ISO:

```
sudo mount /path/to/image.iso /media/<mount_point> -o loop
```

1. Type `cd /media/<mount_point>/linux`
2. To install the Java required by the Operations and Administration Interface on Linux, enter: `rpm -i ipr-base-java-4.v.m-n.x86_64.rpm`, where *v* represents the version while *m* and *n* represent the service update level.
3. To install the Notification Client on Linux, enter: `rpm -i ipr-base-notifclient-4.v.m-n.x86_64.rpm`, where *v* represents the version while *m* and *n* represent the service update level.
4. Unmount the `/media/<mount_point>/` file system.

Installing the software on a Windows client

To install the InfoPrint Manager Notifications software on a remote system:

1. Make sure that you have the latest service installed from the Service DVD-ROM.
2. Insert the *InfoPrint Manager: Common Clients* DVD-ROM, LCD4-5642, into the drive.
3. Click Install InfoPrint Notification client.
4. Follow the instructions on the installation screens to install the program.

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**.
5. Click **Install Products**, and then click **InfoPrint Manager Notifications**.
6. Follow the instructions on the installation screens to install the program.

Starting and using InfoPrint Manager Notifications on an InfoPrint AIX system

To launch InfoPrint Manager Notifications, type `notificationClient` on an AIX command line. The first time you start the program, it needs to connect to the notification server on the machine that your InfoPrint Manager server runs on. If it does not succeed, InfoPrint Manager displays the **Notification Client Properties** dialog. Check to see if the notification server hostname and port number match the ones that the Notification server is using. If they do not, change them and click **OK**. If you need further assistance with the dialog, click **Help** to see the online help.

★ Important

Your site network administrator should add the name `notification` as an alias for the InfoPrint Manager Notifications server to the site's Domain Name Service (DNS) server. Once this is done, the default settings in all of the Notification clients should work. If you ever move the Notification server to another host, you only need to update the notification alias on the DNS server for the default settings in all the Notification clients to work.

Starting and using InfoPrint Manager Notifications on an InfoPrint Linux system

To launch InfoPrint Manager Notifications, type `notificationClient` on an Linux command line. The first time you start the program, it needs to connect to the notification server on the machine that your InfoPrint Manager server runs on. If it does not succeed, InfoPrint Manager displays the **Notification Client Properties** dialog. Check to see if the notification server hostname and port number match the ones that the Notification server is using. If they do not, change them and click **OK**. If you need further assistance with the dialog, click **Help** to see the online help.

★ Important

Your site network administrator should add the name `notification` as an alias for the InfoPrint Manager Notifications server to the site's Domain Name Service (DNS) server. Once this is done, the default settings in all of the Notification clients should work. If you ever move the Notification server to another host, you only need to update the notification alias on the DNS server for the default settings in all the Notification clients to work.

Starting and using InfoPrint Manager Notifications on a Windows system

To launch InfoPrint Manager Notifications, click **Start** → **Programs** → **InfoPrint Manager Notifications** to run the software.

The first time you start the program, it needs to connect to the notification server on the machine that your InfoPrint Manager server runs on. If it does not succeed, the **Notification Client Properties** dialog will be displayed. Check to see if the notification server hostname and port number match the ones that your Notification server is using. If they do not, change them and click **OK**. If you need further assistance with the dialog, click **Help** to see the online help.

★ Important

Your site network administrator should add the name **notification** as an alias for the InfoPrint Manager Notifications server to the site's Domain Name Service (DNS) server. Once this is done, the default settings in all of the Notification clients should work. If you ever move the Notification server to another host, you only need to update the notification alias on the DNS server for the default settings in all the Notification clients to work.

Receiving messages

To receive messages, you must have InfoPrint Manager Notifications installed and running on your workstation. The Notification window can be minimized if you do not want it open on your desktop. You have to restore it when you want to check the messages that have arrived.

The Installer places a shortcut in the user's **Startup** directory so that Notifications starts automatically on Windows systems.

You receive certain messages without having to do anything else; for example, messages about print jobs that you have submitted (including messages about the printers to which you send your jobs) come to you by default. Most of the messages you receive about jobs provide reasons for a job not printing. If you receive one of them, you can either resend the job or try to resolve the problem.

To receive messages about other objects (for example, about printers that you manage), you can change the notification profile for those objects. The delivery address in your InfoPrint Notifications **Settings** window must match the delivery address specified in one of the values of the notification profile of the object that you want to receive messages for. For more information, see "Using InfoPrint Manager Notifications" in *RICOH InfoPrint Manager for AIX: Procedures*, *RICOH InfoPrint Manager for Linux: Procedures*, and *RICOH InfoPrint Manager for Windows: Procedures*.

Multi-server environments

While the notification server defaults to starting automatically, you might have reason to stop and then start it on your own. For example, if you have installed multiple InfoPrint Manager servers, only one notification server (for each cell) should be enabled. To stop the server on an InfoPrint Windows server, access the Management Console and select **File** → **Stop Server**. To stop or disable the server on an InfoPrint AIX server, access the SMIT interface and take this path: **InfoPrint Printing System** → **InfoPrint Utilities** → **Notification Daemon** → **Stop**. You can also stop and start the notification daemon from the command line on the AIX or Linux server by using the **stopnotd** and the **startnotd** utilities, respectively. To stop or disable the server on an InfoPrint Linux server, use the **stopnotd** and the **startnotd** utilities, respectively. For more information about these utilities, see *RICOH InfoPrint Manager: Reference*.

Uninstalling InfoPrint Manager Notifications on AIX

To uninstall InfoPrint Manager Notifications, do this:

From the AIX command line, specify this:

```
/cdrom/setup -Y
```

InfoPrint Manager removes the Notification client from the AIX server.

Uninstalling InfoPrint Manager Notifications on Linux

To uninstall InfoPrint Manager Notifications, do this:

From the Linux command line, specify this:

```
rpm -e ipr-base-notifyclient-4.13.m-n
```

where m and n represent the service update level.

InfoPrint Manager removes the Notification client from the Linux server.

Uninstalling InfoPrint Manager Notifications on Windows

To uninstall InfoPrint Manager Notifications, follow these steps:

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

Note

Click only once, then wait for at least 30 seconds before performing any other action. If you do not wait for the first screen of the uninstaller to appear, it might get lost behind other windows. If you do not see the first screen 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.

Managing InfoPrint Manager licensing

There are several license types available for InfoPrint Manager:

Trial

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

Perpetual

The perpetual license has an unlimited period of usage.

Subscription

The subscription license has a defined period of usage.

Maintenance

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

Enterprise

The enterprise license allows 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. 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 local representative to receive a new license key before the period expires, otherwise the InfoPrint Manager software stops running on this system when the grace period ends.
3. If you make changes to the system configuration of the InfoPrint Manager host that can affect the system fingerprint, you must stop all the InfoPrint related processes by using the `/usr/lpp/pd/install/killprocs.sh` command before.
4. InfoPrint Manager does not check for feature maintenance keys during runtime.

Managing trial and perpetual 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.

Using the License Key Management Application

To start the application:

1. Start the License Key Management Application by entering `pd1 icmgm` at the Linux command line.
2. From the **InfoPrint Manager Licenses** main window, click **Add...** to continue the registration process:
 - 1) Choose which type of license you want to use for your installation and then click **Next**.
 - If you choose to try the product, it will run in trial mode for the time period shown (60 days). Before the trial period is over, you must buy the product to continue using it.
 - 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. This allows renewed maintenance licenses to be installed without manually deleting previously installed licenses. Always make sure you install a valid license for your product.

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

Depending on the type of license chosen, one of the next options will be displayed:

1. Trial license

Select the trial license file you want to install.

2. Perpetual license

- In the **Register manually using the self-service website** window, complete the entries:

Entitlement ID

The Entitlement ID is only used to identify what you purchase.

System fingerprint

The system fingerprint is used for generating a license key. It is automatically generated.

↓ **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 local 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.

License key

Click **Browse** to select the folder where the license key was saved after you received it by e-mail or downloaded from the self-service website.

- 3) Click **Next** or **Register** to display the next screen.

- 4) If **Register** is selected, the following message appears:

- **Registration successful** if the registration process is successful.
- **Registration failed** if the registration process fails.

If the registration process fails, 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.

3. From the **InfoPrint Manager Licenses** main window, click **Delete...** to open the dialog box. The dialog box opens on the screen asking: Do you want to delete the License?

- Select:
 - **yes** the license is deleted
 - **no** the license is not deleted

The graphical interface of the license management application displays the currently installed licenses with options to delete and to add licenses.

Using the License Key Management Application from command line

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

Revoking the License Key

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 may last up to 90 seconds until you receive the notification.

Managing subscription licensing

A **subscription** is a type of license that allows you to maintain access and usage of RICOH InfoPrint Manager and its features for a defined period of time in exchange of a fee.

↓ Note

- For more information about what you need to do before you install a subscription license, see [https://help.ricohsoftware.com/accountadministration/ricoh-account-administration/en-us/raa_AccountAdminstration_project.ditamap/\\$/raa_HelpTitle](https://help.ricohsoftware.com/accountadministration/ricoh-account-administration/en-us/raa_AccountAdminstration_project.ditamap/$/raa_HelpTitle).

To install a subscription license:

1. Go to https://dl.ricohsoftware.com/trial_request, the InfoPrint Manager trial page, and request a trial.
2. Once the trial has been approved, download and install the latest InfoPrint Manager version.

↓ Note

- You can try the product for a period of 60 days, after which the product stops functioning.
 - The InfoPrint Manager Base Server and the following features are available for your evaluation:
 - InfoPrint Manager AFP2PDF Feature
 - InfoPrint Manager Pull Print Feature
 - InfoPrint Manager SAP Print Feature
 - InfoPrint Transform Manager Feature
 - For features that are not available for trial, but you have purchased using the subscription license, contact your Ricoh sales representative.
3. If you are using a subscription license for the first time:
 1. Open the License Key Management Application (LKMA) and delete all the trial licenses. For more information about the License Key Management Application, see [Using the License Key Management Application, p. 52](#).
 2. Restart the InfoPrint Manager system.
 4. Open a web browser and enter `http://localhost:14080/wmi` to open the Web Management Interface. The RICOH Cloud Connector setup dialog displays.
 5. Click the **Setup Cloud Connector** button.

6. Follow the instructions at [https://help.ricohsoftware.com/accountadministration/ricoh-account-administration/en-us/raa_AccountAdminstration_project.ditamap/\\$/rcc_Setup](https://help.ricohsoftware.com/accountadministration/ricoh-account-administration/en-us/raa_AccountAdminstration_project.ditamap/$/rcc_Setup) to set up RICOH Cloud Connector and install your subscription license.
7. Restart the InfoPrint Manager system.

↓ Note

- To log in to RICOH Account Administration, click the RICOH Account Administration link on the RICOH Cloud Connector Setup page.
- For more information about managing users, see [https://help.ricohsoftware.com/dev_accountadministration/dev-account-administration/en-us/raa_AccountAdminstration_project.ditamap/\\$/raa_AddingAUser](https://help.ricohsoftware.com/dev_accountadministration/dev-account-administration/en-us/raa_AccountAdminstration_project.ditamap/$/raa_AddingAUser) and [https://help.ricohsoftware.com/dev_accountadministration/dev-account-administration/en-us/raa_AccountAdminstration_project.ditamap/\\$/raa_ModifyingUserInfo](https://help.ricohsoftware.com/dev_accountadministration/dev-account-administration/en-us/raa_AccountAdminstration_project.ditamap/$/raa_ModifyingUserInfo).
- For more information about managing accounts and subscriptions, see [https://help.ricohsoftware.com/dev_accountadministration/dev-account-administration/en-us/raa_AccountAdminstration_project.ditamap/\\$/raa_ViewingSubscriptions](https://help.ricohsoftware.com/dev_accountadministration/dev-account-administration/en-us/raa_AccountAdminstration_project.ditamap/$/raa_ViewingSubscriptions) and [https://help.ricohsoftware.com/dev_accountadministration/dev-account-administration/en-us/raa_AccountAdminstration_project.ditamap/\\$/raa_ManagingAccountDetails](https://help.ricohsoftware.com/dev_accountadministration/dev-account-administration/en-us/raa_AccountAdminstration_project.ditamap/$/raa_ManagingAccountDetails).

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 Interface. 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 Interface for tasks that must be performed 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. 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 perform. 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. 121](#).

Tasks you perform using the InfoPrint Manager Administration interface

Printer tasks:

- Create or copy a printer
- 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 web page
- 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 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 use²

Other Destination tasks:

- Create an actual destination (e-mail)

- 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

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 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

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

1. 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.
2. Selected jobs are released in the same order that they are listed in the interface.
3. 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.

Tasks you perform using the InfoPrint Manager Operations interface

Printer tasks:

- Check the status of a printer
- Show the printer web page
- 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

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

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 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

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 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.

Tasks you perform using the InfoPrint Manager Web Interface

Printer tasks:

- Create or copy a printer
- Move a printer
- Delete a printer
- Create and modify job and document defaults
- Change printers
- Check the status of a printer
- Show the printer web page
- 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 or a BSD printer
- Change the AFP resource information
- Change AFP color options
- Interrupt the printing of a current job
- View or change printer properties
- Determine the media supported in the server
- Associate a media with a physical printer
- Set or modify notification for a printer
- 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 printers
- Display printers
- Favorite printers
- Monitor printers
- Specify job batches ready for a printer
- Associate resource-context objects with a printer
- Associate auxiliary sheets with a PSF printer
- Activate auxiliary sheets for accounting or auditing information
- Associate input and output data user-exit programs with a printer
- Change the job classes that the printer can accept

- Change the job forms that the printer can use²

Job tasks:

- Check the status of a queued or retained job
- Hold a job
- Release a job
- Pause a job
- Resume a job
- Select the sheets of a job that you want to print
- 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
- View or change job properties
- Display queued or 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

Queue tasks:

- Add favorites
- Create a queue
- Delete a queue
- Filter on queues
- Monitor queues
- Search for queue
- Pause and resume a queue
- View or change queue properties

Printer tasks:

- Add favorites
- Search for printer
- Create or copy a printer
- Move a printer
- Delete a printer
- Create and modify job and document defaults
- Change the printers fed by a printer
- Enable a printer
- Disable a printer
- View or change printer properties
- Filter on printers
- Display printers
- Associate a default job or default document
- Monitor printers
- 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

Custom steps tasks:

- Create a custom step
- Copy a custom step
- Show custom steps in all servers currently being monitored
- Delete a custom step
- View or change custom step properties
- Associate a sequence of custom steps with a printer

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.
- 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 perform 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
- 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

Using the InfoPrint Manager Management Interface (IPMMI)

You use the IPMMI administrator's interface to perform both configuration and system management tasks, including those cited in the following list.

Note

This list is not all inclusive; the miscellaneous configuration tasks and InfoPrint Manager Utilities each contain additional tasks.

- 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
- Start/Stop the Web Server
- Add or change the Pull Print Feature settings
- Configure the Pull Print Feature settings
- Start/Stop the LPD daemon
- View server logs
- Control ACL Security for Objects, Operations, Users or Groups
- Start the InfoPrint Manager Administrator GUI
- Enable/Disable LDAP security
- Configure LDAP security
- Clear LDAP cache
- Configuring the startup of service
- Creating the Links form Primary to Secondary and vice-a-versa for interoperating InfoPrint Manager servers
- Printing a test job
- Controlling server, destination and MVS Download tracing
- Capturing service information
- Reset server communication
- Control server tracing
- Control destination tracing
- Control MVS Download tracing
- Export configuration
- Import configuration
- Clear LDAP cache
- Cleanup leftover Input Manager files

- Remove unassociated pdpr files

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 Management Interface

You have these basic methods of accessing the InfoPrint Manager Management Interface (IPMMI):

1. Enter this command at the command prompt:

```
startipmmi
```

2. On RedHat Enterprise Linux System, go to **Applications** → **InfoPrint Manager** and select **Management Interface** to start the Management Interface GUI.
3. On SUSE Linux Enterprise Server, go to **Computer** → **More Applications** → **InfoPrint Manager** and select **Management Interface** to start the Management Interface GUI.

★ Important

- To start InfoPrint Manager Management Interface, you must be logged in as the root user, or as the user running InfoPrint Manager. The environment variable that defines the user running InfoPrint Manager is \$IPM_USER.

Accessing the online help for the Infoprint Manager Management Interface

The online help for the IPMMI provides descriptions of panel controls, such as buttons, entry fields, and lists. You can access the help information using IPMMI help actions. If you are not familiar with using IPMMI help, you can use the **Help** pull-down menu of any Linux windows IPMMI panel.

Tasks you can perform using the Infoprint Manager Management Interface

The following section is a brief description of the tasks you can perform using the IPMMI. Use the online help for more detailed information.

Server tasks

The IPMMI menu selections for servers allow you to start a new InfoPrint server, start an existing InfoPrint server, or stop a server. When stopping a server, you can specify how InfoPrint shuts down the server with regard to the jobs contained in the queues or being processed by the actual destinations in the server.

Web Server tasks

The InfoPrint MMI administrator's interface menu selections for servers allow you to start or stop the InfoPrint Manager Web Server.

Pull Print Feature tasks

The InfoPrint IPMMI administrator's interface menu allows you to perform these tasks:

- You can add or change the Pull Print Feature settings

- You can configure the Pull Print Feature settings

Troubleshooting tasks

The IPMMI menu selections for troubleshooting allow you to:

- View a server error log
This task opens a **vi** editor session containing the error log for the server that you specify. Server error logs contain messages about both successful and unsuccessful operations performed by the server and the objects the server contains. When you receive a notification message that instructs you to do so, you can open an error log to learn more information about a particular problem
- Enable/disable server tracing
This task should only be performed at the direction of your service representative.
- Capture service/debug information
This task should only be performed at the direction of your service representative.

Security tasks

You can use the IPMMI menu selections for security to control the type of InfoPrint security that you want to use, to control the groups that can access InfoPrint servers, queues, and destinations and the level of access that they have.

For more information, see *RICOH InfoPrint Manager for Linux: Procedures*.

Other miscellaneous InfoPrint Manager tasks

The IPMMI administrator's interface menu selections for miscellaneous InfoPrint Manager configuration allow you to perform these tasks:

- Export configuration
- Import configuration

↓ Note

- For more information on which configuration settings can be exported/imported, see "Using the InfoPrint Manager System Migration (ISMU) Utility" in the *RICOH InfoPrint Manager for Linux: Procedures*.
- 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.
- Clean up canceled jobs and leftover files
- Error log and trace options

Other tasks using InfoPrint Manager utilities

The IPMMI administrator's interface menu selections for InfoPrint Manager utilities allow you to perform these tasks:

- Configure Linux Samba (See the "Using Submit Express Client" section in the *RICOH InfoPrint Manager for Linux: Getting Started*)
- Configure Secondary servers

- Create Default users
- Enable or disable autostart
- Start or stop the SAP callback and SAP connect daemons. (See *RICOH InfoPrint Manager: SAP R/3 Planning and Configuring Guide*)
- Print a test job

Understanding InfoPrint Manager Security

InfoPrint Manager Security, a feature that you administer through the InfoPrint Manager Management Interface (MMI), 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)
- 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 Linux” in *RICOH InfoPrint Manager for Linux: 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 MMI (**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*.

This chapter consists of these topics:

- [InfoPrint Manager for Linux Supported DSSs, p. 75](#)
- [Selecting a DSS, p. 76](#)
- [Selecting from among a PSF, DFE, CUPS, and BSD DSS, p. 78](#)

InfoPrint Manager for Linux Supported DSSs

InfoPrint Manager for Linux supports these DSSs:

PSF DSS

The PSF DSS can send jobs to Intelligent Printer Data Stream (IPDS), PCL, or PPDS printers or to upload jobs to the z/OS system. The PSF DSS transforms jobs to IPDS, PCL, PPDS, or AFP before sending them to the output device or destination. The PSF DSS can transform input data and drive printers concurrently, as well as support multiple document formats in the same job. The way a PSF DSS actual destination communicates with the output device or destination and the format of the data it sends to the device or destination depend on the attachment type. As a result, the PSF DSS is the most flexible DSS. For more information, see [Understanding attachment types for PSF actual destinations, p. 77](#).

