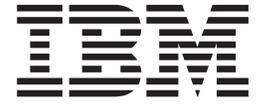Infoprint Manager for AIX

IBM

Getting Started

Version 4 Release 1

Infoprint Manager for AIX

Getting Started

Version 4 Release 1

IBM

> **Internet**
>
> Visit our home page at http://www.ibm.com/printers.

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Part 1. Introduction

Chapter 1. Before you get started

Infoprint Manager for AIX® allows you to manage a complex and heterogeneous print enterprise with a single point of control. This chapter explains the purpose, audience and plan of this book. Before using this manual, you should review the following sections:

- "About this publication"
- "Who should read this publication"
- "Most recent information"

About this publication

This publication describes how to install and begin using IBM Infoprint Manager for AIX (Infoprint). It also describes how to install and begin using the various client components that Infoprint uses to manage your printing environment. By applying the procedures and tasks in this manual, you can set up your minimum Infoprint environment to bring centralized control to your printing environment and help you maximize the capabilities of the printers you possess.

Who should read this publication

This publication contains information for the administrators who create and configure the Infoprint environment. It also contains some information for the operators who monitor the Infoprint server. Before you perform any of the steps documented in this publication, you must understand the general features and requirements of Infoprint Manager for AIX. You can find this information in *IBM Infoprint Manager for AIX: Introduction and Planning Guide*. Consult this publication to determine how Infoprint Manager for AIX Version 4.1 enables you to best manage a diverse print environment from one central location.

Once you have used this publication to install on both the Infoprint AIX server (Part 2, "Getting started with server systems" on page 7) and on the client systems that apply to your print installation (Part 3, "Getting started with client systems" on page 107), you will have an operational Infoprint Manager print environment. At this point, you should consult the *Infoprint Manager for AIX: Procedures* for advanced configuration and operations tasks, and the *Infoprint Manager: Reference* for information about the various Infoprint commands, utilities, and attributes available to you while maintaining the system.

Most recent information

The most recent product information (including updates of this manual and the related Infoprint Manager publications), is found on the World Wide Web at the IBM Printing Systems site (**http://www.ibm.com/printers**). From the Printing Systems homepage:

1. Under **Resources For** click **Infoprint Manager**.
2. Under **Products** in the right hand navigation bar click **Infoprint Manager for AIX** or **Infoprint Manager for Windows**.
3. Under **Product Resources** click **Product Library**.
4. Click on the appropriate Infoprint Manager publication.

Chapter 2. The Infoprint Publication Library

For the most current information, please go to the IBM Printing Systems website at http://www.ibm.com/printers.

Infoprint Manager for AIX Publication Library

Infoprint Manager for AIX provides 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 IBM at the following website:

http://www.elink.ibmlink.ibm.com/public/applications/publications/cgibin/pbi.cgi?CTY=US

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.

Here is the list of publications for Infoprint Manager for AIX:

- *IBM 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 version of Infoprint.
- *IBM Infoprint Manager for AIX: Getting Started*, G544-5817. This publication helps you install and configure IBM Infoprint Manager for AIX. It focuses primarily on server and client system software configuration.
- *Guidelines for Installing Infoprint Manager for AIX 4.1 in an HACMP Configuration*, G544-5818. This publication helps you install and configure HACMP with IBM Infoprint Manager for AIX. It also tells you how to use HACMP with IBM Infoprint Manager for AIX.
- *IBM 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. This publication contains all the IBM Infoprint Manager for AIX procedures that are available as topics on the web in book format, including an index and table of contents for ease of retrievability.
- *IBM Infoprint Manager: Reference*, S544-5475. 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.
- *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 IBM Infoprint Manager for AIX that allows another PSF program (PSF/VM, PSF/MVS, 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.
- *IBM 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 Server/6000 protocol.

- *IBM 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 provides 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 IBM at the following website:

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

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.

Here is the list of publications for Infoprint Manager for Windows:

- *IBM 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 version of Infoprint.

- *IBM Infoprint Manager for Windows: Getting Started*, G544-5717. 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.

- *IBM Infoprint Manager for Windows: Procedures*, G544-5814. This publication contains all the Infoprint Manager for Windows procedures that are available as topics on the web in book format, including an index and table of contents for ease of retrievability.

- *IBM Infoprint Manager: Reference*, S544-5475. 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.

For information on the use of PSF Direct with Infoprint Manager for Windows, visit the Product Library page for Infoprint Manager for Windows at `http://www.ibm.com/printers/R5PSC.NSF/Web/impntrefinfo`.

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 IBM® Infoprint® Manager for AIX® . You can find this information in *IBM Infoprint Manager for AIX: Introduction and Planning Guide*. Consult this publication before proceeding with your installation.

Infoprint Manager CD-ROMs

IBM Infoprint Manager for AIX includes the following CD-ROMs:

IBM Infoprint Manager for AIX: Base Server (LCD4-1916)
Contains all software for installing an Infoprint Manager server on an AIX system. This CD also contains the License Use Management system (LUM), the Infoprint Installer, and an Enrollment Certificate File (ECF) for storing the features purchased for a particular installation. All of the following components are installed with the server; you cannot eliminate any of them.

- **Infoprint Manager server**
- **Infoprint Manager graphical user interfaces (GUIs)**

  Allows you to administer print operations from the system that the server is installed on.

- **Infoprint Manager Notifications** server

  Allows the Infoprint Manager server to send status messages about Infoprint objects to Infoprint Manager Notifications clients.

- **Infoprint Manager Notifications** client

  Allows the Infoprint Manager server to display messages on the system that it is installed on.

IBM Infoprint Manager: Common Client (LCD4-1917)
Contains the following software. Each of these items has its own installer and must be installed separately. All of these components can be installed on multiple systems.

- **Infoprint Select**

  Allows print job submission from Windows applications and the Infoprint Manager command line to destinations managed by an Infoprint Manager server.

- **Infoprint Manager GUIs**

  Allows you to administer and oversee print operations from remote systems.

- **Infoprint Manager Notifications**

  Enables remote systems to receive messages from the Infoprint Manager server.

- **AFP™ Printer Driver for Windows®**

  Allows you to create a Windows printer that generates AFP output.

- **IBM Cross Platform Technologies for Windows** (CPT) version 2.0 Runtime Environment

Must be installed if you want to use the Infoprint Manager GUIs or Infoprint Manager Notifications.

- **Infoprint Manager SAP clients**

  Installs an Infoprint SAP client on a SAP system that resides on either AIX or Windows so you can use the SAP Print feature on either an Infoprint AIX server or an Infoprint Windows server.

- **colorRipd**

  Used to manage the color rasterized image processing (RIP) for the InfoColor 70 and the Infoprint Color 100. Only supported on Infoprint Manager for AIX.

- **Lightning Fax client**

  Used to customize fax supported on Infoprint Manager for AIX. This client runs on Windows client systems.

- **Infoprint Manager AIX client**

  Used to allow users to enter Infoprint commands and the **lp**, **lpr**, and **qprt** AIX print commands on the AIX command line for servers where Infoprint Manager for AIX has not been installed.

- **Infoprint Manager HP client**

  Installs the Infoprint Manager commands on an HP-UX system.

- **Infoprint Manager Sun Client**

  Installs the Infoprint Manager commands on a Sun Solaris system.

IBM Infoprint Manager for AIX: Publications (SK2T-9346)
Contains PDF versions of all product documentation. To browse the information on this CD-ROM, simply insert the disc in the drive. It will automatically launch your default browser to view an HTML index of available publications. (For the most recent versions of these publications, go to http://www.ibm.com/printers.)

> **Note:** The *Print-on-Demand Feature: Submit for Windows* manual is available from this CD-ROM and the IBM Printing Systems web site. For more information on obtaining information from the Web, see "Most recent information" on page 3.)

Optional CD-ROMs

The following specifies the CD-ROM packages that are available as features of Infoprint Manager for AIX Version 4 Release 1:

Infoprint Manager for AIX: Print-on-Demand Feature (LCD4-1918)
The Infoprint Manager Print-on-Demand Feature allows commercial print shops access to the **ppml2afp** data stream transform, the Impositioning assist solution, and other support relevant for a commercial print environment. This support contains the Infoprint Submit client for submitting jobs from Windows systems, and ships with the Mac Submit Feature

Infoprint Manager for AIX: Print-on-Demand Feature (LCD4-1919)
The Infoprint Manager Mac Submit Feature allows users to submit jobs from MAC System 10 clients to an Infoprint server. This support ships with the Print-on-Demand Feature.

Infoprint Manager for AIX Advanced Security/Scalability Feature (LCD4-1920)
The Infoprint Manager Advanced Security/Scalability Feature allows

Infoprint Manager for AIX users to implement DCE 3.1 to maintain the security and scalability of their Infoprint Manager environment.

Infoprint Manager: SAP Print Feature (LCD4-1921)
The Infoprint Manager SAP Print Feature allows SAP users to submit SAP ABAP and OTF print jobs to Infoprint Manager, which transforms those jobs into AFP, and then prints them on either IBM printers or other printers. The SAP Callback support allows SAP users to submit PCL and PostScript jobs, as well as the OTF and ABAP native SAP data stream jobs and allows SAP users to receive both job and device status on their SAP systems. The SAPconnect support allows SAP users to fax out of SAP and receive faxes into SAP. For additional information, refer to the IBM Printing Systems website at http://www.ibm.com/printers.

Infoprint Manager Page Printer Formatting AIX Feature (LCD4-5575)
The Page Printer Formatting Aid (PPFA) optional feature of Infoprint Manager for AIX enables users to create AFP printing resources called page definitions and form definitions. These definitions specify how pages of printed output are formatted and how the printer should handle the physical sheets of paper. Using PPFA, you can turn unformatted z/OS or ASCII line data into highly effective documents without making changes to the application program.

Infoprint Manager for AIX Japanese PostScript Font Feature (LCD4-5577)
The Japanese PostScript Fonts Feature allows Japanese users of Infoprint to print the Kanji double-byte fonts required by PostScript.

Infoprint Manager for AIX Fax Line Feature (LCD4-5577)
The Fax Feature allows users of Infoprint Fax to obtain lines for both the sending and receiving of faxes through Infoprint Manager.

Infoprint Manager DBCS Font Downloader Feature (LCD4-5584)
The Infoprint DBCS Font Downloader is a utility for downloading double-byte PostScript fonts from a Macintosh system to Infoprint Manager.

Infoprint Manager Workgroup Printer Engine Feature (LCD4-5579)
The Infoprint Workgroup Printer Attachment Feature allows users of Infoprint Manager to specify the number of Workgroup (printing from 0 to 49 pages per minute) printers they are running at their installation.

Infoprint Manager for AIX and Windows Low Speed Printer Engine Feature (LCD4-5580)
The Infoprint Low Speed Printer Attachment Feature allows users of Infoprint Manager to specify the number of Low Speed (printing from 50 to 89 pages per minute) printers they are running at their installation.

Infoprint Manager Medium Speed Printer Engine Feature (LCD4-5581)
The Infoprint Medium Speed Printer Attachment Feature allows users of Infoprint Manager to specify the number of Medium Speed (printing from 90 to 116 pages per minute) printers they are running at their installation.

Infoprint Manager High Speed Printer Engine Feature (LCD4-5582)
The Infoprint High Speed Printer Attachment Feature allows users of Infoprint Manager to specify the number of High Speed (printing from 117+ page per minute) printers they are running at their installation.

Programming Request for Price Quotations available with Infoprint

With Infoprint Manager for AIX Version 4 Release 1, you can order from the following series of Programming Request for Price Quotations (PRPQs) that are available from IBM Printing Systems:

Advanced Scan Client Version 1.1.0 (PRPQ 5799–GTG)
Allows users of Infoprint to obtain IBM Infoprint Scan Version 3 Release 2 Modification 3 for use with Infoprint printers and output devices.

Infoprint XT for AIX (PRPQ 5799–GTF)
Allows users of AIX OnDemand to gain the centralized benefits of Infoprint Manager for AIX, while retaining their current OnDemand interfaces. This feature provides the Infoprint XT for AIX Xerox data stream transform to convert Xerox jobs into AFP for printing on either IBM printers or other printers through Infoprint Manager.

Configuring TCP/IP

You may need to configure your AIX 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 Infoprint Manager for AIX systems to your local area network (LAN). You can perform this task when you install Infoprint Manager for AIX 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.	
Adapter	The physical card used to connect this system to the network. An appropriate driver for this card may need to be added.	
Obtain IP address from DHCP server?	The Dynamic Host Configuration Protocol (DHCP) provides a new IP address for this system each time it is restarted. If DHCP is not in use, a static IP address must be assigned.	__ 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.	

Table 1. LAN TCP/IP Configuration Worksheet (continued)

Control Panel Prompt	Description	Value
Subnet Mask	A dotted-decimal number (for example, 255.255.255.0) indicating which part of the IP address identifies the network and which part identifies the system. 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.	

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 AIX 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*.

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.	

Table 2. Printer Network TCP/IP Configuration Worksheet (continued)

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

Chapter 4. Migrating to Infoprint Manager 4.1

Attention: Migrating to Infoprint Manager Version 4.1 requires environment-wide updates. If you plan to migrate a server, be sure to allocate time and resource to make the following upgrades:

- Upgrade all client applications (management and submission) on all networked workstations to 4.1 levels
- Upgrade all interoperating Infoprint Manager for AIX servers to 4.1

If you have previously installed IBM Printing Systems software on your AIX system, you may have invested considerable time defining your printing system configuration. The Infoprint Installer will automatically migrate your Infoprint Manager for AIX 3.2 product configuration to Infoprint Manager 4.1.

- "Preparing to migrate to Infoprint Manager 4.1"
-
-

Preparing to migrate to Infoprint Manager 4.1

Before running the Infoprint Installer to migrate to Infoprint Manager 4.1, it is extremely important to make a complete backup of your current printing system. Consult product documentation for details on how to back up your system. To be completely safe, it is recommended that you make a tape backup of each volume group before proceeding.

The only foolproof way to reverse the migration process (or to recover from a migration failure) is to restore your system from a backup. For a list of files and file systems that you should consider backing up prior to install, see "Backing up Infoprint Manager for AIX 3.2 systems" on page 20.

