InfoPrint Manager for Windows: Getting Started

InfoPrint Manager for Windows: Getting Started

> **Note:**
>
> Before using this information and the product it supports, read the information in "Notices" on page 171.

> **Internet**
>
> Visit our home page: `http://www.infoprint.com`

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Part 1. Introduction

Chapter 1. About this publication

This publication helps you install and begin using InfoPrint® Manager for the Windows® Operating System, hereafter called InfoPrint Manager for Windows. It also describes how to install and begin using the various client components that InfoPrint Manager uses to manage your printing environment. By applying the procedures and tasks in this publication, you can set up your minimum InfoPrint Manager environment to bring centralized control to your printing environment and help you maximize the capabilities of the printers you possess. This publication focuses primarily on server and client system software configuration, but it also includes information for the IBM® 4159 Model 001 S/390® Parallel Channel Emulator Card.

Note: Only Windows 2000 examples are shown in this book.

Who should read this publication

This publication is for the administrator who installs and configures an InfoPrint Manager environment. You should have already planned for and prepared your system for the installation of InfoPrint Manager by performing the steps described in the book *InfoPrint Manager for Windows: Introduction and Planning Guide*, G544–5716.

Most recent information

For the most recent information about InfoPrint Manager, go to the InfoPrint Solutions Company Web site at **http://www.infoprint.com**:
1. Click **Support and downloads**.
2. Select your software product from the **Software support** pull-down list and click either **InfoPrint Manager for AIX®** or **InfoPrint Manager for Windows**.
3. Under **Manuals and publications**, click **Manuals**.
4. Click on the appropriate InfoPrint Manager publication.

Chapter 2. The InfoPrint publication library

For the most current information, see the InfoPrint Solutions Company Web site at
`http://www.infoprint.com`

InfoPrint Manager common publication library

These publications are common to both InfoPrint Manager for AIX and InfoPrint
Manager for Windows:

- *InfoPrint Manager: SAP R/3 Planning and Configuration Guide*, S550-1051. For print
  administrators who need to create and configure both the SAP R/3 environment.
  we recommend that users possess a detailed knowledge of a SAP R/3
  environment, as well as administering and maintaining either AIX or Windows
  operating systems. This publication describes how a business enterprise that
  uses SAP R/3 can use either InfoPrint Manager for AIX or InfoPrint Manager for
  Windows to manage its print environment.
- *InfoPrint Manager: Reference*, S550-1052. For print administrators, operators, and
  application programmers with the need to perform command-line functions.
  This publication describes the commands, utilities, transforms, attributes, and
  attribute values associated with InfoPrint.
- *InfoPrint Manager: PSF and Server Messages*, G550-1053. This publication lists the
  PSF and Server messages and explanations from InfoPrint Manager.
- *InfoPrint Manager Print-on-Demand Feature: Submit Express User's Guide*, S544-5894.
  This publication is for the user who installs, configures, and uses Submit Express
  on a Windows or Macintosh workstation. Although you can use this publication
  for general guidance in using Submit Express, you should use the online Help to
  find more detailed instructions.
- *InfoPrint Job Ticketer: Job Ticketer User's Guide*, S550-0419. This publication is a
  guide for using the InfoPrint Job Ticketer Web application. This guide provides
  descriptions of tasks and procedures that an end-user needs to know to set up
  their workstation to use the application, and then to create, layout, store, retrieve
  print jobs, and submit the jobs to a print server for printing.
- *InfoPrint Job Ticketer: Administrator's Guide*, S550-0420. This publication is a guide
  for system administrators who are responsible for the InfoPrint Job Ticketer Web
  application. This guide provides information about the Job Ticketer system
  requirements, installation and configuration, system maintenance, security, and
  problem determination.

InfoPrint Manager for AIX publication library

InfoPrint Manager for AIX includes publications in PDF format on a CD-ROM
supplied with the product. You can also download PDF versions of these
publications or order printed copies of these publications from the following Web
site:

`http://www.elink.ibmlink.ibm.com/public/applications/publications/cgibin/pbi.cgi`

Note:

1. There is a fee for the printed manuals.
2. You can use the form number specified for a publication to download a PDF
   version or order a printed version.

The publications for InfoPrint Manager for AIX are:

- *InfoPrint Manager for AIX: Installation Instructions*, G544-5891. This publication provides updated migration and installation information from the instructions available in the *InfoPrint Manager for AIX: Getting Started* manual.
- *InfoPrint Manager for AIX: Introduction and Planning Guide*, G544-5833. This publication gives an overview of InfoPrint Manager for AIX, introduces its concepts, and helps you prepare to use it. It addresses migration from previous versions of the product. Finally, this publication explains the differences between the AIX and Windows versions of InfoPrint.
- *InfoPrint Manager for AIX: Getting Started*, G544-5817. This publication helps you install and configure InfoPrint Manager for AIX. It focuses primarily on server and client system software configuration.
- *InfoPrint Manager for AIX: Configuration and Tuning Guide*, S544-5892. This publication provides information about configuring and tuning the InfoPrint Manager for AIX, Version 4.2. This book is designed for the InfoPrint Manager administrator who needs to understand the topics necessary to configure and tune an InfoPrint Manager system. It should help administrators to evaluate, develop, and maintain both a logical and hardware configuration for their environment.
- *Guidelines for Installing InfoPrint Manager for AIX 4.2 in an HACMP Configuration*, G544-5818. This publication helps you install and configure HACMP™ with InfoPrint Manager for AIX. It also tells you how to use HACMP with InfoPrint Manager for AIX.
- *InfoPrint Manager for AIX: Using Generalized Fax*, S544-5893. This publication describes the primary tasks necessary for configuring and using the Generalized Fax support that is included with InfoPrint Manager for AIX. This includes sending and receiving faxes from an InfoPrint Manager Server.
- *InfoPrint Manager for AIX: Impositioning Assist*, G544-5910. This publication describes how commercial print shops can use InfoPrint Manager for AIX to make frequent layout changes to signature-based documents with relatively static content. As a prerequisite, this solution requires the InfoPrint Manager for AIX: Print-On-Demand feature, an InfoPrint 4100 Advanced Function Printing™ System, and a third-party impositioning product, such as ScenicSoft Preps.
- *InfoPrint Manager for AIX: Procedures*, G544-5815. This publication describes the primary tasks necessary for setting up an InfoPrint environment, submitting print jobs, scheduling jobs, and managing the print environment.
- *PSF Direct Network Configuration Guide for System/370™*, S544-5486. For system administrators or network specialists responsible for configuring a system for Print Services Facility™ (PSF) Direct. PSF Direct is a function of InfoPrint Manager for AIX that allows a PSF program (PSF for z/OS®, PSF/390, PSF/400, PSF/MVS, PSF/VM, or PSF/VSE) to print remotely, using the SNA LU 6.2 protocol, on printers supported by InfoPrint. The PSF program sends the print data stream directly to the InfoPrint printer.
- *PSF for AIX: AFP Upload Configuration Guide Using SNA Server/6000*, S544-5422. For system administrators, this publication describes how to configure AFP™ Upload on both AIX (client) and MVS™ (server) to send files to the JES spool on the MVS server, using a SNA LU 6.2 protocol.
- *PSF for AIX: AFP Upload Configuration Guide Using TCP/IP*, S544-5423. For system administrators, this publication describes how to configure AFP Upload on both AIX (client) and MVS (server) to send files to the JES spool on the MVS server, using a TCP/IP protocol.

InfoPrint Manager for Windows publication library

InfoPrint Manager for Windows includes publications in PDF format on a CD-ROM supplied with the product. You can download PDF versions of these publications or order printed copies of these publications from the following Web site:

`http://www.elink.ibmlink.ibm.com/public/applications/publications/cgibin/pbi.cgi`

Notes:

1. There is a fee for the printed manuals.
2. You can use the form number specified for a publication to download a PDF version or order a printed version.

The publications for InfoPrint Manager for Windows are:

- *InfoPrint Manager for Windows: Introduction and Planning Guide*, G544-5716. This publication gives an overview of InfoPrint Manager for Windows, introduces its concepts, and helps you prepare to use it. It describes features of this product and compares its functions to those of IBM Print Services Facility for OS/2® (PSF for OS/2). It addresses migration from PSF for OS/2 at a high level. Finally, this publication explains the differences between the AIX and Windows versions of InfoPrint.
- *InfoPrint Manager for Windows: Getting Started*, G550-1072. This publication helps you install and configure InfoPrint Manager for Windows. It focuses primarily on server and client system software configuration, but it also includes information for the IBM 4159 Model 001 S/390 Parallel Channel Emulator Card.
- *InfoPrint Manager for Windows: Procedures*, G544-5814. This publication describes the primary tasks necessary for setting up an InfoPrint environment, submitting print jobs, scheduling jobs, and managing the print environment.

Part 2. Getting started with server systems

Chapter 3. Preparing to install InfoPrint Manager software

Before you perform any of the steps documented in this publication, you must understand the general features and requirements of InfoPrint Manager for Windows. You can find this information in *InfoPrint Manager for Windows: Introduction and Planning Guide*, G544-5716. Consult this publication before proceeding with your installation.

You should perform all network configuration before installing and configuring InfoPrint Manager. See "Configuring TCP/IP" for procedures for TCP/IP configuration.

If you plan to use PSF Direct to print from remote host systems (such as MVS, iSeries®, or OS/390®), consult the *PSF Direct Configuration Guides* to establish communication between this Windows system and remote hosts. The *PSF Direct Configuration Guides* are available on your publications CD and on the World Wide Web at

http://www.elink.ibmlink.ibm.com/public/applications/publications/cgibin/pbi.cgi

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

Configuring TCP/IP

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

Planning for a LAN connection

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

Table 1. LAN TCP/IP configuration worksheet

Control Panel Prompt	Description	Value
Computer Name	The (NetBIOS) name of this computer on the Windows network.	
Domain/Workgroup	The group of Windows computers to which this computer belongs.	
Adapter	The physical card used to connect this system to the network. An appropriate driver for this card may need to be added.	

Table 1. LAN TCP/IP configuration worksheet (continued)

Control Panel Prompt	Description	Value
Obtain IP address from DHCP server?	The Dynamic Host Configuration Protocol (DHCP) provides a new IP address for this system each time it is restarted. If DHCP is not in use, a static IP address must be assigned.	__ yes __ no **Note:** It is strongly recommended that you specify **no** for DHCP.
IP Address	A dotted-decimal address (for example, 9.99.178.17) statically assigned to this system. Not needed if DHCP is in use.	
Subnet Mask	A dotted-decimal number (for example, 255.255.255.0) indicating which part of the IP address identifies the network and which part identifies the system. Not needed if DHCP is in use.	
Default Gateway	The system used by default to allow this network to communicate with other networks. Not needed if DHCP is in use.	
DNS Host Name	The (Internet) name of this system recognized by the Domain Name System (DNS). If possible, this name should be the same as the Windows computer name.	
DNS Domain	The Internet domain to which this computer belongs.	
DNS Service Search Order	An ordered list of IP addresses of DNS servers. These systems are queried to resolve Internet names into IP addresses.	
Domain Suffix Search Order	An ordered list of TCP/IP domains to search for a given host name.	
Primary WINS Server	The first Windows Internet Name Service (WINS) system to query to resolve a Windows (NetBIOS) system name into an IP address.	
Secondary WINS Server	The second WINS system to query.	
Enable DNS for Windows Resolution?	DNS may be used to resolve Windows (NetBIOS) names into IP addresses.	__ yes __ no
Enable LMHOSTS Lookup?	LMHOSTS files statically associate Windows system names to IP addresses.	__ yes __ no

Table 1. LAN TCP/IP configuration worksheet (continued)

Control Panel Prompt	Description	Value
Scope ID	The set of IP addresses assignable for a Windows domain is a called a *scope*.	
Enable IP Forwarding?	IP Forwarding allows data to be forwarded on a multi-homed system.	__ yes __ no

Planning for a printer network connection

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

Note: This worksheet is specifically designed for use with Windows 2000 or Windows XP, but it will assist you in performing the necessary TCP/IP configuration on all Windows systems.

Table 2. Printer Network TCP/IP configuration worksheet

Control Panel Prompt	Description	Value
Adapter	The physical card used to connect this system to the printer network. An appropriate driver for this card may need to be added.	
IP Address	A dotted-decimal address (for example, 9.99.178.17) statically assigned to this system on the printer network. Required for printer network participation.	
Subnet Mask	A dotted-decimal number (for example, 255.255.255.0) indicating which part of the IP address identifies the network and which part identifies the system. Required for printer network participation.	
Default Gateway	The printer network should not require communication with another network. All communication with the printers is mediated by InfoPrint Manager.	none

Server software prerequisites

The primary software prerequisite for the InfoPrint Manager for Windows server software is one of the following Microsoft® operating systems:

- Windows 2000 Professional (Service Pack 4)
- Windows 2000 Server (Service Pack 4)
- Windows XP Professional (Service Pack 1 or higher)
- Windows Server 2003 Standard Edition

Note: Windows operating systems have strict limitations on the number of connections. Ensure that an adequate version of Windows is used on your InfoPrint Manager Server to meet your connection requirements.

Before migrating to InfoPrint Manager 2.2

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

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

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

Backing up your InfoPrint Manager for Windows install directories

To back up your system, complete these steps:

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

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

After migrating to InfoPrint Manager Version 2.2

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

The lpdmap.txt file included

InfoPrint Manager for Windows now includes a **lpdmap.txt** file that is installed in *install_path***\var\pd\lpd**. Before the file is installed, InfoPrint Manager makes a backup copy of the existing **lpdmap.txt** file. If you have modified your version of the **lpdmap.txt** file, you must merge the changes from the backup copy into the **lpdmap.txt** file.

Updating transform configuration files

As part of the install process, your existing transform configuration files and user exits are automatically zipped and backed up into the path **<install path>\var\pdbk\samples.zip**.

For your reference, this list provides the default full-path names for six commonly modified transform configuration files:

- **c:\Program Files\IBM\Infoprint Manager\pcl2afp\pcl2afp.cfg**
- **c:\Program Files\IBM\Infoprint Manager\pcl2afp\pcl2afpd.cfg**
- **c:\Program Files\IBM\Infoprint Manager\ps2afp\ps2afp.cfg**
- **c:\Program Files\IBM\Infoprint Manager\ps2afp\ps2afpd.cfg**
- **c:\Program Files\IBM\Infoprint Manager\ps2afp\3160d.cfg**

After installing the latest InfoPrint Manager version, you can edit the newly-installed files to add your customized changes into the new configuration files that reside in the **c:\Program Files\Infoprint** directory.

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

Migrating optional InfoPrint Manager features

Any optional features of previous versions of InfoPrint Manager that are installed on the system are removed when the base server software is migrated to Version 2.2. This is done because optional features of previous versions may be incompatible with the Version 2.2 server. The use of previous version options with a Version 2.2 server is not supported. To load Version 2.2 options, insert the CD-ROMs that contain features you want to install.

Preparing to reinstall

At some point, you may need to reinstall InfoPrint Manager. You might be upgrading to a new version or reinstalling the current version because of a problem. Try to install *without* uninstalling first, so that your configuration information is not lost. If that does not work, uninstall and reinstall using the same

installation directory. When you do, the objects you created will still exist, but any post-installation configuration, especially in multi-server environments, will probably be lost.

Note:

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

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

   A similar message is issued at install if you do not have administrative privilege.
2. You must use the same userid to reinstall InfoPrint Manager for Windows as was used to install it initially.
3. Be sure to close the InfoPrint Manager Administration GUI, the InfoPrint Manager Operations GUI, and the InfoPrint Manager Management Console before installing any PTF or reinstalling InfoPrint Manager to avoid problems with files that need to be replaced.

Chapter 4. Installing InfoPrint Manager server software

These are the steps for the initial installation of InfoPrint Manager for Windows Version 2.2 on your server. For instructions on applying service, refer to "Installing service updates for InfoPrint Manager clients" on page 22.

1. Log in as the Administrator user.

   Note: You must have **Administrative Privilege** to install or uninstall InfoPrint Manager for Windows.

2. Insert the Infoprint Manager for Windows Base Server CD-ROM into your CD-ROM drive. The install program starts automatically. You can choose to view a readme file before starting the install.

3. Select the Install Infoprint Manager Server button.

4. The license agreement displays. Read the license agreement and then click the **Accept** button.

5. Follow the instructions on the installation screens to install the program. You may enter the destination directory and other necessary settings.

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

7. If you are installing optional features, refer to "Installing optional features on an InfoPrint Manager system" on page 19 for instructions.

8. Install the most recent service update if appropriate. Refer to "Accessing the latest information and fixes" on page 20 for information and instructions about where to find product updates. Then follow the installation steps in "Installing service updates for InfoPrint Manager clients" on page 22.

Note: If you receive Run-Time Error 5006, go to: **http:// support.installshield.com/kb/view.asp?articleid=Q111253** for resolution. This is a known Macrovision InstallScript problem.

The following software components are now installed on your system:

- InfoPrint Manager server
- InfoPrint Manager Management Console
- InfoPrint Manager Administration GUI
- InfoPrint Manager Operations GUI
- InfoPrint Notifications Server
- IBM TCP/IP Network Port Monitor
- InfoPrint Manager LPD service
- MVS Download

We strongly recommend that you verify the connection from your InfoPrint Manager for Windows server system to an actual destination. To do this, you must first create an actual destination as described in Chapter 10, "Creating actual destinations," on page 65.

Installing on non-English operating systems

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

Running InfoPrint Manager with double-byte languages

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

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

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

1. On the system that your InfoPrint Manager Server runs on, open the InfoPrint Manager Management Console[1] and select **File → Stop Server**.
2. Set up a new domain user account that the InfoPrint Manager service will run under as follows:
   a. Log on to the domain that InfoPrint Manager operates in as a domain administrator.
   b. Use **User Manager for Domains** to create a domain user account that InfoPrint Manager will run under.

      Important: Make the user a member of the **Domain Administrators** group and change the user's primary group from **Domain Users** to **Domain Administrators**. It is recommended that you select **Password never expires** so you don't have to change the password and update all of your servers on a regular basis.
   c. Give the domain user the following user rights: **Act as part of the operating system**, **Create permanent shared objects**, and **Log on as a service**.
3. Log off the domain.
4. Grant the same user rights to the new domain user on the system that InfoPrint Manager is installed on:
   a. Log on the system that the InfoPrint Manager is installed on as a user who is a member of the **Domain Administrators** group.
   b. Use the local **User Manager** to give the domain user that you created in 2 the following user rights on that system: **Act as part of the operating system**, **Create permanent shared objects**, and **Log on as a service**.
5. Log off the system.
6. Change the regional settings for the new domain user to the appropriate language:
   a. Log on the system as the domain user you created in 2.

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

b. Select **Start → Settings → Control Panel**.

c. Double-click the **Regional Settings** icon.

d. Select the appropriate language.

e. Click **OK**.

7. Log off the system.

8. Log on as a user who is a member of the **Administrators** group for that system and complete these steps:

   a. Open the InfoPrint Manager Management Console and select **Edit → Service Account/Domain**.

   b. Enter the name of the domain that the InfoPrint Manager is installed on and the user name and password from 2 on page 18.

   c. Click **OK**.

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

Uninstalling InfoPrint Manager for Windows

To remove InfoPrint Manager from a system, follow these steps:

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

2. Uninstall the product. Go to **Start → Programs → Infoprint Manager → Uninstall Infoprint Manager for Windows**. Follow all instructions as directed.

3. Restart the computer.

4. Delete the install directory. If any directories were moved out from the under the InfoPrint Manager install directory (as identified in step 1), delete those as well.

Installing optional features on an InfoPrint Manager system

After installing InfoPrint Manager on your server, you can install any desired optional features, such as the SAP Print Feature or the PPFA Feature. Each feature CD has an installation program similar to the InfoPrint Manager server installer. Insert the appropriate Infoprint Manager for Windows Version 2.2 feature CD into the CD-ROM drive. The install program starts automatically; follow the instructions to complete the installation. If you are planning on installing the InfoPrint Job Ticketer feature, do not install the Print-on-Demand feature.

If you have already installed a service update to InfoPrint Manager and you are now installing an optional feature for the first time, install it from the Version 2.2 CD-ROM for that feature first, and then install the service update for the feature from the PTF CD-ROM.

Installing the InfoPrint Job Ticketer

After the Infoprint Manager server software has been completely installed, insert the Infoprint Manager Web Server CD-ROM into your CD-ROM drive. The install program starts automatically.

You will be asked for the Domain Name System (DNS) name. Enter the DNS name of your server machine.

Note: If you enter the DNS name incorrectly or if the DNS name of your server machine changes, you must uninstall the InfoPrint Manager Web Server and reinstall the InfoPrint Manager Web Server, the Print-on-Demand feature, and all of your web applications.

After the InfoPrint Manager Web Server software has been completely installed:

1. Insert the Infoprint Manager Print-on-Demand Disk 1 CD-ROM into your CD-ROM drive. The install program starts automatically.
2. Select the **Yes, install Infoprint Job Ticketer** checkbox.
3. Follow the instructions on the installation screens to install the program. You may enter the destination directory and other necessary settings.

Accessing the latest information and fixes

You can find download fixes for InfoPrint Manager for Windows from the InfoPrint Solutions Company Web site at

http://www.infoprint.com

You can find updated documentation for InfoPrint Manager for Windows from the following Web site:

| http://www.elink.ibmlink.ibm.com/public/applications/publications/cgibin/pbi.cgi

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

If you are in the U.S., you may call 1-888-426-4343 to set up a SupportLine contract for InfoPrint Manager for Windows. After a SupportLine contract is established, you may request technical assistance by calling 1-800-237-5511. When you call this number, you will be asked to provide your customer number, operating system (for example, 2000 or XP), name of the failing product (InfoPrint Manager for Windows), and a brief description of the problem. Please have this information available when you place a call for technical assistance.

Installing service updates for InfoPrint Manager and optional features

Before installing any PTF, it is **strongly** recommended that you back up your InfoPrint Manager for Windows install directories, any directories that have been moved out from under the install directory since the initial installation of the product, and the Windows registry. Refer to "Backing up your InfoPrint Manager for Windows install directories" on page 14 for a description of the steps involved in backing up your system.

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

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

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

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

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

Follow these steps to install a service update to the PPFA Feature or the SAP Print or the Pad Features:

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

Installing service updates for InfoPrint Manager clients

Follow these steps to install a service update to an InfoPrint Manager client component:

1. Insert the Infoprint Manager for Windows Common Clients PTF CD-ROM into your CD-ROM drive. The install program starts automatically.

2. Select the client program you wish to update.

3. Follow the instructions on the installation screens to install the update. The destination directory and other necessary settings will be obtained automatically based on your initial installation.

Uninstalling a service update

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

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

2. Uninstall the product. Go to **Start → Programs → Infoprint Manager → Uninstall Infoprint Manager**. Follow all instructions as directed.

3. Restart the computer.

4. Delete the install directory. If any directories were moved out from the under the InfoPrint Manager install directory (as identified in step 1), delete those as well.