CUPS DSS

The CUPS DSS drives printers like the Common UNIX Printing System (CUPS) print spooling system. In standard Linux printing, users submit jobs to a CUPS printer. The CUPS print spooling system schedules the jobs and passes them to a printer device by means of a backend program that is integrated into the CUPS print spooling system, usually InfoPrint Manager **piointfo** backend, InfoPrint Manager **piorpdm** backend for Ricoh printers, **socket**, **ipp**, and if the queue is a remote queue, **lpd**.

With the CUPS DSS, users submit jobs to an InfoPrint Manager logical destination or queue, and InfoPrint Manager schedules the jobs to a CUPS DSS actual destination. The CUPS DSS actual destination submits the job through the CUPS printing system to a printer device using one of the CUPS backend programs.

For InfoPrint Manager to drive your printer with a CUPS DSS, you need to install all the necessary software (filters and driver files) that the CUPS print spooling system would need to drive your printer. You do not need to create Linux CUPS printers for InfoPrint Manager to drive your printer with an CUPS DSS. The CUPS DSS supports both multiple input data formats and multiple document formats in the same job.

For more information about the Linux printing, consult the Linux Foundation OpenPrinting website at <https://wiki.linuxfoundation.org/openprinting/start>, where you can find CUPS Quick Start, OpenPrinting Database, Foomatic, cups-filters, printer driver packages and other printing software. The standard printing technology of Linux Foundation OpenPrinting is CUPS.

BSD DSS

The BSD DSS can be used to invoke any command you want, as long as your command accepts a file as its last argument and lets you map InfoPrint Manager attributes to command options for your command.

Typically, the BSD DSS uses the **InfoPrint Manager (lprafp) LPR** program to send jobs to a printer device connected to another processor. This processor can run Linux or any other operating system that supports the **lpd** protocol and connects to the network using TCP/IP. For remote printer devices, you must set up a remote queue and configure the remote system. See the printer configuration documentation of the remote system.

Email DSS

InfoPrint Manager for Linux 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 FrontEnd) print server, using its added performance and advanced workflow tools.

Selecting a DSS

Selecting the right DSS in some cases is obvious. For example, it should be clear when you create an email. 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 DSSs pass through any data streams including PS, PCL5E, and PCL6. The CUPS DSS uses the CUPS printing system so that system administrators can configure the filter system and the device drivers (PPD format). 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 (PCL 6 and earlier)

- PDF (1.7 and earlier)
- PS (level 3 and earlier)
- PPDS
- SAP (ABAP and OTF)
- TIFF

Understanding attachment types for PSF actual destinations

The attachment type for a PSF DSS actual destination determines what data format is sent and how PSF sends the data to the device or destination. The following attachment types are available:

TCP/IP

A PSF TCP/IP attachment type actual destination drives an IPDS printer that is connected to the network. When sending IPDS to a printer, the PSF DSS uses the PSF printing subsystem to communicate with the output devices. This subsystem provides excellent two way communication with the printer so InfoPrint Manager has the best control and information regarding the job. For more information, see [PSF TCP/IP printer, p. 95](#).

↓ Note

The InfoPrint family of printers uses port 9100. Most other InfoPrint IPDS printers default to port 5001. The value you set here must match the value set at the printer.

Upload-TCP/IP

A PSF Upload-TCP/IP attachment type actual destination uploads jobs in AFPDS format to either z/OS or MVS. This DSS communicates with either PSF for z/OS or PSF for MVS through the TCP/IP network. Before creating the actual destination, you must determine the Internet Protocol (IP) address of the z/OS or MVS system and the port number at which the AFP Upload Server program on the host system receives requests. The port number is an integer from 5001 to 65535. You must also determine the code pages used on both the Linux and host systems. See *RICOH InfoPrint Manager for Linux: Procedures* for more information about configuring for using the AFP Upload function. For more information about creating this DSS, see [PSF upload TCP/IP printer, p. 96](#).

Other-Driver

A PSF other-driver attachment type actual destination drives a PCL (or PPDS) printer in the same manner as an CUPS DSS. It is possible to configure this type of DSS to transform some data formats to PCL while passing some formats (such as PostScript and PCL) through to the device.

For more information, see [PSF Other printer, p. 97](#).

Command

A PSF command attachment type actual destination executes a command that takes **stdin** input and usually requeues jobs to a PCL (or PPDS) printer queue.

For more information, see [PSF Command printer, p. 102](#).

Selecting from among a PSF, DFE, CUPS, and BSD DSS

Understanding the attachment types help further determine which type of DSS to use for your printer. To upload jobs to z/OS or MVS, you should create one of the PSF upload attachment type actual destinations, depending on your communication protocol with PSF running on the host (TCP/IP). To drive an IPDS printer, you should create a PSF TCP/IP actual destination.

The most complex decisions concern when to use either a PSF-other, PSF Command, CUPS, BSD, or DFE DSS for printing. The following topics provide reasons for and reasons against using particular DSSs.

CUPS DSS

If your input data formats (for example, PostScript, PDF, and PCL) are the same as the formats accepted by your printer (you neither need nor desire that data to be transformed), then driving your printer with a CUPS DSS is a good choice. An InfoPrint Manager CUPS DSS can drive any printer that a CUPS printer can drive by using the CUPS-provided backends: **ipp**, **ipp**s, **lpd**, **socket**, etc. By using one of the InfoPrint Manager enhanced CUPS backends (**pioinfo** or **piorpdm** for Ricoh printers), the CUPS DSS also supports accurate job completion and job accounting. Before using one of these backends, you must install the driver files for your printer.

The hardest part of creating a CUPS DSS is figuring out what the **destination-command** should be. So if you want to use the InfoPrint Manager enhanced CUPS backend (**pioinfo** or **piorpdm**) to obtain accurate job completion and job accounting information, you just need to know the port number to use for your printer.

The CUPS DSS destination command for the InfoPrint Manager enhanced backends can be one of these:

```
pioinfo://ip-address:[port-number]
piorpdm://ip-address:[port-number]
```

where *ip-address* is the IP address of the printer you want to use and *port* is the TCP/IP port that printer uses for both PCL and PostScript print jobs. If the port is not specified, it defaults to 9100 for **pioinfo**. On HP, InfoPrint, and Ricoh printers, the port is most often 9100.

If your printer driver supports printing PDF, select the PDF value in the **Formats allowed** list to print PDF documents on your actual destination representing that printer.

If your printer supports printing PDF natively and you want to send the data directly to the printer without any CUPS processing or filtering then your destination command should use the **raw** option:

```
pioinfo://ip-address[:port-number] raw
piorpdm://ip-address[:port-number] raw
```

By using one of the CUPS backends the CUPS DSS provides the same support as the CUPS printing system, such as encryption and other security features over the Internet Printing protocol (IPP). Refer to the CUPS documentation for more details about CUPS, the CUPS backends, and the CUPS implementation of IPP.

The CUPS DSS destination command for the CUPS backends can be one of these:

```
ipp://ip-address:443/ipp/print
```



```
socket://ip-address
lpd://ip-address/queue
```

Mapping Attributes and Values to PPD Options

A PPD file associated to a CUPS destination describes all the device features that can be utilized by a certain printer model. It also contains the coded commands that must be used to invoke certain features of the device. Such features include different page sizes, different methods of paper handling, memory size, font availability, and finishing features, such as duplex printing or stapling.

When a CUPS destination is created within the InfoPrint Manager system, specific information is extracted from the PPD printer. This information is then saved under `/var/pd/linux.models` directory as a printer model configuration file that has the name of the printer model and the `.cfg` extension, for example: `RICOH_MP_601.ppd.cfg`. The `OTHER_PRINTER_OPTIONS` section of the printer model configuration file maps InfoPrint Manager attributes and values to PPD options by using the following basic syntax: `<ipm_attribute_name>:<ipm_attribute_value>:<ppd_options>`. The support consists in passing the `<ppd_options>` to the underlying CUPS print system when the job, document or destination `<ipm_attribute_name>` has the value set to `<ipm_attribute_value>`.

For example, this statement configures the PPD option to be passed for printing monochrome: `color-bits-per-plane:0-bits:ColorModel=GrayScale`. InfoPrint Manager passes the `ColorModel=GrayScale` option for every CUPS job processing with a value of 0-bits for the document or destination **color-bits-per-plane** attribute.

The challenge is in identifying the PPD options which call the needed functions. The **lptions** CUPS command can be used for listing the options defined in the printer PPD file. The CUPS `error_log` in `/var/log/cups` can help as CUPS lists all the options passed for a specific job. To determine the correct mapping, use the Linux print interface to select features and then to identify the PPD options passed in the CUPS logs.

These attributes can be mapped in the `OTHER_PRINTER_OPTIONS` section:

- **color-toner-saver**
- **color-bits-per-plane**
- **default-medium**
- **default-printer-resolution**
- **output bin**
- **output-format**
- **job-finishing**

Examples:

```
color-bits-per-plane:0-bits:ColorModel=Gray
color-bits-per-plane:8-bits:ColorModel=CMYK
color-toner-saver:yes:RIPrintMode=4rhit
output-bin:standard:OutputBin=FinisherStandard
output-bin:middle:OutputBin=FinisherMiddle
output-bin:stapler:OutputBin=FinEUPHBBKShift StapleLocation=UpperLeft
output-bin:bookletmaker:OutputBin=FinEUPHBBKLower StapleLocation=CenterW
job-finishing:punch-2:RIPunch=Left2
job-finishing:staple-2-left:StapleLocation=LeftW
```

Note

- The InfoPrint Manager administrator maps the PPD options in the printer model configuration.
- Unless instructed by the support personnel, the administrator must not edit any other section of the printer model configuration file.
- Restart the server after a change in the printer model configuration file.
- Devices do not have the same set of features, and even devices with the same features do not necessarily invoke those features in the same way.
- PPD print options can be passed to the underlying print system also by using the **printer-pass-through** attribute.
- The underlying print system ignores the PPD options when using passthrough printing, via the `-o raw` option.
- The printer model configuration file supports only the `en_US` locale. You must use **en_US** attributes and values when you map PPD options.
- Use **true** or **false** values for the attributes that accept **yes** or **no**, such as: `color-toner-saver: true:RIPrintMode=4rhit`.

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

Accurate job completion in the CUPS DSS

Accurate job completion means that the job remains in the processing state in InfoPrint Manager until it has completed printing.

The **pioinfo** backend and the **piorpdm** backend for Ricoh printers together with the **wait-for-job-completion** attribute can be used to improve the accuracy of page counts in the accounting log and to provide accurate job completion support. If you want to have accurate job completion, the **wait-for-job-completion** attribute must be set to **true**.

These conditions must be true before you can set **wait-for-job-completion** to **true**:

- Your printer backend program must support accurate job completion. The **pioinfo** and **piorpdm** commands meet this requirement.
- Your printer must support the PDL language. If your printer supports SNMP, the server queries the printer to find out whether it supports PDL. Otherwise, you must have an entry for your printer model in the `/usr/lpp/pd/bin/pjldrtrs.cfg` file. If any of these conditions apply:
 - A printer supports PDL but does not support SNMP
 - A printer is not on when you start the InfoPrint Linux server
 - A printer's actual destination is not using InfoPrint Manager's SNMP support
 put an entry in the **pjldrtrs.cfg** file.
- Do not put an entry in the **pjldrtrs.cfg** file for a printer that does not support PDL.

See [Using the `pjldrtrs` command, p. 81](#) for information on how to determine whether your printer supports PDL and [Adding the printer model to the `pjldrtrs.cfg` file, p. 81](#) to put the entry in the **pjldrtrs.cfg** file.

When you have **wait-for-job-completion** set to **true**, your job remains in a processing state in InfoPrint Manager until the last page has been stacked on the printer. The page count shown in the

accounting log is the page count reported by the printer for that job. If you have requested a start sheet or end sheet, those pages are part of the page count.

Using the `pjldetect` command

If you have a printer that does not support SNMP, the `pjldetect` command can be used to find out whether it supports the PDL language. This information is useful to set `wait-for-job-completion` to `true` for a printer.

The format for the `pjldetect` command follows:

```
pjldetect ip-address port
```

where `ip-address` is the Internet Protocol address of the printer you want to use and `port` is the TCP/IP port which that printer uses for PCL and PostScript print jobs. On HP, InfoPrint and Ricoh printers, the port is most often 9100. If you receive a message that indicates that a connection to the printer could not be established, please consult your configuration manuals for the printers to find the TCP/IP port.

When you run `pjldetect`, the printer must be turned on and online with no error conditions that would prevent it from printing, and it must not be in use by any other program. Once `pjldetect` has completed, you receive a message indicating whether your printer supports correct job completion. If you receive a message indicating that an error occurred while trying to detect job completion support, you should make sure that the printer is online and ready and not in use by another application. If you receive a message indicating that the printer does not support correct job completion, you cannot set `wait-for-job-completion` to `true` for that printer.

If you receive a message indicating that the printer does support correct job completion, you can add the printer model to the `/usr/lpp/pd/bin/pjldrtrs.cfg` file.

Note

If your printer does not support PDL, running `pjldetect` will most likely cause some data to print and a page to be ejected.

Adding the printer model to the `pjldrtrs.cfg` file

The `pjldrtrs.cfg` text file lists printer models that support setting `wait-for-job-completion` to `true`, but these printers either do not support SNMP, are not configured to use SNMP, or are not on when the InfoPrint Linux server is started. Some systems use the `pjldrtrs.cfg` file because they can create printers with the `wait-for-job-completion` attribute set to `true`, without having to verify through SNMP that the printer supports PDL. Without this capability, printers that have not been turned on would fail the SNMP/PDL test, and InfoPrint would automatically set the `wait-for-job-completion` attribute to `false`. This would force administrators to reset the attribute to `true` after they turn on the printer.

If you have determined that your printer does support correct job completion, but it does not support SNMP, you can add the printer model to the `/usr/lpp/pd/bin/pjldrtrs.cfg` file. Only printers that are known to support PDL should be added to this file. You can find the Linux CUPS printer drivers in the `/usr/share/cups/model` directory. The model names in `pjldrtrs.cfg` file must match the model names you specify for the `destination-model` actual destination attribute for the CUPS DSS.

A sample `pjldrtrs.cfg` file that lists the Imagio MP 5000 and Ricoh Pro 907EX printers looks like:

```
Ricoh-Aficio_MP_5000_PS.ppd
Ricoh-Pro_907EX_PS.ppd
```

 **Note**

Because both the Imagio MP 5000 and the Ricoh Pro 907EX support SNMP, you would only place those models in the `pijprtrs.cfg` file if you were setting `use-snmpp` to `false` on the corresponding actual destinations or the printers were turned off when your InfoPrint Manager for Linux server starts.

PSF-other DSS

To submit jobs to a PCL printer in formats other than those the printer accepts (such as PDF, GIF, or a SAP data stream), then driving your printer with a PSF-other DSS is a good choice. You can even configure it to bypass transforming some document formats while transforming all others.

By default, a PSF-other DSS transforms all incoming document formats to PCL4, PCL5, PCL5C, PCL6, or PPDS. PCL color or monochrome printers are supported by CUPS printing system, you only need the PPD file for your PCL printer. For more information about limitations specific to using **PSF-Other** printer to transform input data types to forward to a PCL printer, see [Processing concerns when using the PCL Secondary](#), p. 88.

Because the PSF-other DSS drives the printer just like a CUPS DSS, everything about the CUPS DSS applies. If you want to use the InfoPrint Manager enhanced CUPS backends (`pioinfo` or `piorpdm`) to obtain accurate job completion and job accounting information, you need to know the port number for your printer.

The CUPS DSS destination command for the InfoPrint Manager enhanced backends can be one of the following:

- `pioinfo://ip-address:[port-number]`
- `piorpdm://ip-address:[port-number]`.

By using one of the CUPS backends, the CUPS DSS provides the same support as the CUPS printing system, such as encryption and other security features over the Internet Printing protocol (IPP). Refer to the CUPS documentation for more details about CUPS, the CUPS backends, and the CUPS implementation of IPP.

The CUPS DSS destination command for the CUPS backends can be one of the following:

- `ipp://ip-address:443/ipp/print`
- `socket://ip-address`
- `lpd://ip-address/queue`.

To configure a PSF Other printer not to transform certain input data formats, you use the **InfoPrint Manager Administration GUI** to perform this configuration task. After you create the PSF Other 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 **Add>>**.

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

To print PDF documents directly, select PDF from the **Formats to RIP at destination** list and click **Add....**

 **Note**

As the following sections indicate, you must avoid specifying particular InfoPrint Manager attributes to ensure 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 attributes negate the **Document Formats Ripped at Destination** setting and force the jobs to be transformed:

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

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

PSF header sheet attributes that cause a job to be transformed

These attributes could effect header sheet generation, so they also negate the **Document Formats Ripped at Destination** setting and force jobs to be transformed:

- **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**

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

BSD DSS

You should use the BSD DSS only when there is either no other way to communicate with a device (for example, it is connected to a non-Linux processor) or you require:

- A terminating actual destination for the configurable transform subsystem
- An exit for your own use

The BSD DSS is capable of mapping InfoPrint Manager job and document attributes to options for your destination command. InfoPrint Manager uses the values in the **attribute-map** attribute to map InfoPrint Manager job and document attributes to options that append the **destination-command** value. This provides a means to customize the options passed from InfoPrint Manager to your destination command. Each value of the attribute map consists of an InfoPrint Manager attribute name, a colon, and a string containing the option flag to which the attribute maps. InfoPrint Manager appends the value of the attribute after the option flag in the generated command.

For example, if you set your **attribute-map** attribute to this:

```
copy-count:-N job-name:-T job-owner:-D
```

and your destination command is `lprafp -p mpc1 -s ip_address`, the BSD actual destination would generate this command:

```
lprafp -p mpc1 -s ip_address -N copy_count_value \
-T job_name_value -D job_owner_value
filename
```

The **attribute-map** attribute defaults to **destination-pass-through:-o**. Set your **attribute-map** attribute appropriately for your destination command.

If the **destination-pass-through** attribute is not mapped on the attribute-map attribute, the contents of this attribute are inserted into the command that the BSD actual destination generates after the job and the document mappings, but before the filename.

For example, if **attribute-map=copy-count:-N** and the destination command is

```
lprafp -p mpc1 -s ip_address
```

you can submit the command:

```
pdpr -P LogPrt1 -x "copy-count=2" -x "dest-pass-through=-p15" /etc/motd
```

and expect this result:

From dest-command attribute:	From job/document attribute:	From document's destination-pass-through attribute:	From document file names:
lprafp -p mpc1 -s ip_address	-N 2	-p15	/etc/motd

If possible, you should avoid using the BSD DSS to send jobs to printers for these reasons:

- Because InfoPrint Manager does not directly control the printer device, printer status information and error detection are limited. For example, if the remote queue is up, but the printer device cannot print because of a hardware problem, the BSD actual destination remains in a normal state.
- For the same reason, job status information is limited. For example, InfoPrint reports jobs as complete when they have been sent to the remote queue even though the printer device might be down. This means that you should not include BSD actual destinations in a pool. Jobs can be requeued on the remote queue and never actually printed, although other printers in the pool might be capable of printing them.
- Because most remote queues support only one data stream, BSD actual destinations usually accept only a single document format.
- BSD physical printers do not generate auxiliary sheets. The system where the printer device is attached might create auxiliary sheets, but you cannot control them using InfoPrint Manager attributes.
- If a job sent to a BSD actual destination includes multiple data sets, the output might be interleaved with the output from other jobs. For example, if you request two copies of a job, the printer device might print one copy, then another job, then the second copy.

PSF Command-attached DSS

You should use the PSF command-attached DSS when you need to either transform input data types to forward to a PCL printer that you have no other way to reach or store the data for later handling. For

example, if the PCL printer is physically connected to another system, this method might be the only way to print to it. Before you create the PSF command-attached actual destination, you must create the print queue to which the actual destination will submit requests.