The migration process will interrupt any active print jobs that have been submitted. Prior to migrating, you should allow all active or pending jobs to complete processing. If you cannot, be sure to delete all active and pending jobs prior to migrating.

During the process of installing the Infoprint software, your AIX software may be updated to ensure that Infoprint will function properly. For more details on the service-level prerequisites of Infoprint Manager, see the "Verifying Software Prerequisites" in the *IBM Infoprint Manager for AIX: Introduction and Planning Guide*. If you are missing any required AIX filesets for Version 4.1, the installer will direct you to install them from your AIX product CD.

Migrating optional Infoprint features

Any optional features of Infoprint Manager 3.2 or previous that are installed on the system will be removed when the base server software is migrated to Version 4.1. This is done because optional features at Version 3.2 may be incompatible with the Version 4.1 server. The use of Version 3.2 options with a Version 4.1 server will not be supported. To load Version 4.1 options, insert the CD-ROMs that contain features you wish to install (for example, the **Infoprint Manager: SAP Print Feature**, LCD4-1921, when the Infoprint Installer prompts you for a disk, as described in "Installing server software and features locally with the Installer" on page 22

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page 22, "Installing server software with Advanced Security/Scalability and features locally with the Installer" on page 32, and "Installing additional features on an existing Infoprint Manager for AIX 4.1 system" on page 50.

Migrating between versions of Infoprint Manager 4.1

Migrating between the two (DCE and non-DCE) versions of Infoprint Manager is simple. Because configuration objects are compatible across the two versions, all that is required is a code refresh. To migrate to or from the DCE version of Infoprint Manager 4.1, do the following:

1. Run the Infoprint Installer.
2. Select **Install Infoprint Manager** check box on the second installer screen.
3. Click **Yes** when asked if you want to retain your configuration.
4. Restart all servers.

Be advised that when migrating between the DCE and non-DCE versions, security information (such as access control lists) is not preserved because the two versions use different security models.

Migrating optional Infoprint features

All optional features of Infoprint Manager 4.1 will be removed when the base server software is migrated between the DCE and non-DCE versions. Therefore, you must select the desired options for reinstallation when migrating between versions of Infoprint Manager 4.1.

Recovering from Infoprint Manager 4.1 migration errors

The only way to recover from a failed migration between versions of Infoprint Manager 3.2 is to restore your system from backups.

Migrating from primary server to secondary server

If you are running the non-DCE version of Infoprint Manager, you may easily migrate an independent primary Infoprint Manager server to interoperate with another primary Infoprint Manager server. To do this, the independent server must become a secondary server:

1. Stop each Infoprint Manager server process running on the future secondary system with the following command:

   ```
   stop_server -F ServerName
   ```

2. Remove the **/var/pddir/default_cell** directory on the future secondary system with the following command:

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

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

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

4. On the primary system, perform the following steps:
   a. To access the Infoprint Utilities main menu, do the following:
      1) If you do not have an Infoprint Manager icon on your front panel, open the **Infoprint** folder in the Application Manager and double click on the **Infoprint SMIT** icon.

2) If you do have an **Infoprint Manager** icon on your front panel, open Infoprint Manager's popup menu and click on the **Infoprint SMIT** icon.

3) Click **Infoprint Utilities**.

b. Click **Configure Secondary Servers (NFS)**, then **Link from Primary Server to Secondary Server**.

c. Provide the information about your secondary system as prompted.

5. On the future secondary system, perform the following steps:

a. To access the **Infoprint Utilities** main menu, do the following:

1) If you do not have an **Infoprint Manager** icon on your front panel, open the **Infoprint** folder in the Application Manager and double click on the **Infoprint SMIT** icon.

2) If you do have an **Infoprint Manager** icon on your front panel, open Infoprint Manager's popup menu and click on the **Infoprint SMIT** icon.

3) Click **Infoprint Utilities**.

b. Click **Configure Secondary Servers (NFS)**, then **Link from Primary Server to Secondary Server**.

c. Provide the information about your secondary system as prompted.

Note: If any of the Infoprint Utility procedures above fail because the user and group identifiers could not be set, you must set these values manually so they are the same on all servers in the namespace. To do this, follow these steps:

a. Invoke SMIT.

b. Click **Infoprint Printing System**, then **Troubleshooting**, then **Standardize Default Users**.

c. Enter ID numbers as prompted.

Perform this procedure on both primary and secondary systems until the same IDs are in use by all servers in the namespace.

Note: There is currently no supported migration path to transform primary Infoprint Manager DCE servers into secondary DCE servers, although Infoprint Manager does support DCE cross-cell communications.

Recovering from primary to secondary migration errors

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

Chapter 5. Installing Infoprint Manager Version 4.1

The Infoprint Installer allows you to install Infoprint Manager for AIX Version 4
Release 1 and the combination of features that meet the needs of your print
environment. The Infoprint Installer allows you to perform a standard install of
Infoprint Manager for AIX, perform a command-line only install (without using the
GUI), and a remote system install. The Infoprint Installer also installs the following
components on your AIX server:

- Infoprint AIX client
- Infoprint Notification client
- SAP clients

In addition, the Installer allows you to install Program Temporary Fixes (PTFs) to
Infoprint Manager 4.1, including updates to the Infoprint Installer.

This topic shows how you can get started using the Infoprint Installer and make
some of these selections. After using the Infoprint Installer, this topic show some of
the post-install configuration decisions you might want to make on your Infoprint
AIX server, such as adding support for an Infoprint Manager language other than
English, configuring an additional Infoprint AIX server to meet your printing
needs, or installing additional Infoprint features at a later time. Finally, this topic
concludes with a brief description of how you can install the three AIX clients on
non-Infoprint AIX servers.

You should install Infoprint Manager software using the most recent version of the
Infoprint Installer. However, before using any version of the Infoprint Installer,
ensure that you have reviewed both hardware and software requirements specified
in the *IBM Infoprint Manager for AIX: Introduction and Planning Guide*. Using an
updated Infoprint Installer allows you to install and configure the very latest
Infoprint Manager features. You will find the most recent Installer on the current
service level CD-ROM.

Information about updates to this release of Infoprint Manager is available on the
World Wide Web, where it will be updated as necessary. To access this
documentation, follow the instructions provided in "Most recent information" on
page 3.

The Publications CD-ROM contains a version of this documentation, but we
strongly recommend that you access the Web site for the most current information.

Installation options

To install the Infoprint Manager for AIX server and features, you have several
options:

- "Installing server software and features locally with the Installer" on page 22
- "Installing server software with Advanced Security/Scalability and features
  locally with the Installer" on page 32
- "Installing Infoprint Manager on remote systems" on page 44

This topic steps through each option in sequence, describing the information that
you will need to perform these installs. First, it describes what you must do *before*
installing Infoprint Manager for AIX 4.1 on your AIX server. It describes the

necessary preparation before using the Infoprint Installer, including suggestions on backing up your existing environment and mounting the initial Infoprint Installer CD-ROM. Then it steps through three distinct Infoprint Installer procedures.

Before proceeding, you should review the **allocatefs** utility that is documented in the *Infoprint Manager: Reference*. This utility allocates the necessary Infoprint file systems on your AIX server. The Infoprint Installer uses this utility to assist you in defining your Infoprint environment. You should take some time to review what the utility does and determine how it can best meet your needs prior to invoking the Infoprint Installer.

Backing up Infoprint Manager for AIX 3.2 systems

If you are migrating from Infoprint Manager for AIX 3.2, you should back up the following files in your Infoprint Manager printing system. Your backup regimen should include backups of all files in the following directories:
- **/ipdata** (if used)
- **/usr/lpp/psf/config**
- **/var/pd**
- **/var/pddir** (if non-DCE server)
- **/var/psf**
- **/var/spool/lpd**

In addition, the following individual files should be backed up:
- **/etc/fst.ports** (if non-DCE server)
- **/etc/rc.pd.servers**
- **/etc/services** (if non-DCE server)

When you install Infoprint Manager for AIX Version 4 Release 1, Infoprint Manager backs up the transform configuration files in the **/tmp/savetransconf/** directory by adding a **.bak** qualifier to each file.

The following list provides the default full path names for six commonly modified transform configuration files:
- **/usr/lpp/psf/pcl2afp/pcl2afp.cfg**
- **/usr/lpp/psf/pcl2afp/pcl2afpd.cfg**
- **/usr/lpp/psf//ps2afp/ps2afp.cfg**
- **/usr/lpp/psf/ps2afp/ps2afpd.cfg**
- **/usr/lpp/psf/ps2afp/pdf2afp.cfg**
- **/usr/lpp/psf/ps2afp/3160d.cfg**

Once you have completed installing the latest Infoprint Manager version, you can edit the **.bak** files in the **/tmp/savetransconf/** directory to begin moving your customized changes into the new configuration files that reside in the **/usr/lpp/psf/** directory.

Note: Because the new configuration files have different source material, you cannot copy the **.bak** files over the new configuration files.

Preparing to use the Infoprint Installer

Before you can use the Infoprint Installer, you must prepare your AIX server to use this program. Use the following procedure if you are installing Infoprint Manager for AIX Version 4 Release 1 for the first time on an AIX server.

1. Log into the AIX system as **root**.

2. Insert the **Base Server CD-ROM**, LCD4-1916, into the CD-ROM reader.

3. Open a terminal window.

   If you are using CDE, you may open a terminal window by clicking on the terminal icon contained in the front panel. (The front panel is the task bar that appears at the bottom of the screen.) By default, the terminal icon is contained in a popup menu above the text editor icon that appears on the front panel.

4. The first time you run the Installer, follow this procedure:

   a. Type the following on the AIX command line:

      ```
      smit cdrfs
      ```

   b. Select **Add a CDROM File System** from the list of choices presented.

   c. Click the **List** button and select your CD-ROM device name (**cd0**, for example).

   d. Type the following in the **MOUNT POINT** field:

      ```
      /cdrom
      ```

   e. Click **OK**. The running person raises his arms to indicate success. If he instead falls down and you see `crfs: 0506-909 /cdrom file system already exists`, do not interpret this as a failure. The existing /cdrom file system should be usable.

   f. Press the **F12** key to exit SMIT.

5. Type the following at the command line:

   ```
   mount /cdrom
   ```

   Once you have mounted the CD-ROM by using the procedure described in "Preparing to use the Infoprint Installer" on page 20, you can submit the following command to print a help statement showing a variety of install options:

   ```
   /cdrom/setup -h
   ```

Notes:

1. If you want to perform a remote install, see "Installing Infoprint Manager on remote systems" on page 44.

2. To install Infoprint Manager server software or optional Infoprint Manager features using the Infoprint Manager Installer GUI on the local AIX server, enter the following command:

   ```
   /cdrom/setup
   ```

3. After mounting the CD-ROM, the Infoprint Installer opens and guides you through the installation and configuration processes, as described in "Installing server software and features locally with the Installer" on page 22.

Installing server software and features locally with the Installer

The following procedure steps through a local install of the Infoprint Manager for AIX 4.1 base and features, using the Infoprint Installer GUI.

1. Once you insert the initial Infoprint Manager CD-ROM, **CD 1: Base Server**, LCD4-1916, into the CD-ROM drive, the Installer's first panel (see Figure 1) advises users to back up the system, using the guidelines described in "Backing up Infoprint Manager for AIX 3.2 systems" on page 20.
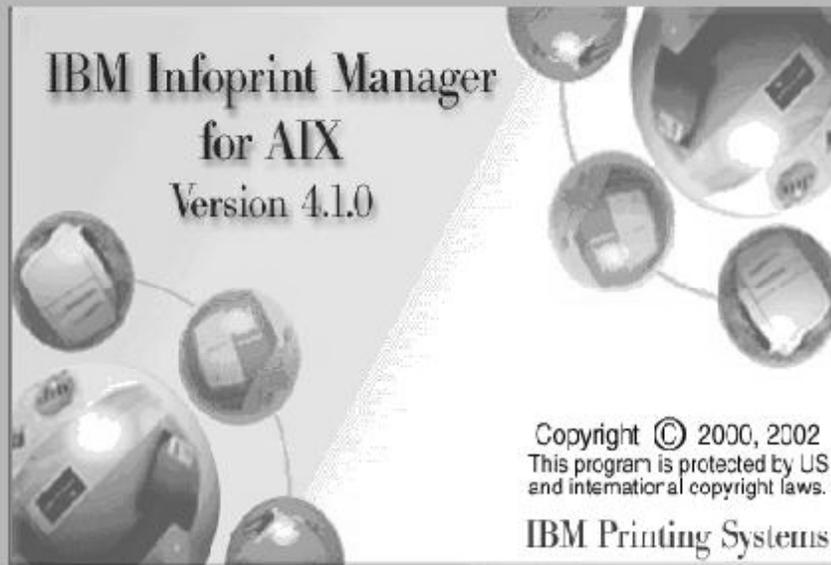
   Click **Next** to proceed.

Figure 1. Infoprint Installer: first panel

2. Allocate your AIX filesystems for Infoprint Manager (see Figure 2).

   If you click on or accept the default of **Automatically Allocated IPM
   Filesystems**, the Installer provides the default values defined in the **allocatefs**
   utility and proceeds to 3 on page 25. If there is not enough space on your
   system, the Installer moves to Figure 3 on page 24 as if you had specified
   Operator Specified IPM Filesystems.

   If you specify the **Operator Specified IPM Filesystems** radio button, the
   Installer allows you to customize the space allocated from the volume groups
   found by Infoprint Manager on your AIX server (see Figure 3 on page 24). As
   noted on this panel, you should review the **allocatefs** utility that is documented
   in the *Infoprint Manager: Reference* before making these decisions.

   Click **Next** to proceed.

   Note: If your AIX server already contains version of the **/var/pd**, **/var/psf**, and
   /var/psf/segments file directories, the Installer skips this panel and
   proceeds to Figure 3 on page 24.

Infoprint file system(s) Do Not exist!

○ Automatically Allocate IPM file system(s)

○ Operator Specified IPM file system(s)

Note: If your System Admin would like to control the
location and size of IPM file system(s), then exit at
this time and read the documentation on the allocatefs
command found in the "Infoprint Manager Reference".