5. Install the InfoPrint Manager product. Follow the directions as specified.

6. Install any required PTFs to get the product to the desired level.

Chapter 5. Working with the Windows XP Service Pack 2 and Windows 2003 Service Pack 1 Firewalls

The Windows XP Service Pack 2 and Windows 2003 Service Pack 1 both include a Windows Firewall that provides a protective boundary that monitors and restricts information that travels between your computer and a network or the Internet. This provides a line of defense against someone who might try to access your computer from outside the Windows Firewall without your permission. Windows Firewall considers an "unsolicited request" any attempt to connect to your computer from the Internet or from the network. Every time your computer gets an "unsolicited request", the Windows Firewall blocks that connection. If you choose to unblock a connection, Windows Firewall keeps track of it by creating an exception, so you will not be notified about it in the future.

When Windows XP Service Pack 2 or Windows 2003 Service Pack 1 is installed on your system and the Windows Firewall is turned on, most programs will not be allowed to accept unsolicited communications unless you choose to list those programs as exceptions. Because firewalls restrict communication between your computer and network, you might need to adjust settings for some other programs that prefer an open connection. You can make an exception for these programs or services, so that they can communicate through the Windows Firewall.

If you are running the InfoPrint Manager server on a Windows XP operating system with Service Pack 2 or a Windows 2003 operating system with Service Pack 1, you can configure your Windows Firewall in one of two ways:

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

Notes:

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

Working with the Windows Firewall

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

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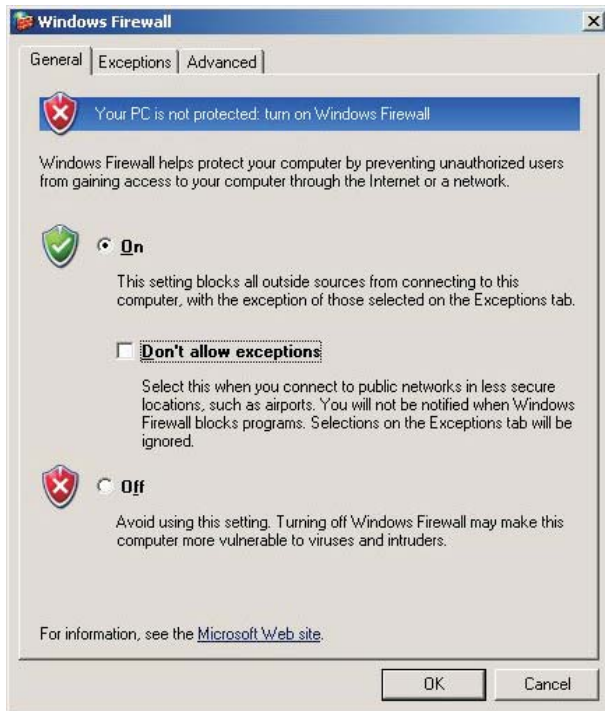
Figure 1. Windows Firewall dialog box

> **Notes:**
>
> a. When the Windows Firewall is active, the Firewall pop-up windows appears every time an unsolicited request is received by your computer from the network or Internet. These pop-up windows ask you to allow access to programs or services that are not yet on the Exceptions list. If you choose to allow them access, the exception is saved in the exception list, and from that moment, all requested from that program or service are accepted.
>
> b. Microsoft recommends that you define a program or service exception, rather than opening a port.
>
> 2. Leave the **On (recommended)** radio button selected to use the Windows Firewall, or click on the **Off (not recommended)** radio button to turn off the Windows Firewall.
>
> 3. Click on the **Exceptions** tab to add or remove the programs and services for which you want to change the access to your computer through the Internet or a network. Make sure that you deselect **Don't allow exceptions** as shown in Figure 1.
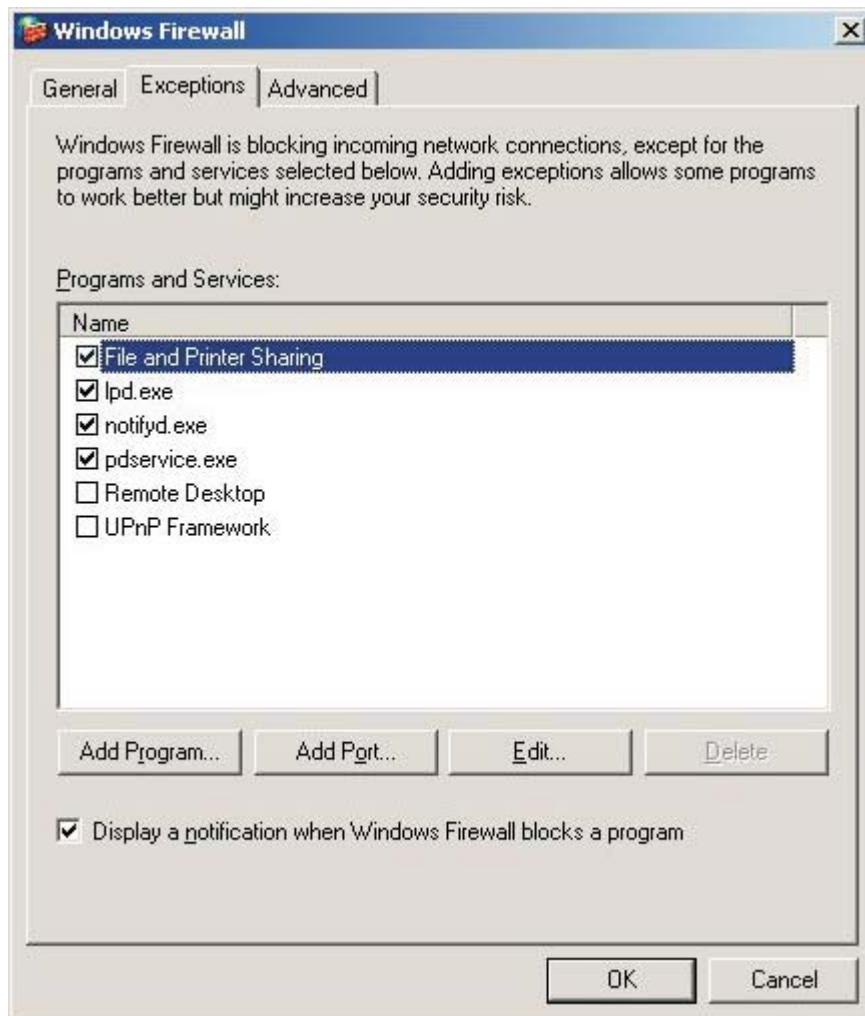
Figure 2. Windows Firewall Exceptions tab

a. You may either use the Windows Firewall pop-up windows or the
Windows Firewall Exceptions tab to give these programs or services access:
   - If you are running the InfoPrint Manager server, define an exception for
     the **pdservice.exe** and the **notifyd.exe**.
   - If you are running the InfoPrint Manager IPP Gateway, define an
     exception for the **ippgw.exe**.
   - If you are running the InfoPrint Manager LPD service, define an
     exception for the **lpd.exe**.
   - If you are running InfoPrint Manager MVS Download receivers, define an
     exception for the **mvsprsd.exe**.
   - If you are running DPF Host Receivers, define an exception for the
     aindpfhr.exe.
   - If you are running PSF Direct Host Receivers, consult your
     Communications program documentation for information on SNA.
   - If you have installed the InfoPrint Manager SAP Print feature:
     – And you are running the SAP Callback processes, define an exception
       for the **sapcbd.exe**.
     – If your SAP system is running on HP-UX or Sun Solaris, define an
       exception for **rshd.exe**.

- If you have installed the InfoPrint Job Ticketer from the InfoPrint Manager Print-on-Demand feature, define an exception for the *install_path***\ipmws\java\bin\java.exe** .

b. Define an exception for **File and Printer Sharing** for these situations:
   - If you are using Hot Folders or the Windows Gateway to accept jobs from other machines.
   - If you are using the Submit Express or Job Ticketer clients from the InfoPrint Manager: Print-on-Demand Feature.
   - If you are using interoperating InfoPrint Manager servers.

4. After a program or a service is added to the **Exceptions** list, you can edit and change the scope of the exception to use IP trust and allow clients to connect to the server from any computer, subnet network, or specific IP/mask by clicking the appropriate radio button.
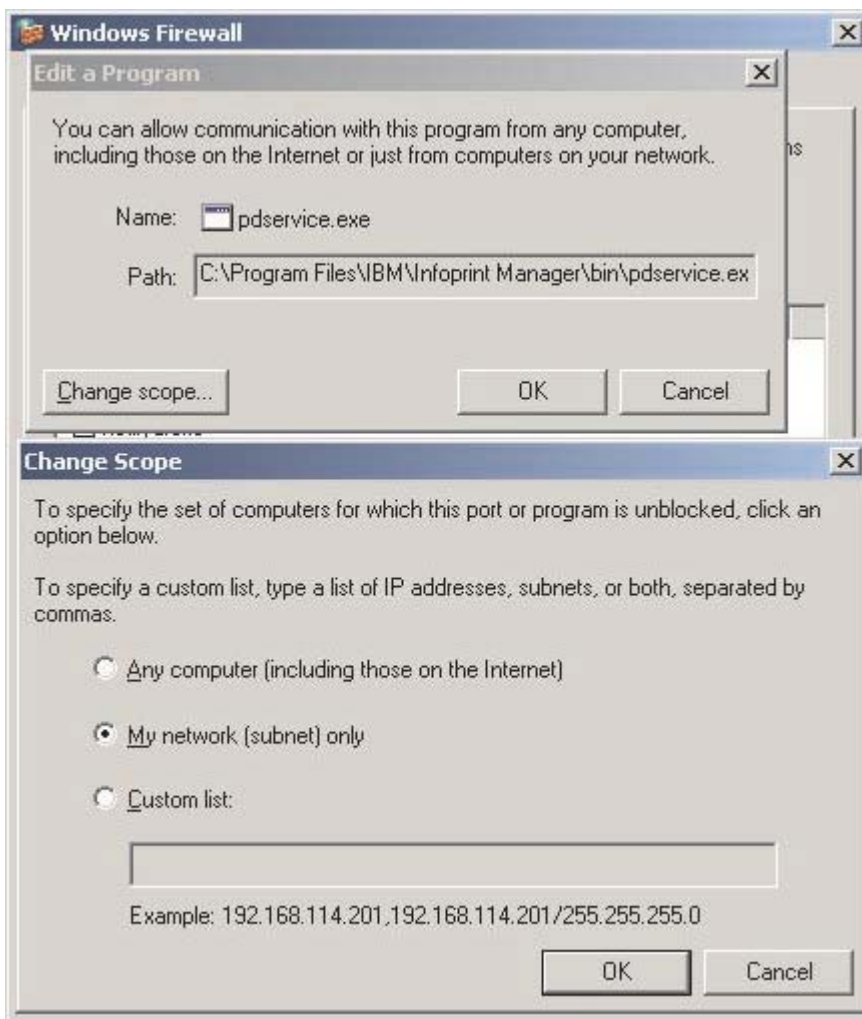
Figure 3. Windows Firewall Change Scope dialog box

5. To create a security log from the Windows Firewall, click on **Settings** on the **Security Logging** section of the **Windows Firewall Advanced** tab.
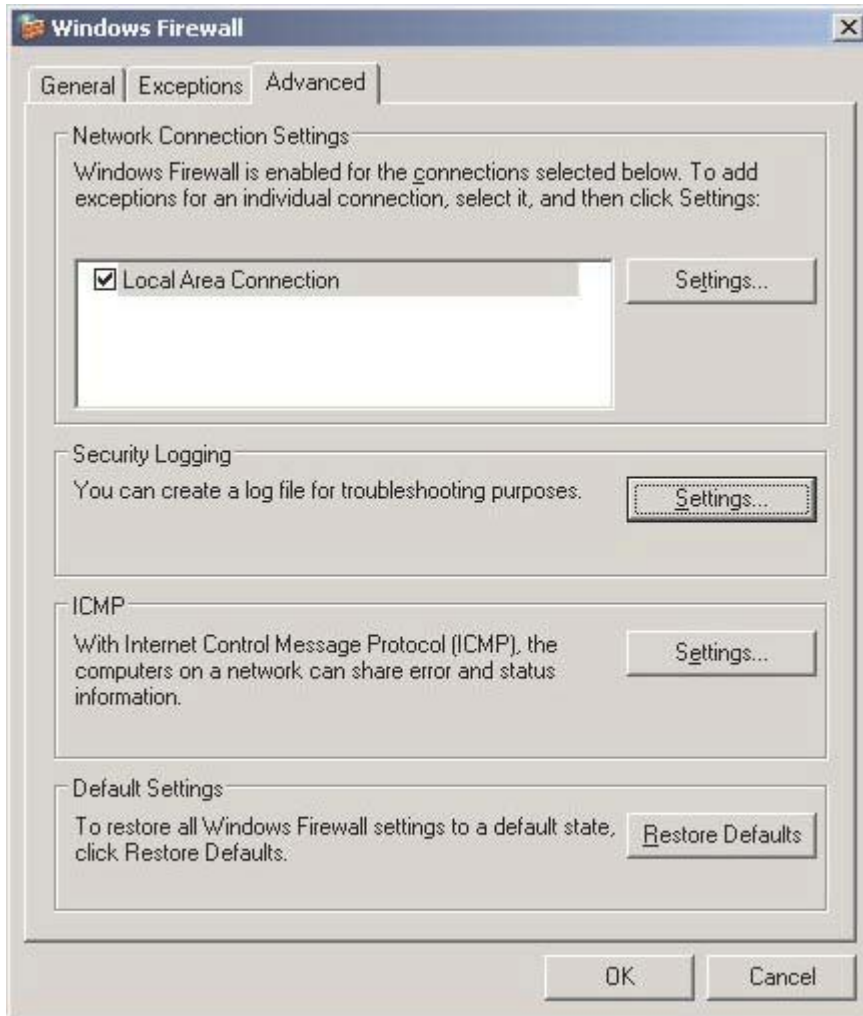
Figure 4. Windows Firewall Advanced tab

6. The **Log Settings** dialog appears.

Figure 5. Log Settings dialog

The default log is **c:\Windows\pfirewall.log**, and it identifies what connections were dropped or successful, depending on the custom settings that you select.

7. To restore the default settings of the firewall, go to **Advanced Tab** on the **Windows Firewall** dialog and click the **Restore Defaults** button (see Figure 4 on page 27).

Chapter 6. Installing necessary hardware

It may be necessary to install and configure some additional hardware to enable communication between your InfoPrint Manager server systems and your printing devices.

The IBM 4159 Model 001 S/390 Parallel Channel Emulator Card

If you are not planning to use channel-attached printers, you can go to the next chapter.

In addition to a description of the IBM 4159 card, this section contains the following information:

- "Preparing to install the IBM 4159 PCI card" on page 33 describes the steps to recreate the IBM 4159 diagnostics diskette if it has been misplaced.
- "Installing the IBM 4159 Model 001 S/390 Parallel Channel Emulator Card" on page 33 describes the procedure for installing the IBM 4159 that includes the following topics:
  - "Attaching the Bus/Tag Interface cable" on page 34
  - "Testing the card" on page 35
  - "Installing more than one IBM 4159 card" on page 37
  - "Testing the printer connection" on page 38

  Note: Read and follow the information about installing the card in the order that it is presented.

The IBM 4159 Model 001 S/390 Parallel Channel Emulator Card is a single board solution for connecting PCI-based Windows 2000 systems to S/390 channel-attached control units equipped with an IBM plug-compatible bus/tag interface. The IBM 4159 card is for use with InfoPrint Manager for Windows only.

The IBM 4159 consists of a single full-length PCI board and a bus/tag interface cable. It contains all logic necessary to drive the bus/tag channel. The IBM 4159 card comes in two sizes: long and short. While these cards may appear to be different, they are functionally identical.

Figure 6 on page 30 and Figure 7 on page 31 show the outlines of the IBM 4159 cards.
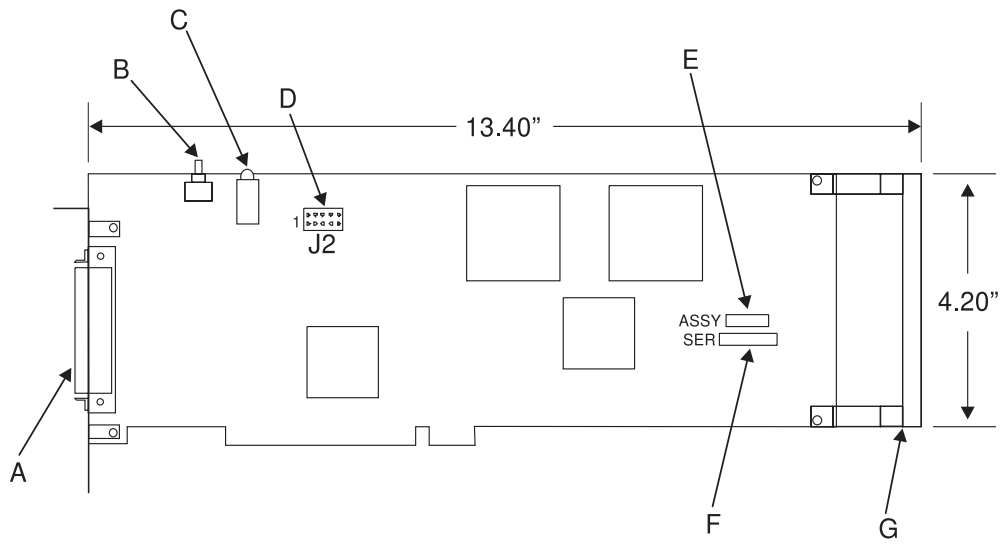
A	80–pin connector
B	Reset switch
C	IRQ/ACTV LEDs
D	10–pin utility connector
E	Assembly number label
F	Serial number label
G	ISA retainer

Figure 6. IBM 4159 Model 001 S/390 Parallel Channel Emulator Card diagram (long card)
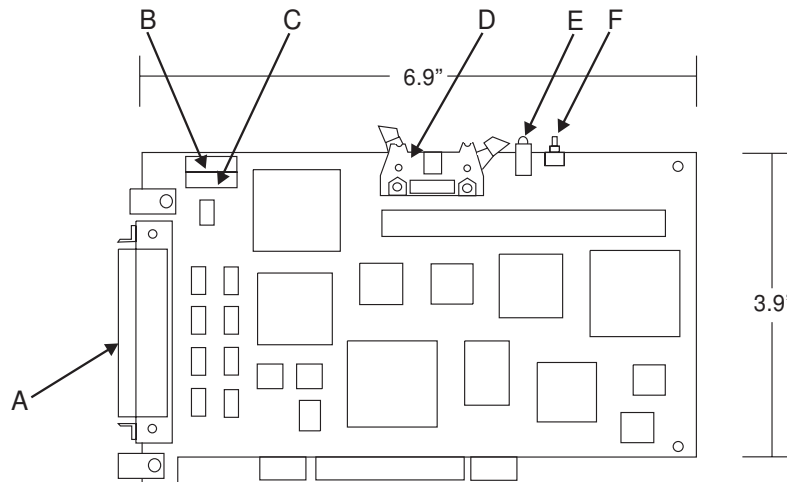
A	80–pin connector
B	Serial number label
C	Assembly number label
D	10–pin utility connector
E	IRQ/ACTV LEDs
F	Reset switch

Figure 7. IBM 4159 Model 001 S/390 Parallel Channel Emulator Card diagram (short card)

The included bus/tag interface cable is attached to the IBM 4159 card with an 80-pin connector on the bracket. The opposite end of this cable has standard bus and tag style connectors.

80 Pin
Connector
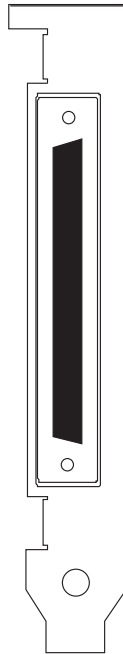
Figure 8. Front panel with 80-pin connector

The IBM 4159 has the following limitations:

- Each IBM 4159 supports at most 8 printers. However, if you are using the card to attach high-speed printers (such as an InfoPrint 4000 or an InfoPrint 4100), you should use one card per printer.
- You should plan to install the IBM 4159 in a long PCI slot. As a result, the number of long PCI slots you have available on your Windows 2000 system determines how many IBM 4159 cards you can install, up to a maximum of 8 cards. Many computers have fewer than 8 long PCI slots.
- The IBM 4159 supports data streaming at either 3.0 Mb per second or 4.5 Mb per second. All printers connected to a computer must be configured for the same data streaming rate.
- The IBM 4159 supports only block multiplex data transfers.

What comes with the IBM 4159 card

The IBM 4159 Card is a separately orderable part for use with InfoPrint Manager for Windows only. Contact your InfoPrint Solutions Company Sales Representative to order a card or cards. When the card arrives, the box contains the following items:

1. 4159 Card
2. 10′ Bus/Tag Interface cable (Y-cable)
3. Multi-language Read Me First sheet that directs you to this book.
4. Bus terminator
5. Tag terminator
6. Bootable diagnostics diskette
7. Emulator loopback (wrap plug) connectors

8. Service Label

Preparing to install the IBM 4159 PCI card

Before attempting to install the IBM 4159, you must install the InfoPrint Manager server code onto the Windows 2000 system as described in Chapter 4, "Installing InfoPrint Manager server software," on page 17. (If you have only channel-attached printers in your environment, you must install the IBM 4159 prior to performing any object configuration within InfoPrint Manager.)

Creating a diagnostics diskette for the IBM 4159

If you are unable to find the diagnostics diskette that accompanied your IBM 4159 card, you may create one on any system where the InfoPrint Manager for Windows server software is installed. You should create the diagnostic diskette before you install the IBM 4159 card, so that you have it available when you test the card. To create a diagnostics diskette, follow these steps:

1. From the **Start** menu, select the **Run** option.
2. Type `poldiagd` in the **Open:** field.
3. Click **OK**. A window displays.
4. Make sure that the drive letter displayed corresponds to the drive letter of your floppy disk drive.
5. Insert a blank 1.44 MB floppy diskette into the drive.
6. Click **OK**.
7. If an error message displays, diagnose and try this procedure again.
8. If the message "Operation completed with no error" appears, click the **Quit** button to close the application.

You may now use this diagnostics diskette to diagnose your IBM 4159 card as described in "Testing the card" on page 35.

Installing the IBM 4159 Model 001 S/390 Parallel Channel Emulator Card

1. Remove all removable media (CD-ROMs, floppy disks, cartridge disks, and so forth) from system drives.
2. Shutdown, power down, and unplug the server/host PC.

   DANGER

   > **Prior to installation of the IBM 4159, the server/host PC must be powered down and unplugged to avoid electrical shocks to the user and damage to the card or PC.**

3. Remove the covers from the server/host PC.
4. Select a full length PCI slot.

   Notes:
   a. A single full-length 32-bit PCI slot on the motherboard is required for installation of the long card. The short version of the card may fit in PCI slots that are not full-length.
   b. The PCI slot must support bus-mastering adapters.
   c. Some motherboards have heat sinks or other components that may obstruct proper installation of the IBM 4159. By design, the long card

version of the IBM 4159's circuit board has a bare corner to allow the card to fit in the grooves of many CPU heat sinks.

5. For the selected slot, remove the metal bracket plate located on the back of the PC.

6. Slide the IBM 4159 into the slot and push firmly to ensure the contact pins are well seated. **Never** force the board into place.

   CAUTION:
   Proper static control precautions must be taken to avoid damage to the circuit board.