Because PSF command-attached actual destinations requeue jobs to a local or remote queue, they share many of the limitations of BSD actual destinations listed in the BSD section. However, there are some notable differences.

Unlike BSD actual destinations, PSF command-attached actual destinations:

- Support multiple document formats because the PSF DSS automatically transforms all input data to AFP and then to some form of PCL or PPDS before sending it to the print queue.
For more information about limitations specific to using PSF command-attached printers to transform input data types to forward to a PCL printer, see [Processing concerns when using the PCL Secondary, p. 88](#).
- Generate auxiliary sheets

Unfortunately, a command-attached actual destination does not receive enough printer and job status information. The command used must be able to accept data from **STDIN**.

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 it to transform some document formats with InfoPrint Manager while bypassing all others to be transformed by the DFE print server. By default, a DFE DSS transforms ASCII, PDF, PostScript, PCL, and TIFF incoming document formats to PDF.

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.

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 sections 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. 91](#)).
 - 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 Transform for PCL Secondary

PCL Secondary uses the Transform to process each non-AFP object type. Therefore, you must verify the PostScript server address and port. You can find these values by selecting the **Customize** tab in the printer properties dialog from the **InfoPrint Manager Administration GUI**. When you run the transform locally, use these default values:

IPv4

IP: 127.0.0.1

Port: 8251

IPv6

IP: ::1

Port: 8251

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 bin mappings for PCL4, PCL5, and PCL5c

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 perform 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 the *RICOH InfoPrint Manager: Reference*.

For example, if you were to try and print a job with a form definition that specifies multiple input bins 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.

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: `/var/psf/Printer Name/TempFont`.

Troubleshooting printing to the PCL Secondary

This section provides potential answers to problems that can result from using the PCL Secondary through InfoPrint Manager:

How can I troubleshoot printing problems with jobs submitted through the PCL Secondary

To understand problems printing through the PCL Secondary, you must capture the PCL file that the PCL Secondary creates by converting the IPDS information it receives from the Primary Print Process.

You can find the PCL file in the `/var/spool/cups` directory on your InfoPrint Linux server.

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 and managing actual destinations

The InfoPrint actual destination is the software representation of an output device. An actual destination can be a physical printer (representing a printer device), or an e-mail destination (representing an email server).

For help in selecting the type of actual destination to create, see [Understanding Destination Support Systems \(DSS\), p. 74](#).

You create and manage InfoPrint actual destinations through the InfoPrint Manager Administration GUI, the command line, or the migration utility. This topic describes how you create new actual destinations and usage tips for displaying actual destination information:

- [Creating actual destinations with the InfoPrint Manager Administration GUI, p. 93](#)

Before creating an actual destination, we recommend that you power on the actual destination, such as a printer. This allows proper initialization of the printer bin configuration using SNMP.

Create an actual destination for each output device used with your InfoPrint Manager system. You can use the InfoPrint Manager Administration GUI or the command line to create an actual destination.

The attributes of the actual destination describe the features, functions, and capabilities of the device. InfoPrint validates that a device is available that supports the requirements of a job before accepting and processing the job.

You can create an InfoPrint actual destination in the same InfoPrint server that contains the queue it will receive jobs on or in a different server.

Creating actual destinations with the InfoPrint Manager Administration GUI

1

The InfoPrint Manager Administration GUI provides wizard support for creating these types of actual destinations:

- [PSF TCP/IP printer, p. 95](#)
- [PSF upload TCP/IP printer, p. 96](#)
- [PSF Other printer, p. 97](#)
- [PSF Command printer, p. 102](#)
- [CUPS DSS Printer, p. 104](#)
- [BSD printer, p. 107](#)
- [E-mail, p. 108](#)
- [DFE printer, p. 109](#)

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
InfoPrint 45, InfoPrint 70	<ul style="list-style-type: none"> • 8.5 x 12.4 inch • 9 x 11 inch • 12 x 18 inch • A3 (297 x 419 mm) • A4 (210 x 297 mm) • A5 (148 x 210 mm) • executive (7.25 x 10.5 inch) • folio (8.5 x 13 inch) • jis-b4-white (257 x 364 mm) • jis-b5-white (182 x 257 mm) • ledger (11 x 17 inch) • legal (8.5 x 14 inch) • letter (8.5 x 11 inch) • statement (5.5 x 8.5 inch)
All other printer models	<ul style="list-style-type: none"> • A3 (297 x 419 mm) • A4 (8.27 x 11.69 inch) • jis-b4-white (257 x 364 mm) • jis-b5-white (182 x 257 mm) • ledger (11 x 17 inch) • legal (8.5 x 14 inch) • letter (8.5 x 11 inch) • tabloid (11 x 17 inch)

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 [Basic InfoPrint Manager Administration GUI defaults for PSF printers, p. 94](#).

Basic InfoPrint Manager Administration GUI defaults for PSF printers

Attribute	Default values
printer-resolutions-ready	600
booklet-fold (set only for InfoPrint 4000)	down


Attribute	Default values
start-sheets-supported	job-ticket
printer-start-sheet	job-ticket
form-definition	F100D
accounting-exit	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	The name for the actual destination object (64-character limit).	
Server	The InfoPrint server that controls this actual destination.	
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.	
TCP/IP address	The IP address used to access this printer.	
TCP/IP port	<p>The port used by the printer for communication.</p> <p>If no value is specified, the server selects a port number based upon the printer model.</p> <p> Note</p> <p>The InfoPrint 1000 family of printers uses port 9100. Most other InfoPrint printers default to port 5001. The value you set here must match the value set at the printer.</p>	

Wizard prompt	Description	Value
Logical destination	The logical destination that directs jobs to this actual destination. You can accept the default LD, use another existing LD, or create a new one for this printer.	__ Default __ Existing: _____ __ Create: _____
Logical destination's server	The server that contains the logical destination.	
Queue	The queue that holds jobs destined for this actual destination.	If you selected a new LD, you get these three options: __ Default __ Existing: _____ __ New: _____

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**.)

[PSF TCP/IP printer worksheet, p. 95](#) provides the information that the wizard prompts for. 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.

PSF upload TCP/IP printer

Create a PSF upload TCP/IP actual destination to represent an IPDS printer for use with the AFP Upload function

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

PSF upload TCP/IP printer worksheet

Wizard prompt	Description	Value
Name	The name for the actual destination object (64-character limit).	
Server	The InfoPrint server that controls this actual destination.	
TCP/IP address	The IP address of the host system.	
TCP/IP port	The port number used by the AFP Upload server running on the host system.	

Wizard prompt	Description	Value
Logical destination	The logical destination that directs jobs to this actual destination. You can accept the default LD, use another existing LD, or create a new one for this printer.	<input type="checkbox"/> Default <input type="checkbox"/> Existing: _____ <input type="checkbox"/> Create: _____
Queue	The queue that holds jobs destined for this actual destination.	If you selected a new LD, you get these three options: <input type="checkbox"/> Default <input type="checkbox"/> Existing: _____ <input type="checkbox"/> New: _____

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** → **Upload TCP/IP**.)

From [PSF upload TCP/IP printer worksheet, p. 96](#), provides the information that the wizard prompts for. See the InfoPrint Manager Administration GUI online help for more assistance.

Note

If the **Create PSF Upload TCP/IP** printer option is not shown in the **Printer** menu, you can add it to the menu using customizing options in the InfoPrint Manager Administration GUI. Select the **Customize** option from the **Options** menu to open the Customize dialog. Select the **Printer** tab and select the Menu checkbox for **PSF Upload TCP/IP printer**. Click **OK** to apply your change and close the dialog. The **Create PSF Upload TCP/IP** printer option displays in the **Printer** menu.

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

PSF Other printer

Create a PSF Other actual destination to represent a PCL printer. By default, a PSF Other printer transforms all incoming data streams into either PCL4, PCL5, PCL5C, PCL6, or PPDS before sending the job to your printer. The actual destination submits jobs to the printer through the CUPS backend program that is defined on the printer command (just like an CUPS DSS). Before creating a PSF Other-driver actual destination, you should review the special processing considerations for jobs submitted through this type of actual destination that are described in [Processing concerns when using the PCL Secondary, p. 88](#).

By setting the **document-formats-ripped-at-destination** actual destination attribute, you can specify particular **document-formats** (such as PostScript and PCL) that will not be transformed by InfoPrint Manager. Using this attribute, you can eliminate the performance overhead of having PCL and PostScript documents transformed into Advanced Function Presentation data and then into PCL image data when your printer is capable of accepting those data streams.


The use of certain job and document attributes requires the actual destination to transform a job even if the job's document format is listed on the **document-formats-ripped-at-destination** attribute. For example, if you submit a PostScript job that contains the document attributes **form-definition** and

output-format, InfoPrint must transform this job to honor these attributes. For a complete list of the attributes that force InfoPrint to transform the job, see [Document attributes that cause a job to be transformed, p. 83](#), [Job attributes that cause a job to be transformed, p. 84](#), and [PSF header sheet attributes that cause a job to be transformed, p. 85](#).

If the printer you are defining is not an SNMP printer, you must configure the **psf-tray-characteristics** attribute to specify the input tray values (paper types) that the printer supports. For more information about the paper type limitations, see *RICOH InfoPrint Manager: Reference*.

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

PSF Other printer worksheet

Wizard prompt	Description	Value
Name	The name for the actual destination object (64-character limit).	
Server	The InfoPrint server that controls this actual destination.	
Model	<p>This single-valued attribute indicates the make and model of the printer device represented by the PSF-other actual destination.</p> <p>Select the printer model from the pull-down list in the InfoPrint Manager Administration GUI or enter a value.</p> <p>The value you specify must match a file in the /usr/share/cups/model directory. For example, one of the files for a Ricoh Aficio MP 5000 printer is Ricoh-Aficio_MP_5000_PS.ppd. Therefore the value you specify is Ricoh-Aficio_MP_5000_PS.ppd.</p> <p> Note</p> <p>Specifying the .ppd format is optional.</p>	<p>Examples from the predef directory:</p> <ul style="list-style-type: none"> • Lexmark_W850.ppd • pxlcolor.ppd • Ricoh-Aficio_MP_5000_PS.ppd • Ricoh-Pro_907EX_PS.ppd • textonly.ppd

Wizard prompt	Description	Value
	<p>If you are not using a predefined printer model, the first time you enter a value that matches a PPD file, InfoPrint Manager dynamically retrieves the printer model from the PPD file and adds it to the dynamic-destination-models server attribute. The dynamic-destination-models are also added to the CUPS DSS actual destination creation wizard drop-down list for further utilization on that server. If you want the new printer model to be displayed in the GUI drop-down list of all the available servers on the same system, you can either create one CUPS actual destination on each server using the same PPD file or restart each server.</p> <p>Consult dynamic-destination-models server attribute to check for additional printer models dynamically supported by InfoPrint Manager.</p>	<p>Note</p> <p>If the PPD files are not located in the default location you can also specify the full path to the PPD file. For example for a Ricoh Aficio Pro 907EX the value you can specify is <code>/printing/drivers/Ricoh-Aficio_Pro_907EX_PS.ppd¹</code></p>
SNMP TCP/IP address	The IP address used to access this printer. This value is used only for SNMP printers.	
Device	The printer device name.	Leave this column blank.
Printer command	<p>The device-uri of the CUPS backend that submits the print data to the printer.</p> <p>This is the command that would appear as the printer Device URI or Backend Connection if you had created a CUPS printer for you device.</p> <p>As an alternative, you could use the InfoPrint-supplied pioinfo CUPS backend or the InfoPrint-supplied piorpdm CUPS backend for Ricoh printers and</p>	Examples ³

Wizard prompt	Description	Value
	supply the correct port number to make sure you get accurate job completion and accounting information ² .	
Data stream	The data stream for PSF transforms to create (for example, PCL4, PCL5, PCL5C, PCL6, or PPDS).	
Logical destination	The logical destination that directs jobs to this actual destination. You can accept the default LD, use another existing LD, or create a new one for this printer.	<input type="checkbox"/> Default <input type="checkbox"/> Existing: _____ <input type="checkbox"/> Create: _____
Logical destination's server	The InfoPrint server that contains the logical destination.	

Wizard prompt	Description	Value
Queue	The queue that holds jobs destined for this actual destination.	If you selected a new LD, you get these three options: ___ Default ___ Existing: _____ ___ New: _____
<p>Note</p> <ol style="list-style-type: none"> Regardless of whether you enter a value or pick a model from the InfoPrint Manager Administration GUI drop-down list, the printer driver (including the PPD files) must be installed on your CUPS system. InfoPrint Manager provides two CUPS printer backend programs that provide accurate job completion information and an accurate count of the pages printed: pioinfo, piorpdm. You can specify a variety of printer commands, depending on the type of printer: <ul style="list-style-type: none"> InfoPrint and most of the printers: pioinfo. Examples: <ul style="list-style-type: none"> – <code>pioinfo://address:9100</code>. The use of port is optional. – <code>pioinfo://address:9100 raw</code>. The use of raw option enables CUPS to print the data without any processing or filtering. Ricoh: piorpdm. Examples: <ul style="list-style-type: none"> – <code>piorpdm://address:9100</code>. The use of port is optional. – <code>piorpdm://address:9100 raw</code>. The use of raw option enables CUPS to print the data without any processing or filtering. IPP Printer: <ul style="list-style-type: none"> – <code>ipp://address/ipp/print</code>. – <code>ipps://address:443/ipp/print</code>. Hewlett Packard JetDirect: <ul style="list-style-type: none"> – <code>socket://address:9100</code>. Lexmark MarkNet: <ul style="list-style-type: none"> – <code>lpd://address/ps</code>. EPSON Multiprotocol Ethernet Interface Board: <ul style="list-style-type: none"> – <code>socket://address</code>. 		

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** → **Other**.)

[PSF Other printer worksheet, p. 98](#) provides the information that the wizard prompts for. See the InfoPrint Manager Administration GUI online help for more assistance.

Note

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

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

After you create the PSF Other-driver attached printer with the **Create Printer Wizard**, you might want to passthrough PostScript and PCL data stream jobs. To configure for this support, you must go into the **Printer Properties** notebook for pdf the printer and modify the **Formats to RIP at destination** field. 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 **Add>>**.

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 **ASCII** or **PDF**.

PSF Command printer

A PSF Command actual destination transforms all incoming data streams into either PCL4, PCL5, PCL5C, PCL6, or PPDS before issuing your print command. Your print command must support **STDIN** (standard input) for receiving data. Before creating a PSF Command actual destination, you should review the special processing considerations for jobs submitted through this type of actual destination that are described in [Processing concerns when using the PCL Secondary](#), p. 88.

Create a PSF Command printer when you need to transform incoming data streams to PCL or PPDS and the PSF Other-driver printer is not suitable. The PSF Command printer only queues jobs, so you have no control and cannot receive accurate job status.

If the printer you are defining is not an SNMP printer, you must configure the **psf-tray-characteristics** attribute to specify the input tray values (paper types) that the printer supports. For more information about the paper type limitations, see the *RICOH InfoPrint Manager: Reference*.

Before creating a PSF Command printer, complete this worksheet.

Note

Before using this worksheet to create your InfoPrint Manager actual destination, you need to create the queue that you are forwarding the job to.

PSF Command printer worksheet

Wizard prompt	Description	Value
Name	The name for the actual destination object (64-character limit).	
Server	The InfoPrint server that controls this actual destination.	
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 for this printer. This value is used only for SNMP printers.	InfoPrint Manager uses this value only to obtain printer SNMP information from the printer.
Printer command	The command string used to send a job to the appropriate UNIX printer. Note that this command must support STDIN for receiving data.	Example: <code>lprafp -p mpc1 -s ip_address</code>
Data stream	The data stream created by PSF transforms and expected by the printing device (for example, PCL4, PCL5, PCL5C, PCL6, or PPDS).	
Logical destination	The logical destination that directs jobs to this actual destination. You can accept the default LD, use another existing LD, or create a new one for this printer.	<input type="checkbox"/> Default <input type="checkbox"/> Existing: _____ <input type="checkbox"/> Create: _____
Logical destination's server	The InfoPrint server that contains the logical destination.	
Queue	The queue that holds jobs destined for this actual destination	If you selected a new LD, you get these three options: <input type="checkbox"/> Default <input type="checkbox"/> Existing: _____ <input type="checkbox"/> New: _____

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**.)

[PSF Command printer worksheet, p. 103](#) provides the information that the wizard prompts for. See the InfoPrint Manager Administration GUI online help for more assistance.

Note

If the **Create PSF Command** printer option is not shown in the **Printer** menu, you can add it to the menu using customizing options in the InfoPrint Manager Administration GUI. Select the **Customize** option from the **Options** menu to open the Customize dialog. Click the **Printer** tab and select the Menu checkbox for **PSF Command printer**. Click **OK** to apply your change and close the dialog. The **Create PSF Command** printer option displays in the **Printer** menu.

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

CUPS DSS Printer

Create an InfoPrint actual destination to represent a printer that receives untransformed data streams through an CUPS backend (printer driver), just as a printer being driven by a CUPS queue would do. The actual destination submits jobs to the printer through the CUPS printing system using the backend program that is defined on the printer command.

Before creating an CUPS DSS printer, complete this worksheet.

CUPS printer worksheet

Wizard prompt	Description	Value
Name	The name for the actual destination object.	
Server	The InfoPrint server that controls this actual destination.	
Model	This single-valued attribute indicates the make and model of the printer device represented by the CUPS actual destination.	Examples from the predef directory: <ul style="list-style-type: none"> • Lexmark_W850.ppd • pxlcolor.ppd • Ricoh-Aficio_MP_5000_PS.ppd • Ricoh-Pro_907EX_PS.ppd • textonly.ppd
	Select the printer model from the drop-down list in the InfoPrint Manager Administration GUI or enter a value.	Example from the drop-down list: Ricoh Aficio Pro 907EX
	If you are not using a predefined printer model, the first time you enter a value that	The value you specify must match a file in the /usr/share/cups/model directory, this

Wizard prompt	Description	Value
	<p>matches a PPD file, InfoPrint Manager dynamically retrieves the printer model from the PPD file and adds it to the dynamic-destination-models server attribute. The dynamic-destination-models are also added to the CUPS DSS actual destination creation wizard drop-down list for further utilization on that server. If you want the new printer model to be displayed in the GUI drop-down list of all the available servers on the same system, you can either create one CUPS actual destination on each server using the same PPD file or restart each server.</p> <p>Consult dynamic-destination-models server attribute to check for additional printer models dynamically supported by InfoPrint Manager.</p>	<p>directory is the default location. For example, one of the files for a Ricoh Aficio MP 5000 printer is Ricoh-Aficio_MP_5000_PS.ppd. Therefore the value you specify is Ricoh-Aficio_MP_5000_PS.ppd.</p> <p>Note</p> <p>If the PPD files are not located in the default location you can also specify the full path to the PPD file. For example for a Ricoh Aficio Pro 907EX the value you can specify is /printing/drivers/Ricoh-Aficio_Pro_907EX_PS.ppd</p>
SNMP TCP/IP address	The IP address used to access this printer. This value is used only for SNMP printers.	
Printer command	<p>The device-uri of the CUPS backend that submits the print data to the printer.</p> <p>This is the command that would appear as the printer Device URI or Backend Connection if you had created a CUPS printer for you device.</p> <p>As an alternative, you could use the InfoPrint-supplied piinfo CUPS backend or the InfoPrint-supplied piorpdm CUPS backend for Ricoh printers and supply the correct port number to make sure you get accurate job completion and accounting information.</p>	Examples ³

Wizard prompt	Description	Value
Logical destination	The logical destination that directs jobs to this actual destination. You can accept the default LD, use another existing LD, or create a new one for this printer.	__ Default __ Existing: _____ __ Create: _____
Logical destination's server	The InfoPrint server that contains the logical destination.	
Queue	The queue that holds jobs destined for this actual destination.	If you selected a new LD, you get these three options: __ Default __ Existing: _____ __ New: _____

Note

- Regardless of whether you enter a value or pick a model from the **InfoPrint Manager Administration GUI** drop-down list, the printer driver (including the **PPD** files) must be installed on your CUPS system.
- InfoPrint Manager provides two CUPS printer backend programs that provide accurate job completion information and an accurate count of the pages printed: **pioinfo**, **piorpdm**.
- You can specify a variety of printer commands, depending upon the type of printer:
 - InfoPrint and most of the printers: `pioinfo://address:9100`. The use of port is optional.
 - Ricoh: `piorpdm://address:9100`. The use of port is optional.
 - Hewlett Packard JetDirect: `socket://address:9100`.
 - Lexmark MarkNet: `lpd://address/ps`.
 - EPSON Multiprotocol Ethernet Interface Board: `socket://address`.