Exit   Next
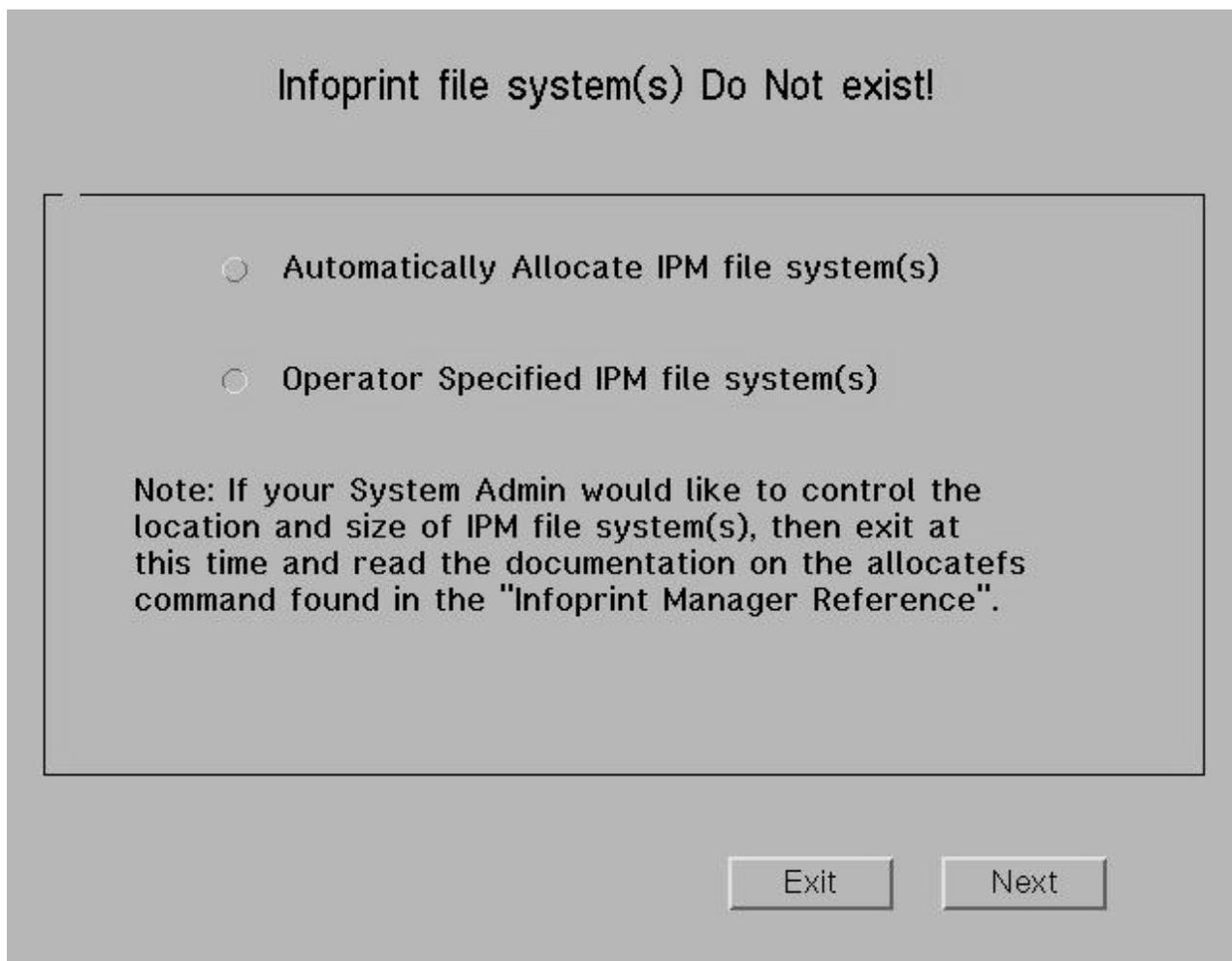
Figure 2. Infoprint Installer: Infoprint Filesystems panel

Note: If you use a volume group name other than the default of **rootvg** in the first column, you must select and highlight each file system name before you can specify a size in the second column.

Once you have made your volume group selections, click **Next** to proceed.

Select Volume Group & Space To Allocate

	Create in vg:	In Megabytes
/var/psf	rootvg	128
/var/pd	datavg	1024
/var/psf/segments	datavg	1024

```
datavg:  7616 MB
rootvg:  4288 MB
```

Previous   Exit   Next
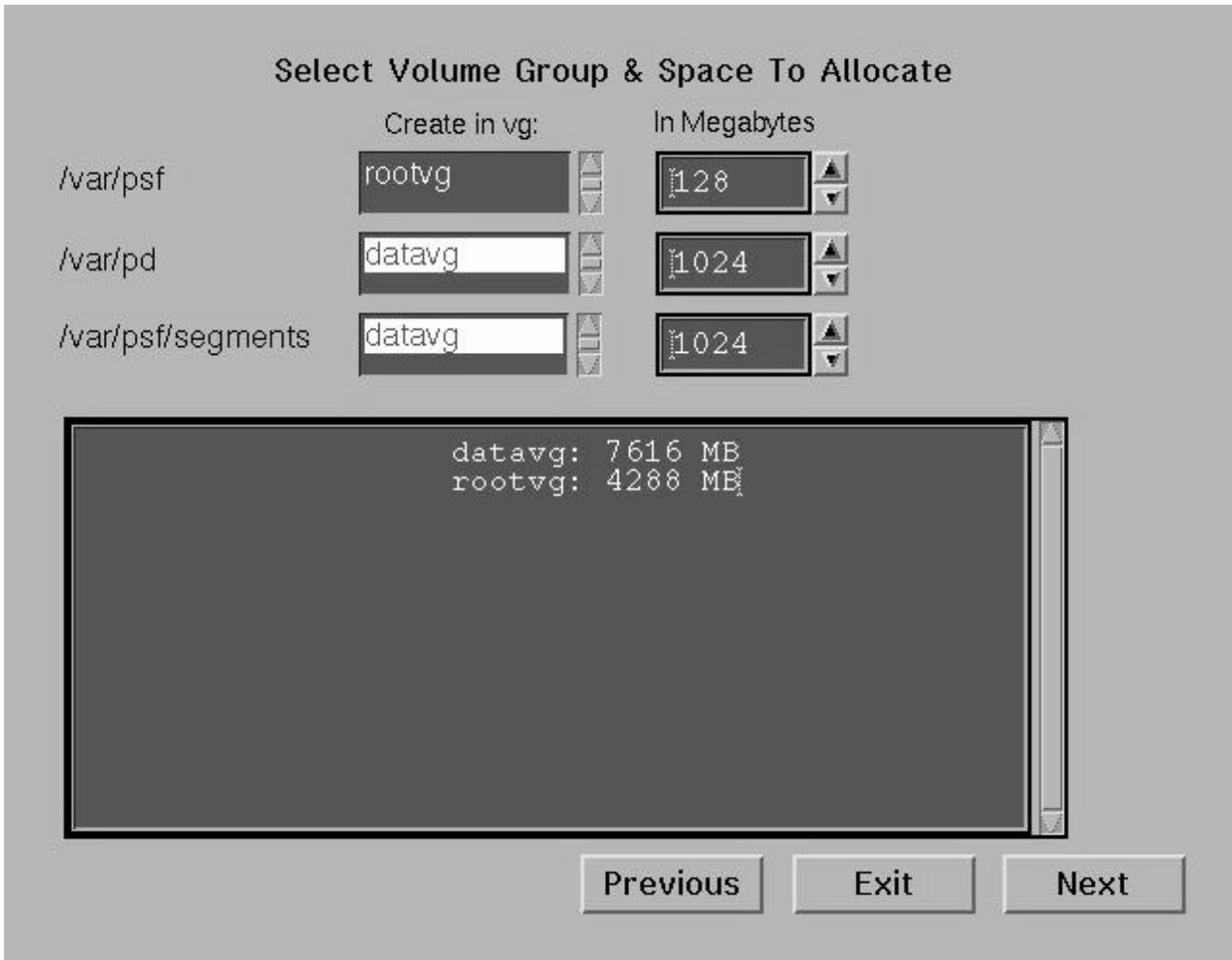
Figure 3. Infoprint Installer: Select Volume Groups & Space to Allocate panel

3. The Installer displays the **Installation Options** panel (Figure 4). This panel allows you to click on the **Infoprint Manager** radio button to select a first-time install of Infoprint Manager for AIX 4.1.

   On the right side of the screen, you can click on the **Secondary Server** checkbox if you are installing a secondary (additional) server to your existing Infoprint Manager configuration.

   Note: The **Keep Current Configuration** checkbox is grayed out because this is a first-time install, not a reinstall of Infoprint Manager for AIX 4.1. This checkbox applies during a product reinstall, when it saves Infoprint logical destination, actual destination, and queue objects that you have already created.

   Click **Next** to proceed.
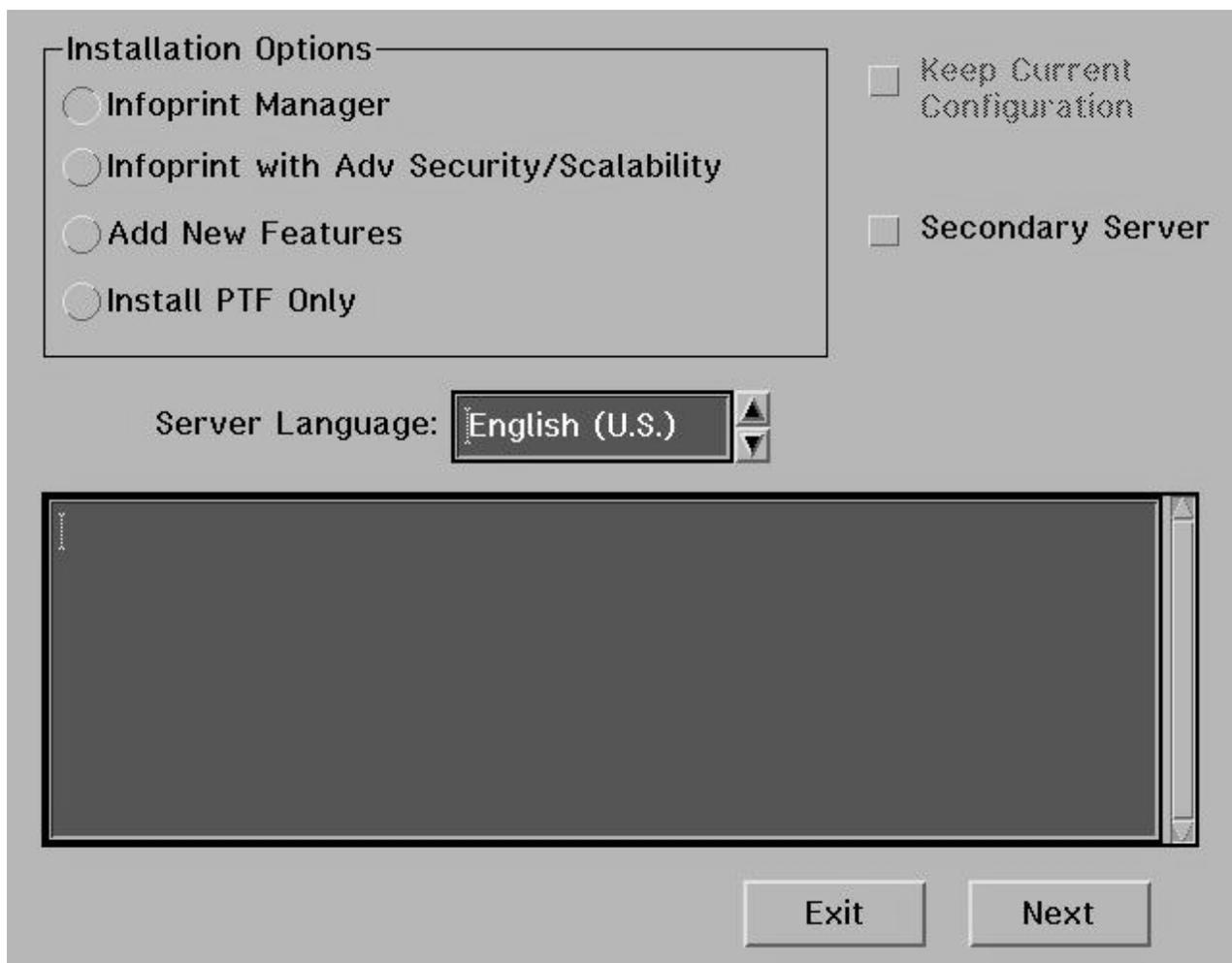
Figure 4. Infoprint Installer: Installation Options panel

4. If you select the **Secondary Server** check box, a **Primary Server Name** field appears, where you can specify either the name or the IP address of the Primary server on which you have previously installed Infoprint Manager for AIX Version 4 Release 1. For more information about installing secondary servers, see "Installing secondary Infoprint servers" on page 47.