7. Look at the base of the card, where it has been inserted into the slot. If you can see any of the gold pins on the card, it is not seated properly. Pull the card out and check the position of the retaining bracket on the card. You may need to adjust the bracket so the card fits properly. Insert it again, pushing firmly and making sure that the gold pins are not visible.

8. When the card is seated, replace the bracket screw to ensure proper grounding.

9. Check the base of the card again to make sure that none of the gold pins are visible. (Cards occasionally become unseated when you reattach the bracket screw.) If the card has become unseated, unscrew the bracket screw, reseat the card, and carefully reattach the bracket screw.

10. Replace the covers on the server/host PC.

11. Plug in the server/host PC.

12. Place the Service Label that came with the IBM 4159 in a conspicuous place that will be easy to find in the future, so that the information is close at hand if you need to call service. We recommend attaching this label to the side of your server or some other obvious location.

Attaching the Bus/Tag Interface cable

CAUTION:
Power down the server/host PC before connecting or disconnecting the Bus/Tag Interface cable.

The IBM 4159 is provided with a Bus/Tag Interface cable to convert from the 80-pin connector on the PCI card to standard bus and tag connectors. This interface cable matches the impedance specification for standard channel cables and may be attached directly to a control unit or extended with standard bus and tag cables. Standard channel terminators (included) must be installed at the last control unit, which is at the opposite end of the cables from the IBM 4159.

Short cable

BUS

Conn
1

Serpentine
(Flip images)

Mini D80
pin connector

Fully shielded
95 ohm cable

TAG

Conn
2

Label

10.0 ft.
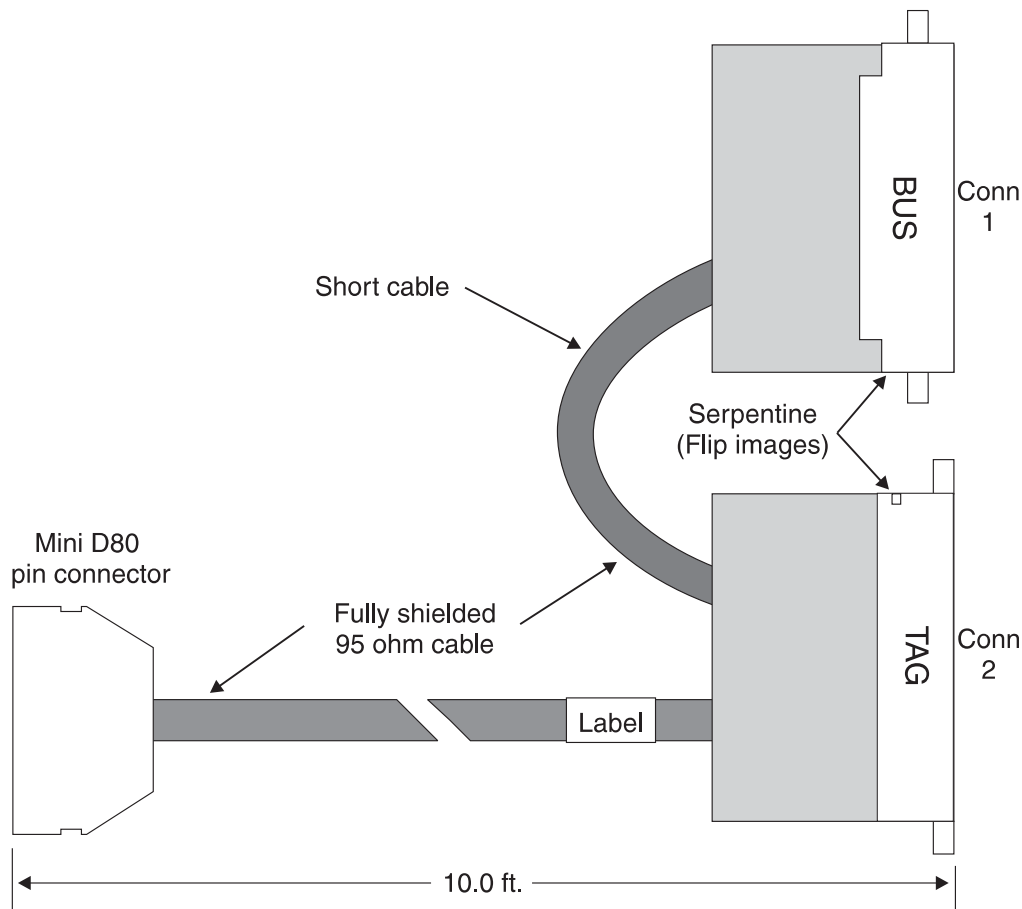
Figure 9. Bus/Tag Interface cable assembly

To attach the Bus/Tag Interface cable to the IBM 4159 PCI card:

1. Squeeze the two release tabs on the 80-pin cable connector.
2. Push the cable onto the mating connector of the PCI card. A slight rocking while pushing may be helpful.
3. Release the two tabs when firmly seated.
4. Now pull on the connector (without squeezing the tabs) to ensure the cable is latched in place.

Testing the card

To verify proper installation, the card diagnostics provided should be run before attaching the card to a control unit. The card diagnostics are supplied with the IBM 4159 on a bootable 3.5-inch floppy diskette. If you cannot locate the diagnostic diskette that was supplied with the card, see "Creating a diagnostics diskette for the IBM 4159" on page 33.

Note: This diagnostic program should only be run as directed. Do not attempt to run the diagnostic program under Windows 2000. You must boot from the floppy to run diagnostics.

To perform the diagnostic, you must first attach the included emulator loopback (wrap plug) connectors to the bus/tag connectors on the interface cable. To do this, follow these steps:

1. Inspect all connectors to ensure no pins are bent or damaged.
2. Attach the tag connector on the Bus/Tag Interface cable to the tag connector on the wrap plug as follows:
   - Join the connectors by hand.
   - Use a flat-head screwdriver to incrementally tighten the screw on the back of the interface cable tag.
   - Do not simply tighten the screw. Alternate between tightening the screw and pushing the connectors together by hand. This will ensure a uniform connection across all pins and reduce the chances of damaging the connectors.
3. Repeat the previous step to connect the bus connector on the Bus/Tag Interface cable to the bus connector on the wrap plug.

To run the diagnostic program, follow these steps:
1. If you have disabled the floppy drive as a boot device in the system BIOS, restore the floppy drive as the primary boot device.
2. Insert the diagnostics diskette in the floppy drive.
3. Restart the system. After a period of time, a window will display summarizing the results of initial diagnostics.
4. Review the summary. If there are no errors, continue with step 5. If there are errors, the IBM 4159 card may be seated improperly. To check, do the following:
   a. Power down the server/host PC.
   b. Remove the cover from the PC.
   c. Look at the base of the card. If you can see any of the gold pins, the card is not seated properly. Remove the card and reseat it so that you cannot see the pins. You may have to move the retaining bracket on the card or try it in a different slot to seat it properly.
   d. Replace the cover on the PC.
   e. Turn the PC back on and re-start the diagnostics test from step 3.
5. Press any key to continue with additional diagnostics. The following menu displays:

   ```
   Diagnostic test options are:

   0. Return to DOS
   1. Run all internal tests
   2. Run all internal tests and loopback tests
   Test number? _
   ```
6. Type **2** and press the **Enter** key to test all board functions including the 80-pin to tag/bus cable and channel driver/receivers. The tests will run continuously until you stop it by pressing any key or until an error is detected.
7. If a red error message displays, write down the contents of the error message and contact InfoPrint customer support.
8. After at least ten test cycles, press any key to stop the test. If no error messages display, the test was a success.
9. Press any key to return to the menu.
10. Type **0** and press **Enter** to return to DOS.
11. Remove the diagnostic diskette from the floppy drive.
12. Power down the server/host PC.

13. Remove the emulator loopback connectors from the Bus/Tag Interface cable by alternating between unscrewing and gently pulling the connectors apart by hand.

14. Attach the loopback connectors to the Bus/Tag Interface cable for future use by looping the end of the black plastic lanyard on the loopback connector around the 10 foot cable of the Bus/Tag Interface cable and snapping it closed.

15. Store the diagnostic floppy disk in a safe place. It may be needed to diagnose communication problems in the future.

Important: You should install and test *all* IBM 4159 cards to be installed in a system prior to establishing connections to any control units (printing devices). This is highly recommended because slot numbers may change if additional IBM 4159 cards are added later. This may make channel destinations defined in InfoPrint Manager invalid. See "Installing more than one IBM 4159 card" for more information.

Installing more than one IBM 4159 card

If only one IBM 4159 card is installed in a system, the slot number assigned to it will always be **1**. If, however, more than one IBM 4159 card is installed in a single system, Windows 2000 assigns a slot number to each card. To determine which slot number has been assigned to which card, follow this procedure:

1. Install each IBM 4159 card as instructed in "Installing the IBM 4159 Model 001 S/390 Parallel Channel Emulator Card" on page 33.

2. Test each card as instructed in "Testing the card" on page 35.

3. Attach the tag connector on the Bus/Tag Interface cable to the supplied Tag Terminator as follows:

   - Inspect all connections to ensure that no pins are bent or damaged.
   - If connecting directly to the printing device, tighten the screws on the interface cable's connectors.
   - If connecting to a channel cable, use the screws on that cable's connectors.
   - Alternate between gradually tightening the screws and pushing the connectors together by hand.

4. Repeat the previous step to connect the bus connector on the Bus/Tag Interface cable to the supplied Bus Terminator.

5. Remove the PC covers, so you can see the LEDs on the installed IBM 4159 cards.

6. Power up the Windows 2000 system.

7. Open a DOS command prompt (by selecting **Programs** and then **Command Prompt** from the **Start** menu on Windows 2000).

8. Type the following command and watch the channel cards while pressing the Enter key:

   ```
   sense 1 00
   ```

   The amber LED on one of the cards will flash off and then on again. This card resides in slot 1.

9. If you do not see which LED flashed, you must repeat this entire procedure from the beginning (including powering your system off and then on).

10. If none of the lights flash, do the following:

    a. Power off your PC and printer.

    b. Power on your PC and printer.

c. When the printer gets back to the **Ready** state, issue the sense command from step 8 on page 37 again and watch for the LED to flash.

The system will number the channel slots in the order in which they are physically attached to the system. Therefore, the channel card located closest to the card identified in slot 1 will be in slot 2. The next channel card located closest to slot 2 will be in slot 3, and so on.

We recommend labeling each card with its associated slot number for future reference. When you have labeled all the slots, complete the following steps:

1. Shutdown and power off the server/host PC.
2. Remove the Bus and Tag Terminators from all the Bus/Tag Interface cables by alternating between unscrewing and gently pulling the connectors apart by hand.
3. Replace the covers on the server/host PC.

Testing the printer connection

After verifying that each of your IBM 4159 cards is operational as described in "Testing the card" on page 35, you should verify the connection between each IBM 4159 and every connected printer. Follow this procedure for each channel card you have installed:

1. Power off all devices attached to the channel.
2. Connect the bus and tag connectors to the appropriate connections on the channel cable that is attached to the control unit (printing device). You may also connect directly to a control unit if it is located near the server system.

   - Inspect all connections to ensure that no pins are bent or damaged.
   - If connecting directly to the printing device, tighten the screws on the interface cable's connectors.
   - If connecting to a channel cable, use the screws on that cable's connectors.
   - Alternate between gradually tightening the screws and pushing the connectors together by hand.

   Terminators are supplied to terminate the bus and tag connections in a channel device chain. It is very important that all channel chains are properly terminated. Contact your InfoPrint customer engineer if you need help connecting and configuring your printing devices.

3. Power on the Windows 2000 system.

   If you installed the card on a Windows 2000 system, the **Found New Hardware** wizard appears at this point. Follow these instructions to complete the wizard:

   a. On the first panel of the wizard, click **Next**.
   b. On the second panel, select **Other Devices** from the list and click **Next**.
   c. On the **Select a Driver** panel, click **Have Disk**.
   d. In the **Install from disk** dialog, click **Browse**.
   e. Navigate to <install_path>\bin, where <install_path> is the directory where you installed InfoPrint Manager.
   f. In that directory, find the **ibm4159.inf** file and select it, then click **Open**.
   g. In the **Install from disk** dialog, click **OK**.
   h. On the **Select a Driver** panel, select the **S/390 Parallel Channel Emulator** and click **Next**.
   i. A dialog will appear to ask you if you want to update the driver. Click **Yes**.
   j. On the **Start Device Driver Installation** panel, click **Next**.

     k. On the **Completing the Found New Hardware Wizard** panel, click **Finish**.

4. Power on all devices attached to the channel.

5. Open a DOS command prompt.

6. Type the following command:

   ```
   sense SlotNumber DeviceAddress
   ```

   where *SlotNumber* is the slot number assigned to the card by Windows 2000, and *DeviceAddress* is the two-character hexadecimal address of the control unit. (If you have only one IBM 4159 in the system, this value is always "1." If you are installing more than one channel card, see "Installing more than one IBM 4159 card" on page 37 for information on how to determine the slot number assigned to each card.)

7. Press Enter. Confirm that the device type and sense response values are displayed.

8. If an error message displays instead, fix the indicated problem, and try this procedure again.

9. Repeat steps 1 through 8 of this procedure for each printer attached to the channel card.

Chapter 7. InfoPrint interfaces tasks

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

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

For information on installing and starting the InfoPrint Manager Administration and Operations GUIs, see Chapter 15, "InfoPrint Manager GUI software," on page 99.

Tasks you perform using the InfoPrint Manager Administration interface

Printer tasks:
- Create or copy a printer (except Windows Gateway or PSF Direct only printers)
- Move a printer
- Delete a printer
- Create, copy, and modify job and document defaults
- Change logical destinations
- Check the status of 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, InfoPrint Color, or Passthrough printer
- Change the AFP resource information
- Change AFP color options
- Change job batch
- Change job routing
- Change tuning
- View or change printer properties
- Determine the media supported in the server
- Associate a medium with a physical printer
- Set or modify notification for an actual destination

- Set or modify notification for default jobs
- Specify the default form definition for a PSF printer
- Specify the default input tray and output bin for a PSF printer
- Map output-bin names to output-bin numbers
- Force messages from a printer
- Configure BSD printers that do not support the -Z flag
- Filter on actual destinations
- Display actual destinations
- Monitor printers
- Specify job batches ready for a printer
- Associate resource-context objects with an actual destination
- Associate auxiliary sheets with a PSF printer
- Activate auxiliary sheets for accounting or auditing information
- Associate input and output data user-exit programs with an actual destination
- Change the job classes that the printer can accept
- Change the job forms that the printer can use[2]

Other Destination tasks:
- Create an actual destination (email, fax, or print optimizer)
- Create or copy an actual destination (SAPconnect)
- 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[2]

Job tasks:
- Check the status of a queued or retained job
- Hold a job
- Release a job[1]
- Pause a job
- Resume a job
- Interrupt a printing job
- Change the media for a job
- Change the number of copies to print
- Change the priority of a job
- 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
- 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[2]

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

Notes:
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 Operations interface

Printer tasks:
- Check the status of 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, InfoPrint Color, or Passthrough printer
- Change job routing
- Display actual destinations
- Monitor printers
- Change the job classes that the printer can accept
- Change the job forms that the printer can use[2]

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[2]

Job tasks:
- Check the status of a queued or retained job
- Hold a job
- Release a job[1]
- Pause a job
- Resume a job
- Interrupt a printing job
- Change the media for a job
- Change the number of copies to print
- Change the priority of a job
- 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

- 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[2]

Queue tasks:
- Filter on queues
- Monitor queues
- Pause and resume a queue

Server tasks:
- Show all servers currently running in the namespace

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

Note:
1. Selected jobs are released in the same order that they are listed in the interface.
2. When you add a *form* in the interface, it only shows up in the list of available forms after a job has been run with that specific form.

For example, if you associate the form `Letter` with Job 1, `Letter` will not display in the **Printer → Change Forms** or **Job → Change Forms** drop-down lists until after Job 1 has completed.

Tasks you perform using the Management Console

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

Server Configuration tasks:
- Change the user account that the server runs under
- Change the password associated with the user account that the server runs under
- Change the domain that the InfoPrint Manager server operates in
- View or modify InfoPrint Manager directory structure, resource search path information, and the shared file folder location
- View or modify the ports that the server communicates on
- Change the hostname or IP address that InfoPrint Manager uses after you have changed it on your system

DPF tasks:
- Create, view, modify, or delete a DPF host receiver
- Start, stop, pause, or resume a DPF host receiver
- Cancel a DPF print job that's currently downloading
- Obtain printer characteristics
- Find a specific DPF resource in the DPF Resource database
- Delete a DPF resource

PSF Direct tasks:
- Create, modify, or delete destinations that are used exclusively by PSF Direct
- Create, view, modify, or delete a PSF Direct host receiver

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

MVS Download tasks:
- View MVS Download receiver information
- Create or delete MVS Download receivers
- Start or stop MVS Download receivers

- Delete orphaned files
- Open the destination control file so you can edit it
- Resubmit a job that failed in processing by the exit program SAP Callback Process tasks:

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

Troubleshooting tasks:
- Capture system information to provide to InfoPrint Service
- Manage server tracing
- Manage PSF destination tracing
- View PSF destination logs
- Reset communications between the InfoPrint Manager server and other servers
- Create or clear namespace
- Manage DPF host receiver tracing
- Show DPF host receiver drive information
- Recreate DPF resources database
- Control MVS Download Tracing

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

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

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

- Enable/disable the InfoPrint Manager LPD

Starting the InfoPrint Manager Management Console

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

Chapter 8. Understanding printer drivers, port monitors, windows gateway printers, and passthrough printers

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

Printer driver

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

Port monitor

Software that controls how the data stream that is generated by the printer driver gets to the printer. If your printer is local- or parallel-attached to your system, you use a local port monitor; if your printer is attached over TCP/IP, you may use a TCP/IP port monitor. InfoPrint Manager includes two port monitors: the **InfoPrint port monitor** that sends print data to the InfoPrint Manager spool and the **IBM TCP/IP Network Port Monitor**.

Note: For more information on the IBM TCP/IP Port Monitor, see the readme file located in the <systemroot>\system32 directory; for example `C:\winnt\system32`.

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

Windows printer

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

Windows shared printer

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

Server | Client

Network Connection to
Windows Gateway Printer

To: Gate 1

Windows Gateway Printer

Share Name: Gate 1

Printer Driver-for target Printer
Infoprint Port Monitor
Port

Select Printer

Printer Driver-for target printer
Infoprint Port Monitor
Port

IPM Spool

**Passthrough Printer
(IPM-Actual Destination)**

Generic Text/Only Driver
Port Monitor
Port

Set by Administrator or User

Set by Infoprint Manager

Figure 10. InfoPrint Manager print data stream flow

Windows gateway printers

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

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

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

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

Note: You must create this destination before you create the Windows gateway printer. Refer to Chapter 9, "Understanding Destination Support Systems (DSS)," on page 55 and Chapter 10, "Creating actual destinations," on page 65 for more information about creating destinations.

- Select the printer driver that generates a datastream that corresponds to the destination or destinations that the jobs may be printed on.

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

Passthrough printers

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

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

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

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

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

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

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

Chapter 9. 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). InfoPrint Manager for Windows supports the following DSSs:

PSF DSS

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

> The way InfoPrint Manager communicates with the output device depends on the type of actual destination. For PSF DSS actual destinations, it also depends on the attachment type. (See "Understanding attachment types for PSF actual destinations" on page 57.)

Passthrough DSS

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

> Before you create an InfoPrint Manager Passthrough printer (also known as a Passthrough *actual destination*), you must perform these tasks:
> - Attach the printer device as specified by its documentation
> - Use the InfoPrint Manager Management Console to create a Windows port to communicate with the printer device (see "Passthrough printer" on page 74 for details)
> - Install the Windows Generic/Text Only Driver from the Windows CD

BSD DSS

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

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

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

IPP DSS

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

If you send intelligent printer data stream (IPDS) to your printer, you should create PSF printers. Check Table 6 on page 59 to see which attachment type to create. Otherwise, the type of destination you create primarily depends on where your print jobs are coming from. The appropriate DSS is different for each of the following job submitters:

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

Refer to the following sections for assistance in making the decision.

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

If you do not use PSF Direct, DPF, or MVS Download to submit jobs, use Table 3 to see which type of destination fits your needs.

Table 3. Selecting a DSS for printing from PC-based applications

If the data stream that your applications send to InfoPrint Manager is:	PostScript, PCL, or any non-IPDS datastream			PostScript, PCL (versions 4, 5, 5c and 6), or any non-IPDS datastream
and the data stream that you send to this printer is:	the same that the application sends to InfoPrint Manager			PCL4, PCL5, PCL5c, PPDS[1], IPDS
and your jobs are going to be sent to a printer:	through a Windows defined port	using a command such as lpr	that is IPP enabled	that is attached to your InfoPrint Manager system in any of the ways listed in Table 6 on page 59.
Create this kind of actual destination:	Passthrough[2]	BSD	IPP	PSF

Note:

1. You can only print PPDS on a non-Windows system, for example, by sending the PPDS data stream to an AIX system.

2. If you are printing PCL data to a Windows-defined printer, you may want to consider creating a PSF (other-driver or command) destination instead. A Passthrough destination uses fewer processing resources, but a PSF destination provides much more functionality, such as accounting and automatic data stream transforms.

Selecting a DSS for printing only from host systems using PSF Direct

If you send print jobs to your printers from a host system using PSF Direct and you do not plan to allow job submission to those destinations through any other paths (such as the IPP gateway), use Table 4 to see which type of destination fits your needs.

Table 4. Selecting a DSS for printing from host systems using PSF Direct

If the data stream that you send to your printer is:	IPDS	PCL or PPDS[1]

Create this type of actual destination:	PSF Direct only (TCP/IP- or channel-attached)	PSF Direct only (non-IPDS) **Note:** This destination type is equivalent to a PSF command destination.
Note: You can only print PPDS on a non-Windows system, for example, by sending the PPDS data stream to an AIX system.		

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

If you will be sending jobs to this destination from both PC-based applications and host systems using PSF Direct, DPF, or MVS Download, use Table 5 to see which type of destination fits your needs.

Table 5. Selecting a DSS for printing using MVS Download, DPF, or from a combination of PC-based applications and host systems

If the data stream that your host system and applications send to InfoPrint Manager is:	AFP, ASCII, DBCS ASCII, line data, PCL4, PCL5, PCL5c, PS, PDF, IPDS (through PSF Direct or DPF)[1]		PCL4, PCL5, PCL5c and PCL6	PS only
and the data stream that you send to your printer is:	IPDS	PCL4, PCL5, or PCL5c or PPDS[2]	PCL	PS
Create this kind of actual destination:	PSF (TCP/IP or channel)	PSF (other driver or command)	PSF (other driver or command) **OR** any of the destination types listed in Table 3 on page 56	One of the destination types listed in Table 3 on page 56.
Note:				
1. PSF Direct and DPF can only submit jobs to PSF printers. MVS Download can submit jobs to any of the printer types listed.				
2. You can only print PPDS on a non-Windows system, for example, by sending the PPDS data stream to an AIX system				

Understanding attachment types for PSF actual destinations

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

TCP/IP

> The printer device communicates using IPDS and attaches to the Windows system through the TCP/IP network. To create the actual destination, you must specify the Internet Protocol (IP) address of the printer device and the port number through which InfoPrint Manager communicates with the

device. The port number for TCP/IP-attached printers is an integer from 5001 to 65535. For printers attached using the i-data 7913 IPDS Printer LAN Attachment, you must use **5001** as the port number.