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

[CUPS printer worksheet, p. 104](#) provides the information that the wizard prompts for. See the InfoPrint Manager Administration GUI online help for more assistance.

Note

If the **Create CUPS** printer option is not shown in the **Printer** 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 **Printer** tab and select the Menu checkbox for **CUPS printer**. Click **OK** to apply your change and close the dialog. The **Create CUPS** printer option displays in the **Printer** menu.

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

BSD printer

Create a BSD actual destination when you need to configure a terminating transform at the actual destination, create an exit for your own use, 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	The name for the actual destination object.	
Server	The InfoPrint server that controls this actual destination.	
SNMP TCP/IP address	The IP address used to access this printer. This value is used only for SNMP printers. This field should be left blank if you are using InfoPrint Manager (lprafp) LPR as the printer backend.	
Printer command	The command to issue to submit a job to this remote destination. Typically, this is a call to the InfoPrint Manager (lprafp) LPR command. For example, <code>/usr/lpp/psf/utis/lpr/LPR -A -s serverName -p printerName</code> .	
Logical destination	The logical destination that directs jobs to this actual destination. You can accept the default LD, use another existing LD, or create a new one for this printer.	<input type="checkbox"/> Default <input type="checkbox"/> Existing: _____ <input type="checkbox"/> Create: _____
Logical destination's server	The InfoPrint server that contains the logical destination.	
Queue	The queue that holds jobs destined for this actual destination.	If you selected a new LD, you get these three options: <input type="checkbox"/> Default <input type="checkbox"/> Existing: _____ <input type="checkbox"/> New: _____

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**.)

[BSD printer worksheet, p. 107](#) provides the information that the wizard prompts for. See the InfoPrint Manager Administration GUI online help for more assistance.

↓ Note

If the **Create BSD** printer option is not shown in the **Printer** 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 **Printer** tab and select the Menu checkbox for **BSD printer**. Click **OK** to apply your change and close the dialog. The **Create BSD** printer option displays in the **Printer** menu.

The BSD DSS is capable of mapping InfoPrint Manager job and document attributes to options for your destination command. InfoPrint Manager uses the values in the **attribute-map** attribute to map InfoPrint Manager job and document attributes to options that append the **destination-command** value. This provides a way to customize the options passed from InfoPrint Manager to your destination command. Each value of the attribute map consists of an InfoPrint Manager attribute name, a colon, and a string containing the option flag to which the attribute maps. InfoPrint Manager appends the value of the attribute after the option flag in the generated command. For more information about the **attribute-map** attribute works, see [BSD DSS, p. 85](#).

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	<p>The logical destination that directs jobs to this actual destination.</p> <p>↓ Note</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>	<p>__ Default</p> <p>__ Existing: _____</p> <p>__ Create: _____</p>

Wizard prompt	Description	Value
Logical destination's server	The InfoPrint server that contains the logical destination.	
Queue	The queue that holds jobs destined for this actual destination.	If you selected a new LD, you get these three options: ___ Default ___ Existing: _____ ___ New: _____

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. 108](#) 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.

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). Note This name is case-sensitive.	
Server	The InfoPrint server that controls this actual destination. Note This name is case-sensitive.	

Wizard prompt	Description	Value
Model	Allow the DFE print server to set this information or enter the name as it appears on the printer.	__Set by DFE 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 user name that the DFE DSS actual destination will use to connect 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**.)

[DFE printer worksheet, p. 109](#) provides the information that the wizard prompts for. 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.

Large file support

Initial installation

The file systems created by InfoPrint Manager during the installation phase are large file enabled. Follow the instructions in [Enabling large file support, p. 112](#) if you did not enable large file support previous to the initial installation of InfoPrint Manager. . Remember to also configure your actual destinations. See [Enabling InfoPrint Manager actual destinations, p. 113](#) for instructions.

If you want your InfoPrint Manager server to support files larger than 2.14 gigabytes, the InfoPrint file systems must be enabled for large files and also large enough to handle the data. The following information explains:

- What is supported
- How to determine if your server is already capable of processing large files
- How to enable your server to process large files
- How to check/change the size of your file systems to support large file processing

Job submission clients supported

Client	Windows	AIX	Linux
pdpr with AIX, Linux, macOS and Windows	Supported	Supported	Supported
MVS Download	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

Enabling large file support

Follow these instructions if you did not enable large file support previous to the initial installation of InfoPrint Manager and you want to use this function.

1. Log into the InfoPrint server as **root**.
2. Open a terminal window.
3. Stop all InfoPrint related processes by using this command: `/usr/lpp/pd/install/killprocs.sh`
4. Use these steps to enable large file support on the file system:

- 1) Verify the current system `limits` by running the command `ulimit -a`:
 1. Edit the file `/etc/security/limits.conf` from the command line.
 2. Change the file size limit or `fsize` to a size that supports your needs. Setting the file size limit to unlimited sets the file size to unlimited. Or you can run the command `ulimit -f unlimited`
 3. Save your changes.
- 2) Restart the server:

```
startsrv <servername>
```

where `<servername>` is the name of your InfoPrint Manager server process (`pdserver`).

Enabling InfoPrint Manager actual destinations

Once your file system is large file enabled, you also need to configure your actual destinations to support large files. To do this, change the `large-file-enabled` attribute to `True` on all of the PSF actual destinations that you want to process large files on. See the *RICOH InfoPrint Manager: Reference* for more information.

Enabling large file support

Follow these instructions if you did not enable large file support previous to the initial installation of InfoPrint Manager and you want to use this function.

1. Log into the InfoPrint server as `root`.
2. Open a terminal window.
3. Stop all InfoPrint related processes by using this command: `/usr/lpp/pd/install/killprocs.sh`
4. Use these steps to enable large file support on the file system:
 - 1) Verify the current system `limits` by running the command `ulimit -a`:
 1. Edit the file `/etc/security/limits.conf` from the command line.
 2. Change the file size limit or `fsize` to a size that supports your needs. Setting the file size limit to unlimited sets the file size to unlimited. Or you can run the command `ulimit -f unlimited`
 3. Save your changes.
 - 2) Restart the server:

```
startsrv <servername>
```

where `<servername>` is the name of your InfoPrint Manager server process (`pdserver`).

Enabling InfoPrint Manager actual destinations

Once your file system is large file enabled, you also need to configure your actual destinations to support large files. To do this, change the `large-file-enabled` attribute to `True` on all of the PSF actual destinations that you want to process large files on. See the *RICOH InfoPrint Manager: Reference* for more information.

Using the LPD Gateway with InfoPrint Manager for Linux

You can use the InfoPrint Manager for Linux line printer daemon (**ipmlpd**) to receive jobs through the **LPD Gateway** to an InfoPrint Linux server. **InfoPrint Manager LPD** is a daemon that lets you submit print jobs from other operating systems using a Line Printer (**LPR**) client. **InfoPrint Manager LPD** submits the files it receives directly to an InfoPrint destination and supports the `-o` options that are available with some **LPR** clients. (`-o` options allow you to specify advanced InfoPrint print options, such as form definitions and page definitions. For more information about using `-o` options with print commands, see *RICOH InfoPrint Manager: Reference*.)

To configure to use the **InfoPrint Manager LPD** protocol you need to verify if other **LPD** daemons or processes that do not belong to InfoPrint Manager (for example, the Common UNIX Printing System [CUPS] **LPD** daemon) are running on the same system, stop them if they are.

★ Important

Do not uninstall **CUPS**, just stop the **cups-lpd** daemon on your Linux server.

The InfoPrint Manager for Linux Line Printer Daemon uses **port 515**.

The **LPD** protocol defines a print command called **lpr**. You can use the **lpr** command, or several other commands that use the **LPD** protocol, to submit jobs from AIX, Linux or Windows systems to InfoPrint Manager for Linux **LPD** destinations. You can also send jobs using the **LPD** protocol from other systems, such as z/OS. Syntax and available options vary from one print command to another and from one version of **lpr** to another. You might have to adapt examples of print commands for your own system.

You might also have to configure the sending system to compensate for options that your print command does not provide. For example, if the print command does not have an option for specifying a print server, you must create a remote print queue on the sending system with the same name as the **LPD** destination.

To start and stop InfoPrint Manager Linux **LPD** you can use the InfoPrint Manager Management Interface:

1. Launch the Infoprint Manager Management Interface:
 - On RedHat Enterprise Server go to **Application->InfoPrint Manager->Management Interface**.
 - On SUSE Linux Enterprise Server go to **Computer->More Applications->InfoPrint Manager->Management Interface**.
2. Go to **InfoPrint Manager-> Objects-> LPD Gateway-> Start or Stop**.

Note

- From the Management Interface, you can start the LPD Gateway as follows:
 - Start at reboot: the **LPD Gateway Daemon** starts automatically when the system reboots.
 - Start now: the **LPD Gateway Daemon** starts immediately.
 - Start both: the **LPD Gateway Daemon** starts immediately and automatically when the system reboots.
- From the command line, you can edit the `/etc/rc.lpd.daemons` and uncomment the `startlpd` comment to automatically start the InfoPrint Manager Linux LPD daemon at system startup.
- From the command line, use the `startlpd` and `stoplpd` to start and stop InfoPrint Manager Linux LPD. For details on how to use these commands, see *RICOH InfoPrint Manager: Reference*.
- Make sure that LPD port number 515 is accessible from other systems by updating the iptables or other firewall rules.
- The CUPS `lpr` command is not a **LPD** client; it is a client for the **CUPS** printing system. It keeps compatibility with the traditional command line interfaces for the Berkley (`lpr`) print systems.

This topic describes the different **LPR** clients that you can use to send print jobs to InfoPrint Manager for Linux:

- [Submitting Print Jobs through the LPD from other UNIX systems, p. 115](#)
-

Submitting Print Jobs through the LPD from other UNIX systems

You can use any **LPR** client, but to be able to specify advanced InfoPrint options on the `-o` flag, you must make sure that your **LPR** client supports `-o` options. Sample code for an InfoPrint Manager **LPR** client called `lprafp` is provided with InfoPrint Manager for Linux and is available from the `/usr/lpp/psf/utlis/lpr` directory. This directory contains sample code of the `lprafp` client for UNIX platforms. This code must be compiled as described in the **README** file that is located in the `/usr/lpp/psf/utlis/lpr` directory.

Be sure to specify the **LPD** subsystem in the `/etc/inittab` file to make sure that the client starts on a system reboot and is always available.

Submitting Print Jobs from a non-UNIX System with the InfoPrint Manager (lprafp) LPR Client

When you submit print jobs from the InfoPrint Manager **LPR** client on a non UNIX system, all you need to specify is the InfoPrint Manager server and the name of an InfoPrint destination (either logical or actual). The **InfoPrint LPD** submits the job to the InfoPrint print spool. If you enter the **LPR** shell script with the `-A` flag, it invokes the `lprafp` command program (`lprafp.c`), which is documented in *RICOH InfoPrint Manager: Reference*. If you enter the **LPR** shell script without the `-A` flag, it invokes the **UNIX** system's `LP` command, which does not support the InfoPrint `-o` options.

For Linux operating system clients, the `lprafp` sample code package is available for free download at [LPRAFP with InfoPrint Server for z/OS](#).

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 `/var/pd/lpd/lpdmap.txt`.
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 through the LPD from a non-UNIX System

To submit jobs from a VM, z/OS, or AS/400 system through the LPD Gateway to an InfoPrint Linux server, you can use any **LPR** client, but cannot specify advanced InfoPrint options on the `-o` flag. If submitting jobs from an MVS or z/OS system, you might want to consider purchasing MVS Download as an alternative that lets you specify a richer set of InfoPrint print options.

Using the IPP Gateway with InfoPrint Manager for Linux

InfoPrint Manager for Linux now includes 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 `startippgw` utility or IPMMI (**InfoPrint Manager** → **Object** → **IPP Gateway**) to enable the IPP gateway.

★ Important

In order to start the IPP Gateway services, you need to make sure the port which you intent to use (default port is 631) is not occupied by another service. On Linux systems most likely `cupsd` service already runs on port 631, needed by CUPS DSS as well, which means that you need to start the IPP Gateway on a different port than 631. If you do not use CUPS DSS destination on InfoPrint Manager for Linux, then you can stop `cupsd` service (do not uninstall CUPS), and use it's default port 631 for IPP Gateway.

Note

- For information about the **startippgw**, **stopippgw**, and **lsippgw** daemon utilities available to use with the IPP Gateway on Linux, see the *RICOH InfoPrint Manager: Reference*.
- The Internet Printing Protocol (IPP) is an application protocol that uses the Hypertext Transfer Protocol (HTTP) to allow you to print your documents to any IPP-enabled printer whose web address (or Uniform Resource Identifier-URI) you know. You can use IPP to send print data over both LANs and the Internet, so users who are directly connected to your LAN, as well as those who work remotely, have access to the same printers.

An **Internet Printing Protocol (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 IPP gateway. The IPP gateway can then send the job on to any InfoPrint printer, even those that are not IPP-enabled.

Printing through the IPP Gateway

The IPP gateway is a daemon in InfoPrint Manager that lets you print using IPP even if you don't have an IPP-enabled printer, as long as you (and your users) have IPP client software installed on your workstation.

1. Start the IPP Gateway using the **startippgw** daemon utility or IPMMI(**InfoPrint Manager** → **Objects** → **IPP Gateway**).
2. Verify that the gateway is working. Open your Internet browser and enter the following web address, replacing *serverhostname* with the DNS hostname of the system where the IPP gateway daemon is running: `http://serverhostname:631/printers` where 631 is the default port. If you are using a different port, specify the number of the port you are using. If the gateway is working correctly, you will see a list of the printers that are available through the gateway. All of your InfoPrint destinations should be listed. Find the address (URI) of the destination you want your users to print to.

If you do not have a DNS name server running on your network, replace *serverhostname* with the dotted-decimal IP address of the system where the IPP gateway daemon is running.

If your InfoPrint Manager environment has two InfoPrint Manager systems in different name spaces on the same machine, you need to start an IPP gateway daemon for each InfoPrint Manager system.

3. Provide your end users the IPP client software to install on their workstations or laptops and give them the address (the URI from step 1) of the printer they should use. When the end users have completed the installation of the IPP client software, they can print to the printer just as they would print to any other printer.

Windows systems come with IPP client software built in. Users on other Windows platforms can download IPP client software. 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 the appropriate client at <http://www.pwg.org/ipp/>.

Enabling Secure Sockets Layer (SSL) in the Web Server for HTTPS protocol

Secure Socket Layer (SSL) is a protocol that provides security for communications between browsers and the web server by implementing encrypted data and certificate-based authentication.

You can activate SSL in the Web server component and link it to an digital certificate. It has an existing digital certificate, self-sign certificates, which should be replaced with personalized certificates generated by customers.

Before you configure the SSL, you must obtain a digital certificate and store it on the computer that the base product is installed on. Follow the instructions provided by the certificate authority (CA) for installing the certificate. You must also know where the keystore is located on the server and the password for the keystore.

In addition, save copies of these files in a safe location so you can find them easily if you need to restore them in the future.

To generate a key and keystore, use the Java **keytool** command. For details about using **keytool**, consult your CA or Java documentation.

↓ Note

Your private key password and keystore password must be the same. If they are not the same, you receive a `java.io.IOException` error.

To configure SSL:

1. Purchase a digital certificate from a reputable certificate authority (CA).
2. Follow the instructions provided by the CA to install the certificate on the computer where the InfoPrint Manager server is installed.
3. Use the Java **keytool** command to generate a key and keystore. For details about using the **keytool** command, refer to Java documentation. Write down the location of the keystore and the password for the keystore. You need them later.
4. Log in to the computer as the InfoPrint Manager administrator.
5. Copy the `.keystore` file previously created to the home directory for the InfoPrint Manager system user.
6. Change the owner of the `.keystore` file to the appropriate owner and group. Type this command, substituting the InfoPrint Manager user ID for `system_user` and the InfoPrint Manager group for `system_group`: `chown system_user:system_group .keystore`.
The default system user is **ipm1** and the default group is **sys**.
7. If you cannot copy the `.keystore` file and change the owner, log out and log back in to the primary computer as the root user or use **su** to become the root user and repeat the previous two steps
8. Switch to the InfoPrint Manager user. Type this command, substituting the InfoPrint Manager user ID for `system_user`: `su - system_user`.
9. Navigate to the `/usr/lpp/pd/ipmws/conf` directory.
10. Open the `server.xml` file and make these changes:
 - 1) Find this configuration and uncomment it:


```

<Connector
protocol="org.apache.coyote.http11.Http11NioProtocol"
port="14443"
maxThreads="150"
SSLEnabled="true">
<SSLHostConfig protocols="TLSv1.2+TLSv1.3"
ciphers="TLS_ECDHE_ECDSA_WITH_AES_128_GCM_SHA256,
TLS_ECDHE_RSA_WITH_AES_128_GCM_SHA256,
TLS_ECDHE_ECDSA_WITH_AES_256_GCM_SHA384,
TLS_ECDHE_RSA_WITH_AES_256_GCM_SHA384,
TLS_ECDH_RSA_WITH_AES_256_GCM_SHA384,
TLS_ECDH_RSA_WITH_AES_128_GCM_SHA256,
TLS_ECDH_ECDSA_WITH_AES_128_GCM_SHA256,
TLS_ECDH_ECDSA_WITH_AES_256_GCM_SHA384,
TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA,
TLS_ECDHE_ECDSA_WITH_AES_256_CBC_SHA,
TLS_ECDH_RSA_WITH_AES_256_CBC_SHA384,
TLS_ECDH_ECDSA_WITH_AES_256_CBC_SHA384,
TLS_ECDH_RSA_WITH_AES_256_CBC_SHA,
TLS_ECDH_ECDSA_WITH_AES_256_CBC_SHA,
TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA256,
TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA256,
TLS_ECDHE_RSA_WITH_AES_128_CBC_SHA,
TLS_ECDHE_ECDSA_WITH_AES_128_CBC_SHA,
TLS_ECDH_RSA_WITH_AES_128_CBC_SHA256,
TLS_ECDH_ECDSA_WITH_AES_128_CBC_SHA256,
TLS_ECDH_RSA_WITH_AES_128_CBC_SHA,
TLS_ECDH_ECDSA_WITH_AES_128_CBC_SHA">

<Certificate
certificateKeystoreFile="etc/InfoPrint.keystore"
certificateKeystorePassword="changeit"
type="RSA"/>
</SSLHostConfig>
</Connector>

```

- 2) Replace the value for *keystoreFile* with the path to your *.keystore* file.
- 3) Replace the *keystore_password* by changing *keystorePass* value with the password to your keystore.
- 4) Save and close the file.

11. If you use another port than the default one (14000), run the *pdwsinitports* utility.

12. Restart the InfoPrint Manager Web server.

13. Verify the secure connection by opening a Web browser and typing this address, replacing *server_name* with the host name or IP address of the computer where InfoPrint Manager is installed:
<https://server-name:14443/IPM>.

If you use a self-signed certificate or if the certificate is not specifically tied to the server, the Web browser issues a warning that the certificate is not trusted.

If you install service updates or a new version of the InfoPrint Manager, you must activate SSL again because the installation process clears the SSL settings in the Web Server component.

If you need to update or replace your digital certificate, install the new certificate into the keystore and remove the old certificate. You do not have to do this task again because InfoPrint Manager can find the new certificate in the keystore.