   Click **Next** to proceed.
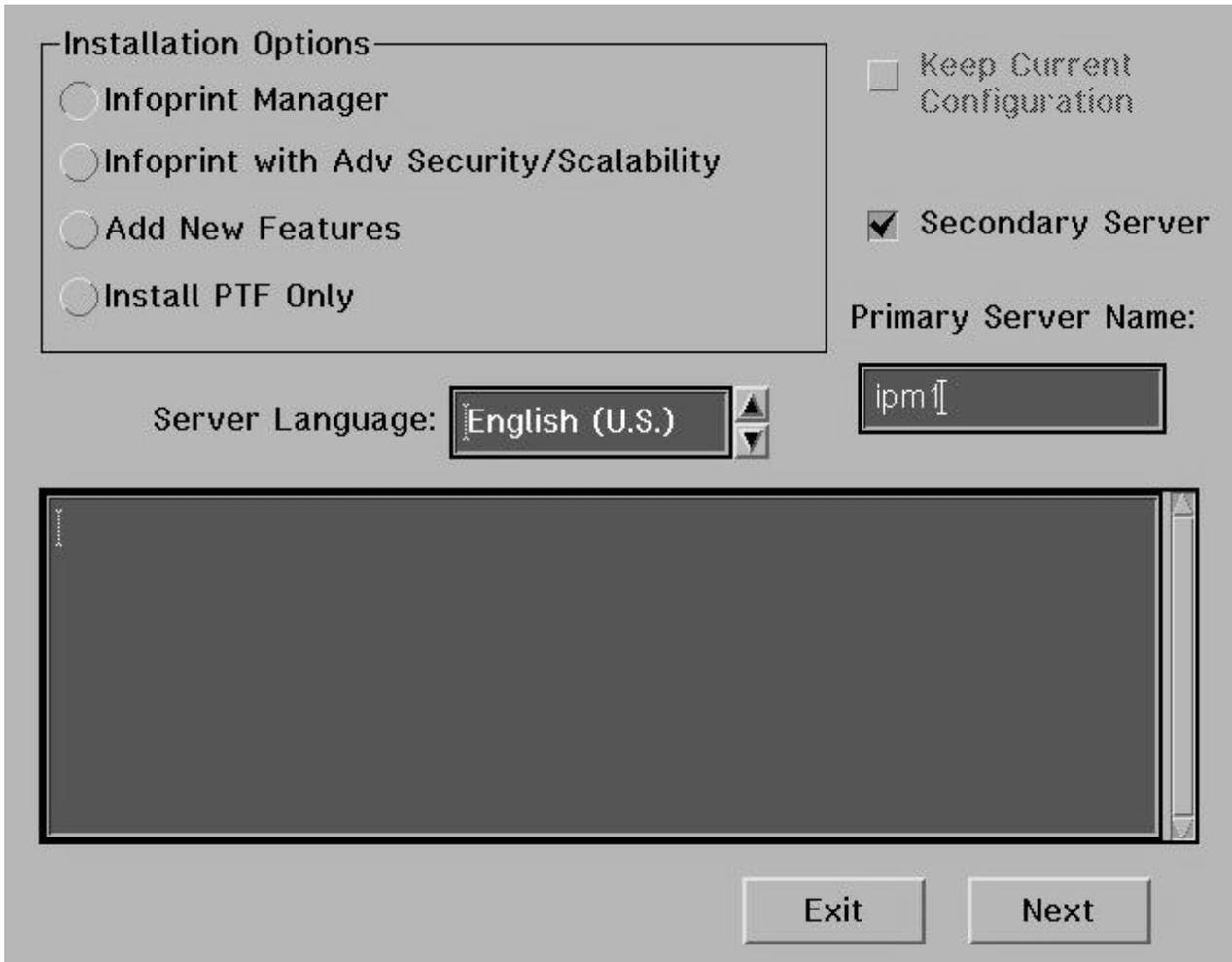
Figure 5. Infoprint Installer: First Installation Options Panel specifying a secondary server

5. The Installer displays the screen for specifying the correct number of licensed printers and whether or not you want to install Fax line support (see Figure 6). Fill in the appropriate information and click **Install**.

Notes:

a. The fields for printer engine features default to 0.

b. The **Number of Fax Lines** field defaults to 0.
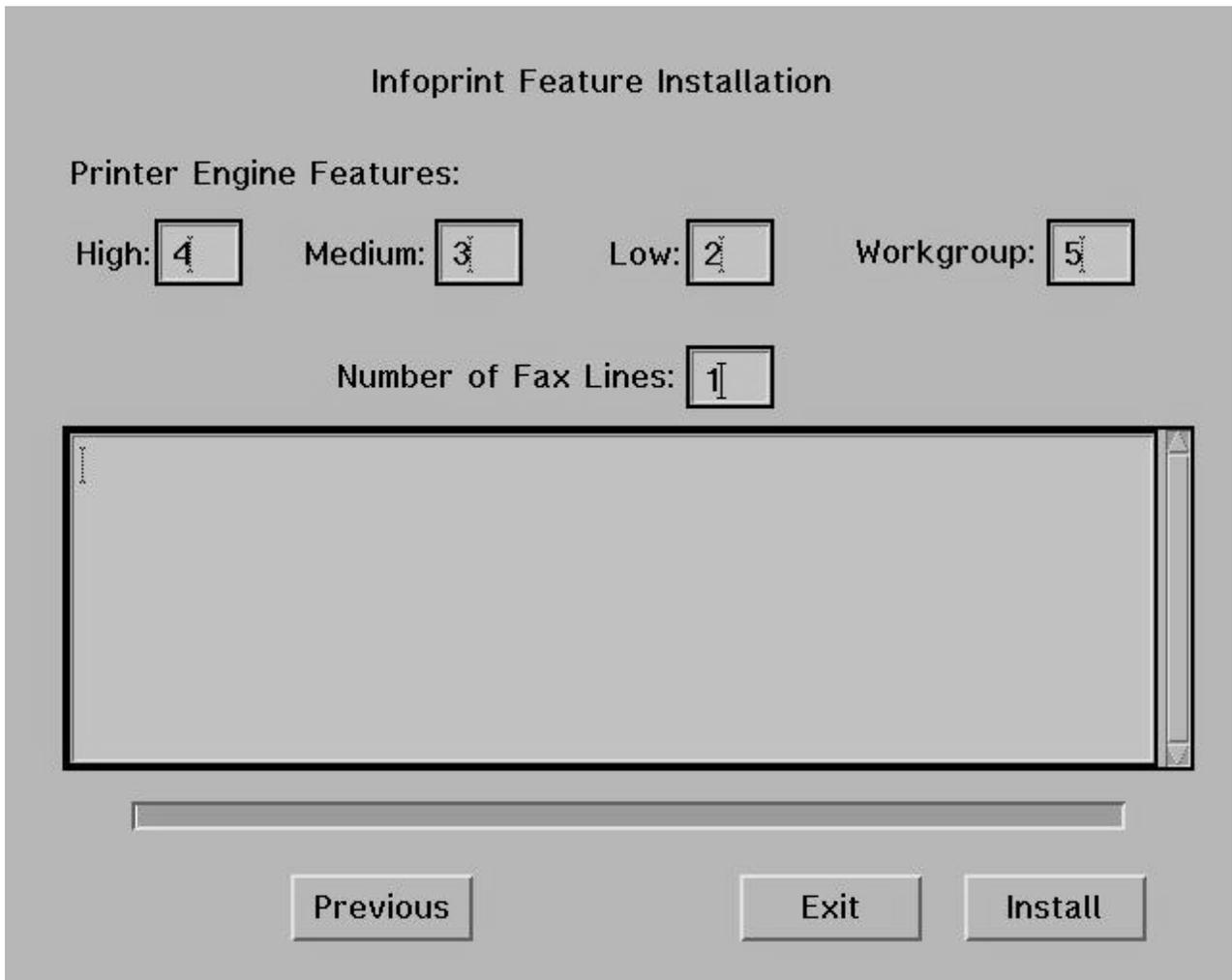
Figure 6. Infoprint Feature Installation panel: before installing

6. When you click the **Install** button on Figure 6 on page 27, the Installer:
   a. Prompts you with a pop-up dialogue box that says:

   ```
   Remove CD-ROM
   Insert new feature CD-ROM
   Click OK when CD-ROM is ready
   ```

   Follow these directions by removing the **CD 1: Base Server**, LCD4-1916, from the CD-ROM drive, inserting the CD-ROM for **Infoprint Manager for AIX: Fax Line Feature**, LCD4-5577 into the CD-ROM drive, and clicking **Ok** on the dialog box.
   b. Installs the fax and printer options (as you specified) and scrolls these updates through the field in the middle of this panel.
   c. Prompts you with a pop-up dialog box that asks: `Do you have additional features to install?`

   If you are installing no additional features besides those specified on this panel, click **No** and proceed to 8 on page 30.

   If you have additional Infoprint Manager for AIX features that you wish to install, click **Yes** and proceed to 7.
7. The Installer prompts you with a second pop-up dialog box that says:

   ```
   Remove CD-ROM
   Insert new feature CD-ROM
   Click OK when CD-ROM is ready
   ```

   Follow these directions by removing the **CD 1: Base Server**, LCD4-1916, from the CD-ROM drive, inserting the CD-ROM for the feature you wish to install (for example, **Infoprint Manager for AIX: Fax Line Feature**, LCD4-5577) into the CD-ROM drive, and clicking **Ok** on the dialog box.

   As each CD-ROM is installed, Infoprint updates:
   - The LUM database with the ECF located on the CD
   - The "Features Installed" file with the correct information.

   The Installer scrolls these updates through the field in the middle of this panel (see Figure 7 on page 29).

Infoprint Feature Installation

Printer Engine Features:

High: `4`   Medium: `3`   Low: `2`   Workgroup: `5`

Number of Fax Lines: `1`

```
Installing IPM Medium Speed Printer Feature
Completed IPM Medium Speed Printer Feature
Installing IPM Low Speed Printer Feature
Completed IPM Low Speed Printer Feature
Installing IPM Work Group Printer Feature
Completed IPM Work Group Printer Feature
Installing IPM Base
```

[Previous]   [Exit]   [Install]

Figure 7. Infoprint Feature Installation panel: after installing

Note: Features can be installed in any order.

8. Once all features have been installed, the Installer displays a panel (Figure 8) that gives you the option to display the full set of features installed.

Figure 8. Final Infoprint Installer panel

If you click on the **View Installation Features Log** button, an AIX window appears with text similar to the following:

```
Infoprint Manager Options Installed
[Base]
Base=Yes

[Printer]
High=1
Medium=2
Low=3
Work=0
Fax=0

[Features]
Email=Yes
Font=No
PPFA=Yes
SAP=Yes
Security=No
JPSF=No
POD=No
```

In this sample file, the customer has installed one high-speed printer, two medium speed printers, three low-speed printers, and no workgroup printers. Of the separately-priced features, they have installed the Page Printer Formatting Aid Feature and the SAP Print Feature.

9. You can either decide to restart your system now, or just click **Finish** and exit the Infoprint Installer, remembering to restart the system at a later time.

If you are asked if you want to reboot the system and click **Now**, the AIX system shuts down immediately without any message to other users that a shutdown is to take place.

Installing server software with Advanced Security/Scalability and features locally with the Installer

The following procedure steps through a first-time install of Infoprint Manager for AIX 4.1 with the Advanced Security/Scalability (DCE) feature using the Infoprint Installer.

1. Once you insert the initial Infoprint Manager CD-ROM, **CD 1: Base Server**, LCD4-1916, into the CD-ROM drive, the Installer's first panel (see Figure 9) advises users to back up the system, using the guidelines described on page "Backing up Infoprint Manager for AIX 3.2 systems" on page 20.

   Click **Next** to proceed.
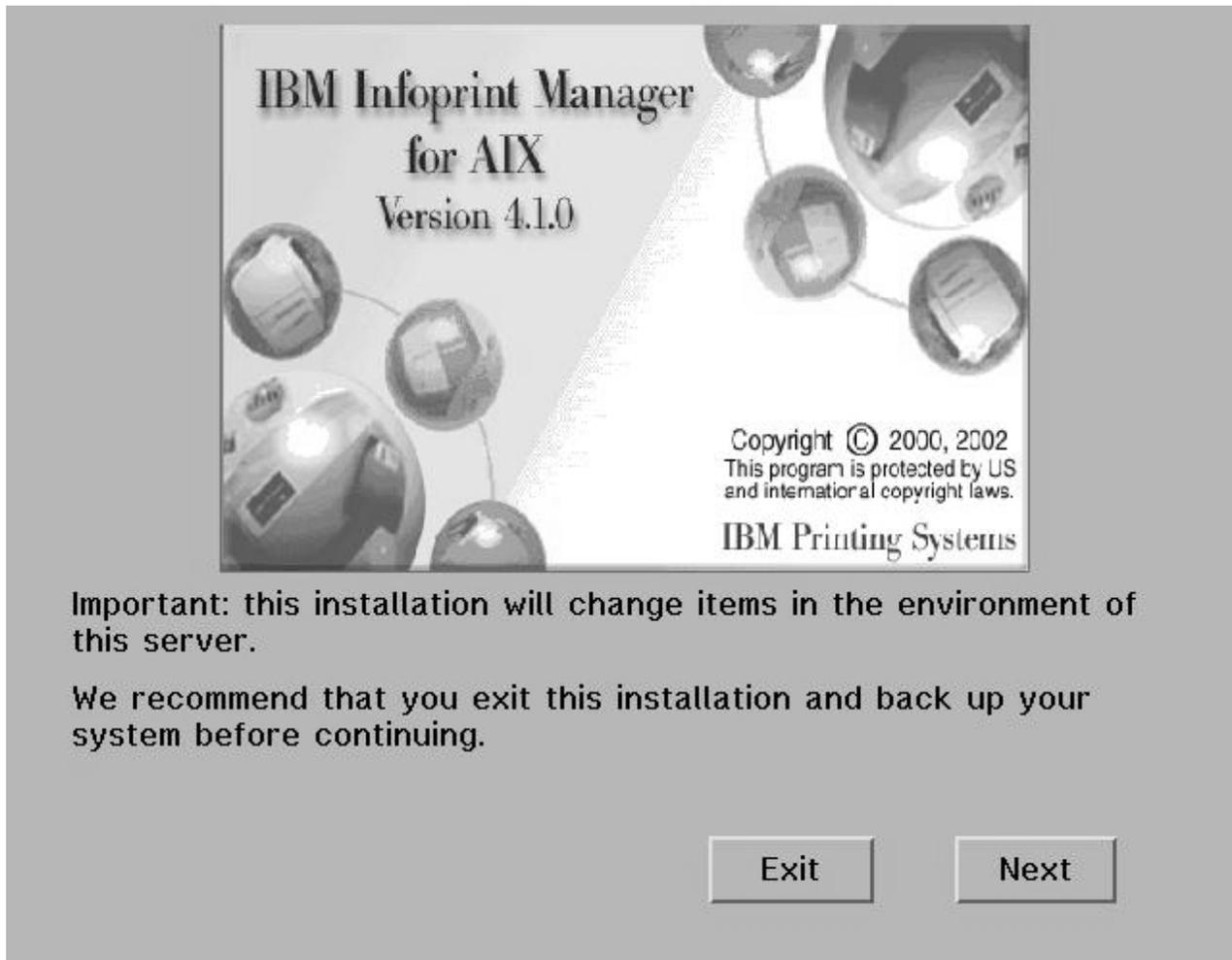
Figure 9. Infoprint Installer: first panel

2. Allocate your AIX filesystems for Infoprint Manager (see Figure 10).

   If you click on or accept the default of **Automatically Allocated IPM Filesystems**, the Installer provides the default values defined in the **allocatefs** utility and proceeds to 3 on page 35. If there is not enough space on your system, the Installer moves to Figure 11 on page 34 as if you had specified **Operator Specified IPM Filesystems**.