Note: If you have trouble connecting with a printer, you may want to increase the number of connection retries. To do this, you can edit the Registry on your Windows server and set the **TcpMaxDataRetransmissions** TCP value to '8' instead of the default of '5'. To edit the registry, you should use the Microsoft document *TCP/IP and NBT Configuration Parameters for Windows (Q120642)*, which is available in an HTML version from their Web site at

http://support.microsoft.com/

You can access this document by searching on the document number *(Q120642)*.

Channel
The Intelligent Printer Data Stream (IPDS) printer device attaches to the Windows system through an IBM 4159 Model 001 S/390 Parallel Channel Emulator Card (with S/390 bus/tag cables). Before creating the actual destination, you must identify the number of the slot that contains the card and the hexadecimal control unit address of the printer device.

Note: If you plan to attach printers through an IBM 4159 Model 001 S/390 Parallel Channel Emulator Card, consider the following limitations:
- Each IBM 4159 supports at most 8 printers. However, if you are using the card to attach high-speed printers (such as an InfoPrint 4000 or an InfoPrint 4100), you should use one card per printer.
- You should plan to install the IBM 4159 in a long PCI slot. As a result, the number of long PCI slots you have available on your Windows 2000 system determines how many IBM 4159 cards you can install, up to a maximum of 8 cards. Many computers have fewer than 8 long PCI slots.
- The IBM 4159 supports data streaming at either 3.0 Mb per second or 4.5 Mb per second. All printers connected to a computer must be configured for the same data streaming rate.
- The IBM 4159 supports only block multiplex data transfers.

Command
Before you create a PSF command actual destination, you must attach the printer device as specified by its documentation. If you are using this device for converting data to PCL to print on a PCL printer, ensure that you review "Processing concerns when using the PCL Secondary" on page 61.

Other-Driver
The PCL printer device communicates using TCP/IP or attaches directly to the Windows system through a parallel or serial port. To create the actual destination, you must specify the port associated with a port monitor needed to operate the PCL printer. If you are using this device for converting data to PCL to print on a PCL printer, ensure that you review "Processing concerns when using the PCL Secondary" on page 61.

Use Table 6 on page 59 to determine the appropriate attachment type for PSF actual destinations.

Table 6. Selecting an attachment type for PSF actual destinations

If you are sending this data stream to the printer:	IPDS	IPDS	PCL4, PCL5, PCL5c or PPDS	PCL4, PCL5, PCL5c or PPDS
and you are going to attach the printer to the system where InfoPrint Manager is running this way:	over the TCP/IP network	using the IBM 4159 Model 001 S/390 Parallel Channel Emulator Card	over the TCP/IP network **OR** directly attaching it through a parallel or serial port	over the TCP/IP network using a command such as lpr to submit jobs to it
Select this attachment type:	TCP/IP	Channel	Other-driver **Note:** You may not use a PSF Other-driver destination with PSF Direct.	Command **Note:** You must use a Command destination with PSF Direct.

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

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

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

Note: As the following sections indicate, you must avoid specifying particular Manager attributes to ensure that jobs are not transformed.

Document attributes that cause a job to be transformed

Please note that the following document attributes negate the **Document Formats Ripped at Destination** setting and force jobs to be transformed. For more information on these attributes, see *InfoPrint Manager: Reference*.
* **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**
- **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**
- **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**

Job attributes that cause a job to be transformed

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

- **delete-segment-list**
- **job-finishing**
- **job-rip-action**
- **optimize-for-multiple-copies**
- **tape-exit**
- **tape-format**
- **tape-labeled**
- **tape-max-block-size**
- **tape-rewind-before**
- **tape-rewind-unload**

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

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

Processing concerns when using the PCL Secondary

InfoPrint Manager uses the PCL Secondary when PSF receives data and converts it to PCL for printing on a PCL printer. You use the PCL Secondary whenever you submit jobs through either a PSF Other-driver printer that does not set the **document-formats-ripped-at-destination** attribute or through a PSF Command printer. The following 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
- 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.
- The PCL Secondary does not support:
  - 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" on page 63).
  - Reusing printer resources (including fonts) in subsequent jobs.
  - Selecting output bins.
  - Using custom media sizes.

Configuring trays for PCL Secondary printers

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

Table 7. Sample input bin mappings

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

The PCL Secondary has limitations that apply to input bins that may 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 bin for each **LCC** command. Because each **XOH-SIMS** command overrides the previous one, you cannot specify multiple copies of each page from different bins on the PCL printer. For a complete example of how this works, see the **psf-tray-characteristics** actual destination attribute description in the *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.

How the PCL Secondary uses fonts

The PCL Secondary supports only two types of fonts:

1. 300 pel AFP fonts
2. Relative-Metric AFP fonts

You must install one of these two 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.

Troubleshooting printing to the PCL Secondary

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

The graphics in my PCL file do not print, and I receive errors with the output.
You may have submitted a file with graphics as either PCL4 or PPDS output. Neither of these data streams support graphics. To ensure 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 or PCL5c data.

Chapter 10. Creating actual destinations

For help in selecting the type of actual destination to create, see Chapter 9, "Understanding Destination Support Systems (DSS)," on page 55.

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

The interface you use depends on whether you want the printer to be driven through an InfoPrint Manager queue or exclusively by a remote host system through PSF Direct. The driven by InfoPrint Manager Administration GUI provides wizards to help you create several types of actual destinations to be driven by InfoPrint Manager. The InfoPrint Manager Management Console provides support for creating printers to be driven exclusively by PSF Direct. It also provides support for creating InfoPrint gateways, which allow users to submit jobs to InfoPrint Manager even if they do not have InfoPrint Select installed.

This chapter assumes that you have started the InfoPrint Manager interfaces and you are comfortable using them. See Chapter 7, "InfoPrint interfaces tasks," on page 41 for information on the tasks you can perform with the InfoPrint Manager interfaces.

Note: Even if all printers in your environment are driven exclusively by host systems through PSF Direct, you should initially set up one printer to be driven by InfoPrint Manager. You can use this printer to verify that InfoPrint Manager is functioning properly.

Creating a destination driven by InfoPrint Manager

Use the InfoPrint Manager Administration GUI to create these types of actual destinations. The InfoPrint Manager Administration GUI provides wizard support for creating the following types of printers:
- "PSF TCP/IP printer" on page 68
- "PSF Channel printer" on page 69
- "PSF Command printer" on page 70
- "PSF Other-Driver printer" on page 72
- "Passthrough printer" on page 74
- "BSD printer" on page 76
- "IPP printer" on page 78

When you use the wizard to create any of the PSF printers (PSF TCP/IP, PSF Channel, 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.

Table 8. Default printer values using the wizard

Printer	Values
InfoPrint 70	• letter (8.5 x 11 inch) • legal (8.5 x 14 inch) • ledger (11 x 17 inch) • executive (7.25 x 10.5 inch) • folio (8.5 x 13 inch) • statement (5.5 x 8.5 inch) • A3 (297 x 419 mm) • A4 (210 x 297 mm) • A5 (148 x 210 mm) • jis-b4-white (257 x 364 mm) • jis-b5-white (182 x 257 mm) • 8.5 x 12.4 inch • 9 x 11 inch • 12 x 18 inch
InfoPrint 1116, InfoPrint 1120, InfoPrint 1125, InfoPrint 1130, InfoPrint 1140, InfoPrint Color 1220, InfoPrint Color 1228	• letter (8.5 x 11 inch) • legal (8.5 x 14 inch) • executive (7.25 x 10.5 inch) • folio (8.5 x 13 inch) • statement (5.5 x 8.5 inch) • A4 (210 x 297 mm) • A5 (148 x 210 mm) • jis-b5-white (182 x 257 mm) • 7.75 inch envelope (98 x 191 mm) • 9 inch envelope (98 x 225 mm) • Commercial #10 envelope (104.8 x 241.3 mm) • C5 envelope (169 x 229 mm) • B5 envelope (176 x 250 mm) • DL envelope (110 x 220 mm)
InfoPrint 1145	• letter (8.5 x 11 inch) • legal (8.5 x 14 inch) • executive (7.25 x 10.5 inch) • folio (8.5 x 13 inch) • statement (5.5 x 8.5 inch) • ledger/tabloid (11 x 17 inch) • A3 (297 x 419 mm) • A4 (210 x 297 mm) • A5 (148 x 210 mm) • jis-b5-white (182 x 257 mm) • jis-b4-white (257 x 364 mm) • Universal

Table 8. Default printer values using the wizard (continued)

Printer	Values
InfoPrint 2000 AFP	• letter (8.5 x 11 inch) • legal (8.5 x 14 inch) • ledger/tabloid (11 x 17 inch) • manual (9 x 12 inch) • A3 (297 x 419 mm) • A4 (210 x 297 mm) • B4 • RA3 • RA4 • 8 x 10 inch • 8 x 10.5 inch • 8.5 x 10 inch • 12 x 18 inch • 14 x 17 inch • 14 x 18 inch • letter-tab (9 x 11 inch) • a4-tab (8.86 x 11.69 inch) • legal-tab (9 x 14 inch)
All other printer models	• letter (8.5 x 11 inch) • legal (8.5 x 14 inch) • tabloid (11 x 17 inch) • ledger (11 x 17 inch) • 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)

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 Table 9 also.

Table 9. Basic InfoPrint Manager Administration GUI defaults for PSF printers

Attribute	Default values
printer-resolutions-ready	**600**
booklet-fold (set only for InfoPrint 4000)	**down**
optimize-for-multiple-copies (set only for InfoPrint 4000)	**true**
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 the following worksheet.

Table 10. PSF TCP/IP printer worksheet

Wizard Prompt	Description	Value
Name	The name for the actual destination object (8 character limit). **Note:** This name is case-sensitive.	
Server	The InfoPrint server that controls this actual destination. By default, the server name is the same as the name of the system where the server is installed. **Note:** This name is case-sensitive.	
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 dotted-decimal IP address used to access this printer.	
TCP/IP port	The port used by the printer for communication. The InfoPrint 1000 family of printers uses port 9100. Most other printers default to port 5001. The value you use here must match the value set at the printer.	
Logical destination	The logical destination that directs jobs to this actual destination. **Note:** This name is case-sensitive.	__ Default __ Other:
Logical destination's server	The InfoPrint server that contains the logical destination. **Note:** This name is case-sensitive.	

Table 10. PSF TCP/IP printer worksheet (continued)

Wizard Prompt	Description	Value
Queue	The queue that holds jobs destined for this actual destination. **Note:** This name is case-sensitive.	__ Default __ Other:

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

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

Table 10 on page 68 provides the information that the wizard prompts for. For assistance, refer to the InfoPrint Manager Administration GUI online help.

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

PSF Channel printer

Create a PSF actual destination to represent an IPDS printer on a Windows 2000 system. Use the channel attachment type for an IPDS printer that PSF controls directly through an IBM 4159 Model 001 S/390 Parallel Channel Emulator Card.

Before creating a PSF channel printer, complete the following worksheet.

Table 11. PSF Channel printer worksheet

Wizard Prompt	Description	Value
Name	The name for the actual destination object (8 character limit). **Note:** This name is case-sensitive.	
Server	The InfoPrint server that controls this actual destination. The server name is the same as the name of the system where the server is installed. **Note:** This name is case-sensitive.	
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.	

Table 11. PSF Channel printer worksheet (continued)

Wizard Prompt	Description	Value
Channel device address	The two-digit hexadecimal control-unit address assigned to the physical print device hardware. Consult printer documentation for instructions on how to determine this value.	
Channel slot number	The system slot number where the channel card is installed. If more than one channel card is installed, consult "Installing more than one IBM 4159 card" on page 37 to determine the correct value. Otherwise, the default value of "1" is appropriate.	
Logical destination	The logical destination that directs jobs to this actual destination. **Note:** This name is case-sensitive.	__ Default __ Other:
Logical destination's server	The server that contains the logical destination. **Note:** This name is case-sensitive.	
Queue	The queue that holds jobs destined for this actual destination. **Note:** This name is case-sensitive.	__ Default __ Other:

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

Note: If the **Channel** is not shown in the **Printer ➤ Create ➤ PSF** menu by default, use **Printer ➤ Add/Remove Menu Items** to add it.

Table 11 on page 69 provides the information as prompted by the wizard. For assistance, refer to the InfoPrint Manager Administration GUI online help.

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

PSF Command printer

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

Before creating a PSF Command printer, complete the following worksheet.

Table 12. PSF command printer worksheet

Wizard Prompt	Description	Value
Name	The name for the actual destination object (8 character limit). **Note:** This name is case-sensitive.	
Server	The InfoPrint server that controls this actual destination. The server name is the same as the name of the system where the server is installed. **Note:** This name is case-sensitive.	
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 dotted-decimal IP address used to access this printer. This value is used only for SNMP printers.	
Device	The AIX device name. This is not applicable for Windows.	Leave blank.
Printer command	The command string used to send a job to the appropriate Windows printer. For example, `lpr -S serverName -P printerName`. **Note:** This command is case-sensitive.	
Data stream	The data stream expected by the printing device (for example, PCL5 or PCL 6).	
Logical destination	The logical destination that directs jobs to this actual destination. **Note:** This name is case-sensitive.	__ Default __ Other:
Logical destination's server	The InfoPrint server that contains the logical destination. **Note:** This name is case-sensitive.	
Queue	The queue that holds jobs destined for this actual destination. **Note:** This name is case-sensitive.	__ Default __ Other:

Table 12. PSF command printer worksheet (continued)

Wizard Prompt	Description	Value
Note: Prior to using this worksheet to create your InfoPrint Manager actual destination, you may need to use the standard Windows **Add Printer Wizard** to make the printer available.		

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

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

Table 12 on page 71 provides the information as prompted by the wizard. For assistance, refer to the InfoPrint Manager Administration GUI online help.

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

PSF Other-Driver printer

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

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

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

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

   For example, if you are using an InfoPrint network-attached workgroup printer, such as the InfoPrint 20, as a non-IPDS printer, you should use the IBM TCP/IP Network Port Monitor.

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

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

Table 13. PSF other-driver printer worksheet

Wizard Prompt	Description	Value
Name	The name for the actual destination object (8 character limit). **Note:** This name is case-sensitive.	

Table 13. PSF other-driver printer worksheet (continued)

Wizard Prompt	Description	Value
Server	The InfoPrint server that controls this actual destination. The server name is the same as the name of the system where the server is installed. **Note:** This name is case-sensitive.	
Model	On either a Windows or an AIX server, 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; or if the printer is SNMP-enabled, you can select **Set by SNMP printer**.	
SNMP TCP/IP address	The dotted-decimal IP address used to access this printer. This value is used only for SNMP printers.	
Device or Windows port name	The name of the output device that the selected actual destination represents.	
Printer command	The printer command that submits a job to this remote destination.	On a Windows system, leave this column blank.
Data stream	The data stream output by PSF when a job is transformed.	
Logical destination	The logical destination that directs jobs to this actual destination. **Note:** This name is case-sensitive.	__ Default __ Other:
Logical destination's server	The InfoPrint server that contains the logical destination. **Note:** This name is case-sensitive.	
Queue	The queue that holds jobs destined for this actual destination. **Note:** This name is case-sensitive.	__ Default __ Other:

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

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

Table 13 on page 72 provides the information that the wizard prompts for, When a PSF Other-Driver printer is created, a Windows Passthrough printer is created automatically. Therefore, the Windows Generic/Text printer driver is required. If you have not installed the Windows Generic/Text Printer driver before, you must install it by following the installation instructions in "Passthrough printer".

Refer to the InfoPrint Manager Administration GUI online help for more assistance.

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

Passthrough printer

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

Note: By default, the Passthrough DSS supports only the following data streams:
- ASCII
- iso-6429
- PCL
- PostScript
- PPDS
- simple-text (text)

To create a Passthrough actual destination, complete the following four steps.
1. Install the Windows Generic/Text Only printer driver.
   a. Use the Windows **Add Printer Wizard** to create a local printer.
   b. When you have to choose a port, select **FILE:**.
   c. When you have to choose the manufacturer and model of the printer, select **Generic** from the list of manufacturers and **Generic/Text Only** from the list of models.
   d. Finish the wizard, selecting not to share the printer and not to print a test page.
   e. When you are finished, you can delete the printer; the driver will still be installed.
2. Attach the printer device as specified by its documentation.
3. Define a Windows port.

   If you already have a Windows port defined, you are ready to create your Passthrough printer. If you need to create a Windows port, use the InfoPrint Manager Management Console to create a Windows port to communicate with the printer device as follows:
   a. Open the **Start** menu and click **Programs → Infoprint Manager → Management Console**.
   b. Select **Edit → New → Windows Port**.

c. In the **Create Windows Port** dialog, select the appropriate port monitor for your printing environment from the pull-down list and click **OK**.

- If you are using an InfoPrint 1000 family printer (InfoPrint 1116, 1120, 1125, 1130, 1140, 1145, 1220, or 1228), use the Lexmark TCP/IP Network Port Monitor. If the Lexmark TCP/IP Network Port Monitor doesn't appear on the list, you must install it from the CD-ROM that came with your printer first.
- If you are using another InfoPrint network-attached workgroup printer, such as the InfoPrint 20, use the IBM TCP/IP Network Port Monitor.

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

d. Fill in the information that the dialog requires and click **OK**.

4. Create a Passthrough printer by completing the worksheet Table 14 and using the **Create Printer Wizard** in the InfoPrint Manager Administration GUI. (On the menu bar, click **Printer → Create → Passthrough**.)

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

Table 14 provides the information as prompted by the wizard. For assistance, refer to the InfoPrint Manager Administration GUI online help.

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

To print a test page, see Chapter 14, "Printing a test job," on page 95.

Table 14. Passthrough destination worksheet

Wizard Prompt	Description	Value
Name	The name for the actual destination object. For example, the name you will use for the passthrough printer you just attached. **Note:** This name is case-sensitive.	
Server	The server that controls this actual destination. The server name is the same as the name of the system where the server is installed. **Note:** This name is case-sensitive.	

Table 14. Passthrough destination worksheet (continued)

Wizard Prompt	Description	Value
Windows port name	The name of the Windows port to assign to this destination. Enter the Windows port name that you want to use **exactly** as it appears to Windows. To determine what ports exist on your server, open the **Start** menu and click **Settings ➔ Printers**. On the **Printers** dialog, click on the **File** menu and click on **Server Properties**. The **Print Server Properties** dialog box appears where you can click on the **Ports** to display the list of available ports.	
TCP/IP address	The dotted-decimal IP address used to access this printer. This value is used for SNMP printers only.	
Logical destination	The logical destination that directs jobs to this actual destination. **Note:** This name is case-sensitive.	__ Default __ Other:
Logical destination's server	The InfoPrint server that contains the logical destination. **Note:** This name is case-sensitive.	
Queue	The queue that holds jobs destined for this actual destination. **Note:** This name is case-sensitive.	__ Default __ Other:

BSD printer

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

Before creating a BSD printer, complete the following worksheet.

Table 15. BSD printer worksheet

Wizard Prompt	Description	Value
Name	The name for the actual destination object. **Note:** This name is case-sensitive.	

Table 15. BSD printer worksheet (continued)

Wizard Prompt	Description	Value
Server	The InfoPrint server that controls this actual destination. The server name is the same as the name of the system where the server is installed. **Note:** This name is case-sensitive.	
SNMP TCP/IP address	The dotted-decimal IP address used to access this printer. This value is used only for SNMP printers.	
Printer command	The command to issue to submit a job to this remote destination. Typically, this is a call to the **lpr** command. For example, lpr -S *serverName* -P *printerName*. **Note:** This command is case-sensitive.	
Data stream	The data stream expected by the printed device (for example, PCL5 or PCL6).	
Logical destination	The logical destination that directs jobs to this actual destination. **Note:** This name is case-sensitive.	__ Default __ Other:
Logical destination's server	The InfoPrint server that contains the logical destination. **Note:** This name is case-sensitive.	
Queue	The queue that holds jobs destined for this actual destination. **Note:** This name is case-sensitive.	__ Default __ Other:

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

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

Table 15 on page 76 provides the information as prompted by the wizard. For assistance, refer to the InfoPrint Manager Administration GUI online help.

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

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

IPP printer

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

Before creating an IPP printer, complete the following worksheet.

Table 16. IPP destination worksheet

Wizard Prompt	Description	Value
Name	The name for the actual destination object. This is the printer URL, for example, np17.prtrm4.bldr.infoprint.com. **Note:** This name is case-sensitive.	
Server	The server that controls this actual destination. The server name is the same as the name of the system where the server is installed. **Note:** This name is case-sensitive.	
URL	The universal resource locator (URL) for this destination.	
TCP/IP address	The dotted-decimal IP address used to access this printer. This value is used for SNMP printers only.	
Logical destination	The logical destination that directs jobs to this actual destination. **Note:** This name is case-sensitive.	__ Default __ Other:
Logical destination's server	The InfoPrint server that contains the logical destination. **Note:** This name is case-sensitive.	
Queue	The queue that holds jobs destined for this actual destination. **Note:** This name is case-sensitive.	__ Default __ Other:

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

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

Table 16 on page 78 provides the information as prompted by the wizard. For assistance, refer to the InfoPrint Manager Administration GUI online help.

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

Creating a PSF Direct Only destination

To create a PSF Direct Only actual destination, you must run the InfoPrint Manager Management Console as described in "Starting the InfoPrint Manager Management Console" on page 49. The InfoPrint Manager Management Console provides support for creating the following types of printers to be driven exclusively by PSF Direct:

- "PSF Direct Only TCP/IP printer"
- "PSF Direct Only channel printer" on page 80
- "PSF Direct Only non-IPDS printer" on page 80

PSF Direct Only TCP/IP printer

If you want to set up a TCP/IP-attached printer to accept jobs only from mainframe host systems, you should first complete the following worksheet.

Table 17. PSF Direct Only TCP/IP printer worksheet

Management Console Prompt	Description	Value
Destination	The name for the actual destination object (8 character limit). **Note:** This name is case-sensitive.	
TCP/IP Internet Address	The dotted-decimal IP address used to access this printer.	
TCP/IP Port Number	The port used by the printer for communication. The InfoPrint 1000 family of printers uses port 9100. Most other InfoPrint printers use port 5001.	
Connection Timeout	Number of seconds that the server will try to establish a connection with the destination before terminating the PSF Direct session.	
Intervention Timer	Number of seconds that the server will wait for a problem at the printer (for example, "Printer out of paper") to be resolved before canceling a job.	

Use the InfoPrint Manager Management Console to create the actual destination. For assistance, refer to the Management Console online help.

PSF Direct Only channel printer

If you want to set up a channel-attached printer on a Windows 2000 system to accept jobs only from mainframe host systems, you should first complete the following worksheet.