Configuring Tomcat to redirect all HTTP requests to HTTPS

To force the Web server redirect all calls to a secure connection:

1. Use a self-signed certificate or a certificate generated by a Certificate Authority (CA).
InfoPrint Manager Web server already provides a sample self-signed certificate. The certificate must be signed by the trusted third party so that it can work in the visitors browsers without warnings. To obtain a signed certificate, choose a CA and follow its instruction.
2. Install and configure the Web server so that you can use your certificate. For more information, see [Enabling Secure Sockets Layer \(SSL\) in the Web Server for HTTPS protocol, p. 118](#). To use the sample certificate, enable the SSL connector in `/usr/lpp/pd/ipmws/conf/server.xml` file.
3. Go to `/usr/lpp/pd/ipmws/conf/web.xml` file, scroll to the bottom of the file and add the following just above the `</web-app>` entry:

```
<!-- Force HTTPS, required for HTTP redirect! -->
<security-constraint>
<web-resource-collection>
<web-resource-name>Protected Context</web-resource-name>
<url-pattern>/*</url-pattern>
</web-resource-collection>

<!-- auth-constraint goes here if you require authentication -->
<user-data-constraint>
<transport-guarantee>CONFIDENTIAL</transport-guarantee>
</user-data-constraint>
</security-constraint>
```

4. Save the `web.xml` file and restart the web server from MMI for these changes to take effect.

↓ Note

- If you have multiple web servers running, make sure that they all use the same HTTP or HTTPS protocol.

2. Getting started with client systems

- InfoPrint Manager GUI software
- Setting up the InfoPrint Manager Web Management Interface
- Using InfoPrint Select for Windows
- Using InfoPrint Select for Linux
- Using InfoPrint Select for macOS
- Using the InfoPrint Manager AIX client
- Using the InfoPrint Manager Linux client
- Using the InfoPrint Manager macOS client
- Using the InfoPrint Submit Express Client
- Using the InfoPrint Manager Windows Client
- Setting up hot folders to submit jobs
- 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 systems. 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 (pdls)` 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 Linux: 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.

User authentication methods

Using local system account authentication with InfoPrint Manager GUI software

The standard FST information (*user@host*) is used for InfoPrint Manager authentication when you are logged in with your local account.

This authentication method is available only for the Java GUI. For more information on the FST security, see *RICOH InfoPrint Manager for Linux: Procedures*.

Using LDAP or Active Directory authentication with InfoPrint Manager GUI software

The system login is an LDAP or Active Directory authentication, called Single Sign-on (SSO). It does not request an additional authentication at the command runtime.

Single Sign-on (SSO) is an authentication process that allows you to log in with a single ID and password to access multiple applications.

The default Windows login does not support LDAP, only the Active Directory authentication method.

If you are logged in using this type of authentication, the user name is used for InfoPrint Manager authentication.

This authentication method is available only for the Java GUI.

Using custom LDAP or Active Directory authentication with InfoPrint Manager GUI software

The custom login is provided by InfoPrint Manager. It requires you to log in separately on the LDAP server. This configuration supports both LDAP and Active Directory servers.

If you are logged in using this type of authentication, the user name is used for InfoPrint Manager authentication.

This authentication method is available only for the Web Interfaces.

Using Federated authentication with InfoPrint Manager GUI software

The custom login is provided by InfoPrint Manager. It requires you to log in to a separate federated authentication server.

If you are logged in using this type of authentication, the user roles are used for InfoPrint Manager authentication.

This authentication method is available only for the Web Interfaces.

Using the basic view of the GUI

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 on Windows

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, do this procedure:

1. Insert the *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.
 - 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. Click **Modify**, 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 level 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.

To install the **InfoPrint Manager Administration GUI** software, do this procedure:

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

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.

The InfoPrint Manager Administration GUI allows the administrator to access almost all of the functions available in InfoPrint Manager for Linux. For additional information, see the *RICOH InfoPrint Manager for Linux: Procedures*, available on your Base DVD or in the RICOH Software Information Center at <https://help.riohsoftware.com/swinfocenter>.

Note

If you receive a communication error when using Windows operating system, 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 the **Operations InfoPrint** icon 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.

2

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-4.13.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-4.13.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 RedHat 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.

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

The special version of the InfoPrint Manager Operations GUI allows you to 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 or Linux command line, enter:

```
ipguiadv
```

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

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

★ 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 add users to the InfoPrint Manager Access Control Lists (ACLs):

1. Go to **Applications** and start the **InfoPrint Manager Management Interface**.
2. Select **Security** → **Groups** and add your ID for use with InfoPrint Manager Administration GUI and InfoPrint Manager Operations GUI.
3. Stop the **Web Server** and right-click to select **Applications Settings**.
4. 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.

5. Start 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 Linux: 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 `/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 hostname 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**.

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 hostnames. 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
 - PCL
 - PDF
 - PS

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 Interface. For more information, see the *Working with ACLs and groups* section in the *RICOH InfoPrint Manager for Linux: 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 Interface. 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:
 - /usr/lpp/psf/reslib for AIX and Linux
 - /usr/lpp/psf/reslibif 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 Linux: 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.

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. 152](#) 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. 136](#)
- [Configuring your InfoPrint Manager server to work with InfoPrint Select, p. 145](#)
- [Creating InfoPrint Select printers on Windows, p. 148](#)
- [Printing from applications, p. 152](#)
- [Commands you can use with InfoPrint Select for Windows, p. 154](#)
- [Using custom LDAP job authentication with InfoPrint Select for Windows, p. 141](#)
- [Using InfoPrint Select for Windows with Anyplace printing, p. 157](#)

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. 145](#).
- 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.

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

2

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. Information about security and how users can be authorized to InfoPrint Manager is found in the topic "Managing security for InfoPrint Manager for Linux" in the *RICOH InfoPrint Manager for Linux: Procedures* manual.

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 Linux: 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 pool 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**.

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 `pnotify` and in the **Variable Value** field, type `override_select`.
6. Click **OK**.
7. Verify that `pnotify` 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.

Creating InfoPrint Select printers on Windows

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. 150](#)
 - [Adding your first InfoPrint Select printer on Windows systems, p. 150](#)
 - [Adding an additional InfoPrint Select printer on Windows systems, p. 151](#)

Collecting required information

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 these 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.
- 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).

Choosing the Right PPD

If you plan to use InfoPrint Select to print PostScript jobs to an CUPS DSS (InfoPrint Manager for Linux 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. If you submit jobs to either the CUPS, BSD, or Passthrough DSS printers, do not use the printer drivers and PPDs that are provided with InfoPrint Select. They contain specific attributes that apply only to PSF DSS printers.

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. 246](#).

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 CUPS printer on InfoPrint Manager for Linux).

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 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. 153](#) for more information).
- You can also specify the finishing options separately under the **Other** tab in the Select **Job Settings** dialog using the attributes entry (see [Specifying InfoPrint attributes, p. 153](#) 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. 150](#)
- [Adding an additional InfoPrint Select printer on Windows systems, p. 151](#)

2

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. 148](#).
- Configure the server as described in [Configuring your InfoPrint Manager server to work with InfoPrint Select, p. 145](#).

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**.

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.

15. In the **Server name** field, specify the name of the InfoPrint Manager server (**pdservr**) 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. 151](#).

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. 148](#).
- Configure the server as described in [Configuring your InfoPrint Manager server to work with InfoPrint Select, p. 145](#).

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. 150](#).

Changing the InfoPrint Manager target printer

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. 140](#)), 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 "Managing security for InfoPrint Manager for Linux" section in the *RICOH InfoPrint manager for Linux: Procedures* manual.

InfoPrint Manager lets authorized users (normally all users) use these InfoPrint commands:

pdl

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 the *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
```

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. 248](#) and [Configuring the automatic download of registry updates, p. 264](#).

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 *InfoPrint Manager: Common Clients* ISO file:
 - 1) Mount the *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-4.13.m-n.x86_64.rpm
```

or

Install the LDAP-enabled InfoPrint Select client package by typing:

```
sudo rpm -i ipr-select-ldap-4.13.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-4.13.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-4.13.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-4.13.m-n.x86_64.rpm
```

or

Install the LDAP-enabled InfoPrint Select client package by typing:

```
sudo rpm -i ipr-select-ldap-4.13.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-4.13.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-4.13.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/se1pms` rights to 755 using the following command:

```
chmod 755 /usr/lib/cups/backend/se1pms
```

2. If you want to use KDE libraries, make sure `kdelibs 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. 167](#).

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-4.13.m-n
```

2. For the LDAP-enabled version, type:

```
rpm -e ipr-select-ldap-4.13.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_yplibind SELinux boolean:

```
setsebool -P allow_yplibind=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
```

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_yplibind SELinux boolean:

```
setsebool -P allow_yplibind=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 web page [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 login 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 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.

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>
```

Example:

```
se1pms://server.company.domain:6874/IP1107EX
```

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
```

Example:

```
/usr/sbin/lpadmin -p myCupsPrinter
-v "selpms://server.company.domain:6874/IP1107EX"
-m InfoPrint-Pro_1107EX.ppd -D "InfoPrint Select" -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: `selpms://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 data_stream 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.

2

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 commands that can be issued from the Command Line on the client system.

InfoPrint Manager lets authorized users (normally all users) use these InfoPrint commands:

pdl

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 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 `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 reenable 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
```

2

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/<mount_point>` file system.
 - 6) Remove the DVD-ROM.
3. Test the system.
 4. Follow the instructions from [Creating InfoPrint Select printers on Linux, p. 167](#) and InfoPrint Manager PDF `ppd` to add an InfoPrint Select printer.

Using InfoPrint Select for macOS

InfoPrint Select for macOS lets you submit and track jobs from a macOS workstation to a destination that is managed by InfoPrint Manager. Through InfoPrint Select for macOS, 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.

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.

InfoPrint Select for macOS lets you:

- Specify AFP and other InfoPrint job attributes when submitting a job to the server
- Print using LDAP authentication for job submission

Installing InfoPrint Select for macOS

There are two versions of the InfoPrint Select client for macOS: 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 and you want to switch back to the non-LDAP version, you can install it over the LDAP version. The installer allows you to install one version of the InfoPrint Select client over the other and automatically removes the old version.

Note

Starting with macOS 10.6, filters and backends are run inside a security sandbox that restricts beyond the normal UNIX user/group permissions what a filter or backend can do. To use InfoPrint Select on these operating systems, add Sandboxing Relaxed to the file `/etc/cups/cups-files.conf` and restart the CUPS service. Open the Terminal application and run this command:

```
sudo launchctl stop org.cups.cupsd
```

If prompted, enter the password for the current user, press the **Enter** key, and then run:

```
sudo sh -c 'echo "Sandboxing Relaxed" >> /etc/cups/cups-files.conf'
sudo launchctl start org.cups.cupsd
```

To install the InfoPrint Select clients:

1. Log in to the macOS system as `root`.
2. Mount the *RICOH InfoPrint Manager: Common Clients* ISO file.
3. Copy the installer package for the version of the InfoPrint Select client you want to install to a temporary location. For example: `/tmp`.
4. To install the non-LDAP InfoPrint Select client, double-click the `ipr-select-4.13.m-n.x86_64.pkg` package to launch the installer.

To install the LDAP-enabled InfoPrint Select client, double-click the `ipr-select-ldap-4.13.m-n.x86_64.pkg` package to launch the installer.

If prompted, enter the password for the current user and press the **Enter** key.

`m` and `n` represent the service update level.

If you want to install the InfoPrint Select clients in silent mode:

- 1) Open a command terminal.
- 2) Execute the following commands:

```
sudo -S installer -verbose -pkg /tmp/ipr-select-4.13.m-n.x86_64.pkg -target /
```

for the non-LDAP InfoPrint Select client.

```
sudo -S installer -verbose -pkg /tmp/ipr-select-ldap-4.13.m-n.x86_64.pkg -target /
```

for the LDAP-enabled InfoPrint Select client.

m and n represent the service update level.

5. Follow the instructions provided in the installer to finish the installation.
6. These environment variables must be set for the non-LDAP macOS 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 server is located.

PD_SOCKET

The TCP/IP socket number of the port for the InfoPrint 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

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 (the `-P DestinationName` flag) on the command line.

↓ Note

To perform a correct installation, use a macOS account with admin rights.

To use InfoPrint Select for macOS you must create an InfoPrint Select printer using one of the methods described in [Creating InfoPrint Select printers on macOS, p. 186](#).

Uninstalling InfoPrint Command Line Client and InfoPrint Select for macOS

1. Log in to the macOS system.
2. Open a command terminal.
3. Type this command:

```
sudo /opt/Ricoh/InfoPrint-Manager/bin/uninstall
```

4. If prompted, enter the password for the current user and press the **Enter** key. Both InfoPrint Command Line Client and InfoPrint Select are uninstalled.

Using LDAP Job Authentication with InfoPrint Select for macOS

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. If you install the LDAP version of the InfoPrint Select client and you want to switch back to the non-LDAP

version, you can install it over the LDAP version. The installer allows you to install one version of the InfoPrint Select client over the other and automatically removes the old version. 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 login 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. This way each time you log in you are required to LDAP authenticate. 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 macOS 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 macOS

For the LDAP-enabled InfoPrint macOS 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. It is used to search the LDAP directories for the specific globally unique DN anonymously. The search on the LDAP directories is always done using the DN Search Options settings. The search is performed only for the Simple authentication method.

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.

2

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.



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

If the LDAP server does not allow anonymous queries, enter the Distinguished Name (DN) of the account.

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.

2

Creating InfoPrint Select printers on macOS

There are two methods to create InfoPrint Select printers on macOS:

1. Add a printer using the CUPS (Common Unix Printing System) web interface:
 - 1) Enable first the CUPS web interface.
 1. Open the Terminal in the **/Applications/Utilities/** folder
 2. Run this command:

```
cupscpl WebInterface=yesb
```

Note

By default, the CUPS web interface is disabled.

- 2) Open a web browser.
- 3) To access the CUPS web interface, enter `http://localhost:631` in the browser address bar.
- 4) Enter CUPS administrator credentials and on the **Administration** tab, click **Add Printer**.
- 5) From the **Other Network Printers** section, select InfoPrint Select and click **Continue**.
- 6) Set the correct `DEVICE_URI` in the Connection field and click Continue, where `DEVICE_URI` is:

```
se1pms://<server_hostname>[:<port>]/<destination>
```

Example:

```
se1pms://server.company.domain:6874/IP1107EX
```

Note

If no port is specified, the default port number is 6874.

- 7) Set the Name, Description and Location values for the CUPS printer and click **Continue**.
 - 8) Select the printer manufacturer from the drop-down list and click **Continue**. Choose the printer model and click **Add Printer**.
 - 9) 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
```

Example:

```
/usr/sbin/lpadmin -p myCupsPrinter
-v"selpms://server.company.domain:6874/IP1107EX"
-m InfoPrint-Pro_1107EX.ppd -D "InfoPrint Select" -E
```

Printing from applications

These 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, go to the **Spotlight** icon, search for `ipmprinters`, and open the application. 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, go to the **Spotlight** icon, search for `ipmjobs`, and open the application. 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.

2

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 data_stream 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, go to `/opt/Ricoh/InfoPrint-Manager/bin` and run in Spotlight the `activateipmjobsettings` script. 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, go to `/opt/Ricoh/InfoPrint-Manager/bin` and run in Spotlight the `activateipmjobsettings` script.

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 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, go to the **Spotlight** icon, search for `ipmnotification`, and open the application.

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 macOS 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 macOS

Typically, InfoPrint Select is used to let users print to InfoPrint Manager destinations from existing macOS applications. In addition, you can use several InfoPrint commands that can be issued from the Command Line on the client system.

InfoPrint Manager lets authorized users (normally all users) use these InfoPrint commands:

pdl

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 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 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 server status

To query the status of the InfoPrint server, enter:

```
pdls -c server
```

Querying device status

To query the status of all printers on the InfoPrint server whose hostname is `pauper`, enter:

```
pdls -c printer pauper
```

Querying 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
```

Submitting a print job

To submit the file `newjob` to the logical destination `boston`, requesting single-sided printing on the actual destination `printer1`, enter:

```
pdpr -d boston -x "destination-name-requested=printer1 sides=1" newjob
```

Querying jobs

To list the jobs associated with logical destination `ld1` on the server `newyork`, showing detailed information (`-r verbose`) and not filtering for particular criteria, such as the job submitter (`-F`), enter:

```
pdq -p newyork:ld1 -r verbose -F
```

Modifying the job name

To change the **job name** attribute of one of the jobs that was listed in [Querying jobs, p. 198](#), enter:

```
pdmod -x "job-name=NewJobName" newyork:job_ID
```

Removing a job

To remove one of the jobs that was listed in [Querying jobs, p. 198](#), enter:

```
pdrm newyork:job_ID
```

Using InfoPrint Select for MacOS with Anyplace printing

If you use InfoPrint Select for MacOS 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 Macintosh system.
2. Copy The InfoPrint Manager PDF Driver from the install media to the local system.
3. Follow the instructions provided in the installer to finish the installation.
4. Follow the instructions from [Creating InfoPrint Select printers on macOS, p. 186](#) and InfoPrint Manager PDF `ppd` to add an InfoPrint Select printer.

Using the InfoPrint Manager AIX client

The InfoPrint Manager AIX client is installed on all InfoPrint Manager AIX servers with the **InfoPrint Manager for AIX Base Server**. Do not install InfoPrint Manager AIX client on a system where you already installed InfoPrint Manager for AIX server. To install InfoPrint AIX client on any AIX servers that do not have InfoPrint Manager for AIX, you can use either the *InfoPrint Manager: Common Clients* DVD-ROM, LCD4-5642 or the *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 AIX client supports files greater than 2 GB in size.

The InfoPrint AIX client lets you enter InfoPrint 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 AIX client, 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 AIX client

★ Important

The InfoPrint Manager 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 AIX client on an AIX system where you have not installed the server:

1. Log onto AIX as `root`.
2. Insert the *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?    no      +
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 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 Linux client enables users of Linux on Intel-based machines to issue InfoPrint commands over a TCP/IP-connected network to an InfoPrint Manager server. Using a UNIX command line or shell script, you can issue a variety of commands to the InfoPrint 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/<mount_point>/linux
```

- 4) Install the Linux Command Line Client package.
Type:

```
rpm -i ipr-cmd-4.13.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-4.13.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/<mount_point>` 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-4.13.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.

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.

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-4.13.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 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 the InfoPrint Manager macOS client

The InfoPrint Manager macOS client enables users of macOS to issue InfoPrint Manager commands over a TCP/IP-connected network to an InfoPrint Manager server. Using a UNIX command line or shell script, you can issue a variety of commands to the InfoPrint Manager server. The macOS client supports files larger than 2 GB in size.

To install the macOS client on a macOS 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 Linux: Procedures*.

Note

For the latest information about installing the InfoPrint Manager macOS client, go to the RICOH Software Information Center at <https://help.ricohsoftware.com/swinfocenter>.

If you are using the non-LDAP InfoPrint Manager Os X 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.

Installing the InfoPrint Manager macOS client

The macOS Command Line Clients and the InfoPrint server are available in these languages:

- English
- French
- German
- Italian
- Japanese
- Spanish

To use a non-English version of InfoPrint Manager, your Linux system must have installed the file sets for that language. You should associate the macOS Command Line clients with an InfoPrint server running in your language.

To install the InfoPrint Manager macOS Command Line clients:

1. Log into the macOS system as `root`.
2. Insert the *RICOH InfoPrint Manager: Common Clients* DVD-ROM, LCD4-5642 into your drive.
3. Copy the installer package for the version of the macOS Command Line Client you want to install to a temporary location. For example: `/tmp`.
4. To install macOS Command Line Client, double-click on the `ipr-cmd-4.13.m-n.i586.pkg` package to launch the installer, where `m` and `n` represent the service update level.

If you want to install the macOS Command Line Clients in silent mode:

- 1) Open a command terminal.
- 2) Execute the following command:

```
sudo -S installer -verbose -pkg /tmp/ipr-cmd-4.13.m-n.i586.pkg \
-target
```

where m and n represent the service update level.