   If you specify the **Operator Specified IPM Filesystems** radio button, the Installer allows you to customize the space allocated from the volume groups found by Infoprint Manager on your AIX server (see Figure 11 on page 34). As noted on this panel, you should review the **allocatefs** utility that is documented in the *Infoprint Manager: Reference* before making these decisions.

   Click **Next** to proceed.

   Note: If your AIX server already contains version of the **/var/pd**, **/var/psf**, and **/var/psf/segments** file directories, the Installer skips this panel and proceeds to Figure 11 on page 34.

Infoprint file system(s) Do Not exist!

○ Automatically Allocate IPM file system(s)

○ Operator Specified IPM file system(s)

Note: If your System Admin would like to control the location and size of IPM file system(s), then exit at this time and read the documentation on the allocatefs command found in the "Infoprint Manager Reference".

Exit   Next
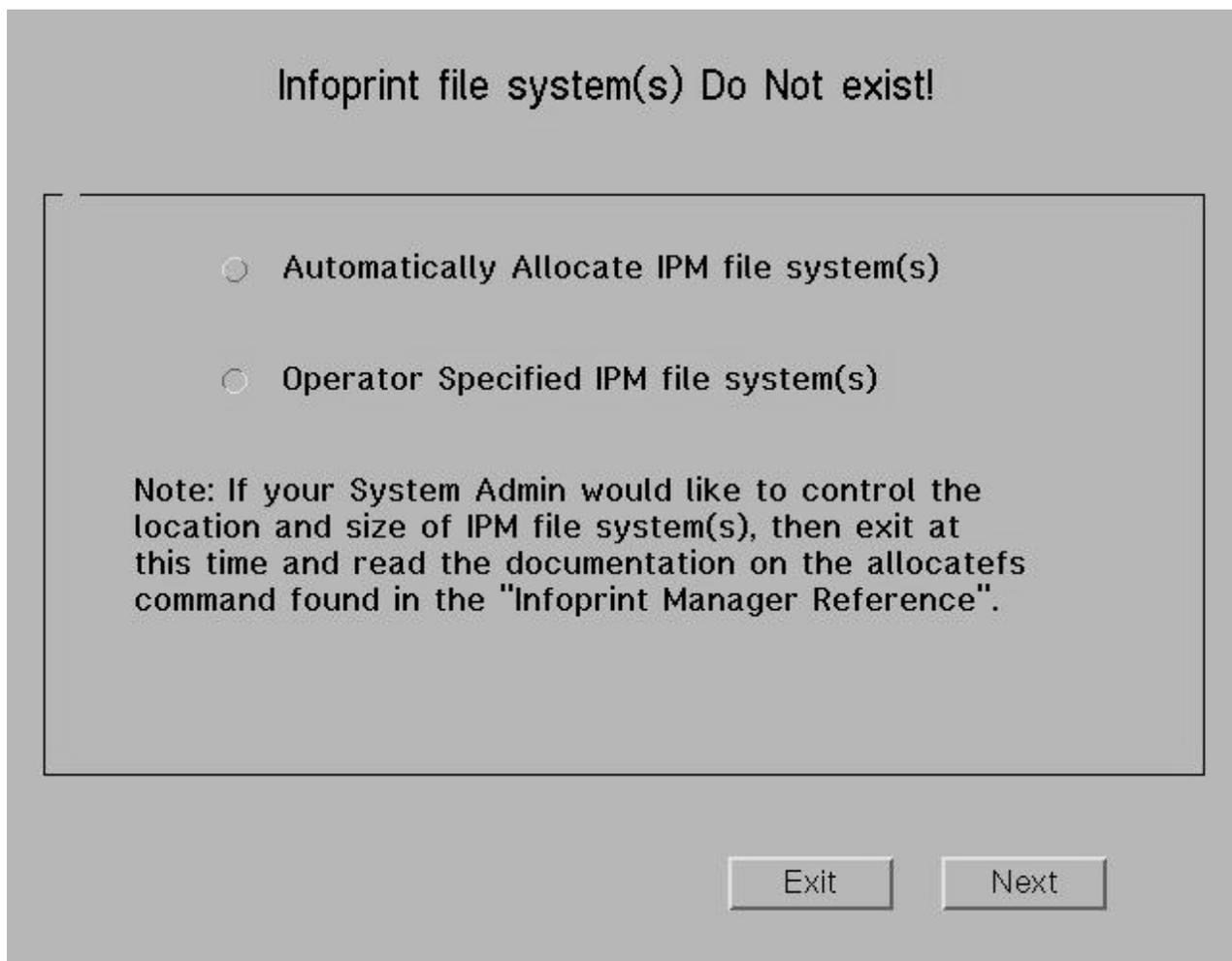
Figure 10. Infoprint Installer: Infoprint Filesystems panel

Note: If you use a volume group name other than the default of **rootvg** in the first column, you must select and highlight each file system name before you can specify a size in the second column.

Once you have made your volume group selections, click **Next** to proceed.
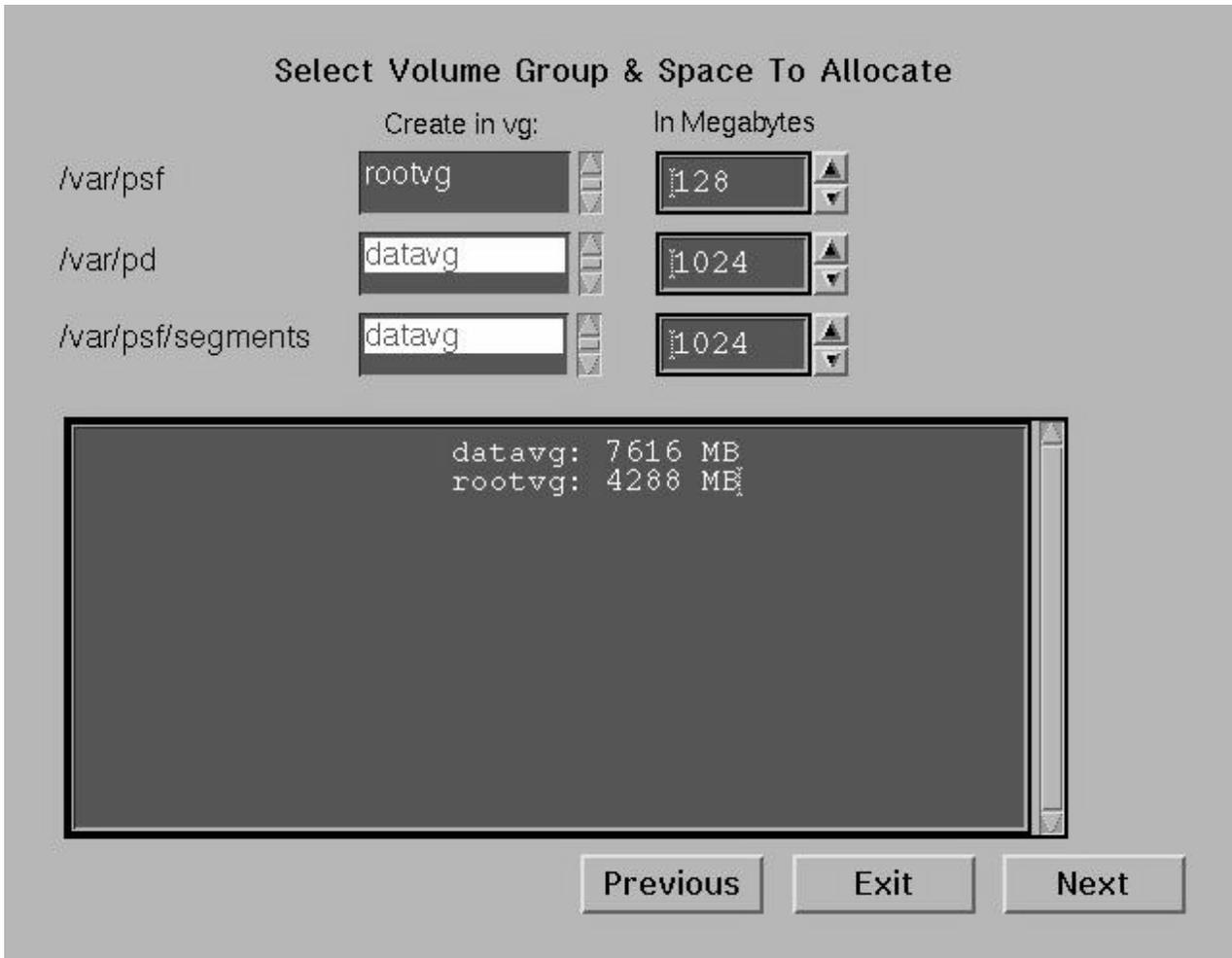
Figure 11. Infoprint Installer: Select Volume Groups & Space to Allocate panel

3. The Installer displays the **Installation Options** panel (Figure 12). This panel allows you to click on the **Infoprint with Adv. Security/Scalability** radio button to select a first-time install of Infoprint Manager for AIX 4.1 with the Advanced Security/Scalability (DCE) option.
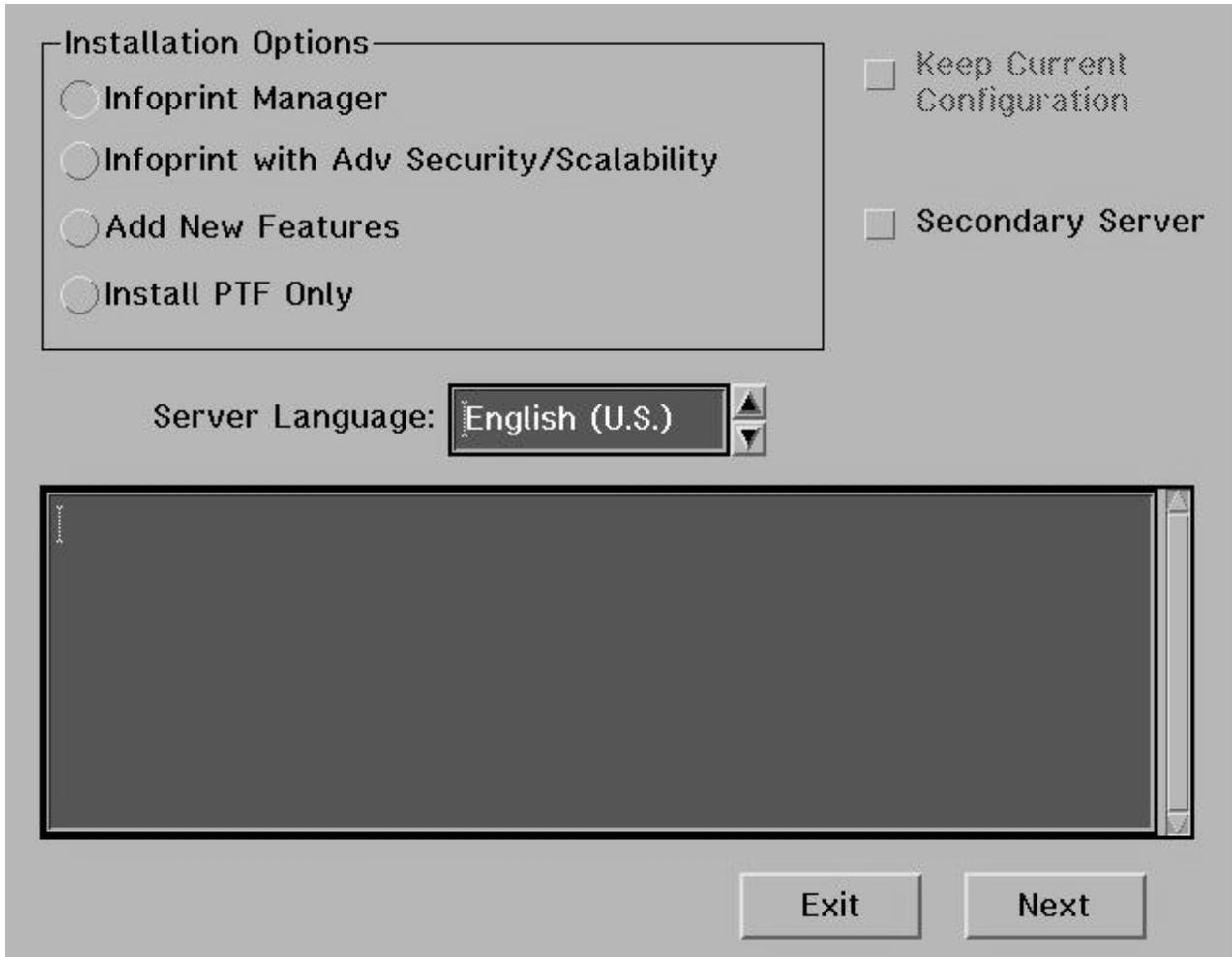
Figure 12. Infoprint Installer: Installation Options panel

The Installer prompts you to insert the **Advanced Security/Scalability Feature**, LCD4-1920.

Notes:

a. Before installing the DCE version of Infoprint Manager, you must have DCE installed and configured on your AIX system. For more information about purchasing or installing DCE, go to the RS/6000 web site at http://www.austin.ibm.com.

b. When installing the DCE version of Infoprint Manager, IBM recommends that you do not log into DCE prior to running the Installer. If a DCE session expires while the Installer is executing, the Installer will be unable to complete.

c. The **Keep Current Configuration** checkbox is grayed out because it does not apply here on a first-time product install. This checkbox applies during a product reinstall, when it saves Infoprint logical destination, actual destination, and queue objects that you have already created.

On the right side of the screen, you can click on the **Secondary Server** checkbox if you are installing a secondary (additional) server to your existing Infoprint Manager configuration.

Click **Next** to proceed.

4. Once you insert the CD-ROM in the CD-ROM drive, the Installer displays an AIX window that shows DCE initializing and preparing for the install. Then the **Create or Join DCE Cell** panel appears, giving you the opportunity to either create your own cell or join an existing DCE cell (Figure 13).