Table 18. PSF Direct Only channel printer worksheet

Management Console Prompt	Description	Value
Destination	The name for the actual destination object (8 character limit). **Note:** This name is case-sensitive.	
Channel Device Address	The two-digit hexadecimal control-unit address assigned to the physical print device hardware. Consult printer documentation for instructions on how to determine this value.	
Channel Slot Number	The system slot number where the channel card is installed. If more than one channel card is installed, consult "Installing more than one IBM 4159 card" on page 37 to determine the correct value. Otherwise, the default value of "1" is appropriate.	
Intervention Timer	Number of seconds that the server will wait for a problem at the printer (for example, "Printer out of paper") to be resolved before canceling a job.	

Use the InfoPrint Manager Management Console to create the actual destination. For assistance, refer to the Management Console online help.

PSF Direct Only non-IPDS printer

This type of printer is a streamlined command printer. If you want to set up a non-IPDS printer to accept jobs only from mainframe host systems, you should first complete the following worksheet.

Table 19. PSF Direct Only non-IPDS printer worksheet

Management Console Prompt	Description	Value
Destination	The name for the actual destination object (8 character limit). **Note:** This name is case-sensitive.	

Table 19. PSF Direct Only non-IPDS printer worksheet (continued)

Management Console Prompt	Description	Value
Data Stream	The data stream expected by the printing device (PCL4, PCL5, PCL5C, or PPDS).	
Command to Print	The command used to submit jobs to this destination. **Note:** This command is case-sensitive.	
Printer Memory	The amount of memory available on the printer itself.	

Use the InfoPrint Manager Management Console to create the actual destination. For assistance, refer to the Management Console online help.

Important Note: All printers created through the Management Console are not visible to the server and are not viewable using the Administration and Operations GUIs.

Chapter 11. Working with files larger than 2 gigabytes

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

This section includes:

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

Job submission clients supported

Client	Windows	AIX
pdpr with AIX, Linux®, and Windows	Supported	Supported
pdpr with HP-UX and Sun Solaris	Not Supported	Not Supported
hot folders	Supported	Supported
InfoPrint Select	Not supported	Not supported
Submit Express	Not supported	Not supported
InfoPrint Job Ticketer	Not supported	Not supported
IPP Gateway	Not supported	Not supported
Windows Gateway	Not supported	Not supported

Output methods supported

The output methods that support large files include:

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

Client	Windows	AIX
TCP/IP	Supported	Supported
Channel	Supported	N/A
Command	Supported	Not supported
Other	Supported	Not supported

Note:

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

- PSF Direct

InfoPrint Manager document formats support for greater than 2 gigabyte files

Document format	Windows	AIX
MOD:CA	Supported	Supported
PostScript (see Notes[®] 1 and 2)	Supported	Supported
PCL (see Note 1)	Supported	Supported
PDF	Not supported	Not supported
Line data	Supported	Supported
XML	Not supported	Not supported
Xerox	Not supported	Not supported
SAP	Not supported	Not Supported
PPML	Not supported	Not supported
TIFF, JPEG, GIF	Not supported	Not supported
ASCII	Not supported	Not supported
Notes:		
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
Booklet print	Not supported	Not supported
Booklet print with integrated cover	Not supported	Not supported
Side-by-side copies	Not supported	Not supported
Slit-and-merge	Supported	Supported
Simple-n-up	Supported	Supported

Chapter 12. Preparing InfoPrint Manager to connect to your host system

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

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

- **PSF Direct host receiver**

  Accepts print jobs from a PSF on your host system and sends them to a PSF Direct destination without putting them into a queue.

- **DPF host receiver**

  Downloads print jobs and their resources from a PSF on your host system and submits them to an InfoPrint Manager PSF printer to be printed. To the host PSF, the DPF host receiver looks like a TCP/IP-attached IPDS printer, so you can submit jobs to it as you would to that type of printer.

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

- **MVS Download receiver**

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

  The Exit is responsible for performing some action on the received file. Two sample exits are provided with InfoPrint Manager: one written in Microsoft Visual C++ Version 6.0 and one written in Microsoft Visual Basic Version 6.0. Both samples perform the same action: submit the file to InfoPrint Manager using pdpr and log any errors. The sample exits also stop the MVS Download receiver if the pdpr fails.

  Note: MVS Download receivers don't download AFP resources along with print jobs; AFP resources must already be available to InfoPrint Manager.

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

- "Before you create a PSF Direct host receiver" on page 86
- "Before you create a DPF host receiver" on page 87
- "Before you create an MVS Download host receiver" on page 91

Troubleshooting host receivers

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

Before you create a PSF Direct host receiver

When you create a PSF Direct host receiver, you have to specify which InfoPrint Manager actual destination the host receiver will send jobs to. If you have not already created the actual destinations you need, refer to Chapter 10, "Creating actual destinations," on page 65.

Notes:

1. You must use the PSF DSS with PSF Direct.
2. If you currently use PSF Direct in PSF for OS/2, refer to the *InfoPrint Manager for Windows: Introduction and Planning Guide* for instructions on collecting the information you need from your OS/2 system. You can use the printer information that you collect to help create your InfoPrint Manager actual destinations.

Creating a PSF Direct host receiver

1. Complete the following configuration worksheet.

   Note: If you currently use PSF Direct in PSF for OS/2, refer to the *InfoPrint Manager for Windows: Introduction and Planning Guide* for instructions on collecting the information you need from your OS/2 system.

   Table 20. PSF Direct host receiver worksheet

Management Console Prompt	Description	Value
SNA logical unit alias name	The local alias of the name used to start an SNA conversation with this host receiver.	
Actual destination name	The name of the associated actual destination object. **Note:** This name is case-sensitive.	
Description	Text to describe this receiver (optional).	
Inactivity limit	Number of seconds to wait for jobs from a connected host before disconnecting.	
Device busy limit	Number of seconds for host systems to wait for the printer to become available when it is in use by other print processes.	

2. Open the InfoPrint Manager Management Console and select **Edit → New → PSF Direct Host Receiver**.

Refer to the Management Console help system if you need further information.

3. Use the information from the worksheet to complete the dialog and click **OK**.

4. To finish setting up your PSF Direct system, refer to the appropriate PSF Direct configuration guide for information about configuring your host system and configuring IBM SecureWay® Communications Server for Windows. The following configuration guides are available on your Publications CD-ROM and on the InfoPrint Solutions Company Web site:

   - *Configuring PSF Direct for an iSeries System*
   - *Configuring PSF Direct for the 3174 Communications Controller*
   - *Configuring PSF Direct for the 3172 Communications Controller*
   - *Configuring PSF Direct for the 37xx Communications Controller*

Before you create a DPF host receiver

When you create a DPF host receiver, you have to specify which InfoPrint Manager actual destination the host receiver will send jobs to. If you have not already created the actual destinations you need, refer to Chapter 10, "Creating actual destinations," on page 65.

Notes:

1. You must use the PSF DSS with DPF.

2. If you have interoperating InfoPrint Manager servers, the actual destination that the host receiver submits jobs to and the logical destination that the actual destination is associated with must reside on the same server.

3. If you currently use DPF in PSF for OS/2, refer to the *InfoPrint Manager for Windows: Introduction and Planning Guide* for instructions on collecting the information you need from your OS/2 system. You can use the printer and spool information that you collect to configure your InfoPrint Manager actual destination.

DPF working directories

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

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

If you create your own directories, it is recommended that you create one directory named after the receiver, then two subdirectories inside it, one named **Jobs** and one named **Resources**. For example, if you plan to name your host receiver **hr_ip4000**, you would create a directory named **hr_ip4000**, then create the **Jobs** and **Resources** subdirectories under it. When you create your host receiver, you would type E:/hr_ip4000/Jobs for the **Jobs directory** and E:/ hr_ip4000/Resources for the **Resources directory**.

Creating a DPF host receiver

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

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

Table 21. DPF host receiver worksheet

Management Console Prompt	Description	Value
Logical unit alias name	The local alias of the name used to start an SNA conversation with this host receiver. Because DPF connects to InfoPrint Manager over TCP/IP instead of SNA, you will not use the LU alias, however, knowing it will help you figure out the TCP/IP connection.	
PSF actual destination	The name of the actual destination object that this receiver will send jobs to. **Note:** This name is case-sensitive.	
Port number	The port that the host receiver will use to communicate with the host system.	
Description	Text to describe this receiver (optional).	
Submission priority	The relative importance of jobs submitted by this receiver. 1 is the highest priority; 100 is the lowest priority.	Default: 50
Inactivity limit	Number of seconds to wait for jobs from a connected host before disconnecting. When the inactivity timer runs out, the receiver drops the connection with the host system. If the timer is set to 9999, it will never run out.	Default: 9999

Table 21. DPF host receiver worksheet (continued)

Management Console Prompt	Description	Value
Save resources	If Save resources is selected, the DPF host receiver acknowledges the public/private settings on the DPF resources that are downloaded with print jobs. Resources that were marked public on the host are stored in the DPF Resources Database for reuse later. Resources that were marked private cannot be reused. If Save resources is not selected, all DPF resources that are downloaded are considered private.	__ yes __ no
Obtain printer characteristics at start up	If selected, the receiver checks the printer settings every time the receiver connects to a host PSF and communicates any changes to the host system.	__ yes __ no
Suppress start sheets	Select to turn off the start sheets that InfoPrint Manager generates.	__ yes __ no
Suppress end sheets	Select to turn off the trailer sheets that InfoPrint Manager generates.	__ yes __ no
Suppress separator sheets	Select to turn off the separator sheets that InfoPrint Manager generates.	__ yes __ no
Jobs directory	The directory that the host receiver stores print jobs in until they are printed. Refer to "DPF working directories" on page 87 for more information.	
Resources directory	The directory that the host receiver stores job resources in. Refer to "DPF working directories" on page 87 for more information.	

Table 22. DPF host receiver class set up worksheet

Receiver				
Class	Copies	Start page	Disposition	Retention Period
			__ • Print __ • Retain __ • Print then Retain	• ___ Forever • ___ Days • ___ Hours

Table 22. DPF host receiver class set up worksheet (continued)

Receiver				
			__ • Print __ • Retain __ • Print then Retain	• ___ Forever • ___ Days • ___ Hours
			__ • Print __ • Retain __ • Print then Retain	• ___ Forever • ___ Days • ___ Hours
			__ • Print __ • Retain __ • Print then Retain	• ___ Forever • ___ Days • ___ Hours
			__ • Print __ • Retain __ • Print then Retain	• ___ Forever • ___ Days • ___ Hours

2. Open the InfoPrint Manager Management Console and select **Edit → New → DPF Host Receiver**.

3. Use the information from the worksheet to complete the dialog. Make sure you click **Class Set Up** to configure your receiver classes with the information from Table 22 on page 89. Click **OK** when you are finished.

   Refer to the Management Console help system if you need further information.

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

4. Refer to "Settings on your host system" to create a printer that will submit jobs to this host receiver from your host system.

Settings on your host system

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

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

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

PSF for z/OS

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

PSF/VM

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

Additional information about TCP/IP support and defining a Group 4 printer is available on the InfoPrint Solutions Company Web site at http:// www.infoprint.com/.

PSF for VSE

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

Additional information about TCP/IP support for PSF for VSE is available on the InfoPrint Solutions Company Web site at http://www.infoprint.com/.

PSF for iSeries

Use the CRTDEVPRT (Create Device Description (Printer)) command to define a TCP/IP printer on your iSeries system. Use the IP address of your InfoPrint Manager server for the **RMTLOCNAME** value and the port that your DPF host receiver uses for the **PORT** value. For example, the following command defines a printer that can send IPDS data to a DPF host receiver using the TCP/IP protocol, assuming that the DPF host reciever uses port 5005, and the IP address of the InfoPrint Manager server is 9.34.746.882.

```
CRTDEVPRT DEVD(IPMDPF) DEVCLS(*LAN) TYPE(*IPDS) MODEL(0) LANATTACH(*IP)
AFP(*YES) PORT(5005) FONT(11) RMTLOCNAME('9.34.746.882') TEXT('Sample
InfoPrint Manager DPF printer writer')
```

Before you create an MVS Download host receiver

When you create an MVS Download receiver, you have to specify which InfoPrint Manager actual destination the host receiver will send jobs to. If you have not already created the actual destinations you need, refer to Chapter 10, "Creating actual destinations," on page 65.

Creating an MVS Download receiver

1. Complete the following configuration worksheet.

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

Table 23. MVS Download host receiver worksheet

Management Console Prompt	Description	Value
Port Number	The port assigned for communication with z/OS or MVS. This value must be the same as the port assigned during configuration of the host system.	
Target Destination Name	The InfoPrint Manager logical destination to which jobs are routed from this receiver by default. This default may be overridden with the appropriate z/OS or MVS job parameters and printer control file settings. In sample destination control file supplied with InfoPrint Manager, the value of MVS keyword **DEST** overrides whatever value you specify here. **Note:** This name is case-sensitive.	
Print Control File	The file that contains the appropriate attributes for jobs submitted to this receiver. You may use the default file, or you may point to a customized version of this default file.	
Exit Program Name	The program that processes jobs submitted to this receiver from the host and passes the jobs to the requested InfoPrint Manager destination. Typically, the default program **o390dsubm.exe** is used.	
Retain command files	Indicate whether to save the command files for jobs that do not print correctly.	__ yes __ no
Process one file at a time	Indicate whether InfoPrint Manager should wait for a previous job to complete before starting to process the next job.	__ yes __ no

2. Open the InfoPrint Manager Management Console and select **Edit → New → MVS Download Receiver**.

3. Use the information from the worksheet to complete the dialog and click **OK**.

   Refer to the Management Console help system if you need further information.

4. To complete your MVS Download configuration, refer to *InfoPrint Manager for Windows: Procedures*, available on your Publications CD-ROM, and on the InfoPrint Solutions Company Web site at http://www.infoprint.com

Chapter 13. Synchronizing InfoPrint Manager with an InfoPrint 4000 or an InfoPrint 4100

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

1. Use either InfoPrint Manager GUI to specify the media that the actual destination representing the InfoPrint 4000 or the InfoPrint 4100 supports.

   a. Open the InfoPrint Manager GUI.

   b. Click the InfoPrint 4000 or InfoPrint 4100 printer object in the tree window to select it.

   c. Select **Printer → Change Media** to open the **Change Media** dialog.

   d. Associate each tray with an appropriate media. Click **Help** for more information.

2. On the printer, define forms that correspond to the media you specified in the previous step. Consider the settings in the following table as an example:

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

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

Chapter 14. Printing a test job

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

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

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

If you have created a PSF Direct Only destination, the only way to submit a test job is through PSF on the host system. All versions of PSF include suitable test jobs. Consult your host PSF documentation for details on submitting test jobs.

Part 3. Getting started with client systems

Chapter 15. InfoPrint Manager GUI software

When you install the InfoPrint Manager Server, you automatically install the standard InfoPrint Manager GUIs: the InfoPrint Manager Administration GUI and the InfoPrint Manager Operations 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 functionality available in the Administration GUIs. (The Basic GUIs are installed with the Print-on-Demand feature, or you can install them from the Infoprint Manager: Common Clients CD-ROM, LCD4-1917.)

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

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

Preparing to install the GUIs

With PTF UO04346, both InfoPrint Manager GUIs require the IBM 32-bit Runtime Environment for Windows, Java 2 Technology Edition, Version 1.4.2[2], at the appropriate build level. This is the only supported level of the Runtime Environment for running the InfoPrint Manager GUIs. If you have a previous version of the InfoPrint Manager GUIs, you do not need to uninstall them before you install the new Runtime Environment and the new GUIs.

Important: Since the install process for InfoPrint Select requires a reboot, if you plan to install one or both of the InfoPrint Manager GUIs as well as InfoPrint Select, you may wish to install the GUI(s) first.

- To verify that you have the correct version of the Runtime Environment installed, follow these steps:
  1. Type `java -fullversion` at an MS-DOS command line.
  2. Verify that output from the command contains the following text:
     ```
     J2RE 1.4.2 IBM Windows 32 build cn142-20060824 (SR6)
     ```
     or
     ```
     J2RE 1.5.0 IBM Windows 32 build pwi32dev-20060511 (SR2)
     ```
- If necessary, follow these steps to install the required Runtime Environment:
  1. Insert the **Infoprint Manager: Common Clients** CD-ROM, LCD4-1917, into the drive. The install program will start automatically.
  2. Select the **Infoprint Manager Clients** button, and then select the **Java**™ **Runtime Environment 1.4.2 or 1.5.0** button.
  3. Provide information as prompted by the installation program. When the installer asks if you want to install the Runtime Environment as the system Java Virtual Machine (JVM), answer **Yes**.

---

2. When you work with the InfoPrint Manager GUIs on the InfoPrint Server, you use Version 1.4.2 Service Release 6; and when you work with the InfoPrint Manager GUIs on an InfoPrint Client, you can use Version 1.4.2 Service Release 6 or Version 5.0 Service Release 2. Both versions are available on the Infoprint Common Clients CD.

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- When the installation is complete, verify that you have the correct version of the Runtime Environment installed:
  1. Type `java -fullversion` at an MS-DOS command line.
  2. Verify that the output from the command contains the following text:

     ```
     J2RE 1.4.2 IBM Windows 32 build cn142-20060824 (SR6)
     ```
     or
     ```
     J2RE 1.5.0 IBM Windows 32 build pwi32dev-20060511 (SR2)
     ```

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 have not installed the Print-on-Demand feature and want to use the basic view of the InfoPrint Manager GUI, complete the following steps in the standard view of the GUI:

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

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

Installing the Operations GUI

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

Ensure 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 may receive error messages like: 5010-625 Cannot recognize attribute ....

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

1. Insert the **Infoprint Manager: Common Clients** CD-ROM, LCD4-1917, into the drive. The install program starts automatically.
2. Select **Install Infoprint Manager Clients → Infoprint Manager GUIs**, and then select the Operations GUI button.
3. Follow the instructions on the installation screens, paying attention to the following guidelines:
   - The InfoPrint Manager Operations GUI is the recommended version. You can also choose to use the **Basic** version. See "Using the basic view of the GUI" on page 100 for more information.
   - The InfoPrint Manager Operations GUI requires approximately 24 MB of space on your hard drive, whether you install one view or both.
   - If you are installing over a previous version of InfoPrint Manager GUI software or you have already installed another GUI, a window will appear that gives you the option to modify the current installation. Select the **Modify** button, and leave the checkboxes checked for the components that are already installed.
   - If you are installing over a previous version of the InfoPrint Manager GUI software, click **yes** for any questions about replacing files. If you will be using this GUI to work with an InfoPrint Manager for Windows server, you do not need to change any of the selections from the default values.
   - You should install the DCE version of the InfoPrint Manager GUIs only if you will be using them to work with the DCE version of InfoPrint Manager for AIX.
   - If you change your system language, the interface displays properly in the new language.

Installing the Administration GUI

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.

Ensure 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 may receive error messages like: 5010-625 Cannot recognize attribute ....

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

1. Insert the Infoprint Manager Common Clients CD-ROM into the drive. The install program will start automatically.
2. Select **Install Infoprint Manager Clients → Infoprint Manager GUIs**, and then select the Administration GUI button.
3. Follow the instructions on the installation screens, paying attention to the following guidelines.

- The InfoPrint Manager Administration GUI is the recommended version. You can also choose to use the **Basic** version. See "Using the basic view of the GUI" on page 100 for more information.
- The InfoPrint Manager Administration GUI requires approximately 24 MB of space on your hard drive, whether you install one view or both.
- If you are installing over a previous version of InfoPrint Manager GUI software or you have already installed another GUI, a window will appear that gives you the option to modify the current installation. Select the **Modify** button, and leave the checkboxes checked for the components that are already installed.
- If you are installing 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.
- You should install the DCE version of the InfoPrint Manager GUIs only if you will be using them to work with the DCE version of InfoPrint Manager for AIX.
- If you change your system language, the interface displays properly in the new language.

Starting the GUIs

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

For the most recent information about InfoPrint Manager, visit the InfoPrint Information Center at **www.infoprint.com/infocenter**.

Note: If you receive a communication error when using Windows XP with Service Pack 2 or Windows 2003 with Service Pack 1, you may 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 one of the following icons.

Table 24. The InfoPrint Manager GUI icons. The text above the icons is the difference between the GUI icons.

Administration InfoPrint	Operations InfoPrint
Basic Administration InfoPrint	Basic Operations InfoPrint

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 may 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.

Starting the special version of the Operations GUI

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 ensure that the configuration remains unchanged from session to session. The changes made during each session are not saved when the GUI is closed.

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

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

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\IBM\Infoprint GUI** and invoke the **StandardOperSBC** shortcut.

Uninstalling the GUIs

To uninstall the InfoPrint Manager GUIs, follow these steps:
1. Click the Windows **Start** button and select **Settings → Control Panel**.
2. Double-click the **Add/Remove Programs** icon.
3. Select **Infoprint Manager Administration GUI** or **Infoprint Manager Operations GUI**.
4. Click the **Change/Remove** button.
5. Click on the **Remove** button and then the **next** button
6. Follow the instructions on the InstallShield Uninstaller screens that display.

Note: If you want to uninstall both the JRE and the GUIs, make sure you uninstall the GUIs first. If you uninstall the JRE first, the GUIs cannot be uninstalled since the uninstall process for the GUIs is a Java uninstall process that requires a version of JRE to run.

Chapter 16. InfoPrint Manager Print-on-Demand software

The Print-on-Demand feature provides an easy to use graphical user interfaces for print submission in commercial print environments including job ticketing, automated impositioning, assembling of print jobs, and finishing. The InfoPrint Manager Print-on-Demand feature works with two clients:

- InfoPrint Submit Express
- InfoPrint Job Ticketer

The exact functions that are available depend on which client you will be using.

Submit Express

InfoPrint Submit Express is the standard client that comes with the Print-on-Demand feature of InfoPrint Manager and provides a variety of functions for the Print-on-Demand environment. For more information about Submit Express and the Print-on-Demand feature of InfoPrint Manager, see *InfoPrint Manager Print-on-Demand Feature: Submit Express User's Guide*.

Note: InfoPrint Submit Express replaces the InfoPrint Submit for Windows and Macintosh clients.

InfoPrint Job Ticketer

InfoPrint Job Ticketer is the new web based submission client used in the Print-on-Demand environment. It also comes with the Print-on-Demand feature of InfoPrint Manager. InfoPrint Job Ticketer is a unified solution for the creation, submission, and management of print jobs with focus on the commercial segment of the printing business. For more information, see the *InfoPrint Job Ticketer: User's Guide* and the *InfoPrint Job Ticketer: Administrator's Guide*.

Chapter 17. Using InfoPrint Select to submit a job

InfoPrint Select allows you to submit and track jobs from a Windows workstation to a destination that is managed by InfoPrint Manager. Through InfoPrint Select, 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 client allows you to:
* Specify AFP and other InfoPrint job attributes when submitting a job to the server
* Cancel and hold jobs within a queue
* Check the status of destinations before submitting jobs

For more information on these specific functions, see "Printing from applications" on page 123 and consult the help system provided with InfoPrint Select.