5. Follow the instructions provided in the installer to finish the installation.
6. Remove the *RICOH InfoPrint Manager: Common Clients* DVD-ROM.
7. Create a shell script in the language of your choice or manually set these environment variables:

PDHOST

The name of the host where the InfoPrint server is located.

PD_SOCKET

The TCP/IP socket number of the port for the InfoPrint 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

The default logical destination in the InfoPrint Manager server. The commands will use this value if you do not specify a logical destination (the `-P DestinationName` flag) on the command line.

This example shows a Korn shell script to set the environment variables:

```
export PDHOST="hostname-of-infoprint-server"
export PD_SOCKET="6874"
export PDPRINTER="name-of-default-logical-destination"
```

8. Test the system:
 - 1) Open a command line window.
 - 2) Set the environment variables as directed in step 7 either manually or using a shell script.
 - 3) Issue one of the chosen commands, followed by the `-h` flag to display the syntax of that command and verify the installation.

For example:

```
pdls -h
```

- 4) Arrange for all users of the macOS Command Line Clients to set the environment variables as directed in step 7, whenever they log in. You can use either of these methods:
 - Set the environment variables in the default shell configuration file, either individually or by invoking the shell script.
 - Tell each user to set the environment variables in his or her own shell configuration file, either individually or by invoking the shell script.

Note

To perform a correct installation, use a macOS account with admin rights.

Commands you can use from the InfoPrint macOS 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 Manager macOS client

The *RICOH InfoPrint Manager: Reference* and the command man pages show several examples of each command that you can issue from the InfoPrint macOS 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 server status

To query the status of the InfoPrint server, enter:

```
pdls -c server
```

Querying device status

To query the status of all printers on the InfoPrint server whose hostname is `pauper`, enter:

```
pdls -c printer pauper
```

Querying 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
```

Submitting a print job

To submit the file `newjob` to the logical destination `boston`, requesting single-sided printing on the actual destination `printer1`, enter:

```
pdpr -d boston -x "destination-name-requested=printer1 sides=1"
newjob
```

Querying jobs

To list the jobs associated with logical destination `ld1` on the server `newyork`, showing detailed information (`-r verbose`) and not filtering for particular criteria, such as the job submitter (`-F`), enter:

```
pdq -p newyork:ld1 -r verbose -F
```


Modifying the job name

To change the **job name** attribute of one of the jobs that was listed in [Querying jobs, p. 214](#), enter:

```
pdmod -x "job-name=NewJobName" newyork:job_ID
```

Removing a job

To remove one of the jobs that was listed in [Querying jobs, p. 214](#), enter:

```
pdrm newyork:job_ID
```

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 macOS and 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 Client DVD-ROM

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*.

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 InfoPrint Submit Express on a macOS system

This section contains information that you need to install InfoPrint Submit Express.

To install the InfoPrint Submit Express clients:

1. Log in to the macOS system.
2. Insert the *RICOH InfoPrint Manager: Common Clients* DVD-ROM into your drive.
3. Copy the installer package for the version of the InfoPrint Submit Express client you want to install to a temporary location. For example: /tmp.
4. To install the InfoPrint Submit Express client, double-click the `ipr-submit-express-4.13.0.0.x86_64.pkg` package to launch the installer.
5. Follow the instructions provided in the installer to finish the installation.
6. Remove the DVD-ROM.

↓ Note

If you cannot install InfoPrint Submit Express on your macOS system, copy the directory containing the InfoPrint Submit Express feature directory from the Common Client DVD-ROM to your hard drive and install the program from there.

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. 217](#) and then see [Configuring the InfoPrint Submit Express client for InfoPrint Manager for AIX, InfoPrint Manager for Linux, and InfoPrint Manager for Windows, p. 220](#).
- With InfoPrint Manager for Linux, see [Setting up InfoPrint Manager for Linux to use an ipdata file system, p. 218](#) and then see [Configuring the InfoPrint Submit Express client for InfoPrint Manager for AIX, InfoPrint Manager for Linux, and InfoPrint Manager for Windows, p. 220](#).
- With InfoPrint Manager for Windows, see [Setting up InfoPrint Manager for Windows to use the ipdata folder, p. 219](#) and then see [Configuring the InfoPrint Submit Express client for InfoPrint Manager for AIX, InfoPrint Manager for Linux, and InfoPrint Manager for Windows, p. 220](#).

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/.

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.
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. 220](#)).

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

1. First, you need to install Samba for Linux.
 - For RedHat Enterprise Linux, run as root: `yum install samba`
 - For Suse Enterprise Linux, run as root: `zypper install samba`
2. To start samba server, run as root: `service smb start`
3. 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:

1. Start the InfoPrint Manager Management Interface (IPMMI), go to **Applications** → **InfoPrint Manager** → **Management Interface** on RedHat Enterprise Linux (RHEL) or **Computer** → **More Applications** → **InfoPrint Manager** → **Management Interface** on SUSE Linux Enterprise Server (SLES).
2. Click **Options**.
3. Select **Enable Clients Shared File System**.
4. Specify the **Volume group for /ipdata** and the **Space for /ipdata (Mbytes)**.
5. 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. 220](#)).

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. 219](#)) and then you need to set it up for sharing (see [Sharing the ipdata folder, p. 219](#)). 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. 220](#)).

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.

Configuring the InfoPrint Submit Express macOS client for InfoPrint Manager for AIX, InfoPrint Manager for Linux, and InfoPrint Manager for Windows

To configure the InfoPrint Submit Express macOS client, you must map a network drive from the client system where you installed InfoPrint Submit Express and change the folders for the shared file system.

Mapping a network drive on a macOS system

1. Click **Go** → **Connect to Server**:
2. In the **Address** field, type `smb://servername/ipdata` where `servername` is the host name of the system where InfoPrint Manager is installed.
3. Click **Connect**.
4. Enter "ipuser" in the Username field and the password (if needed) in the Password field of the **SMB/CIFS Filesystem Authentication** window.
5. Click **OK** to finish mounting the server's **IPDATA** directory in `/Volumes/ipdata`.

Changing the folders for the shared file system

To change the folders for the shared file system:

1. Start InfoPrint Submit Express.
2. Go to **Options** → **Settings** to open the Settings window.
3. Click **Folders** to open 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**.

Using Submit Express to process a job

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.

Job tickets

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

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

2

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

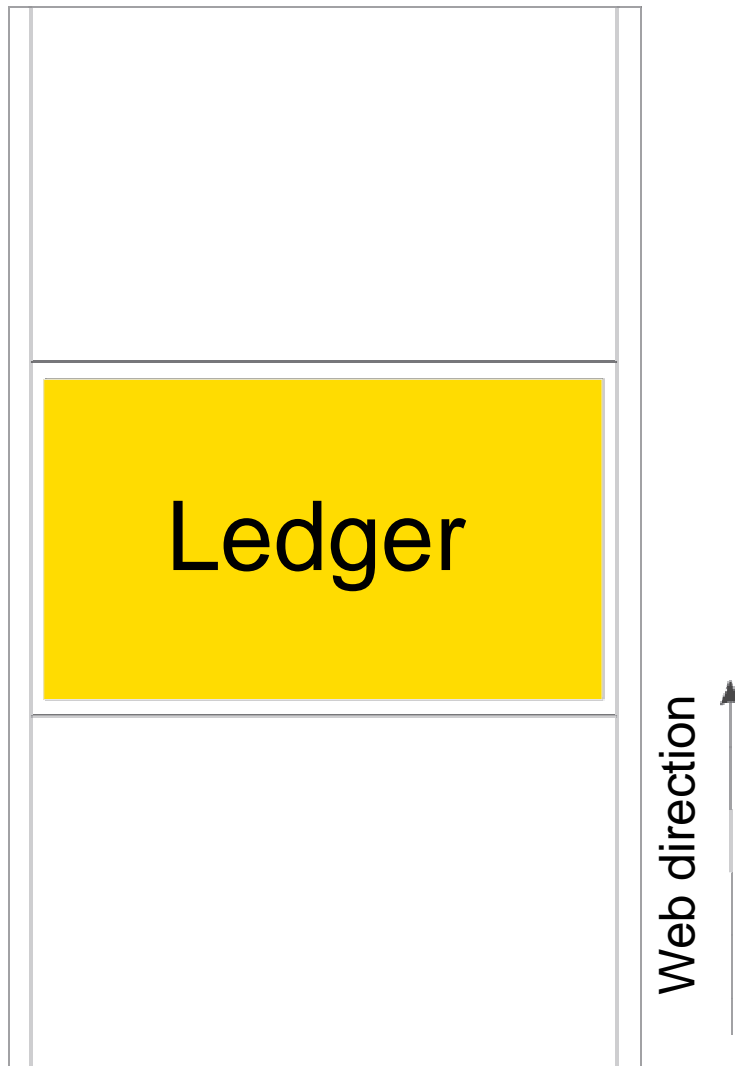
Before you configure any media, make a list of all of the different layout types that jobs will use. In the list, include the page lengths, n-up specifications, job orientation (portrait or landscape), and any other information that you have. Give each type of job a name. You will use this name on the 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



2

InfoPrint Manager and Submit Express values for Ledger-sized document printed 1-up, landscape

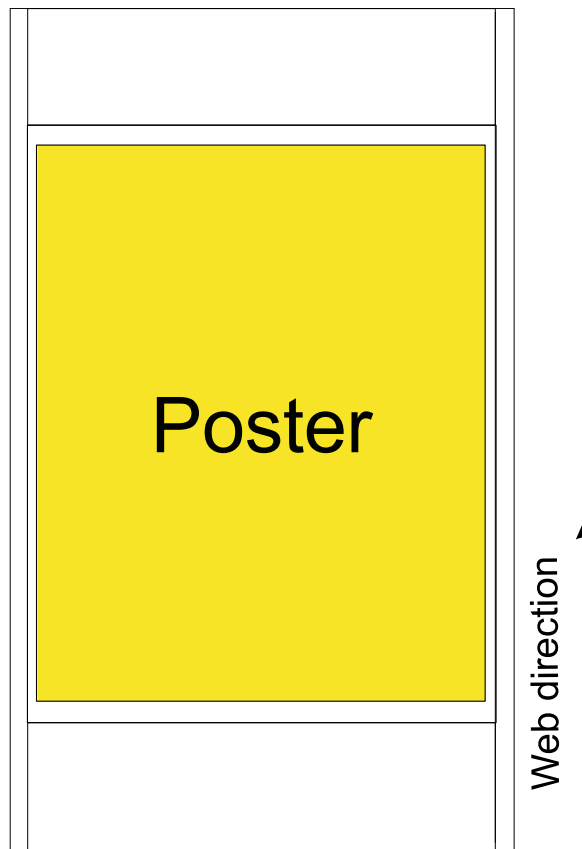
Option	Value
Finished page (document) size	17 x 11 inches
Form size (Untrimmed page size: width and length)	17 x 11 inches
Media size (in InfoPrint Manager)	17 x 11 inches

Option	Value
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

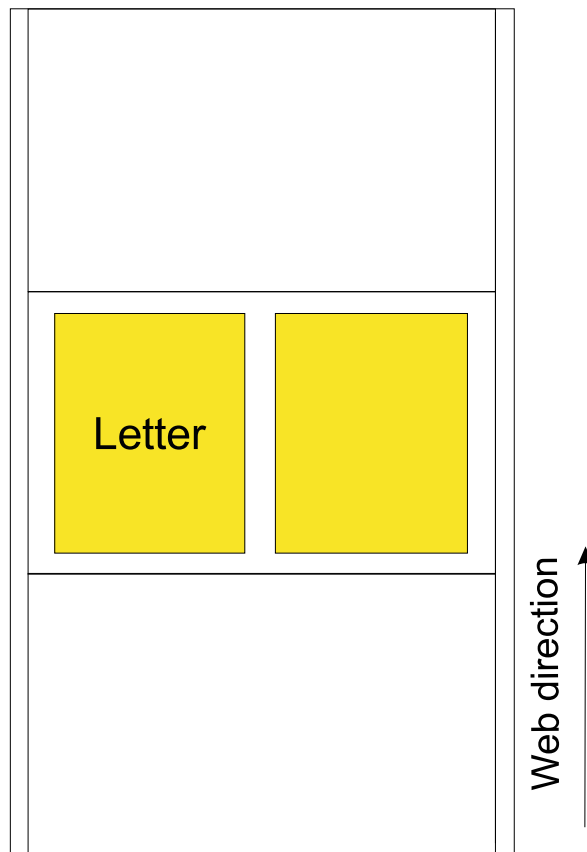
Option	Value
Finished page (document) size	17 x 25 inches
Form size (Untrimmed page size: width and length)	17 x 25 inches or larger

Option	Value
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

Option	Value
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. 228](#) for an illustration of the layout.

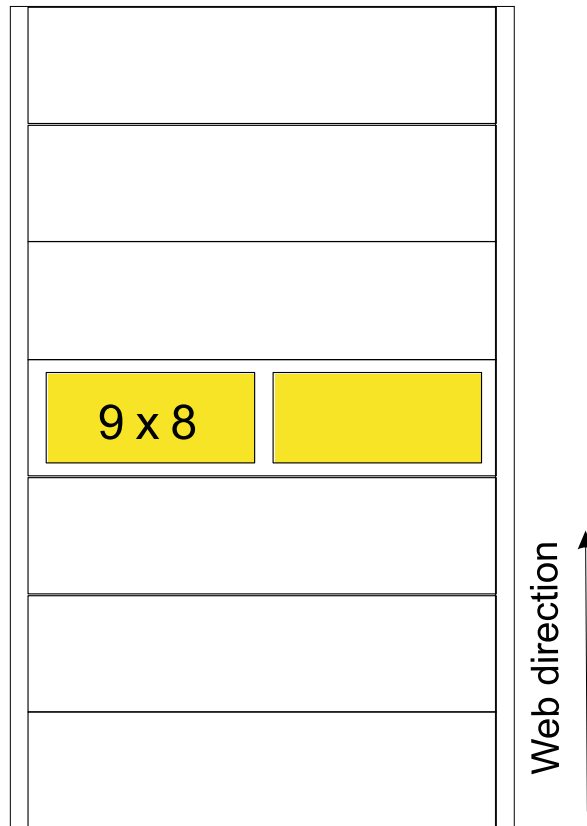
InfoPrint Manager and Submit Express values for legal-sized document printed 2-up, portrait

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



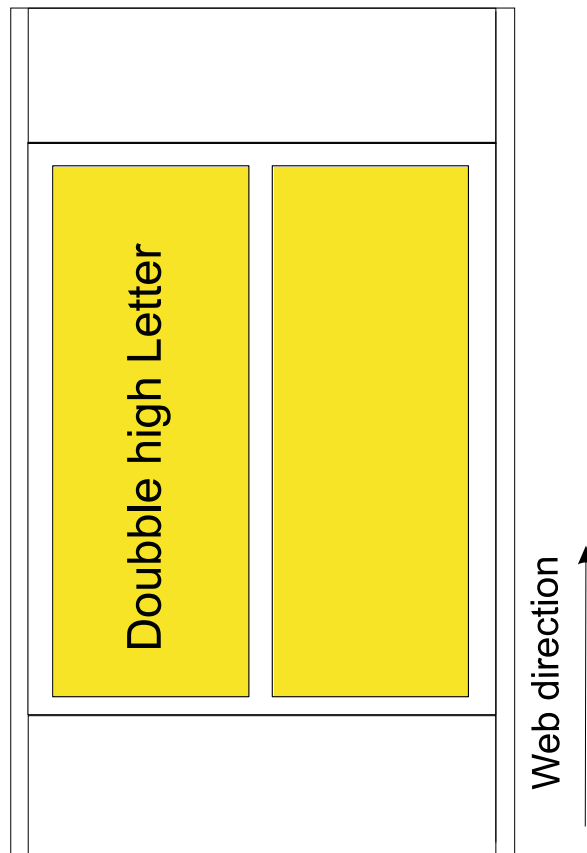
InfoPrint Manager and Submit Express values for 9 x 8 inch document printed 2-up, landscape

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



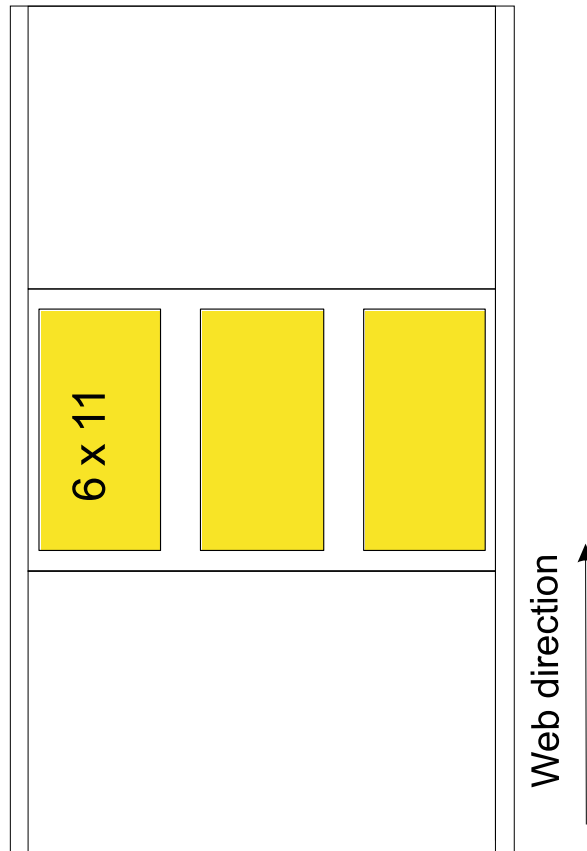
InfoPrint Manager and Submit Express values for double-high letter-sized document printed 2-up, portrait

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



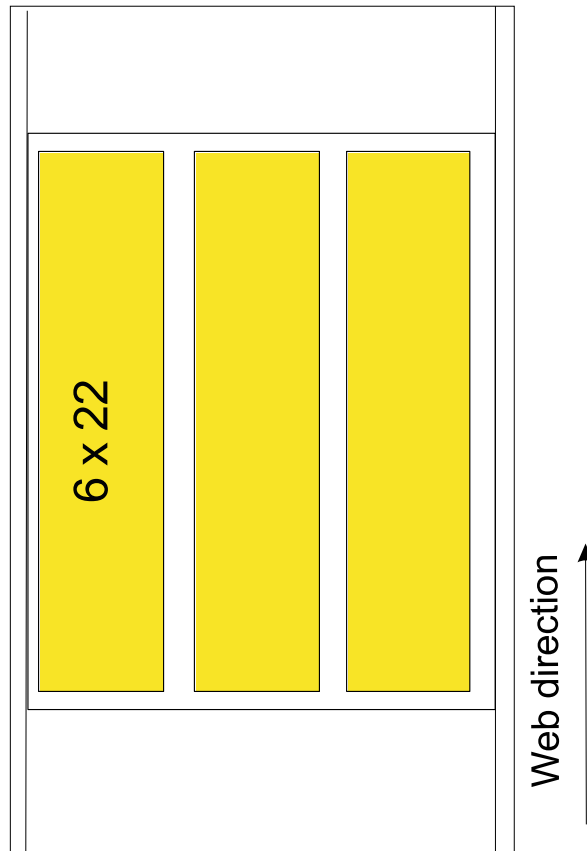
InfoPrint Manager and Submit Express values for 6 x 11 inch document printed 3-up, portrait

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

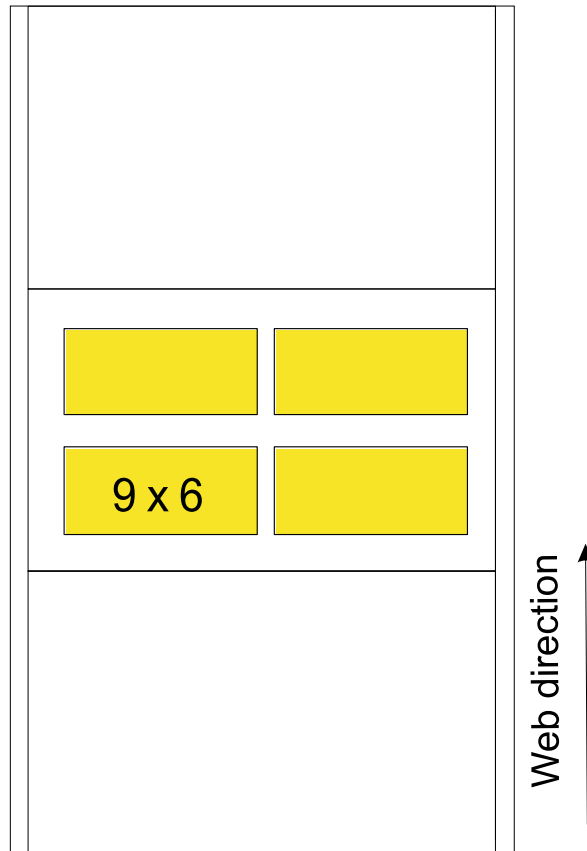


InfoPrint Manager and Submit Express values for double-high document printed 3-up, portrait

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

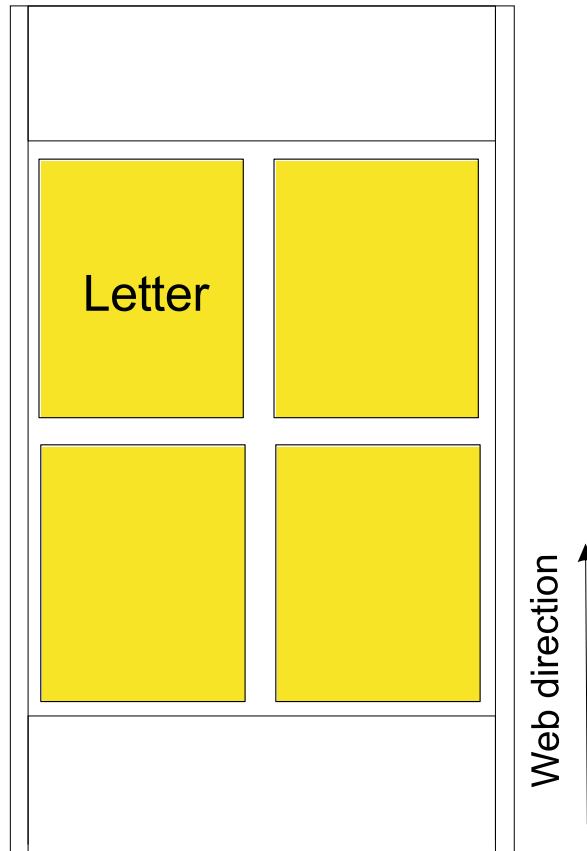
In this layout, the printer form is wider than it is long. Because you do not specify a form definition, you can use the **Page placement** (X and Y shift) option in Submit Express.

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. 237](#) 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

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 Linux: Procedures*.

Note

For the latest information about installing the InfoPrint Manager Windows client, go to the RICOH Software Information Center at <https://help.riohsoftware.com/swinfocenter>.

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 *InfoPrint Manager: Common Clients* DVD-ROM:

1. Insert the *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 *InfoPrint Manager: Common Clients* DVD-ROM, LCD4-5642:

1. Insert the *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 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 "Managing security for InfoPrint Manager for Linux" section in the *RICOH InfoPrint Manager for Linux: 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 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 the *RICOH InfoPrint Manager: Reference*.

Setting up hot folders to submit jobs

The simplest way to submit jobs to InfoPrint is to use a *hot folder*. A hot folder is a directory that is associated with a logical destination. When you copy or move a file to the hot folder, InfoPrint automatically submits that file as a job to that logical destination.

If you do not explicitly specify a hot folder directory, a logical destination will not have a hot folder (there is no default hot folder). If you explicitly specify a hot folder directory, the server will create it for you; however, the path up through and including the parent directory of the hot folder directory must already exist on your InfoPrint Linux server. For example, if you specify `/var/pd/hotfolder/lp-impos/` as your hot folder, you must have previously created the directory `/hotfolder` and its subdirectory `/lp-impos`.

Note

You should make a copy of any jobs that you will be placing in a hot folder. After you have put them in the folder, files are submitted and then deleted.

Creating a hot folder

To create a hot folder:

1. Make sure that file sharing is available on the InfoPrint server system. Many file sharing methods are available, but Ricoh recommends the methods shown in [Recommended file sharing methods, p. 243](#).

Recommended file sharing methods

Server	Client	Method	See
AIX	AIX	Network File Sharing (NFS)	<i>System Management Guide: Communications and Networks</i>
AIX	Windows	Samba for AIX for Windows	<i>System Management Guide: Communications and Networks</i>
AIX	Linux	Network File Sharing (NFS)	<i>System Management Guide: Communications and Networks</i>
Linux	Linux	Network File Sharing (NFS)	<i>System Management Guide: Communications and Networks</i>
Linux	Windows	Samba for AIX for Windows	<i>System Management Guide: Communications and Networks</i>
Windows	Windows	Server Message Block (SMB) (standard Windows folder sharing)	Windows help

Note

It is strongly recommended that you create your hot folder on the same system where the InfoPrint Manager server is installed. If you create the hot folder on a network resource, the polling traffic created by the InfoPrint Manager server process might cause performance degradation of the remote server, the InfoPrint Manager system, or the network connection in between.

2. Select a location on the InfoPrint server system for the hot folder. If all hot folders are subdirectories of the same directory, users can access them all with a single connection (through a **mount** command or some form of file sharing) to the parent directory.

3. If the hot folder does not exist, you can optionally create it. Be sure to give it the appropriate universal or group write permission.
 - If the hot folder already exists, or if you create it now, it remains after you delete the associated logical destination.
 - If it does not exist and you do not create it now, it is created automatically in the next step and is deleted when you delete the associated logical destination. If you run InfoPrint Manager as non-root, make sure that the InfoPrint Manager user has the write permission in the directory where the hot folder is created automatically in the next step.
 - If you run InfoPrint Manager as non-root, make sure you allow the write permission to the hot folder for non-root user.
4. Set the `hot-folder-directory` attribute for the logical destination to the full path name of the hot folder as it is known on the server system.

You can do this either when you create a logical destination or afterwards. See the InfoPrint Manager Administration GUI online help for instructions.

Note

1. A hot folder can be associated with only one logical destination; and a logical destination can be associated with only one hot folder.
2. InfoPrint Manager for Linux users who are using hot folder support for submitting jobs must use Samba for Linux to connect to Windows systems.
3. Just like any other InfoPrint job submission method, attribute values specified in a default document and in default job attributes for the logical destination are used for all jobs submitted through the hot folder, unless the job submitter overrides them.

Accessing a hot folder

From a client system, you can access the hot folder in the same way as any shared directory. You do not have to install any InfoPrint client software. For more information, see the references in [Recommended file sharing methods, p. 243](#).

Note

If multiple hot folders are subdirectories of the same directory, Windows users can map a single drive to the parent directory rather than mapping a drive for each hot folder.

Submitting jobs through a hot folder

To submit a file through a hot folder, simply copy or move it to the hot folder.

Note

If you experience problems with hot folders submitting incomplete jobs to the InfoPrint Manager server, use the method described in [Staging jobs, p. 245](#).

★ 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. To override these values:

1. Create an attributes file called `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`. In this file, specify the attributes and values that you want. 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

This file is the same format as an attribute file specified with the **-X** flag on a **pdpr** print command. For information about job and document attributes, see *RICOH InfoPrint Manager: Reference*.

2. Copy or move the attributes file to the hot folder. The `.att` file extension tells InfoPrint Manager not to print the attributes file. You must make sure that the attributes file is either copied or moved to the hot folder before you copy or move the print file to the hot folder.

↓ Note

This step is optional because you can create the attributes file in the Hot Folder directory.

3. Copy or move the print file to the hot folder. InfoPrint Manager looks for an attributes file with the same file name and submits the two files together.

Staging jobs

You can stage jobs to InfoPrint by using this procedure:

1. Copy the file to the hot folder with the extension `.stg`. InfoPrint ignores files with this extension.
2. Rename the copy with the original extension when you want 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. Create a subdirectory in the hot folder called `jobname.stg`, where `jobname` is any name you choose. The `.stg` extension prevents InfoPrint from processing the directory.

2. 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.

3. 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 *jobname.stg* subdirectory.
4. Rename the subdirectory from *jobname.stg* to *jobname*. InfoPrint then submits all 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 *InfoPrint Manager: Common Clients* DVD-ROM, LCD4-5642. You can also download 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 *InfoPrint Manager: Common Clients* DVD-ROM, LCD4-5642, that came with your InfoPrint Manager package into your DVD-ROM drive. The install program will start automatically.
2. Click **Install InfoPrint Products**, and then click the **AFP Print Driver** button.
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.

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 **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 **IBM 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 click **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 InfoPrint Manager for Windows 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\RICOH\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\RICOH\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 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 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 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`.

↓ 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.

- 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\`.

- To specify the global settings and create filters, edit the `ipm_select.cfg` file. See [Sample ipm_select.cfg file, p. 253](#) for more details about the configuration file.
- Copy the InfoPrint Select kit from the *RICOH InfoPrint Manager: Common Clients DVD-ROM* to `<configuration_dir>\Products\InfoPrint Select\Windows\<product_version>\Kit\`.
- 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`.
- Create the response files with these names: `setup_new.iss`, `setup_update.iss`, `setup_repair.iss`.

To create your own response files:

- 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.
- `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.

- 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. 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::?.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 hostname strings are compared literally.

Example: `host.example.org;*.example.org;.example.org;host?.example.org` where:

host.example.org

Matches only the hostname `host.example.org`.

***.example.org**

Matches any hostname that ends with `.example.org`.

.example.org

Matches any hostname that ends with `.example.org`.

host*.example.org.

Matches any hostname that starts with `host`, followed by any number of characters (valid for hostname) and ends with `.example.org`.

Examples:

- `host123.example.org`
- `host2A.example.org`
- `host-name.example.org`

host?.example.org.

Matches any hostname 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. 259](#) for more details about the configuration file.
5. Unzip the contents of `InfoprintManagerPDFdriver.zip` file from the 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 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 hostname strings are compared literally.

Example: `host.example.org;*.example.org;.example.org;host?.example.org` where:

host.example.org

Matches only the hostname `host.example.org`.

***.example.org**

Matches any hostname that ends with `.example.org`.

.example.org

Matches any hostname that ends with `.example.org`.

host*.example.org.

Matches any hostname that starts with `host`, followed by any number of characters (valid for hostname) and ends with `.example.org`.

Examples:

- `host123.example.org`
- `host2A.example.org`
- `host-name.example.org`

host?.example.org.

Matches any hostname 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.

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.

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 InfoPrint Manager for Windows Common Clients DVD-ROM into your DVD-ROM drive.
2. Install `ipr-ipmupdateserver-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-4.13.0/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 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 login 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 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. 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 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 hostname strings are compared literally.

Example: `host.example.org;*.example.org;.example.org;host?.example.org` where:

host.example.org

Matches only the hostname `host.example.org`.

***.example.org**

Matches any hostname that ends with `.example.org`.

.example.org

Matches any hostname that ends with `.example.org`.

host*.example.org.

Matches any hostname that starts with `host`, followed by any number of characters (valid for hostname) and ends with `.example.org`.

Examples:

- `host123.example.org`
- `host2A.example.org`
- `host-name.example.org`

host?.example.org.

Matches any hostname 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. 259 for more details about the configuration file.
4. Unzip the contents of `InfoprintManagerPDFdriver.zip` file from the 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 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 hostname strings are compared literally.

Example: host.example.org;* .example.org;.example.org;host?.example.org where:

host.example.org

Matches only the hostname host.example.org.

***.example.org**

Matches any hostname that ends with .example.org.

.example.org

Matches any hostname that ends with .example.org.

host*.example.org.

Matches any hostname that starts with host, followed by any number of characters (valid for hostname) and ends with .example.org.

Examples:

- host123.example.org
- host2A.example.org
- host-name.example.org

host?.example.org.

Matches any hostname 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.

To install the automatic update client:

1. Insert the InfoPrint Manager for Windows 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 in the home directory of a person using the InfoPrint GUI. InfoPrint 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 GUI, an icon that represents an operation that you can perform on an InfoPrint 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, 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, the person who creates and manages one or more components of a printing system, such as servers and actual destinations. By default, InfoPrint gives administrators authorization to perform some InfoPrint 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 Reader, you can view, navigate, print, and present any Portable Document Format (.pdf) file.

Adobe PageMaker

A desktop publishing program that produces PostScript documents.

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 an pSeries computer through the network or through a serial or parallel port that receives jobs from an AIX print queue.

In InfoPrint, 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, the destination support system that communicates with the standard AIX print backend (`pioibe`), or with certain variations of the `rembak` print backend, to print jobs.

AIX physical printer

In InfoPrint, 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. PhotoShop offers anti-aliasing when rasterizing an EPS file.

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 floppy disk, compact disc, or other 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, occurring without a regular or predictable time relationship to a specified action. Contrast with *synchronous*.

attachment type

Defines the method by which a printer device is attached to the AIX system from which it receives data. See *AIX-attached printer*, *direct-attached printer*, *TCP/IP-attached printer*, and *upload-TCP/IP-attached printer*.

attribute

A defined characteristic of an object, such as the number of copies required of a job, or the document formats accepted by an actual destination.

attribute name

A string that identifies an attribute. Typically, in InfoPrint 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, 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, the amount of time calculated by InfoPrint that is required to print all of the jobs currently in a queue.

backspace

In InfoPrint, the action used to back up and reprint pages in a job.

bar code

A code representing characters by sets of parallel bars of varying thickness and separation that are read optically by transverse scanning.

An array of parallel rectangular bars and spaces that together represent data elements or characters in a particular symbology. The bars and spaces are arranged in a predetermined pattern following unambiguous rules defined by the symbology.

BCOCA

Bar Code Object Content Architecture.

Bezier curves

A method of defining curves using anchor points, control handles, and tangent lines. The PostScript path passes through anchor points. Its approach direction is along the tangent lines that are controlled by the control handles. Many personal computer programs use this drawing method. Type 1 PostScript fonts are defined using Bezier curves.

binding

The cover and materials that hold a book together. See *edition binding*, *perfect binding*, *spiral binding*, *wire-o binding*.

The process of applying the binding to a book.

In InfoPrint, 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, the destination support system that generates a print command string that the shell runs to print jobs.

BSD physical printer

In InfoPrint, the object representing a printer device that uses the BSD destination support system.

burn

In platemaking, an exposure. Burn is named because of the extremely bright ultraviolet lamps used to transfer images from film to plate.

In photography, to lengthen the final exposure time to increase the final density of print.

C

CDE

Common Desktop Environment.

child

See *parent/child relationship*.

choke

In color printing, an area whose dimensions have been reduced to avoid overlapping another color. Contrast with *spread*.

class

Synonym for *object class*.

clean

In InfoPrint, 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, the component of the print system that assembles a print request and submits the request to a server. The client generates the local ID numbers for each job, submits the jobs to the servers, and keeps track of where each user's jobs have been submitted.

CMR

Color Management Resource.

CMY

Cyan, magenta, yellow.

CMYK

Cyan, magenta, yellow, black.

collator

In some printers a special-purpose hard drive disk array used to store RIPPed files and later transfer them to the LED print heads for imaging.

color balance

The relative levels of cyan, magenta, and yellow channels in an image to produce accurate color rendition of an original image.

color correction

The adjustment of the color balance in an image to produce accurate color rendition of an original image. Color correction is used for two- or three-spot-color jobs.

color key

A color proof similar to Cromalin, but typically not laminated and not necessarily accurate in color. Color keys are used to verify that breaks or color assignments and traps have been made accurately.

Color management resource

Color management resource (CMR) is an architected resource that is used to carry all of the color management information required to render a print file, document, group of pages or sheets, page, or data object with color fidelity.

Command Line Interface (CLI)

A type of user interface where commands are specified on the command line. Contrast with *Graphical User Interface*.

Common Desktop Environment (CDE)

A graphical user interface running on a UNIX operating system.

complex attribute

In InfoPrint, an attribute that can have multiple values with each value containing multiple components.

constant data

Data that does not change between copies of a document and that is merged with variable data to produce personalized documents. For example, a form letter (constant data) can be merged with a customer's name and address (variable data).

contextual help

A type of online help that provides specific information about each selectable object, menu choice, notebook tab, field, control, and pushbutton in a window.

control strip

A strip of information that can be attached to a print job and used to measure registration and density.

Cromalin

The Dupont color proofing system. Four layers (CMYK) of light-sensitive material are exposed through final halftone negative films, then laminated together on an opaque backing to produce a color- and trap-accurate final proof showing actual halftone dot structure. Cromalin is sometimes called an analog proof.

crop

To remove unwanted areas of an image, usually indicated by crop marks on the original.

CTS

Cutter-trimmer-stacker.

CUPS

Common Unix Printing System is a modular printing system for Unix-like computer operating systems which allows a computer to act as a print server. A computer running CUPS is a host that can accept print jobs from client computers, process them, and send them to the appropriate printer.

CUPS destination support system

In InfoPrint, the destination support system that communicates with the standard LINUX print system (CUPS) and that uses InfoPrint Manager **pioinfo** backend, InfoPrint Manager **piorpdn** 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, pertaining to the incoming format of the job and the output format required by the printer device. InfoPrint transforms the incoming format into the output format, as required. See also *document format*.

DB2*/6000

DataBase 2/6000.

deadline

In InfoPrint, 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, an object that represents default attribute values for a document in a job. Synonymous with *initial value document*.

default job

In InfoPrint, an object that represents default attribute values for a job. Synonymous with *initial value job*.

default object

In InfoPrint, a general term that refers either to a *default document* or a *default job*. Synonymous with *initial value object*.

default value

A value stored in the system that is used when no other value is specified.

delete

In InfoPrint, 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, 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.

DFS

Distributed File Service.

digital

Pertaining to data represented by digits, sometimes with special characters and the space character.

digital color proof

An off-press color proof made from a color printer attached to a computer.

digital printing

A filmless and plateless printing process in which digital data for each page is transferred directly to a light-sensitive drum and then to paper for a final image.

direct-attached printer

A printer device, attached to an pSeries computer through the network or through a serial or parallel port.

In InfoPrint, 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, 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, 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, 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 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 supports the DPA standard.

document transfer method

In InfoPrint, the transfer method describes how documents are transferred to, or acquired by, servers. See *pipe-pull* and *with-request*.

document type