   Once you make your selection, click **Next** to proceed.

Create or Join DCE Cell

This system has not been defined as a member of a DCE cell.

To run Infoprint Manager for DCE, you must either create a new DCE cell or join a cell that has been previously defined on your network. If you choose to create a new cell, DCE security and directory services will be established on this AIX System. If you elect to join a DCE cell that already exist, you will be asked for the host name of systems to be used for DCE security and directory services.

Join an existing cell or create a new DCE cell.

◯ Join Existing Cell   ◯ Create New Cell

[Previous]   [Exit]   [Next]

Figure 13. Infoprint Installer: Create or Join DCE Cell panel

5. If you clicked **Create New Cell**, skip to the next step. If you clicked **Join Existing DCE Cell**, the Installer displays the **Create or Join DCE Cell** panel so you can fill in the relevant information:

Figure 14. Infoprint Installer: Join Existing DCE Cell panel

6. If you clicked **Create New Cell**, the Installer displays the **Create a New DCE Cell** panel so you can fill in the relevant information:

Create a New DCE Cell

Please enter the information required to create a new DCE cell.

The installer will set up a new cell with the account name and password you supply.

You must memorize this password or record it in a safe place. You will be unable to administer this system in the future without this password.

Cell Name: `paper`

Cell Administrator Account `cell admin`

Cell Administrator Password `*******`

Confirm Administrator Password `*******`

Previous   Exit   Next

Figure 15. Infoprint Installer: Create a New DCE Cell panel

Once you have specified the relevant DCE information and clicked **Next**, the Installer returns you to the **Infoprint Feature Installation** panel to continue the install of Infoprint Manager for AIX.

7. The Installer displays the screen for specifying the correct number of licensed printers (see Figure 16). Fill in the appropriate information and click **Install**.

Notes:

a. The fields for printer engine features default to 0.

b. The **Number of Fax Lines** field defaults to 0.

Infoprint Feature Installation

Printer Engine Features:

High: 4   Medium: 3   Low: 2   Workgroup: 5

Number of Fax Lines: 1

Previous   Exit   Install
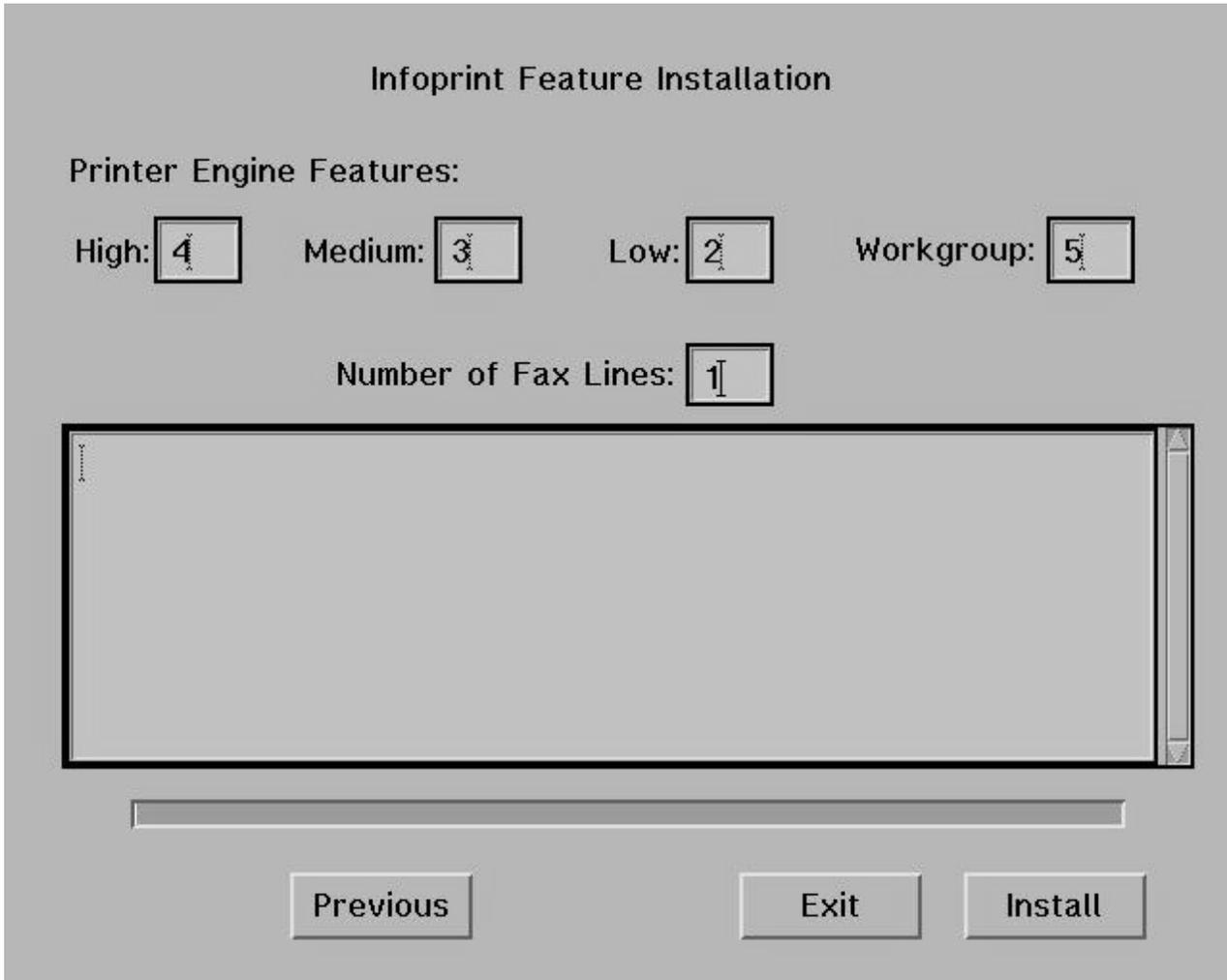
Figure 16. Infoprint Feature Installation panel.

8. When you click the **Install** button on Figure 16, the Installer:

a. Installs the printer, fax, and email options (as you specified) and scrolls these updates through the field in the middle of this panel.

b. Prompts you with a pop-up dialog box that asks: Do you have additional features to install?

If you are installing no additional features besides those specified on this panel, click **No** and proceed to 10 on page 42.

If you have additional Infoprint Manager for AIX features that you wish to install, click **Yes** and proceed to 9 on page 41.

9. The Installer prompts you with a second pop-up dialog box that says:

```
Remove CD
Insert new feature CD
Click OK when CD is ready
```

Follow these directions by removing the **CD 1: Base Server**, LCD4-1916, from the CD-ROM drive, inserting the CD-ROM for the feature you wish to install (for example, the **Infoprint Manager for AIX: Fax Line Feature**, LCD4-5577, into the CD-ROM drive, and clicking **Ok** on the dialog box.

As each CD-ROM is installed, Infoprint updates:
- The LUM database with the ECF located on the CD
- The ″Features Installed″ file with the correct information.

The Installer scrolls these updates through the field in the middle of this panel.

10. Once all features have been installed, the Installer displays a panel (Figure 17) that gives you the option to display the full set of features installed.

Infoprint Manager has been successfully installed.

View Installation Features Log

You must shutdown/restart your
system for all changes to take effect.

Now   Later

Finish
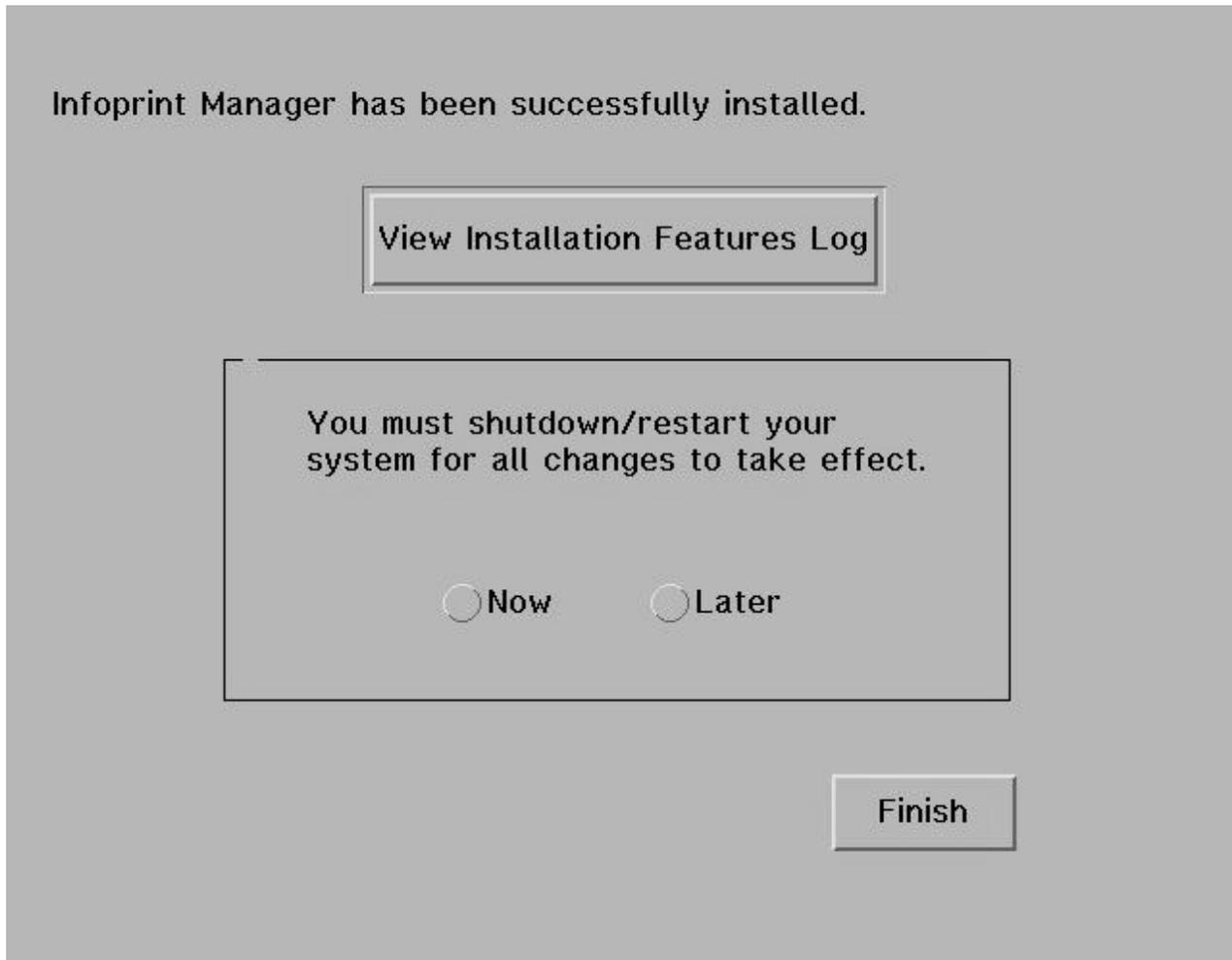
Figure 17. Final Infoprint Installer panel

If you click on the **View Installation Features Log** button, an AIX window appears with text similar to the following:

```
Infoprint Manager Options Installed
[Base]
Base=Yes

[Printer]
High=1
Medium=2
Low=3
Work=0
Fax=0

[Features]
Email=Yes
Font=No
PPFA=Yes
SAP=Yes
Security=Yes
JPSF=No
POD=No
```

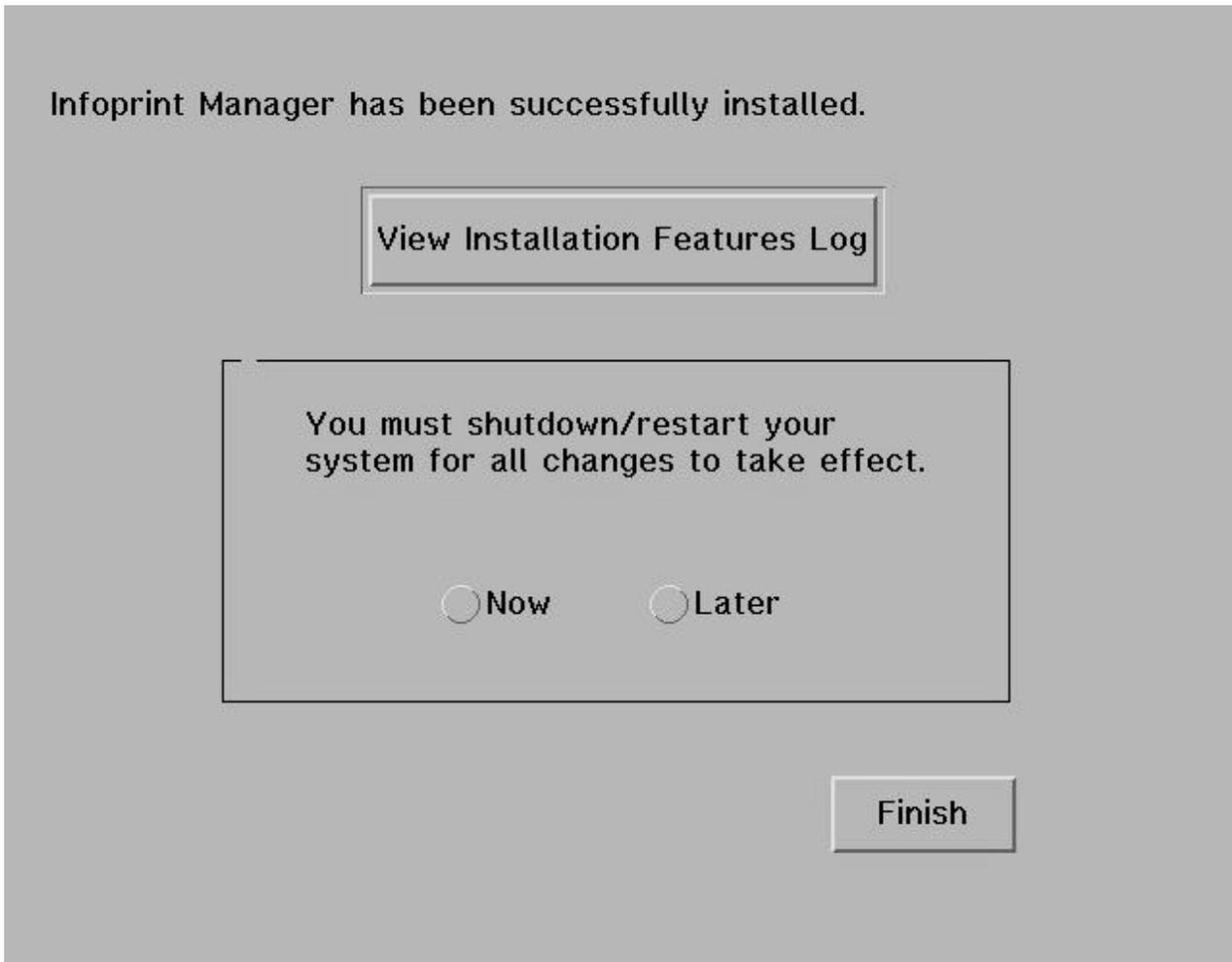In this sample file, the customer has installed one high-speed printer, two medium speed printers, three low-speed printers, and no workgroup printers. Of the separately-priced features, they have installed the Advanced Security/Scalability Feature (`Security=Yes`), the Page Printer Formatting Aid Feature and the SAP Print Feature.