This section contains procedures for using InfoPrint Select on the Windows platform. The following topics are covered:
* "Installing InfoPrint Select"
* "Configuring your InfoPrint Manager server to work with InfoPrint Select" on page 110
* "Creating InfoPrint Select printers" on page 114
* "Printing from applications" on page 123
* "Commands you can use with Select" on page 125

Installing InfoPrint Select

Before you install InfoPrint Select, consider these conditions:
* You must have administrative privileges in order to install InfoPrint Select.
* If you plan to install one or both of the InfoPrint Manager GUIs as well as InfoPrint Select, the sequence of the installs is important. Since InfoPrint Select may require a system reboot, you may wish to install the InfoPrint Manager GUI(s) first.
* If you want to enable other users that do not have administrator privileges to print using InfoPrint Select, then install Select in a folder where those users have read/write access. Do not install InfoPrint Select into the **Program Files** folder.
* You must adjust the configuration of the InfoPrint Manager Server in order for InfoPrint Select to function properly. See "Configuring your InfoPrint Manager server to work with InfoPrint Select" on page 110.

Follow these steps to install InfoPrint Select on a Windows system from the **Infoprint Manager: Common Clients**, LCD4-1917, CD-ROM:
1. Insert the Infoprint Manager Common Clients CD-ROM into the drive.
2. Select the Install Infoprint Products button, and then select the Infoprint Select button.
3. Follow the instructions on the installation screens to install the program.

4. Enter the installation path. The default installation path is `C:\Program Files\IBM\Infoprint Select`.

5. Specify the name for the application program folder to install InfoPrint Select shortcuts. The default folder name is **Infoprint Select**.

6. Enter the host name or IP address for the InfoPrint Manager Server in the `Host:` entry field and the socket number that the InfoPrint Manager Server uses for client communication in the `Socket:` entry field on the `Environment Variable Settings` window. The default socket number is `6874`. Click the `Next` button to continue with the InfoPrint Select installation.

7. After you have installed InfoPrint Select, the installation program asks if you want to reboot your system. The default answer to this question is **Yes** because InfoPrint Select will not function properly until the system is rebooted. When you click **OK** or press **Enter**, your system reboots.

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
> This method uses the response file embedded with the **InfoprintSelect.exe**.

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, the following 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.

Notes:

1. To create your own response file, invoke the installer in **record mode**:
   InfoprintSelect.exe /r

   This 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**.

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

Upgrading InfoPrint Select

Follow these steps to upgrade InfoPrint Select on a Windows system from the **Infoprint Manager: Common Clients**, LCD4-1917, CD-ROM:
1. Insert the Infoprint Manager Common Clients CD-ROM 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 if you want 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.

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 Select, users can enter job and document attributes with print jobs if the printer to which they send the job is a Select printer. You may decide not to provide this ability to end users since it requires an understanding of how to use attributes.

If you want to apply the enhanced InfoPrint Select, perform the following action:

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

To uninstall InfoPrint Select, follow these steps:
1. From the **Start** menu, select **Settings → Control Panel**.

2. Double-click the **Add/Remove Programs** icon.
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 may 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.

Configuring your InfoPrint Manager server to work with InfoPrint Select

In order 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 the following procedure to configure logical and actual destinations correctly. If you want to use the command line instead of the GUI, use the **pdset** command to set the **client-driver-names** attribute.

Printing to actual destinations: In order to submit jobs to actual destinations, the **logical-destinations-assigned** attribute must be set for the actual destination.

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

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

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

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

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 in conjunction with InfoPrint Select.
7. Click **Add >>**.
8. Click **OK**.

Select support for Windows 2000 Server and Windows 2003 Server

Select will be supported on the following versions of Windows 2000 and Windows 2003:

- Windows Server 2000 Standard Edition with Service Pack 4 or higher
- Windows Server 2003 Standard Edition with Service Pack 1 or higher

Note: Select is not supported on any 64 bit versions of Windows.

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

InfoPrint Select may be used in a Windows Terminal Server Environment, however, some functions should be disabled by the administrator. The following items need to be considered for use by WTS clients:

1. Enhanced InfoPrint Select cannot be used and should be disabled.
2. Error messages should be disabled.
3. The Select Notification client should be disabled or administrators need to assign a unique Select Notification port to each user.

Enhanced InfoPrint Select

By default, enhanced InfoPrint Select is disabled for each client. However, if Enhanced InfoPrint Select is enabled on a WTS client, the **Job Settings** dialog that may appear after a job submission will not be displayed in the client session console, but will be displayed in the main server console. Any files that are submitted using Enhanced InfoPrint Select will not print until **OK** is clicked on the **Job Settings** dialog of the main server console. All jobs submitted after the first one will not print until **OK** is clicked on the **Job Settings** dialog of the main server console. Therefore the ability for clients to enable Enhanced InfoPrint Select **should be disabled**.

InfoPrint Select Error Messages

When errors are detected upon submission of a job, an error message is usually displayed. Jobs submitted by WTS clients, however, will not display this message in the client session console, but will display the message on the main server console. The file will not print until **OK** is clicked from the main server console. Therefore, Select error messages should be suppressed. When error messages are suppressed, files that fail submission to the InfoPrint Manager server for any reason will be deleted from the Windows spool for the printer. An option is available to pause the failed job, but if the option is used then the administrator will need to periodically check for failed jobs and take the appropriate action to avoid filling up the disk on the server.

Select Notifications

By default, the installation of InfoPrint Select adds the Select Notification program to the **Startup** directory of all users. The default installation will not work on WTS clients. You can choose to either disable Select Notifications for your users or you can configure and manage the Select notification ports for each user to allow each user to use Select Notifications. If you wish to allow each user to use Select Notifications, each user will need to be assigned a unique TCP/IP port on the WTS server. The administrator must ensure that each user has a unique port assigned. If two users are assigned the same port, one user will get all notification messages for both users. The other user will receive no notification messages.

WTS Server Configuration

After InfoPrint Select is installed, perform the following procedures. All of the procedures must be completed from an administrator userid.

Select.ini file

Select creates a .ini file for each userid 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 **<Select_install_path>\<userid>\Select.ini.** The WTS administrator should create or modify the existing file for all users. The file should look like the following:

```
[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 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 errors found during submission.
- Pause jobs if submission fails=0 - Optionally may set this to 1 to cause failed jobs to be retained on the WTS Windows spool for resubmission by the administrator.

Client Desktop Programs

The default installation of the following programs should be modified. The following instructions indicate how to remove items. Instead of removing them, they may be moved to the equivalent folder under the Administrator userid or another userid.

1. Select Notification in Startup - If Select Notifications are not being used, remove the Select Notification Startup from all users by deleting **C:\Documents and Settings\All Users\Start Menu\Programs\Startup\ Infoprint Select Notification**.
2. Select Menu - The following should also be removed to prevent problems:
   a. **C:\Documents and Settings\All Users\Start Menu\Programs\Infoprint Select\Activate Job Settings Dialog**
   b. **[Optional] C:\Documents and Settings\All Users\Start Menu\Programs\Infoprint Select\Change the Notification port**
   c. **[Optional] C:\Documents and Settings\All Users\Start Menu\Programs\Infoprint Select\Infoprint Select Notification**

Working with Select notifications

By default when you submit a job using InfoPrint Select, a notification profile is sent with the job. If you have the Select message windows running when you submit a print job using InfoPrint Select, notifications are requested. If the Select message window is not running, notifications are not requested. When notifications are requested, they are delivered by e-mail. InfoPrint Select does not use the

standard e-mail port for notifications to avoid conflict with other SMTP servers. If you have a conflict with the port that Select is using for notification, you can choose another port by following: **Start → Programs → Infoprint Select → Infoprint Select Notification → Infoprint Manager Message Port**, and entering another port.

The InfoPrint Select Notification message window usually starts automatically when Windows first loads, but if you need to start the Notification message Window at another time, go to **Start → Programs → Infoprint Select → Infoprint Select Notification**.

To turn off the Notification message window, click the **X** in the upper right corner of the screen and then click **OK** on the warning message.

Note: If you receive a communication error when using the Select Message Window with Windows XP with Service Pack 2 or Windows 2003 with Service Pack 1, you may have to include `ipnotify.exe` on the **Exceptions** tab of the **Windows Firewall** dialog.

Setting up your own InfoPrint Select notification profile

The Select notification profile overrides any notification settings that you configure in a default job. If you do not want to use the Select notification profile, use the appropriate procedure for your operating system:

- **Windows XP**
  1. On the Windows system that InfoPrint Select is installed on, right click on **My Computer** and select **Properties**.
  2. Select the **Advanced** tab, and click the **Environment Variables** button.
  3. Click one of the variables listed under **System Variables** to signal that you want to create a system variable. The variable and its value will appear in the fields at the bottom of the dialog.
  4. Clear the **Variable** and **Value** fields.
  5. In the **Variable** field, type: `pdnotify` and in the **Value** field type: `override_select`.
  6. Click **Set**.
  7. Verify that `pdnotify` appears in the list of **System Variables** and not in the **User Variables**. If it appears in the list of **User variables**, delete it and start again from step 3.
  8. Click **OK**.
  9. Restart your system to make the changes take effect.
- **Windows 2000**
  1. On the Windows system that InfoPrint Select is installed on, right click on **My Computer** and select **Properties**.
  2. In the System Properties window, click the **Advanced** tab.
  3. On the Advanced tab, click **Environment Variables**.
  4. In the **System variables** box on the **Environment Variables** dialog, click **New**.
  5. In the **Variable Name** field, type `pdnotify` and in the **Variable Value** field, type `override_select`.
  6. Click **OK**.

7. Verify that `pdnotify` appears in the list of **System variables** and not in the **User variables**. If it appears in the list of **User variables**, delete it and start again from step 4.

8. Click **OK** in the **Environment Variables** dialog.

9. Click **OK** in the System Properties window.

10. Restart your system to make the changes take effect.

- **Windows Vista**

    1. On the Windows system that InfoPrint Select is installed on, right click on **My Computer** and select **Properties**.

    2. In the System Properties window, click the **Advanced system settings** tab.

    3. On the Advanced tab, click **Environment Variables**.

    4. In the **System variables** box on the **Environment Variables** dialog, click **New**.

    5. In the **Variable Name** field, type `pdnotify` and in the **Variable Value** field, type `override_select`.

    6. Click **OK**.

    7. Verify that `pdnotify` appears in the list of **System variables** and not in the **User variables**. If it appears in the list of **User variables**, delete it and start again from step 4.

    8. Click **OK** in the **Environment Variables** dialog.

    9. Click **OK** in the System Properties window.

    10. Restart your system to make the changes take effect.

Creating InfoPrint Select printers

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. This section includes the following topics:

Using the generic Adobe PostScript driver and PPDs with InfoPrint Select

This is not supported on Windows Vista.

The InfoPrint Manager PPDs and the Windows printer creation wizard require the `adobeps5.dll` file to be located in the PPD install directory. When the `adobeps5.dll` file isn't in the PPD directory, InfoPrint Manager issues a message `Can't find the adobepst.dll file` and opens a browser Window. If the `adobeps5.dll` file is not in the PPD install directory, you need to do one of two things:

- Search your computer to see if this file is located some place else on your computer. If it is, copy it into the PPD install directory.

  Note: On some Windows systems, this file is a hidden or system file. For example, on Windows XP Professional: Go to **Advanced Options** and check **Search hidden/system files**.
- If this file is not located on your computer, you need to:
  1. Ensure that you have installed InfoPrint Select or the InfoPrint Manager Windows server.
  2. Access the Adobe® web site and download the generic Adobe PostScript driver to the PPD install directory.
  3. Choose InfoPrint Select or InfoPrint Port Monitor as appropriate.

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 the following information before you begin:

- The host name or IP address of the InfoPrint Manager server.
- The port number that the InfoPrint Manager server uses to communicate with client systems. The default is 6874.

  You can find this port number in the **Service Configuration** dialog in the Management Console.
- The names of destinations to use.
- The names of the drivers to associate with each destination.
- Where the driver files are located (on a CD-ROM, on a network server, or on your local system).
- The name of the server where your actual or logical destination resides (this value is optional).

Verify that the InfoPrint Manager server destinations have been configured correctly. Refer to "Configuring your InfoPrint Manager server to work with InfoPrint Select" on page 110 for more information.

Choosing the Right PPD

 If you plan to use InfoPrint Select to print PostScript jobs to an AIX DSS (InfoPrint Manager for AIX only), BSD DSS, or Passthrough DSS (InfoPrint Manager for Windows only) printer, be sure to use the PostScript printer driver that came with your printer when you create an InfoPrint Select printer on your desktop. These drivers include PostScript Printer Definitions (PPDs) that are specific to your printer. If you submit jobs to either the AIX, 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.

 If you plan to submit jobs to a PSF DSS, use the printer drivers and PPDs that are provided on the InfoPrint Manager Common Client CD-ROM. By default, these PPDs are installed in the **C:\Program Files\IBM\Infoprint Manager\PPDs for PSF** folder, with files in the format **IBM***printer***.PPD**

(where *printer* is the specific printer type) for most systems. 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 Chapter 26, "Installing and configuring the AFP driver," on page 163.

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 may discover that you cannot specify finishing options when you submit a job, even if the print driver you use supports those options. It is recommended that you either use a different method to submit those print jobs or that you submit them to an InfoPrint printer that does not transform the data stream (such as a Passthrough printer on InfoPrint Manager for Windows or an AIX printer on InfoPrint Manager for AIX).

If you cannot use a different submission method and cannot submit your jobs to a different type of InfoPrint printer, the only way to request finishing options on PCL and PostScript jobs submitted to a PSF destination is to specify the finishing attributes for the job. You have several options:

- You can create an attributes file for 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" on page 124 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" on page 124 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. If you want 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 2000 systems

This section includes:

- "Adding your first InfoPrint Select printer on Windows 2000 systems"
- "Adding an additional InfoPrint Select printer on Windows 2000 systems" on page 118

Adding your first InfoPrint Select printer on Windows 2000 systems

Before adding an InfoPrint Select printer to your Windows 2000 system, you must perform these steps:

- Collect the information described in "Collecting required information" on page 115.
- Configure the server as described in "Configuring your InfoPrint Manager server to work with InfoPrint Select" on page 110.

Follow these steps to add an InfoPrint Select printer to your Windows 2000 system:

1. From the Windows desktop, click **Start** ➔ **Settings** ➔ **Printers** ➔ **Add Printer**.
2. The **Add Printer Wizard** window displays. Click **Next**.
3. In the **Local or Network Printer** dialog, select the **Local printer** button and ensure that the **Automatically detect and install my Plug and Play Printer** button is **not** selected. Click **Next**.
4. In the **Select the Printer Port** dialog, select the **Use the following port** check box, then scroll down the list of ports until you find the **Infoprint** port and select it. Click **Next**.
5. Click **Have Disk**.
   a. Click **Browse**.
   b. Navigate to the directory **C:\Program Files\IBM\Infoprint Manager\PPDs for PSF**. This directory holds the required **ibmprint.inf** file. Highlight this file.
   c. Click **Open**.
   d. Click **OK** to close the **Install from Disk** window.
6. On the next dialog, select the manufacturer and model of your printer and click **Next**.
7. If the driver for your printer is already installed, the **Use Existing Driver** dialog appears. Click **Next**.
8. The **Name your Printer** dialog appears. Enter a name for the printer in the field provided. This is the name by which the printer will be known to your Windows applications and the Windows desktop. Click **Next**.
9. Select the **Do not share this printer** radio button and click **Next**.
10. When you are asked **Would you like to print a test page?** select **No** and click **Next**.
11. Click **Finish**.
12. From the Windows desktop, click the Windows **Start** button and select **Settings** ➔ **Printers**.
13. On the menu bar of the **Printers** window, click **File** and select **Server Properties**.
14. In the **Print Server Properties** window, click the **Ports** tab.

15. Highlight the **Infoprint Select** port that you want to configure and click **Configure Port**.

16. In the **Infoprint Port Configuration** window, ensure that the **Print Server** field is showing **Infoprint Manager**.

17. In the **Host Name** field, type the host name of your InfoPrint Manager server.

18. In the **Host Port** field, type the port number that your InfoPrint Manager server uses to communicate with client systems. The default port is 6874.

    Note: You can find this port number in the **Service Configuration** dialog in the Management Console.

19. In the **Server name** field, specify the name of the InfoPrint Manager server (**pdserver**) where your destination resides. If you are unsure of the correct InfoPrint Manager server name, specify the default value of * to list all the printers on all the InfoPrint Manager servers. Specifying the server name greatly reduces the number of printers listed, which reduces the amount of time it takes to configure a port.

    Note: If you know the name of the printer you wish to use, type it in the **Printer name** field and go to step 22 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 choose.

20. Click **Refresh Printer Selection List**.

21. Select the appropriate printer from the list.

22. Click **OK**.

23. Click **Close**.

When Files Needed dialog appears: A **Files Needed** dialog may open at this point. In all likelihood, the file you need (`pscript.dll`) is already present on your system. If the **Files Needed** dialog does appear, follow these steps:

1. Click **Browse**.

2. Navigate to the `C:\winnt\system32` directory (assuming that your operating system is installed on the c: drive), and select the file that is needed.

3. Click **Open**.

4. Click **OK**.

5. If the `pscript.dll` file is not found in this directory, you must load it from the operating system CD-ROM. To do this, follow these steps:

    a. Insert the Windows 2000 operating system CD-ROM.

    b. Click **Browse** on the **Files Needed** dialog.

    c. Navigate to the `d:\I386\pscript.dll_` file (where *d:* is your CD-ROM drive).

    d. Click **Open** and then **OK** to complete the configuration.

If you want to add additional InfoPrint Select printers to your environment, follow the procedure described in "Adding an additional InfoPrint Select printer on Windows 2000 systems."

Adding an additional InfoPrint Select printer on Windows 2000 systems

Before adding an InfoPrint Select printer to your Windows 2000 system, you must first perform these steps:

- Collect the information described in "Collecting required information" on page 115.
- Configure the server as described in "Configuring your InfoPrint Manager server to work with InfoPrint Select" on page 110.

To print to an additional InfoPrint Select printer, you must add an additional InfoPrint Select port. Otherwise the configuration is similar to that described in "Adding your first InfoPrint Select printer on Windows 2000 systems" on page 117.

To add an additional InfoPrint printer to your Windows 2000 system, follow these steps:

1. From the Windows desktop, click **Start** → **Settings** → **Printers** → **Add Printer**.
2. The **Add Printer Wizard** window displays. Click **Next**.
3. In the **Local or Network Printer** dialog, select **Local printer** and clear the **Automatically detect and install my Plug and Play Printer** checkbox. Click **Next**.
4. Click **Create a new port** and highlight **Infoprint Select** from the pull-down list. Click **Next**.
5. 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.)
6. Continue by starting with step 5 of the procedure documented in "Adding your first InfoPrint Select printer on Windows 2000 systems" on page 117, configuring the new port you just added.

Creating InfoPrint Select printers on Windows XP systems

This section includes:
- "Adding your first InfoPrint Select printer on Windows XP systems"
- "Adding an additional InfoPrint Select printer on Windows XP systems" on page 121

Adding your first InfoPrint Select printer on Windows XP systems

Before adding an InfoPrint Select printer to your Windows XP system, you must perform these steps:
- Collect the information described in "Collecting required information" on page 115.
- Configure the server as described in "Configuring your InfoPrint Manager server to work with InfoPrint Select" on page 110.

Follow these steps to add an InfoPrint Select printer to your Windows XP system:

1. From the Windows desktop, click **Start** → **Settings** → **Printers and Faxes**.
2. The **Add Printer Wizard** window displays. Click **Next**.
3. In the **Local or Network Printer** dialog, select the **Local printer** button and ensure that the **Automatically detect and install my Plug and Play Printer** button is **not** selected. Click **Next**.
4. In the **Select the Printer Port** dialog, select the **Use the following port** check box, then scroll down the list of ports until you find the port and select it. Click **Next**.
5. Click **Have Disk**.
   a. Click **Browse**.

> **Note:** If you are using a printer driver other than those provided with InfoPrint Manager or Select, specify that printer driver now.

   b. Navigate to the directory **C:\Program Files\IBM\Infoprint Manager\PPDs for PSF**. This directory holds the required **ibmprint.inf** file. Highlight this file.

   c. Click **Open**.

   d. Click **OK** to close the **Install from Disk** window.

6. Select the manufacturer and model of your printer and click **Next**.

7. If the driver for your printer is already installed, the **Use Existing Driver** dialog appears. Click **Next**.

8. The **Name your Printer** dialog appears. Enter a name for the printer in the field provided. This is the name by which the printer will be known to your Windows applications and the Windows desktop. Click **Next**.

9. Select the **Do not share this printer** radio button and click **Next**.

10. When you are asked **Would you like to print a test page?** select **No** and click **Next**.

11. Click **Finish**.

12. On the menu bar of the **Printers and Faxes** window, click **File** and select **Server Properties**.

13. In the **Print Server Properties** window, click the **Ports** tab.

14. Highlight the **Infoprint Select** port that you want to configure and click **Configure Port**.

15. In the **Infoprint Port Configuration** window, ensure that the **Print Server** field shows **Infoprint Manager**.

16. In the **Host Name** field, type the host name of your InfoPrint Manager server.

17. In the **Host Port** field, type the port number that your InfoPrint Manager server uses to communicate with client systems. The default port is 6874.

> **Note:** You can find this port number in the **Service Configuration** dialog in the Management Console.

18. In the **Server name** field, specify the name of the Manager server (**pdserver**) where your destination resides. If you are unsure of the correct Manager server name, specify the default value of * to list all the printers on all the Manager servers. Specifying the server name greatly reduces the number of printers listed, which reduces the amount of time it takes to configure a port.

> **Note:** If you know the name of the printer you wish to use, type it in the **Printer name** field and go to step 21 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 choose.

19. Click **Refresh Printer Selection List**.

20. Select the appropriate printer from the list.

21. Click **OK**.

22. Click **Close**.

When Files Needed dialog appears: A **Files Needed** dialog may open at this point. In all likelihood, the file you need (pscript.dll) is already present on your system. If the **Files Needed** dialog does appear, follow these steps:

1. Click **Browse**.

2. Navigate to the `c:\windows\system32` directory (assuming that your operating system is installed on the c: drive), and select the file that is needed.
3. Click **Open**.
4. Click **OK**.
5. If the `pscript.dll` file is not found in this directory, you must load it from the operating system CD-ROM. To do this, follow these steps:
   a. Insert the Windows XP operating system CD-ROM.
   b. Click **Browse** on the **Files Needed** dialog.
   c. Navigate to the `d:\I386\Pscript.dll_` file (where *d:* is your CD-ROM drive).
   d. Click **Open** and then **OK** to complete the configuration.

If you want to add additional InfoPrint Select printers to your environment, follow the procedure described in "Adding an additional InfoPrint Select printer on Windows XP systems."

Adding an additional InfoPrint Select printer on Windows XP systems

Before adding an InfoPrint Select printer to your Windows XP system, you must perform these steps:
- Collect the information described in "Collecting required information" on page 115.
- Configure the server as described in "Configuring your InfoPrint Manager server to work with InfoPrint Select" on page 110.

To print to an additional InfoPrint Select printer, you must add an additional InfoPrint Select port. Otherwise the configuration is similar to that described in "Adding your first InfoPrint Select printer on Windows XP systems" on page 119.

To add an additional InfoPrint printer to your Windows XP system, follow these steps:
1. From the Windows desktop, click **Start → Settings → Printers and Faxes → Add Printer**.
2. Select **Add a printer**. The **Add Printer Wizard** window displays. Click **Next**.
3. In the **Local or Network Printer** dialog, select **Local printer** and clear the **Automatically detect and install my Plug and Play Printer** checkbox. Click **Next**.
4. Click **Add port** and highlight **Infoprint Select** from the pull-down list. Click **Next**.
5. 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.)
6. Continue by starting with step 5 of the procedure documented in "Adding your first InfoPrint Select printer on Windows XP systems" on page 119, configuring the new port you just added.

Creating InfoPrint Select printers on Windows Vista Business or Enterprise systems

This section includes:
- "Adding your first InfoPrint Select printer on Windows Vista Business or Enterprise systems" on page 122

- "Adding an additional InfoPrint Select printer on Windows Vista Business or Enterprise systems" on page 123

Adding your first InfoPrint Select printer on Windows Vista Business or Enterprise systems

Before adding an InfoPrint Select printer to your Windows Vista Business or Enterprise system, you must perform these steps:

- Collect the information described in "Collecting required information" on page 115.
- Configure the server as described in "Configuring your InfoPrint Manager server to work with InfoPrint Select" on page 110.

Follow these steps to add an InfoPrint Select printer to your Windows Vista Business or Enterprise system:

1. From the Windows desktop, click **Start → Settings → Printers**.
2. Select **Add a printer**. The **Add Printer** window displays. Select **Add a local printer**.
3. On the **Choose a printer port** page, select the **Use an existing port** option button, then scroll down the list of ports until you find the port and select it. Click **Next**.
4. Click **Have Disk**.
   a. Click **Browse**.

      Note: If you are using a printer driver other than those provided with InfoPrint Manager or Select, specify that printer driver now.
   b. Click **Open**.
   c. 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 appears. Click **Next**.
7. The **Type a printer name** dialog appears. Enter a name for the printer in the field provided. This is the name by which the printer will be 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 the **Ports** tab.
11. Highlight the **Infoprint Select** port that you want to configure and click **Configure Port**.
12. In the **Infoprint Port Configuration** window, ensure that the **Print Server** field shows **Infoprint Manager**.
13. In the **Host Name** field, type the host name of your InfoPrint Manager server.
14. In the **Host Port** field, type the port number that your InfoPrint Manager server uses to communicate with client systems. The default port is 6874.

    Note: You can find this port number in the **Service Configuration** dialog in the Management Console.
15. In the **Server name** field, specify the name of the InfoPrint Manager server (**pdserver**) where your destination resides. If you are unsure of the correct InfoPrint Manager server name, specify the default value of * to list all the

printers on all the InfoPrint Manager servers. Specifying the server name greatly reduces the number of printers listed, which reduces the amount of time it takes to configure a port.

Note: If you know the name of the printer you wish 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 choose.

16. Click **Refresh Printer Selection List**.
17. Select the appropriate printer from the list.
18. Click **OK**.
19. Click **Close**.

If you want to add additional InfoPrint Select printers to your environment, follow the procedure described in "Adding an additional InfoPrint Select printer on Windows Vista Business or Enterprise systems."

Adding an additional InfoPrint Select printer on Windows Vista Business or Enterprise systems

Before adding an InfoPrint Select printer to your Windows Vista Business or Enterprise system, you must perform these steps:

- Collect the information described in "Collecting required information" on page 115.
- Configure the server as described in "Configuring your InfoPrint Manager server to work with InfoPrint Select" on page 110.

To print to an additional InfoPrint Select printer, you must add an additional InfoPrint Select port. Otherwise the configuration is similar to that described in "Adding your first InfoPrint Select printer on Windows Vista Business or Enterprise systems" on page 122.

To add an additional InfoPrint printer to your Windows Vista Business or Enterprise system, follow these steps:

1. From the Windows desktop, click **Start → Settings → 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. Continue by starting with step 4 on page 122 of the procedure documented in "Adding your first InfoPrint Select printer on Windows Vista Business or Enterprise systems" on page 122, configuring the new port you just added.

Printing from applications

The following must be kept in mind 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 may 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

If you want to check the status of your printer before committing a print job, follow the appropriate procedure below for your version of Windows:

- Windows 2000, click **Start → Settings → Printers**
- Windows XP, click **Start → Settings → Printers and Faxes**
- Window Vista Business or Enterprise, click **Start → Settings → Printers**

Select the printer that you want to check. Right click on your selection and choose **View IPM 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. If you want 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.

Specifying InfoPrint attributes

The enhanced InfoPrint Select client allows you to send InfoPrint attributes with your print jobs. Once you activate the attributes dialog (see "Selecting enhanced or standard InfoPrint Select" on page 109), 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 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 allows you to disable submission error message boxes. This enables unattended operation.
- **Re-spool jobs if submission fails** that allows you to 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 the following content:

```
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 *InfoPrint Manager: Reference* manual.

Notes:

1. Before specifying any InfoPrint attributes, refer to the *InfoPrint Manager: Reference* for specific information and syntax rules.

2. The 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 the following hierarchy is how InfoPrint Manager determines what to send with the job:

   a. Values specified in the **Attributes** field on the **Other** tab.

   b. Values specified in the **Attributes file** field on the **Other** tab.

   c. Any values specified on either the **General**, **Scheduling**, or **Messages** tab.

Viewing and canceling jobs

After you have submitted your job, InfoPrint Select allows you to access the InfoPrint server queues to view their status and hold, cancel, or release jobs. Use the following procedure:

1. From the **Start** menu on your Windows client, access the **Settings → Printers** window.

2. From the **Printers** window, right-click on the printer and select **View IPM Queue**.

3. From the *printer_name* **InfoPrint Manager Jobs** window, you can hold, cancel, or release jobs in the queue on the InfoPrint server.

Commands you can use with Select

Typically, InfoPrint Select is used to allow users to 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 *Infoprint Manager Common Clients* CD-ROM, LCD4–1917.

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

InfoPrint Manager allows authorized users (normally all users) to use the following 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 allows authorized users (the job owner is usually authorized) to use the following 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 the following 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 allows you to 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, refer to *InfoPrint Manager: Reference* or to the man pages. Command man pages have the same name as the command.

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 *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 the following:

```
                                  Intervening Destination Destination
Job ID                Name      State    Jobs        Requested   Assigned
--- ---------------- --------- -------- ----------- ----------- -----------
13  Serv1:1104221000 report.ps printing 0           london      caxton
14  Serv1:1104221023 myjob.ps  pending  8           london      morris
```

Specifying the destination name

If you want 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 by doing the following:

1. Open a **Command Prompt** window and edit the autoexec.bat file.
2. Add the following line to the file:

   ```
   SET PDPRINTER=destinationname
   ```

3. Save your changes and close the **autoexec.bat** file.
4. Restart the Windows system to make this change effective.

Chapter 18. Windows gateway printer

A Windows gateway printer is a Windows shared printer that you create on your InfoPrint Manager server system. This allows users anywhere in the network to submit print jobs through InfoPrint Manager. Users must follow the instructions in "Adding a Windows gateway printer to a workstation" to add the Windows gateway printer to their desktops. Use the Management Console to create and administer a Windows gateway printer. The Management Console help includes instructions.

Note: When InfoPrint Manager is uninstalled, all Windows Gateway printers are deleted. Therefore, you must have your users manually delete the Windows Gateway printer from their desktops after the uninstall.

Adding a Windows gateway printer to a workstation

To add a Windows gateway printer to a workstation, instruct your users to follow these steps:

1. Locate the share name of the Windows gateway printer.
2. Follow the standard procedure for adding a network printer to your desktop. This procedure depends on the operating system that you use. For example, on Windows systems, use the **Add Printer Wizard** to create a printer that will be managed by network print server. When you are prompted for the name of the printer to connect to, enter the share name of the Windows gateway printer.
3. Once the connection to the Windows gateway printer is created, you can print to it just as you would print to any other printer.

Note:

1. This procedure assumes that you have already created the Windows gateway printer on the InfoPrint Manager server system.
2. When the InfoPrint Manager server is uninstalled, any Windows gateway printers that exist on the server are deleted. However, connections to those Windows gateway printers that have been added to workstations are still present; they are still displayed in the Printers window, and you can still try to print to them from applications. Because the Windows gateway printer on the InfoPrint Manager server no longer exists, those print jobs will fail. If you try to print to one of these Windows gateway printer, you will get an application-dependent message that does not identify this problem. To resolve this problem, delete the Windows gateway printer from your desktop and create a new one once your print system administrator has created a new one.

Chapter 19. IPP gateway printer

InfoPrint Manager provides an Internet Printing Protocol (IPP) gateway. The IPP gateway allows 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 Management Console to enable the IPP gateway.

An **Internet Printing Protocol (IPP) gateway printer** is a printer that you create on a client workstation using IPP client software, such as the Windows 2000 IPP client. 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.

Adding an IPP gateway printer to a workstation

Instruct your end users to follow the steps below in order to add a printer that uses the IPP gateway to their desktops. This procedure assumes that IPP client software is installed on the workstation. If the IPP client software is not installed, the Printer Working Group (the organization that is leading the development of IPP) provides a list of IPP client software that you can use to find an appropriate client at:

http://www.pwg.org/ipp/IPP-Products.html

1. Locate the address of the printer that you want to print to.
2. Follow the instructions provided with your IPP client software for adding a printer to your desktop.

After you have added the printer to your desktop, you can print to it just as you would print to any other printer.

Chapter 20. Using the InfoPrint AIX client

The InfoPrint AIX client is installed on all InfoPrint AIX servers with the **InfoPrint Manager for AIX Base Server**. To install the InfoPrint AIX client on any AIX servers that do not have InfoPrint Manager for AIX, you can use either the **Infoprint Manager Common Clients** CD-ROM or the **Infoprint Manager for AIX Base Server** CD-ROM. This client can be used to send commands to InfoPrint Manager for either AIX or Windows servers. The InfoPrint AIX client supports files greater than 2 GB in size.

The InfoPrint AIX client allows you to enter InfoPrint commands on the AIX command line. It also allows you to enter **enq**, **lp**, **lpr**, and **qprt** commands. It has no graphical user interface.

Note: Consult the installation procedures on either the InfoPrint Manager for AIX site or the InfoPrint Manager for Windows site, both at http://www.infoprint.com, for the latest information on installing the InfoPrint AIX client.

Installing the InfoPrint AIX client

Attention: The InfoPrint AIX client and the InfoPrint server are available in the following languages:
* English
* French
* German
* Italian
* Japanese
* Spanish
* Korean

You should associate the AIX client with an InfoPrint server running in your language.

To install the InfoPrint AIX client on an AIX system where you have not installed the InfoPrint server, follow these steps:
1. Log onto AIX as **root**.
2. Insert the **Infoprint Manager Common Clients**, LCD4-1917, into the drive.
3. If this is the first time you are installing software on this AIX system, create the **/cdrom** file system.
   a. Start the System Management Interface Tool (SMIT).
      * To start the AIX windows version of SMIT, enter the following command:
        ```
        smit cdrfs
        ```
      * To start the ASCII version of SMIT, enter the following command:
        ```
        smitty cdrfs
        ```
      The CDROM File Systems panel is displayed.

```
                            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
```
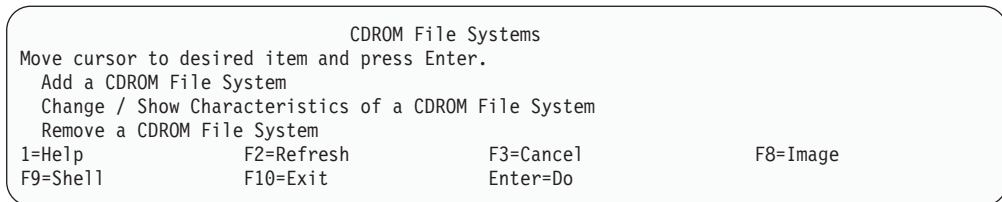
Figure 11. SMIT CDROM File Systems panel

> b. Select **Add a CDROM File System**.

```
                         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
```
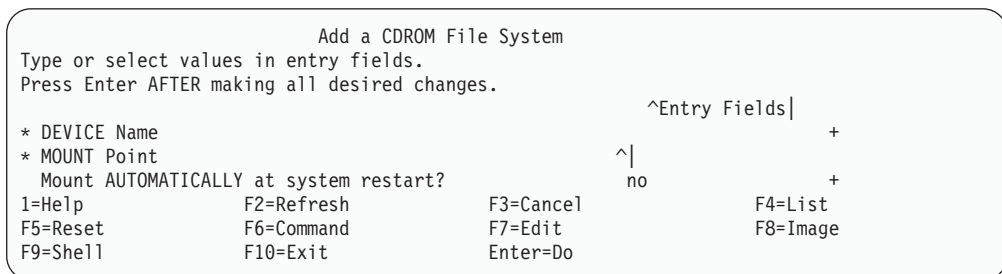
Figure 12. SMIT Add a CDROM File System panel

> c. In the **DEVICE name** field, enter the identifier of your CD-ROM drive.
>
> d. In the **MOUNT POINT** field, enter /cdrom.
>
> e. Select **OK** (AIX windows version) or press **Enter** (ASCII version).
>
> f. Select **Cancel** (AIX windows version) or press **F10** (ASCII version) to exit from SMIT.

4. To mount the CD-ROM, enter:

    ```
    mount /cdrom
    ```

5. Enter the following 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 server you want to communicate with (**PDHOST**) is running.

    PortNumber
    > is the number of the port for the InfoPrint 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

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

InfoPrint Manager allows authorized users (normally all users) to use the following 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 allows authorized users (the job owner is usually authorized) to use the following 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 the following 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 allows you to 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, refer to
InfoPrint Manager: Reference or to the man pages. Command man pages have the
same name as the command.

Examples using the InfoPrint AIX client

The *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 the following:

```
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 the following:

```
                             Intervening Destination Destination
Job ID               Name   State    Jobs        Requested   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

You want to restrict the actual destination Printer3 so that it does not accept very large jobs. To do this:

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 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
```

Chapter 21. Using the InfoPrint HP-UX client

The InfoPrint Manager HP-UX client enables users of HP-UX 11.0 and above to issue InfoPrint commands over a TCP/IP-connected network to an InfoPrint Manager for AIX or an InfoPrint Manager for Windows server. Using a UNIX® command line or shell script, you can query server, printer, and print job status; change the state of a server, printer, or print job; create, delete, or reorder a print job on the server. The HP-UX client does not support files larger than 2 GB in size.

To install the HP-UX client on an HP-UX server, you can use the **Infoprint Manager Common Clients**, LCD4-1917.

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, refer to *InfoPrint Manager for Windows: Procedures*.

Note: Consult the installation procedures on either the InfoPrint Manager for AIX site or the InfoPrint Manager for Windows site, both at

`http://www.infoprint.com`

for the latest information on installing the InfoPrint Manager HP-UX client.

Installing the InfoPrint Manager HP-UX client

Attention: The HP-UX client and the InfoPrint server are available in the following languages:
- English
- French
- German
- Italian
- Japanese
- Spanish
- Korean

To use a non-English version of InfoPrint Manager, your AIX system must have installed the file sets for that language. You should associate the HP-UX client with an InfoPrint server running in your language.

To install the InfoPrint Manager HP-UX client, follow these steps:
1. Log onto the HP-UX system as **root**.
2. Create a directory called **/usr/lpp/pd/bin** on the HP-UX client system. This directory must have approximately two megabytes of available storage.
3. Copy the pdcommand.HP-UX.11 file from the **Infoprint Manager Common Clients**, LCD4-1917, to the **/usr/lpp/pd/bin** directory.
4. Enter **echo $NLSPATH** to determine the value of this environment variable. If the **NLSPATH** environment variable does not exist . . .
5. Run **locale** to determine the value of the **LC_MESSAGES** environment variable. Make a note of this value.

6. Copy the **ipr.cat** file from the **Infoprint Manager Common Clients**, LCD4-1917, to the **/usr/lib/nls/msg/***locale* directory, where *locale* is the value that you saved in step 4.

7. Change to the **/usr/lpp/pd/bin** directory.

8. Type the following commands:
   ```
   chmod 755 pdcommand
   mv pdcommand.HP-UX11 pdcommand
   ```

9. Create links to the **pdcommand** for each supported command that you wish to make available. See "Commands you can use from the InfoPrint HP-UX client" on page 141 for the names of the supported commands.

   For example, to support the **pdls** command, which lists information about InfoPrint objects, type the following command:
   ```
   ln -s pdcommand pdls
   ```

10. Create a shell script in the language of your choice or manually set the following environment variables:

    PDHOST
    > The name of the host where the InfoPrint server resides.

    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.

    PATH Add the **/usr/lpp/pd/bin** directory to the value of this variable. It must be the first directory in the path; otherwise, a conflict with the **HPDPS** daemon exists.

    NLSPATH
    > The path for the message catalog.

    The following 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"
    export PATH=/usr/lpp/pd/bin:$PATH
    export NLSPATH=/usr/lib/nls/msg/%L/%N:
    ```

11. Test the system:

    a. Open a command line window.

    b. Set the environment variables as directed in Step 10, either manually or using a shell script.

    c. 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
    ```

    d. Arrange for all users of the HP-UX client to set the environment variables as directed in Step 10, 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.

Commands you can use from the InfoPrint HP-UX client

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

InfoPrint Manager allows authorized users (normally all users) to use the following 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 allows authorized users (the job owner is usually authorized) to use the following 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 the following 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 allows you to 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, refer to
InfoPrint Manager: Reference or to the man pages. Command man pages have the
same name as the command.

Examples using the InfoPrint HP-UX client

The *InfoPrint Manager: Reference* and the command man pages show several
examples of each command that you can issue from the InfoPrint HP-UX 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 the following:

```
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," enter:

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

Removing a job

To remove one of the jobs that was listed in "Querying jobs," enter:

```
pdrm newyork:job_ID
```

Chapter 22. Using the InfoPrint Manager Sun Solaris client

The InfoPrint Manager Sun Solaris client enables users of Sun Solaris 2.5.1 and above to issue InfoPrint commands over a TCP/IP-connected network to an InfoPrint Manager for AIX or an InfoPrint Manager for Windows server. Using a UNIX command line or shell script, you can query server, printer, and print job status; change the state of a server, printer, or print job; create, delete, or reorder a print job on the server. The Sun Solaris client does not support files larger than 2 GB in size.

To install the InfoPrint Manager Sun Solaris client, you can use the **Infoprint Manager Common Clients**, LCD4-1917.

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, refer to *InfoPrint Manager for Windows: Procedures*.

Note: Consult the installation procedures on either the InfoPrint Manager for AIX site or the InfoPrint Manager for Windows site, both at `http://www.infoprint.com`, for the latest information on installing the InfoPrint Manager Sun Solaris client.

Installing the InfoPrint Manager Sun Solaris client

Attention: The Sun Solaris client and the InfoPrint server are available in the following languages:
- English
- French
- German
- Italian
- Japanese
- Spanish
- Korean

You should associate the Sun Solaris client with an InfoPrint server running in your language.

To install the InfoPrint Manager Sun Solaris client, follow these steps:
1. Log on to the Sun Solaris client system as **root**.
2. Create a directory called **/usr/lpp/pd/bin** on the Sun Solaris client system. This directory must have approximately one megabyte of available storage.
3. Copy the **pdcommand.solaris.251** file from the **Infoprint Manager Common Clients** CD-ROM, LCD4-1917, to the **/usr/lpp/pd/bin** directory.
4. Enter **locale** to determine the value of the **LC_MESSAGES** environment variable. Make a note of this value, for example, **en_US**.
5. Copy the **ipr.cat** file from the **Infoprint Manager Common Clients** CD-ROM, LCD4-1917, to the **/usr/lib/locale/<locale>** directory, where **<locale>** is the value that you noted in the last step. For example, **/usr/lib/locale/en_US/**.
6. Change to the **/usr/lpp/pd/bin** directory.
7. Type the following command:

```
mv pdcommand.solaris.251 pdcommand
```

8. Create links to the **pdcommand** for each supported command that you wish to make available. See "Commands you can use from the InfoPrint Sun Solaris client" on page 147 for the names of the supported commands.

   For example, to support the **pdls** command, which lists information about InfoPrint objects, type the following command:

   ```
   ln -s pdcommand pdls
   ```

9. Create a shell script in the language of your choice or manually set the following environment variables:

   PDHOST
   The name of the host where the InfoPrint server resides.

   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.

   PATH Add the **/usr/lpp/pd/bin** directory to the value of this variable.

   NLSPATH
   The path for the message catalog.

   The following 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"
   export PATH=/usr/lpp/pd/bin:$PATH
   export NLSPATH=/usr/lib/locale/%L/%N:$NLSPATH
   ```

10. Test the system:

    a. Open a command line window.

    b. Set the environment variables as directed in Step 9, either manually or using a shell script.

    c. 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
       ```

    d. Arrange for all users of the Sun Solaris client to set the environment variables as directed in Step 9, 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.

Commands you can use from the InfoPrint Sun Solaris client

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

InfoPrint Manager allows authorized users (normally all users) to use the following 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 allows authorized users (the job owner is usually authorized) to use the following 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 the following 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 allows you to 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, refer to *InfoPrint Manager: Reference* or to the man pages. Command man pages have the same name as the command.

Examples using the InfoPrint Sun Solaris client

The *InfoPrint Manager: Reference* and the command man pages show several examples of each command that you can issue from the InfoPrint Sun Solaris 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 the following:

```
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," enter:

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

Removing a job

To remove one of the jobs that was listed in "Querying jobs," enter:

```
pdrm newyork:job_ID
```

Chapter 23. 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 for AIX or an InfoPrint Manager for Windows server. Using a UNIX command line or shell script, you can issue a variety of commands to the InfoPrint server. The Linux client requires Red Hat 7.3 or above. The Linux client will support files greater than 2 GB in size.

Installing the InfoPrint Linux client

To install the InfoPrint Manager Linux client, follow these steps:

1. Log into the Linux system as **root**.
2. If you are installing from the Infoprint Manager Common Clients CD, LCD4-1917:
   a. Insert the CD-ROM into the drive.
   b. Mount the file system by typing:

      `mount /mnt/cdrom`

   c. Type:

      `cd /mnt/cdrom/linux`

   d. Install the Linux Client package by typing:

      `rpm -i ipr-cmd-1.0-0.i386.rpm`

   e. Unmount the file system.
   f. Remove the CD-ROM.
3. If you are installing from the Web:
   a. Download the Linux Client package.
   b. Install the Linux client package by typing:

      `rpm -i ipr-cmd-1.0-0.i386.rpm`

4. The following environment variables must be set for the InfoPrint Manager 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 resides.