In InfoPrint, 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, assigning a job to an actual destination as soon as it is accepted. Early binding permits InfoPrint to estimate the time when the job will be completed. Contrast with *late binding*.

edition binding

A type of book binding in which printed sheets are folded into 16- or 32-page signatures. Four-page endleaves are pasted on the outside of the first and last signature. The signatures are then collated by machine and sewn together using special sewing machines. Contrast with *perfect binding*, *spiral binding*, and *wire-o binding*.

electronic document

A document stored in a computer instead of printed on paper.

electronic mail

Correspondence in the form of messages sent between workstations over a network. Synonymous with *email*.

electrophotographic

Pertaining to a type of printer technology that creates an image on paper by uniformly charging the photoconductor, creating an electrostatic image on the photoconductor, attracting negatively charged toner to the discharged areas of the photoconductor, and transferring and fusing the toner to paper.

em

In composition, a unit of measurement exactly as wide and as high as the point size of the font being set. The name is derived from the fact that the letter M in early typefaces was usually cast on a square body.

email

Electronic mail.

email destination

In InfoPrint, an actual destination representing an electronic mailing system.

email destination support system

In InfoPrint, 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, the action that makes a destination, queue, or server able to accept jobs, or a log able to accept information.

end sheet

The sheet of paper, blank or otherwise, that can follow a job. See also *auxiliary sheet*.

Enhanced X-Windows

A tool designed to permit multiple application processes to operate in multiple windows displayed on a virtual terminal. See *X-Windows*.

environment variable

Any one of a number of variables that describe the way an operating system runs and the devices it recognizes.

error log

A data set or file in a product or system where error information is stored for later access.

estimate

The professional cost analysis made by a print shop in response to a customer's request for a price quotation on a print job.

event

In InfoPrint, an occurrence in the printing system during an operation; for example, the completion of a command.

event log

In InfoPrint, a collection of messages about events that have occurred.

event notification

The notification that is sent by InfoPrint 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, 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 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, 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 prints each file listed in the reference document.

File Transfer Protocol (FTP)

In TCP/IP, the application protocol that makes it possible to transfer data to and from host computers and to use foreign hosts indirectly.

finisher

A hardware device attached to a printer that performs such operations as folding or stapling the printed pages.

finishing

In a print shop, the final operations on a printed product, such as stapling, trimming, drilling, folding, embossing, varnishing, gluing, shrink wrapping, perforating, laminating, collating, and so on.

flag

A modifier of a command that specifies the action of the command. A dash usually precedes a flag. Synonymous with *option*. See also *keyword*.

FOCA

Font object content architecture.

folder

In the InfoPrint 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 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, 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 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, a global character is represented by an asterisk (*).

global ID

Global job identifier.

global job identifier

An unambiguous job identifier. In InfoPrint, 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 server.

glyph

An image, usually of a character, in a font.

GOCA

Graphics object content architecture.

graphic character

A visual representation of a character, other than a control character, that is normally produced by writing, printing, or displaying.

Graphical User Interface (GUI)

A type of user interface that takes advantage of a high-resolution monitor and includes a combination of graphics to implement an object-action paradigm, the use of pointing devices, menu bars, overlapping windows, and icons. Contrast with *Command Line Interface*.

Graphics Interchange Format (GIF)

A compressed graphics format widely used on the Internet.

gray component replacement (GCR)

Synonym for *under color removal (UCR)*.

gray scale

A strip of standard gray tones, ranging from white to black, placed at the side of the original copy during photography to measure the tonal range and contrast obtained.

GUI

Graphical User Interface.

gutter

The blank area or inner margin from the printing area to the binding.

H

halftone

A printing method that simulates continuous-tone shading using dots of varying sizes laid out on a rectangular grid. Larger dots simulate darker tones and smaller dots simulate lighter tones. Typical grid spacings are 85 lines per inch (lpi) (newspaper), 133 lpi (low end), 150 lpi (midrange), and 175+ lpi (high quality).

help

In the InfoPrint 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 from scheduling it.

hostname

The name given to an AIX system.

hot folder

A workstation directory where users copy jobs to submit them to print.

hypertext

A way of presenting information online with connections between one piece of information and another. These connections are called hypertext links. See also *hypertext link*.

hypertext link

A connection between one piece of information and another. Selecting a link displays the target piece of information.

I

icon

A graphic symbol displayed on a screen that a user can click to invoke a function or software application.

image

Toned and untoned pels arranged in a pattern.

image data

Rectangular arrays of raster information that define an image.

imagesetter

A high resolution (1270–3600+ dpi) printer that uses an Argon (green) laser to write to film using digital input. Imagesetting is the step before Cromalin proofing and platemaking.

imposition

The process of arranging pages on a press sheet to ensure the correct order during final cutting, folding, and binding. Electronic imposition builds press sheets automatically during the RIP and outputs film formatted for immediate use in platemaking.

InfoPrint

A solution of software and 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 takes documents from creation to the published, kitted, and shipped product.

In InfoPrint software publications, InfoPrint Manager for AIX or any of its components.

InfoPrint Manager for AIX

The software component of InfoPrint. InfoPrint Manager for AIX handles the scheduling, archiving, retrieving, and assembly of a print job and its related resource files. It also tracks the finishing and packaging of the printed product.

InfoPrint Manager for AIX is based on Palladium technology developed at MIT/Project Athena. It conforms to the ISO DPA and POSIX standards.

InfoPrint Network

The local area network running TCP/IP protocol that InfoPrint uses to communicate among servers, clients, and output devices.

InfoPrint Select

The component of InfoPrint Manager for AIX that lets you submit jobs from a Windows workstation.

InfoPrint Submit Express

The component of InfoPrint Manager that lets you submit jobs with a job ticket from a Windows or Macintosh workstation.

InfoPrint 20

A black and white, large-format, cut-sheet, workgroup laser printer with optional duplexing and 600-dpi resolution.

InfoPrint 60

A duplex, black and white, cut-sheet printer with 600-dpi resolution.

InfoPrint 62

A non-impact, continuous-forms printer that runs at a maximum of 62 impressions-per-minute (depending on forms size), and is factory set to run at either 240 or 300 dpi on a maximum paper size of 370.8 mm (14.6 in.).

InfoPrint 4000

A duplex, black and white, continuous-forms printer with 600-dpi resolution.

initial value document

Synonym for *default document*.

initial value job

Synonym for *default job*.

initial value object

Synonym for *default object*.

initially settable attribute

An attribute whose value can be established when an object is created but cannot be subsequently set or modified. See also *resettable attribute*; contrast with *non-settable attribute*.

input focus

The area of a window where user interaction is possible from either the keyboard or the mouse.

input tray

For a printer device, the container that holds the medium upon which the printer prints its output.

Intelligent Printer Data Stream (IPDS)

An all-points-addressable data stream that enables users to position text, images, and graphics at any defined point on a printed page.

Information that the host sends to IPDS printers. This information generally contains basic formatting, error recovery, and character data and enables the printers to make decisions.

An architected host-to-printer data stream that contains both data (text, image, graphics, and bar codes) and controls defining how the data is to be presented. IPDS provides a device-independent interface for controlling and managing all-points-addressable (APA) printers.

International Organization for Standardization (ISO)

An organization of national standards bodies from various countries established to promote development standards to facilitate international exchange of goods and services, and develop cooperation in intellectual, scientific, technological, and economic activity.

Internet

A wide area network connecting thousands of disparate networks in industry, education, government, and research. The Internet network uses TCP/IP as the protocol for sending information.

Internet Protocol

The set of rules that determines how to route data from its source to its destination in an internet environment.

intervening jobs

In InfoPrint, 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, an object that represents a request to print or send one or more documents together in a single session. A job includes the data to be printed or sent and resources such as fonts, images, and overlays. Depending on how it was submitted, it can also include a job ticket. Synonymous with *job bundle* and *print job*.

job bundle

Synonym for *job*.

job data

The page descriptions, merge data, and embellishments that compose a document in a job, either directly or by reference.

job ID

A local or a global identifier that identifies a job to a job submitter, administrator, operator, or InfoPrint. See *local job identifier*, *global job identifier*.

job-priority

In InfoPrint, 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, the person who submits jobs for printing. Often, this person is an application programmer who maintains applications that generate data to be printed.

job ticket

The customer's hardcopy or electronic instructions listing all the variables describing a print job, either directly or by reference. The print shop can add specifications to the job ticket and can print the job ticket.

Joint Photographic Experts Group (JPEG)

A compressed graphics format widely used on the Internet.

JPEG

Joint Photographic Experts Group.

K

Kerning

In typesetting, adjusting the relative spacing of two characters to improve their appearance and readability. Kerning pairs are specific sets of characters with built-in relative spacing. Some typefaces have as many as 100 kerning pairs.

keyword

A name or symbol that identifies a parameter.

Part of a command operand that consists of a specific character string, such as `DSNAME=`.

kitting

In a print shop, packaging the completed published work with attendant binders, tabs, diskettes, and other equipment or information, before shipping the finished product.

L

LAN

Local Area Network.

laser (light amplification by stimulated emission of radiation)

In InfoPrint printers, a device that emits a beam of coherent light that forms the image on the photoconductor that is subsequently transferred to the paper.

late binding

In InfoPrint, waiting to assign a job to an actual destination until it is about to be processed. Late binding permits InfoPrint 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 only supported on Red Hat Enterprise Linux (RHEL) 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, a job identifier automatically generated by the server, identifying the job to the person who submitted it. InfoPrint 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, the language InfoPrint uses when sending notification and error messages or displaying the InfoPrint graphical user interfaces.

log

A collection of messages or message segments added to a file for accounting or data collection purposes.

To record messages in a file.

logical destination

In InfoPrint, 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, 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, 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 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, 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, 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 developed by Sun Microsystems 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. Contrast with *initially settable attribute* and *resettable attribute*.

notification

The act of reporting the occurrence of events.

In InfoPrint, notification of events appears as messages in event logs or messages sent to administrators, operators, and job submitters. In the InfoPrint GUI, notification of events also appears as changes to the appearance of icons.

notification-profile

In InfoPrint, an attribute associated with an object that contains information designating the people to whom InfoPrint 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 queue objects are

in the same object class and each queue has the same set of queue attributes. However, the values for those attributes can differ for each queue in the queue object class.

Object Identifier (OID)

In architecture, a notation that assigns a globally unambiguous identifier to an object or a document component. The notation is defined in international standard ISO.IEC 8824(E).

object name

The alphanumeric term that identifies an object.

object state

The state of an object indicates its availability and readiness for performing its functions. An object can be in one of a number of states such as ready, busy, or unknown.

OCR

Optical character recognition.

octet

A byte that consists of eight binary digits (bits).

offset stacking

In certain printer devices, a function that allows the printer to offset the printed output pages for easy separation of the jobs.

OID

Object Identifier.

open destinations window

In the InfoPrint 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 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, the person responsible for printer devices. Also, this person performs a subset of tasks for InfoPrint 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 GUI, an object that represents a logical destination that is not associated with an existing queue.

orphan logical printer

In the InfoPrint 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, 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.

Palladium

A distributed print system developed at MIT/Project Athena with participation from Digital Equipment Corporation (DEC), International Business Machines (IBM), and Hewlett-Packard (HP). It is a reference implementation for the OSI Document Printing Architecture (DPA) standard, ISO/IEC 10175.

pane

In the Work Area of the InfoPrint Manager Administration GUI, an area containing a group of objects of a specific type, such as an actual destinations pane.

parent/child relationship

In InfoPrint, 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, referring to options submitted with a job that are used by the device driver, but not InfoPrint. InfoPrint 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, 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, 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, a utility used to display information about a message.

pdpr

In InfoPrint, 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, 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, a document transfer method where InfoPrint saves the documents in a file and transfers the address of the file to the server. InfoPrint transfers the file to the server upon the request from the server. This is an efficient transfer method for large jobs and is the default transfer method at job submission. Contrast with *with-request*.

plex

A document or actual destination attribute used to define the placement of output images on the page. See the plex values *simplex* and *tumble*.

Portable Document Format (PDF)

An Adobe PostScript data format that can be viewed or printed.

Portable Operating System Interface for Computer Environments (POSIX)

An Institute of Electrical and Electronics Engineers (IEEE) standard for computer operating systems.

POSIX

Portable Operating System Interface for Computer Environments.

PostScript

Adobe's page description language. PostScript has become a standard for graphic design and layout software. PostScript files can contain both vector and raster data. Fonts are described using PostScript coding. Many desktop publishing systems produce PostScript data as their output data stream.

PostScript printer description (PPD)

A file that contains options for printing PostScript data on various printer devices.

PPD

PostScript printer description.

Prefix lengths

Identify a range of IPv6 addresses that are on the same network.

preflight

To assess all resources for a job before the actual print run.

prepress

Work done in the print shop before printing a job, such as preparing data and art, page imposition, color retouching, electronic editing, and page layout.

print database

The set of files on disk that provide a permanent repository for the attributes of all print objects, such as logical destinations, queues, and actual destinations.

print job

Synonym for *job*.

Print Quality Enhancement (PQE)

A printer facility that provides edge smoothing along diagonal lines, fine fidelity protection, and independent boldness control.

Print Services Facility (PSF)

Any of several programs, including PSF for AIX, PSF/MVS, PSF/VM, and PSF/VSE, that produce printer commands from the data sent to them.

print system

A group of one or more print servers and one or more printing devices, which might or might not be located in the same geographical area. The components of a print system are assumed to be interconnected in some manner, providing at least one network interface to print clients, and acting synergistically to supply the defined document print service. (D)

printable document

In InfoPrint, 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, 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, the action used to move a job to the beginning of the queue so that it will print on the next available printer that can handle that job.

protocol

A set of semantic and syntactic rules that determines the behavior of functional units in achieving communication.

pSeries

A family of workstations and servers based on IBM's POWER architecture. They are primarily designed for running multi-user numerical computing applications that use the AIX operating system.

PSF

Print Services Facility.

PSF destination support system

In InfoPrint, the destination support system that communicates with PSF for AIX to print jobs.

PSF physical printer

In InfoPrint, the object representing a printer device that uses the PSF destination support system.

Q

QuarkXpress

A desktop publishing system produced by Quark, Incorporated.

queue

In InfoPrint, 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 uses an Adobe RIP to convert PostScript to IPDS for such printers as the InfoPrint 4000 and InfoPrint 60.

rc.pd

In InfoPrint, a utility used to start the InfoPrint servers listed in the `/etc/pd.servers` file.

read-only

In InfoPrint, describes an attribute value that cannot be set by the user but can change based on other activity.

ready

A state in which an object is ready and able to perform tasks.

An available resource, such as a value of the `media-ready` attribute. Contrast with *supported*.

red, green, blue (RGB)

The colors of CRT display phosphors. RGB images are for screen display only. They must be converted to CMYK images before printing.

registration

The accuracy of printing on paper relative to the edges of the paper.

The accuracy of printing a single color (cyan, magenta, or yellow) relative to black.

The accuracy of printing on one side of a page relative to printing on the reverse side of the page.

reprographics

The process of copying or duplicating documents or information.

requested

In InfoPrint, 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, 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, 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, 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, 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, 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, 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, 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 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, a queuing technique where the next job assigned to the first position in the queue is the shortest job in the queue. Contrast with *deadline*, *FIFO (first-in-first-out)*, *job-priority*, and *longest-job-first*.

shut down

In InfoPrint, 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, the value of the document or actual destination `plex` attribute indicating that output images are placed on the media in a head-to-head format, so that the top of one image is at the same edge as the top of the next image. Depending on the value of the document or actual destination `sides` attribute, the document can be printed on one or both sides of the paper. Contrast with *tumble*; see also *simplex printing* and *duplex printing*.

simplex printing

Printing on only one side of the paper. Contrast with *duplex printing (1)*.

Printing on one or both sides of the paper, placing output images on the media in a head-to-head format, so that the top of one image is at the same edge as the top of the next image. Contrast with *tumble duplex printing*; see also *duplex printing (2)*.

SMIT

System Management Interface Tool.

SNA

Systems Network Architecture.

spiral binding

A type of book binding in which wire or plastic coils are threaded through a series of holes or slots in the binding edge. Contrast with *edition binding*, *perfect binding*, and *wire-o binding*.

spot color

Individual colored inks formulated to exactly match a specified color. Spot color is used when CMYK process color cannot produce a reasonable facsimile of the color or when vivid color is needed. Spot color is also used when fluorescent or metallic colors are needed.

spread

In color printing, an area whose dimensions have been enlarged to eliminate white space between it and another color. Contrast with *choke*.

start sheet

The sheet of paper, blank or otherwise, that can precede a job. See also *auxiliary sheet*.

state

Synonym for *object state*.

stripping

The process of mechanically assembling film into plate layouts. Page imposition takes place during stripping.

subnet mask

Identify a range of IPv4 addresses that are on the same network.

subnetwork

Any group of nodes that have a set of common characteristics, such as the same network ID.

In the AIX operating system, one of a group of multiple logical divisions of another network, such as can be created by TCP/IP.

subtractive color system

A system that reproduces an image by mixing (adding) appropriate quantities of cyan, magenta, and yellow paints on white paper. These paints reflect certain colors and absorb—or subtract—others. Contrast with *additive color system*.

superuser

Synonym for *root user*.

supported

In InfoPrint, pertaining to the specific job attribute values that the actual destination can accept during job validation. InfoPrint validates the requested attribute values of the job against the supported attribute values of the actual destination to determine whether the actual destination can handle that job. Contrast with *requested*.

synchronous

Occurring with a regular or predictable time relationship to a specified action. Contrast with *asynchronous*.

system administrator

Synonym for *administrator*.

System Management Interface Tool (SMIT)

In the AIX operating system, an interface tool for installation, maintenance, configuration, and diagnostic tasks. SMIT lets you perform tasks without entering any commands.

Systems Network Architecture (SNA)

The description of IBM's logical structure, formats, protocols, and operational sequences for sending units through, and controlling the configuration and operation of, networks.

T**table reference character (TRC)**

An optional control character in a print data set. The TRC identifies the font used to print the record and can be used to select a font during printing.

Tagged Image File Format (TIFF)

A digital format for storing scanned images. TIFF files are also referred to as raster format files (as opposed to vector format files). When used in desktop publishing, TIFF files produce only a low-resolution FPO image; the high-resolution data remains on the hard disk.

task help

A type of online help that provides a list of tasks that can be completed with a selected object. When you select a task, the help provides step-by-step information about how to complete the task.

TCP/IP

Transmission Control Protocol/Internet Protocol.

TCP/IP-attached printer

A printer device attached to an pSeries computer through telecommunication lines using the TCP/IP protocol.

In InfoPrint, 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, the value of the document or actual destination **plex** attribute indicating that output images are placed on the media in a head-to-toe format, so that the top of one image is at the same edge as the bottom of the next image. The document must be printed on both sides of the paper. Contrast with *simplex*.

tumble duplex printing

Printing on both sides of the paper, placing output images on the media in a head-to-toe format, so that the top of one image is at the same edge as the bottom of the next image. Contrast with *simplex printing (2)*, *duplex printing (2)*.

U

UCR

Under color removal.

under color removal (UCR)

Conversion of neutral color areas to black ink that reduces use of CMY inks, improves trapping, and reduces setup time. Generally, UCR is performed during image scanning, but some RIPs perform it during processing. Synonymous with *gray component replacement (GCR)*.

unmanage

In the InfoPrint Manager Administration GUI, the action used to put an object into a mode where its icon does not reflect the changes of status for the object.

upload printer

See *upload-TCP/IP-attached printer*.

upload-TCP/IP-attached printer

In InfoPrint, a PSF physical printer that represents a printer device attached through an MVS system and managed by PSF/MVS. InfoPrint 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, to compare the attribute values requested by a job with the supported attribute values of the actual destinations in the system and to determine whether there is an actual destination capable of printing or sending the job.

value

A specific characteristic of an attribute.

variable

A name used to represent a data item whose value can change while the program is running.

variable data

Data that can be changed between copies of a document. For example, a form letter (constant data) can be merged with variable data, such as a customer's name and address to produce personalized documents.

varnish

A protective layer applied to a finished sheet, usually for photos, but sometimes used as a design element because of its reflective qualities. Varnishes can be tinted.

vector

An absolute coordinate point and line in space. PostScript files can contain vector artwork. Vector files are converted to rasters during the RIP process.

velox

A black and white photographic print made from a halftone negative, to be used as a proof copy.

vignette

An image with soft, fade-away edges.

Virtual Machine (VM)

An IBM licensed 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)

An IBM licensed program whose full name is the Virtual Storage Extended/Advanced Function. It is a software operating system controlling the execution of programs.

Visual Systems Management (VSM)

In AIX, a type of graphical user interface that allows system management through the direct manipulation of objects.

VM

Virtual Machine.

VSE

Virtual Storage Extended.

VSM

Visual Systems Management.

W

web

A roll of paper used in web or rotary printing.

well

In the InfoPrint Manager Administration GUI, an area in a pane that contains a group of objects related to the objects in the pane; for example, a queues well in a servers pane.

what you see is what you get (WYSIWYG)

Refers to the fact that the composite image displayed on the screen at a computer workstation has the appearance of the final printed image.

window

A rectangular area of the screen that you can move about, place on top of, or pull under other windows, or reduce to an icon.

wire-o binding

A continuous double series of wire loops run through punched slots along the binding side of a booklet. Contrast with *edition binding*, *perfect binding*, and *spiral binding*.

with-request

In InfoPrint, 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.