11. You can either decide to restart your system now, or just press **Finish** and exit the Infoprint Installer, remembering to restart the system at a later time.

If you are asked if you want to reboot the system and you select **Now**, the AIX system shuts down immediately without any message to other users that a shutdown is to take place.

Installing Infoprint Manager on remote systems

To install software on remote systems, you must create an Infoprint Manager software server. The **/cdrom/mk_ip_remote** script creates the software server for you automatically.

1. To run this script, issue the following commands:

   ```
   cp /cdrom/mk_ip_remote
   /tmp /tmp/mk_ip_remote
   ```

2. Insert the Infoprint Manager for AIX CD-ROMs when prompted by the script.

   After **mk_ip_remote** completes successfully, you have a file system called /ip_remote that is readable by all systems in your network through Network File System (NFS) . For more information about the **mk_ip_remote** script, type the following:

   ```
   /cdrom/mk_ip_remote -h
   ```

3. When the Infoprint Manager software server is in place, **root** users on remote systems, after NFS-mounting **/ip_remote**, may "pull" software from the server with the following command:

   ```
   /ip_remote/setup -s /ip_remote
   ```

   A series of messages similar to the following appear on the screen in sequence:

   ```
   Infoprint Installer loading.  Please wait...
   Updating environment for Infoprint Installer.....
   Verifying Java Installation.....
   ```

   Then Installer GUI opens and prompts users for information to define their installations, as described in both"Installing server software and features locally with the Installer" on page 22 and step 5 on page 50of "Installing additional features on an existing Infoprint Manager for AIX 4.1 system" on page 50.

After Installing Infoprint Manager on the AIX Server

This section gives you information for verifying the install on your Infoprint Manager for AIX server, once you have rebooted the system to allow for all changes to take effect. It also covers other specific tasks that can be performed on your Infoprint AIX server after you've installed Infoprint Manager for AIX 4.1.

The tasks include:

- Enabling and disabling autostart support
- Adding or removing languages
- Configuring for additional Infoprint Manager servers
- Adding additional features to an Infoprint Manager installation

The common aspect uniting these tasks is that they should be performed *after* you have completed installing Infoprint Manager for AIX 4.1 on your server.

Verifying your Infoprint Manager install for Version 4.1

After you have completed installing Infoprint and any optional features and rebooted the system, you can start the Infoprint Administration GUI to view the initial configuration of your system.

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

From the front panel on an AIX system:

1. Double-click the **Application Manager** icon on the front panel. The Application Manager window displays.

   Note: The **Application Manager** icon looks like an open file drawer with a calculator sticking out.

2. Double-click the **Infoprint** folder icon. The Application Manager— Infoprint window displays.

3. Double-click the icon for the **Infoprint Administration GUI**.

If you have installed the Print-On-Demand option with the Basic Administration GUI:

1. Select the arrow above the **Infoprint** icon to display the IBM Infoprint popup.

2. Select the **Basic Administration GUI**.

To start the Infoprint Manager Administration GUI from the AIX command line, enter `ipguiadvadm`.

Enabling or disabling autostart

The Infoprint server created for you by the Infoprint Installer starts automatically when the system reboots. You may enable or disable the autostart of any Infoprint servers present on your AIX system.

Enabling autostart

To enable autostart on a server, do the following:

1. Invoke the SMIT panel directly from the AIX command line by specifying either `smit ipru_autostart` or `smitty ipru_autostart`, or access the **Infoprint Utilities** main menu by:

   - If you do not have an **Infoprint Manager** icon on your front panel, open the **Infoprint** folder in the Application Manager and double click on the **Infoprint SMIT** icon. Then click **Infoprint Utilities**.

   - If you do have an **Infoprint Manager** icon on your front panel, open Infoprint Manager's popup menu and click on the **Infoprint SMIT** icon. Then click **Infoprint Utilities**.

2. Click **Enable/Disable Autostart**.

3. Select **on** in response to the question, `Do you wish to turn autostart on or off?`

4. Click **List** and select the Infoprint server's hostname that you wish to start automatically on reboot.

5. Enter the port number used to communicate with this server. (Leave this field blank to use the default port number.)

6. Click **List** and select the locale (language environment) in which you want the server to run.

7. Click **OK**.

Disabling autostart

To disable autostart of a server, do the following:

1. Invoke the SMIT panel directly from the AIX command line by specifying either `smit ipru_autostart` or `smitty ipru_autostart`, or access the **Infoprint Utilities** main menu by:

   - If you do not have an **Infoprint Manager** icon on your front panel, open the **Infoprint** folder in the Application Manager and double-click on the **Infoprint SMIT** icon. Then click **Infoprint Utilities**.

- If you do have an **Infoprint Manager** icon on your front panel, open Infoprint Manager's popup menu and click on the **Infoprint SMIT** icon. Then click **Infoprint Utilities**.

2. Click **Enable/Disable Autostart**.

3. Select **off** in response to the question, Do you wish to turn autostart on or off?

4. If prompted, select the server you want to disable for autostart.

Adding or removing languages

The Infoprint Installer installs U.S. English (**en_US**) filesets on all Infoprint AIX servers. You may add support for an Infoprint Manager language only if your system has that language support installed. The following topics provide the procedures for adding base AIX support for a language, and for adding and removing Infoprint Manager language support.

Software prerequisites for translated versions of Infoprint Manager

If not already installed, you must install support from the AIX operating system version 4.3.3 CD-ROM, onto each AIX system on which you will install Infoprint Manager and run an Infoprint server in a non-English supported language. Infoprint Manager supports French, German, Italian, Spanish, and Japanese.

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

To install a language on an AIX operating system, use the following procedure:

1. From an AIX command line, access the smit fastpath by specifying: smitty lang

2. Select the **Add Additional Language Environments** option.

3. From the **Add Additional Language Environments** panel, press the **F4** key to determine value to specify in the **CULTURAL convention to Install** field.

   Note: Languages that are already installed on this AIX system will not appear in this list.

4. Press the **F4** key to determine the value to specify in the **LANGUAGE translation to install** field.

   Note: Languages that are already installed on this AIX system will not appear in this list.

5. Ensure that the **INPUT device/directory for software** field is pointing to your CD-ROM drive.

6. Press **Enter** to install the language.

Note: For more information about installing different languages on your AIX operating system, access the **info** data base on your AIX operating system.

Adding an Infoprint Manager language

To add support for a language to Infoprint Manager, do the following:

1. Insert your Infoprint product CD.

2. Invoke the SMIT panel directly from the AIX command line by specifying either smit ipru_langsupp or smitty ipru_langsupp, or access the **Infoprint Utilities** main menu by:

- If you do not have an **Infoprint Manager** icon on your front panel, open the **Infoprint** folder in the Application Manager and double click on the **Infoprint SMIT** icon. Click **Infoprint Utilities**.
- If you do have an **Infoprint Manager** icon on your front panel, open Infoprint Manager's popup menu and click on the **Infoprint SMIT** icon. Click **Infoprint Utilities**.

3. Click **Add or Remove Languages**, then **Add Language**.
4. Select one or more locales to add from the list presented. (The list will only contain locales that your system is able to support.)
5. Click **OK**.

Removing a language

To remove support for a language from Infoprint Manager, do the following:

1. Invoke the SMIT panel directly from the AIX command line by specifying either `smit ipru_langsupp` or `smitty ipru_langsupp`, or access the **Infoprint Utilities** main menu by:
   - If you do not have an **Infoprint Manager** icon on your front panel, open the **Infoprint** folder in the Application Manager and double click on the **Infoprint SMIT** icon. Then click **Infoprint Utilities**.
   - If you do have an **Infoprint Manager** icon on your front panel, open Infoprint Manager's popup menu and click on the **Infoprint SMIT** icon. Then click **Infoprint Utilities**.
2. Click **Add or Remove Languages**, then **Remove Language**.
3. Select one or more locales to remove from the list presented.
4. Click **OK**.

Note: The English locale may not be removed because some default messages must be presented in English.

Installing secondary Infoprint servers

Infoprint Manager allows you to configure multiple AIX systems to work together to meet your printing needs. Installing secondary servers using the DCE version of Infoprint Manager is simple. All that is required is to run the Infoprint Installer on each system. DCE will provide the services that your primary and secondary Infoprint servers require to communicate with each other.

If, however, you are installing secondary servers in a non-DCE Infoprint environment, you will be using Network File System (NFS) to enable communication between servers. To make this work correctly, you must use one of the following two procedures:
- "Installing secondary Infoprint servers using NFS (no job ticketing)"
- "Installing secondary Infoprint servers using NFS (job ticketing)" on page 48

Installing secondary Infoprint servers using NFS (no job ticketing)

To set up multiple Infoprint servers that do not require full job ticketing services, do the following:

1. Complete the installation of the primary Infoprint server.
2. Apply current APAR service, if available.
3. Complete the configuration of the primary Infoprint server:

a. Either invoke the SMIT panel directly from the AIX command line by specifying either `smit iprufst_secondary` or `smit iprufst_secondary`, or access the **Infoprint Utilities** main menu by:

- If you do not have an **Infoprint Manager** icon on your front panel, open the **Infoprint** folder in the Application Manager and double click the **Infoprint SMIT** icon. Then click **Infoprint Utilities**.

- If you do have an **Infoprint Manager** icon on your front panel, open Infoprint Manager's popup menu and click on the **Infoprint SMIT** icon. Then click **Infoprint Utilities**.

b. Click **Configure Secondary Servers (NFS)**, then **Link from Primary Server to Secondary Server**.

c. Provide the information about your secondary system as prompted.

   Notes:

   1) If you are using DNS or NIS name resolution services, be sure to update these services with all new server information before proceeding. (DNS and NIS are centralized services used to resolve host names into IP addresses. Whenever a new machine is added to the network, these services must be advised of the host name and IP address of the new system. These services may or may not be used on your LAN. If you are unsure about about your network's name resolution services, contact your network administrator.)

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

d. Do the following for each secondary server:

   1) Run the Infoprint Installer.

   2) Apply current APAR service, as necessary.

Installing secondary Infoprint servers using NFS (job ticketing)

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

1. Complete the installation of the primary Infoprint server.

2. Apply current APAR service, if available.

3. Run **Infoprint Utilities** on the primary Infoprint server as described in "Setting up the primary server".

4. Run **Infoprint Utilities** on the secondary Infoprint server as described in "Setting up the secondary servers" on page 49.

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

Setting up the primary server:

1. Either invoke the SMIT panel directly from the AIX command line by specifying either `smit iprufst_secondary` or `smit iprufst_secondary`, or access the **Infoprint Utilities** main menu by:

- If you do not have an **Infoprint Manager** icon on your front panel, open the **Infoprint** folder in the Application Manager and double click the **Infoprint SMIT** icon. Then click **Infoprint Utilities**.

- If you do have an **Infoprint Manager** icon on your front panel, open Infoprint Manager's popup menu and click on the **Infoprint SMIT** icon. Then click **Infoprint Utilities**.

2. Click on **Configure Secondary Servers (NFS)**, then **Link from Primary Server to Secondary Server**. Provide the information about your secondary system as prompted.

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

Notes:

1. If you are using DNS or NIS name resolution services, be sure to update these services with all new server information before proceeding. (DNS and NIS are centralized services used to resolve host names into IP addresses. Whenever a new machine is added to the network, these services must be advised of the host name and IP address of the new system. These services may or may not be used on your LAN. If you are unsure about about your network's name resolution services, contact your network administrator.)

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

Setting up the secondary servers: Do the following for each secondary server:

1. Run the Infoprint Installer.
2. Apply current APAR service, as necessary.
3. Access the **Infoprint Utilities** main menu by:
   - Invoking the SMIT interface directly from the AIX command line by specifying either `smit iprufst_secondary` or `smit iprufst_secondary`.
   - If you do not have an **Infoprint Manager** icon on your front panel, open the **Infoprint** folder in the Application Manager and double click the **Infoprint SMIT** icon. Then click **Infoprint Utilities**.
   - If you do have an Infoprint Manager icon on your front panel, open Infoprint Manager's popup menu and click the **Infoprint SMIT** icon. Then click **Infoprint Utilities**.
4. Click on **Configure Secondary Servers (NFS)**, then **Link from Secondary Server to Primary Server**. Provide the information about your primary system as prompted.

Note: If any of the procedures above fail because the user and group identifiers could not be set, you must set these values manually so they are the same on all servers in the namespace. To do this, follow these steps:

1. Invoke **SMIT**.
2. Click **Infoprint Printing System**, then **Troubleshooting**, then **Standardize Default Users**.
3. Enter ID numbers as prompted.

Perform this procedure on both primary and secondary systems until the same IDs are in use by all servers in the namespace.

Installing additional features on an existing Infoprint Manager for AIX 4.1 system

If you have previously installed Infoprint Manager for AIX 4.1 on your AIX server, you can use the Infoprint Installer to add an additional product feature. This scenario can be used either locally or remotely (see "Installing Infoprint Manager on remote systems" on page 44).