   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:

a. Log off and log back on to pickup the changes.

b. 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
   ```

Commands you can use from the InfoPrint Linux client

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

InfoPrint Manager allows authorized users (normally all users) to use the following 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 allows authorized users (the job owner is usually authorized) to use the following 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 the following 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 allows you to 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, refer to *InfoPrint Manager: Reference* or to the man pages. Command man pages have the same name as the command.

Security Considerations

Access to the InfoPrint Manager server and to the InfoPrint Manager commands is controlled on the system where the server is installed. If you are using InfoPrint Manager for AIX and your InfoPrint Manager server uses DCE security, you can only use the **pdpr**, **pdls**, and **pdq** commands. Otherwise, for information about providing access, refer to the following books:
- *InfoPrint Manager for AIX: Procedures*, G544-5815
- *InfoPrint Manager for Windows: Procedures*, G544-5814

National Language Support Considerations

InfoPrint Manager servers are available in the following languages:
- English
- French
- German
- Italian
- Japanese
- Spanish
- Korean

You should associate (using PDHOST and PD_SOCKET) the Linux client with an InfoPrint Manager server running in your language. If you are running in a language not listed in this section, associate the Linux client with an InfoPrint server running in English.

Examples using the InfoPrint Linux client

The *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 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.

InfoPrint returns information similar to the following:

```
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" &&
destination-realization==logical *:
```

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 the following:

Job ID	Name	Intervening State	Destination Jobs	Destination Requested	Destination Assigned
13	Serv1:1104221000	printing	0	london	caxton
14	Serv1:1104221023	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 the following:

1. Before you can modify the attributes of the Printer3 actual destination, you must disable it by entering the following:

   ```
   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
```

Uninstalling the Linux client

1. Log in as **root**.
2. Type:

   rpm -e ipr-cmd-1.0-0

Chapter 24. InfoPrint Manager hot folders

An InfoPrint Manager *hot folder* is a directory that is associated with a logical destination. When you copy or move a file to the hot folder, InfoPrint Manager automatically submits the file to that logical destination. The default job and document attributes that are set for that logical destination are applied to jobs submitted through the hot folder.

If all of the systems that will be submitting jobs to hot folders are Windows systems, you can use standard Windows folder sharing to make the hot folder accessible to both the InfoPrint Manager server and to users. If you will be submitting jobs to hot folders from other systems (such as AIX), you will have to install and configure separate software to transfer the files (such as AIX FastConnect for Windows). The procedures below assume that jobs will be submitted only from other Windows systems.

Note: Make sure you know what kinds of files the InfoPrint Manager destination will accept. The files that you put in the hot folder should already be print data streams (such as PCL or PostScript), not the standard "working" files that many desktop programs create. For example, if you are writing a report using word processing software, you cannot simply save the file and copy that file to the hot folder to be printed. You need to convert it into a print data stream first. One way to do that conversion is to create a printer on your desktop that uses a PostScript or PCL driver and the **FILE:** port. If you send a job to that printer, the output won't be printed; it will be saved in a file (called my_report.ps, for example). Then, you can copy the new file into the hot folder to be sent to InfoPrint Manager.

Configuring your system to work with hot folders

1. Decide what Windows system you want to create the hot folder on. Make sure that the InfoPrint Manager server and all users who will use it can access that system.

   Notes:

   a. It is strongly recommended that you create your hot folder on the same system that your InfoPrint Manager server is installed on for these reasons:
      - Performance will be better because the files have to be transferred over the network only once.
      - The polling traffic created by the InfoPrint Manager server process when it is looking for new files may cause performance degradation of the remote server hosting the directory, the InfoPrint Manager system, or the network connection between them.
      - If you need to restart the system that the InfoPrint Manager server is installed on, the InfoPrint Manager server will automatically have access to the hot folder when it restarts. If the hot folder is on a different system, you must log on to the InfoPrint Manager server system to re-establish the connection.

   b. If you plan to have more than one hot folder, you can create all of them in the same parent directory. That way, users can access all of them through a single mapped drive.

2. Use the regular Windows process to create a directory (add a folder to an existing directory). Name the folder something distinctive, so you know that it is a hot folder, and possibly, what logical destination it submits jobs to or what department should submit jobs to it.

3. Set up sharing on the folder so that the InfoPrint Manager server and users who will submit jobs to it have **write** access to it.

4. Open the InfoPrint Manager Administration GUI.

5. Find or create the logical destination that you want the hot folder to submit jobs to and select it.

6. In the Properties notebook for the logical destination, click the **General** tab and find the **Hot folder location** field. Type the directory path that the InfoPrint Manager server system will use to access the hot folder.

   If the hot folder is in a different partition or on a different hard drive than your InfoPrint Manager server, this path will include the drive letter for that partition or drive and the directory path to the hot folder. For example, d:\hotfolders\copy_postscript_here. Refer to the InfoPrint Manager Administration GUI online help for further instructions.

   Note: A hot folder can be associated with only one logical destination, and a logical destination can be associated with only one hot folder.

7. Set the default document and default job attributes for the logical destination. Unless the job submitter overrides them, these attribute values will be used for all jobs submitted through the hot folder. Refer to the InfoPrint Manager Administration GUI online help for instructions.

When you tell users how to submit jobs to the hot folder, be sure to tell them what types of files the InfoPrint Manager destination can accept and how to generate those files.

Mapping a network drive

On the end user system, use the standard Windows method to map a network drive (available in Windows Explorer) to the InfoPrint Manager hot folder. If there are multiple hot folders within the same directory, you only have to map one network drive to the parent directory; you will be able to access all of the subdirectories through it.

Submitting jobs through a hot folder

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

Note: If you experience problems with hot folders submitting incomplete jobs to the InfoPrint Manager server, use "Specifying hot folder poll method" on page 159 when you have multiple-document jobs or single-document jobs with Network File System shares, else use the method described in "Submitting multiple-document jobs" on page 160.

Attention: If you want to save the file, copy it. Files are deleted from the hot folder after submission.

Specifying job attributes

By default, jobs submitted through a hot folder use the attribute values in the default document and default job associated with the logical destination; and also by default, hot folder jobs are submitted to InfoPrint Manager with job notifications turned off. If you want to receive notifications about jobs that you submit through hot folders, you must specify a **notification-profile** with an explicit **delivery-address** in the .att file. If you want to specify other attributes or use different values for existing attributes, complete these steps.

1. Either on your system or in the hot folder itself, create a text file to use as your attributes file. Name the attributes file *filename*.att, 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`.

2. In the attributes file, specify the InfoPrint attributes and values that you want to use for this job. For example, if you want to print three single-sided copies of `report.pdf`, `report.pdf.att` looks like this:

   ```
   copy-count = 3
   sides = 1
   ```

   Note: The attributes file is in the same format as a –X file passed to a pdpr command.
   For information about job and document attributes, refer to *InfoPrint Manager: Reference*.

3. If you created the attributes file on your system, copy or move the file to the hot folder. The InfoPrint Manager logical destination recognizes the `.att` file extension as an attributes file and knows not to try to print it.

4. Copy or move the print file to the hot folder. The InfoPrint Manager logical destination sees the print file and looks for an attributes file with the same file name. Both of the files are taken and your attributes are used.

Specifying hot folder poll method

There are two hot folder poll methods. By default, the **file access monitoring method** is used when jobs are submitted through a hot folder. This method is used for single or multiple-document jobs. If you have hot folders with large single or multiple-document jobs, or both, copied over the network in a Network File Share folder, you need to use the **file size monitoring method**. This method will check the file size during the poll interval before submitting the job to InfoPrint manager. The default method will not work for files being copied over the network in a NFS folder.

You can specify the hot folder poll method with this procedure:

1. Open the InfoPrint Manager Administration GUI.

2. Find the logical destination that you want the hot folder to submit jobs to and select it.

3. In the **Properties** notebook for the logical destination, click **Hot folder poll method** and select the hot folder poll method suitable for you. If you use the **File size monitoring** method, key in the poll interval value in the **Hot folder poll interval field**. The default value is 30.

4. Copy the documents you want to print into the hot job folder.

   Note: If you copy multiple files in a single operation on a Windows system, the order of document submission will be in alphabetical order. If the print

order matters, rename the files according to the intended submission order or
use the "Submitting multiple-document jobs" method.

Staging jobs

You can stage jobs to InfoPrint Manager with this procedure:

1. Make a copy of the print file on your local system.

   You will end up with 2 files: **report.pdf** and **copy of report.pdf**.
2. Rename the copy of the print file so that it has the same name as the original
   print file and the extension .stg.

   Rename **copy of report.pdf** to **report.pdf.stg**.
3. Copy the new file to the hot folder.

   Copy **report.pdf.stg** and paste it in the hot folder.

   Note: The InfoPrint Manager logical destination ignores files with the .stg
   extension.
4. Change the extension back to the original extension when you want the job to
   print.

   Rename **report.pdf.stg** back to **report.pdf**. InfoPrint Manager will pick up the
   renamed file and send it to print.

Submitting multiple-document jobs

You can use staging to print jobs that contain multiple documents. In this case, you
stage an entire directory. The InfoPrint Manager logical destination prints the
documents as one job, in the order that you copied the files into the directory.

1. Navigate to the hot folder (using Windows Explorer, for example).
2. In the hot folder directory, create a new folder named *jobname*.stg, where
   jobname is any name you choose.

   Note: The InfoPrint Manager logical destination ignores directories with the
   .stg extension.
3. Copy the documents you want to print into the subdirectory in the **same** order
   that you want to print them.

   Note: If you copy multiple files in a single operation, they may not be copied
   in the same order that you selected them. If the print order matters, copy the
   files one at a time.
4. If you want 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 hot folder.
5. Rename the subdirectory from *jobname*.stg to *jobname*. The InfoPrint Manager
   logical destination then accepts all of the files in the subdirectory as a single
   job.

Chapter 25. Submitting print jobs through the InfoPrint Manager LPD

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

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

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

To submit print jobs to the InfoPrint Manager LPD, you can use any LPR client. However, if you want to be able to specify advanced InfoPrint options on the –o flag, you should use the **lprafp** sample code package. **lprafp** is an LPR client that is available as a free download from the InfoPrint Solutions Company Web site. The package includes executable forms of the **lprafp** client for the Windows and AIX (version 5.1 and above) platforms. You can compile this code to use it on other platforms as well. InfoPrint Solutions Company does not provide support for the package.

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

Install and configure lprafp for Windows from the Web

For Windows operating system clients, the **lprafp** sample code package is available for free download from the InfoPrint Solutions Company Web site at **http://www.infoprint.com**. Use this procedure to locate and install the package:

1. Navigate to **http://www.infoprint.com** in your Web browser.
2. Click **Support & downloads**.
3. Click **Support and maintenance**.
4. Select **InfoPrint Manager for Windows** in the **Software Support** list.
5. On the InfoPrint Manager for Windows Home page, click **Downloads**.
6. On the Downloads page, click **InfoPrint Manager for Windows NT® and Windows 2000 downloads**.
7. Choose **lprafp - LPR sample code package** and click **FTP**.
8. Save the **lprafp.zip** file to your machine.
9. Use a zip utility to unzip the package.

10. Open the **readme.txt** file and follow the instructions for installing the package on a Windows system.

Preparing to submit print jobs

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 do the following.

1. Open the file **<install path>\var\pd\lpd\lpdmap.txt** (where **<install path>** is the directory where InfoPrint Manager is installed) in a text editor such as Notepad.
2. Read all of the instructions in the mapping file before you make any changes.
3. Edit the mappings as necessary and save the file using the same name.

Because all LPR clients use different keywords, it is impossible to list them all. The mappings listed are "best guess" mappings and may 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

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

Chapter 26. Installing and configuring the AFP driver

The InfoPrint AFP Driver software allows you to 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 in conjunction 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 for Windows Common Clients CD-ROM. You can also download English and other language versions of the AFP driver from the InfoPrint Solutions Company Web site at **http://www.infoprint.com**. Translated drivers may 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.

Notes:
1. For the most current AFP Driver in English and other languages, go to the InfoPrint Solutions Company Web site at http://www.infoprint.com/.
2. The AFP Driver for Windows 2000 is known to produce unpredictable results when used with InfoPrint Manager for Windows. Therefore, it is highly recommended that you not install the AFP Driver for Windows 2000.
3. 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 Common Clients CD-ROM, LCD4-1917, that came with your InfoPrint Manager package into your CD-ROM drive. The install program starts automatically.
2. Click the **Install Infoprint Products** button and then select the **AFP Print Driver** button.
3. Select the appropriate operating system and language.

   Note: If you are installing the AFP driver files as part of a service update, language information is obtained automatically, and you are not asked to specify a language.
4. The License Agreement displays. Click the **Accept** button, 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, refer to 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.

Notes:

1. The Windows printers that result from these procedures do not send print jobs to actual printer devices; they generate files. If you want 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 2000 or 2003 system

1. Click the Windows **Start** button and select **Settings → Printers**.
2. In the Printers window, double-click the **Add printer** icon to start the **Add Printer Wizard**.
3. On the first panel of the wizard, click **Next**.
4. In the **Local or Network printer** dialog, select **Local** and click **Next**.
5. In the **Select Printer Port** dialog, select **FILE:** and click **Next**.
6. In the next dialog, click **Have disk** without selecting a printer or a manufacturer.
7. In the **Install from disk** dialog, type the path to the directory that you copied the AFP driver files into (for example, `c:\afpdriver`) and click **OK**.
8. Select the printer that you plan to use this driver with from the list and click **Next**.

   Note: If your printer does not appear in the list, select **Infoprint AFP** *nnn*, where *nnn* is the resolution of your printer.

9. In the next dialog, accept the name of the printer and do not set it to be your default printer. Click **Next**.
10. Leave the printer **Not shared** and click **Next**.
11. Do not print a test page and click **Next**.
12. Click **Finish**.
13. If a dialog displays telling you that the driver doesn't have a digital signature, simply select **Yes** to finish installing the driver.

Setting up the InfoPrint AFP Driver on a Windows XP system

1. Click the Windows **Start** button and select **Settings → Printers and Faxes**.
2. In the Printers window, click the **Add a printer** selection to start the **Add Printer Wizard**.
3. On the first panel of the wizard, click **Next**.
4. In the **Local or Network printer** dialog, select **Local** and click **Next**.
5. In the **Select Printer Port** dialog, select **FILE:** and click **Next**.

6. In the next dialog, click **Have disk** without selecting a printer or a manufacturer.

7. In the **Install from disk** dialog, type the path to the directory that you copied the AFP driver files into (for example, `c:\afpdriver`) and click **OK**.

8. Select the printer that you plan to use this driver with from the list and click **Next**.

   Note: If your printer does not appear in the list, select **Infoprint AFP** *nnn*, where *nnn* is the resolution of your printer.

9. In the next dialog, accept the name of the printer and do not set it to be your default printer. Click **Next**.

10. Leave the printer **Not shared** and click **Next**.

11. Do not print a test page and click **Next**.

12. Click **Finish**.

13. If a dialog displays telling you that the driver has not passed Windows Logo testing, simply select **Continue Anyway** to finish installing the driver.

Setting up the InfoPrint AFP Driver on a Windows Vista Business or Enterprise system

1. From the Windows desktop, click **Start** → **Settings** → **Printers**.

2. In the Printers window, click the **Add a printer** selection to open the **Add Printer** window.

3. Select **Add a local printer**.

4. In the **Choose a Printer Port** dialog, select **FILE:** and click **Next**.

5. In the next dialog, click **Have Disk** without selecting a printer or a manufacturer.

6. 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**.

7. Select the printer that you plan to use this driver with from the list and click **Next**.

   Note: If your printer does not appear in the list, select **Infoprint AFP** *nnn*, where *nnn* is the resolution of your printer.

8. In the next dialog, accept the name of the printer and do not set it to be your default printer. Click **Next**.

9. Click **Finish**.

10. If a dialog displays telling you that the driver has not passed Windows Logo testing, simply select **Continue Anyway** to finish installing the driver.

Part 4. Appendixes

Appendix. Accessibility

Accessibility features help a user who has a physical disability, such as restricted mobility or limited vision, use software products successfully. The major accessibility features in the InfoPrint Manager for Windows let users:

- Use assistive technologies such as screen-readers and screen magnifier software.
- Operate specific or equivalent features using only the keyboard.
- Customize display attributes such as color, contrast, and font size.

Using assistive technologies

Assistive technology products, such as screen-readers, function with the user interfaces found in the InfoPrint Manager for Windows. Consult the assistive technology documentation for specific information when using it to access the InfoPrint Manager for Windows.

Keyboard navigation of the user interface

The InfoPrint Manager for Windows user interface complies with the accessibility guidelines for HTML. Users can use keyboard shortcuts or function keys (PF keys) to access the InfoPrint Manager for Windows user interface. For example, Alt+Shift+F2 lets you skip to the main content. Refer to your browser documentation for keyboard shortcuts and default settings for the PF keys and for explanations about how to modify their functions.

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Glossary

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Sources and References

This glossary includes definitions from the following sources:

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- Definitions from *IBM Dictionary of Computing*.
- Definitions that are specific to certain products are so labeled, for example, "In InfoPrint", or "In DCE".

This glossary uses the following cross-references:

Contrast with
> This refers to a term that has an opposed or substantively different meaning.

Synonym for
> This indicates that the term has the same

meaning as a preferred term, which is defined in its proper place in the glossary.

Synonymous with
> This is a backward reference from a defined term to all other terms that have the same meaning.

See This refers you to multiple-word terms that have the same last word.

See also
> This refers you to terms that have a related, but not synonymous, meaning.

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.
>
> In DCE, a list associated with each object in the namespace that specifies the access authorization level for each user or user group.

ACL Access Control List.

acl editor
> A command line interface that allows you to 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, *fax 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™)
An IBM 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 RS/6000 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 prior to the backend program sending it to the printer device.

AIX Advanced Interactive Executive.

AIX-attached printer
A printer device, attached to an RS/6000 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 *channel-attached printer*, *direct-attached printer*, *TCP/IP-attached printer*, *upload-SNA-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 (**piobe**), 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, fax, color, audio, bar code, and multimedia.

archiving
The transfer of digital information from an online system onto magnetic tape, 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 charactes 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*, *channel-attached printer*, *direct-attached printer*, *TCP/IP-attached printer*, *upload-SNA-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 within 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, the program that is invoked by the **qdaemon** process 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*.

In DCE, pointers stored in a DCE cell that are used to connect clients to servers.

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

cathode ray tube (CRT)
A vacuum tube in which a beam of electrons can be moved to draw lines or form characters or symbols on its luminescent (phosphor-coated) screen. CRTs are the heart of all modern computer display screens. Black and white displays have only one phosphor scanned by one electron beam, while color displays have RGB phosphors scanned by three beams.

CDE Common Desktop Environment.

cell Synonym for *DCE cell*.

Cell Directory Service
A DCE component that manages a database of information about resources within a cell.

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.

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.

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.

CRT Cathode ray tube.

CTS Cutter-trimmer-stacker.

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.

DAT Digital audio tape.

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.

DCE Distributed Computing Environment.

DCE authority
The permission granted by DCE to access an object.

DCE cell
The basic unit of operation and administration in DCE. A group of DCE machines that work together and are administered as a unit. A cell represents a group of users, systems, and resources that typically have a common purpose and share common DCE services.

DCE login ID
The identifier of a person logging into DCE. DCE uses this ID to determine a user's authenticity and authorization levels for accessing and modifying data in the DCE cell.

DCE ticket
The time-limited DCE authority granted whenever a user logs into DCE. When the DCE ticket expires, the user must log into DCE again in order to access objects protected by DCE.

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 within 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*, *Generalized Fax 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*.

DFS™ Distributed File Service.

digital Pertaining to data represented by digits, sometimes with special characters and the space character.

digital audio tape (DAT)
A high-capacity, low-cost bulk storage system used for archiving, copying (for backup purposes), and transferring large files. Typical DAT units store 1.3 GB on inexpensive cassette tapes.

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 RS/6000 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*, *channel-attached printer*, *TCP/IP-attached printer*, *upload-SNA-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 Computing Environment (DCE)
A software system from the Open Software Foundation (OSF). DCE provides the services that allow a distributed application to interact with a collection of possibly heterogeneous computers, operating systems, and networks as if they were a single system.

Distributed File System (DFS)
A DCE component consisting of a single, integrated file system that is shared among all DCE users and host computers in a DCE cell. DFS allows users to access and share files stored in a network, without having to know the physical location of the files. It also prevents users from simultaneously modifying the same information.

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 resides 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 in order to smooth the result.

document
In InfoPrint, an object representing a grouping of data within 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 within 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 within 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.

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 transmitted 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 within 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.

extensions

An IBM program-provided software component that enables users to incorporate variable data into fixed-text documents to produce personalized or customized documents.

F

fax destination
In InfoPrint, an actual destination representing a fax device.

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.

FTP
File Transfer Protocol.

G

GCR
Gray component replacement.

Generalized Fax destination support system
In InfoPrint, the destination support system that supports generalized fax destinations.

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 within 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 select 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 imput. 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 allows users to submit jobs from an OS/2 or Windows workstation.

InfoPrint Submit Express

The component of InfoPrint Manager that allows users to 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 transmitting 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 Internet Protocol address of the server in a dotted decimal format where each node is an integer. (For example, `9.99.9.143`).

IPDS Intelligent Printer Data Stream.

ISO International Organization for Standardization.

J

job In InfoPrint, an object that represents a request to print or transmit one or more documents together in a single session. A job includes the data to be printed or transmitted 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*.

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).

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, electronic mail systems,

or fax machines. 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 than can display during the processing of an application.

MICR Magnetic ink character recognition.

Mixed Object Document Content Architecture (MO:DCA)
An architected, device-independent data stream for interchanging documents.

MO:DCA-P
Mixed Object Document Content Architecture Presentation.

modify
In InfoPrint, an action used to modify the values of attributes within 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.

name service
The DCE service that administers the namespace and provides the network binding information that a client requires to access the server.

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 resides.

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 within 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. OSF developed the Distributed Computing Environment (DCE).

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. Palladium was selected in 1990 as the DCE distributed printing technology. InfoPrint was designed using Palladium concepts.

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.

pdcrcds
In InfoPrint, a utility used to create directories within the DCE namespace.

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*.

plug-ins
A component of Adobe PageMaker that enables users to incorporate variable data into fixed-text documents to produce personalized or customized documents.

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.

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.

Privilege Attribute Certificate (PAC)

In DCE, a certified set of access privileges that can be presented by a user or administrator to establish access rights to objects.

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.

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.

Remote Procedure Call (RPC)

A DCE component that manages communication between clients and

servers in a DCE environment. It allows requests from a client program to access a procedure anywhere in the network.

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.

RS/6000

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.

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 within 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 is unable to 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
A bit template indicating which part of an IP address represents the network. A 1 in the subnet mask means that the corresponding bit in the IP address is part of the network address; a 0 means that it is not. For example, if the IP address is `9.99.12.137` and the subnet mask is `255.255.255.0`, the network address is `9.99.12.0`.

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 allows you to perform tasks without entering any commands.

Systems Network Architecture (SNA)
The description of IBM's logical structure, formats, protocols, and operational sequences for transmitting 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 RS/6000 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*, *channel-attached printer*, *direct-attached printer*, *upload-SNA-attached printer*, *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* and *DCE 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-SNA-attached printer*, *upload-TCP/IP-attached printer*.

upload-SNA-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 SNA network. See also *AIX-attached printer*, *channel-attached printer*, *direct-attached printer*, *TCP/IP-attached printer*, *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*, *channel-attached printer*, *direct-attached printer*, *TCP/IP-attached printer*, and *upload-SNA-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 transmitting 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 within a pane that contains a group of objects related to the objects in the pane; for example, a queues well within 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 RS/6000 system, from which a user can perform command-line functions and run X-Windows based applications.

Xtensions
A UNIX-provided software component that enables users to incorporate variable data into fixed-text documents to produce personalized or customized documents.

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