1. Log onto the AIX system as **root**.

2. Insert the appropriate Infoprint Manager for AIX 4.1 features CD into the CD-ROM reader.

   Note: You can start this process with the **Base Server CD-ROM**, LCD4-1916, but the Infoprint Installer begins at the initial splash screen. If you begin with a specific feature CD-ROM, such as **Infoprint Manager Medium Speed Printer Engine Feature**, LCD4-5581, the Installer takes you directly to the Installation Options panel, where you can begin installing the product.

3. Open a terminal window.

   If you are using CDE, you may open a terminal window by clicking on the terminal icon contained in the front panel. (The front panel is the task bar that appears at the bottom of the screen.) By default, the terminal icon is contained in a popup menu above the text editor icon that appears on the front panel.

4. Type the following at the command line:

   ```
   mount /cdrom
   ```

5. To install Infoprint Manager server software or optional Infoprint Manager features, enter the following command:

   ```
   /cdrom/setup
   ```

   The Installer opens at the **Infoprint Feature Installation** panel displayed in Figure 18 on page 51.This panel allows you to click on the **Add New Features** radio button to select an install of additional features on an existing Infoprint Manager for AIX 4.1 system.

   The **Keep Current Configuration** checkbox defaults to being checked so that during this reinstall, your Infoprint logical destination, actual destination, and queue objects will be saved. If you uncheck this box, all these Infoprint objects are deleted by the Installer during the reinstall.

   On the right side of the screen, the **Secondary Server** checkbox is grayed out because defining a secondary server to your configuration is not an option when either installing additional features or adding maintenance to Infoprint Manager.

   Once you have made your selections, click **Next** to proceed.
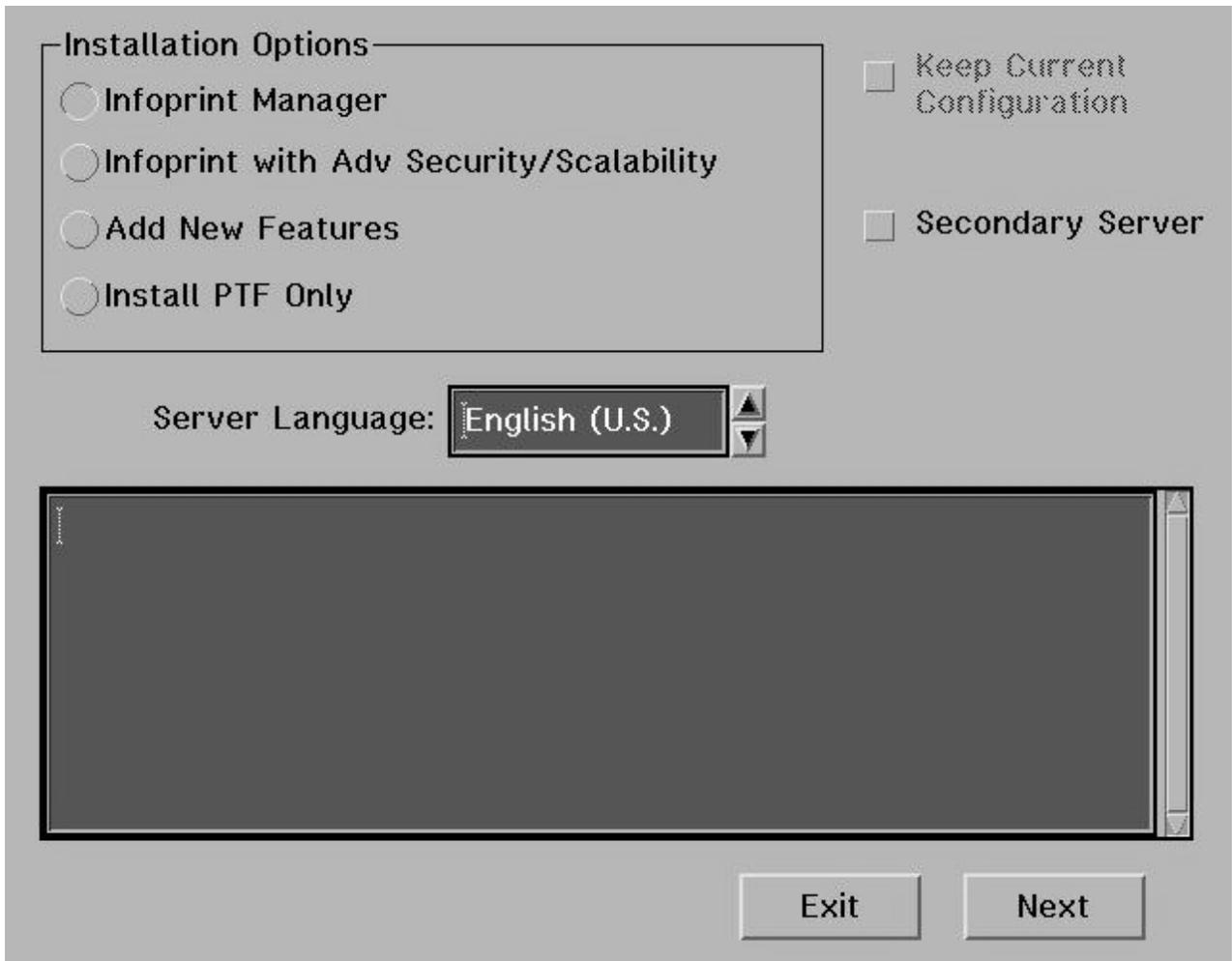
Figure 18. Infoprint Installer: Installation Options panel for Adding Features

6. If you are adding the Fax lines feature or adding additional printers, update the appropriate fields with the printers or fax lines that you are adding. For example, if you are adding a single medium speed printer to your configuration, update the **Medium** field from 2 (defined and attached with the initial Infoprint install) to 3. If you are not adding either Fax lines or additional printers, click the **Install** button on Figure 19.

Infoprint Feature Installation

Printer Engine Features:

High: `4`   Medium: `3`   Low: `2`   Workgroup: `5`

Number of Fax Lines: `1`

Previous   Exit   Install
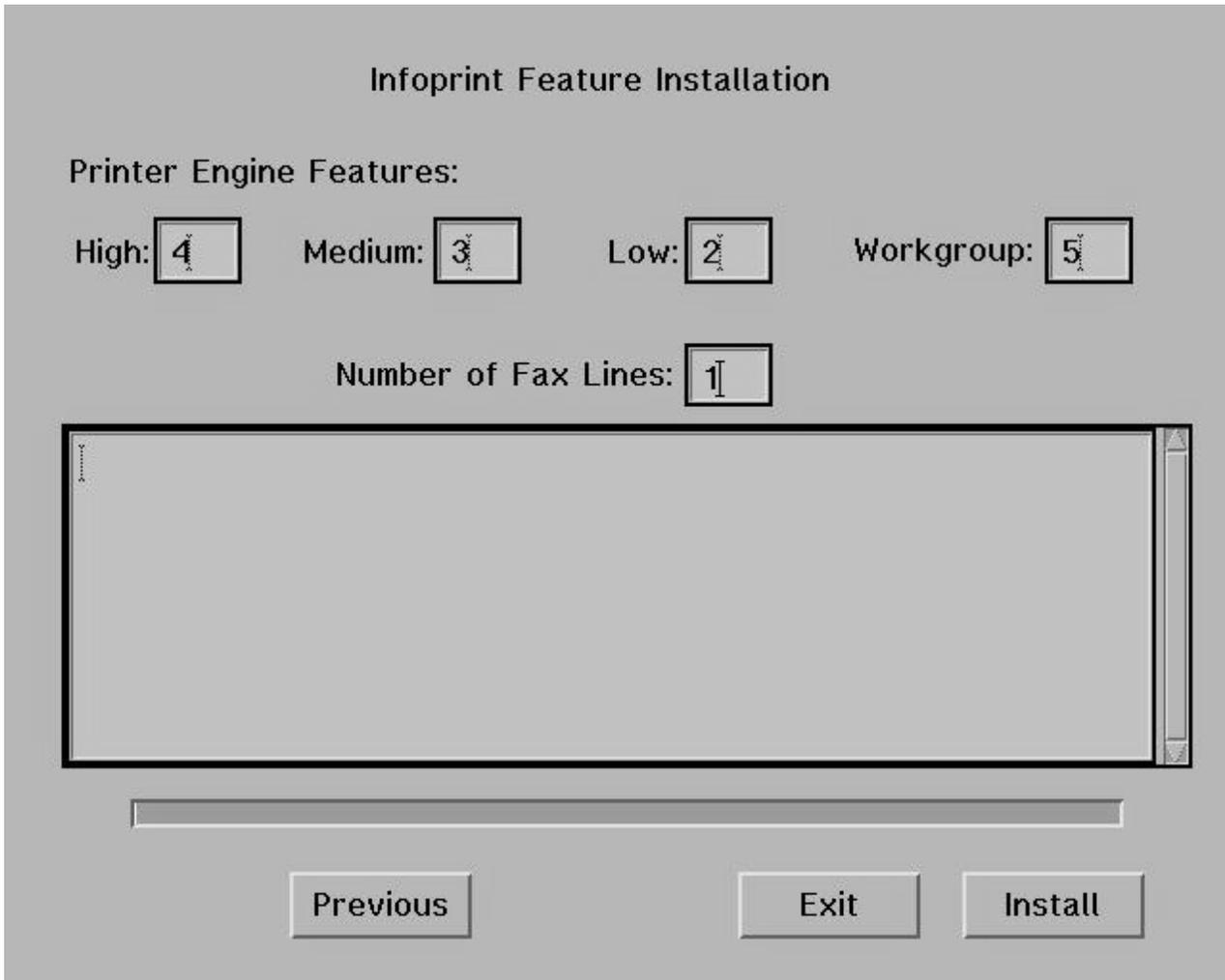
Figure 19. Infoprint Feature Installation panel: Adding Features

7. The Installer begins to install the feature that you inserted into the CD-ROM drive, showing progress from the open window at the center of the screen and the revolving progress bar (see Figure 20 on page 53).
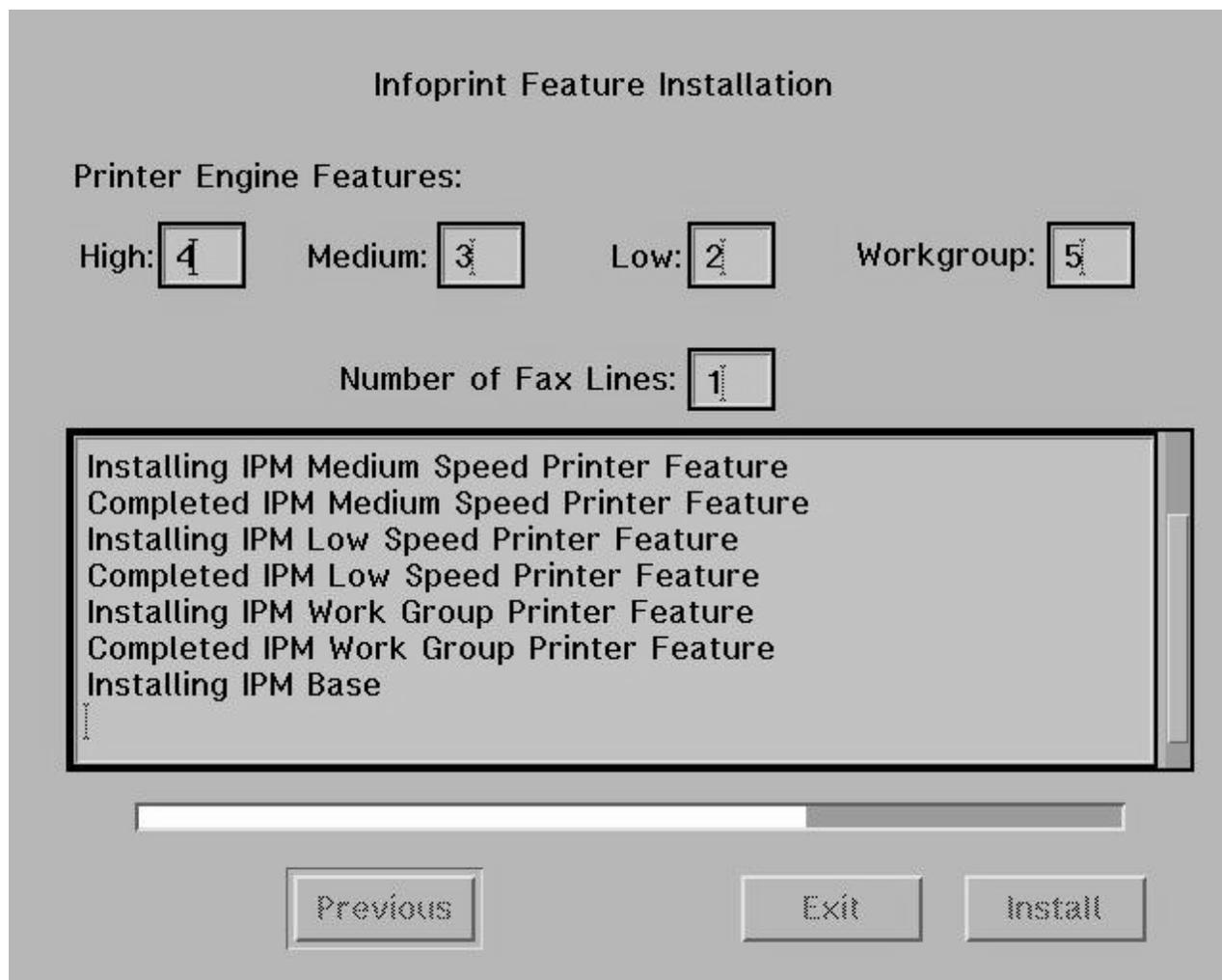
Figure 20. Infoprint Feature Installation panel: Adding Features (in progress)

If you updated a field in 5 on page 50, but have not inserted the CD-ROM for that feature, the Installer prompts you for the CD-ROM necessary to update this setting (**Infoprint Manager Low Speed Printer Engine Feature**, LCD4-5580) through the following pop-up dialog box:
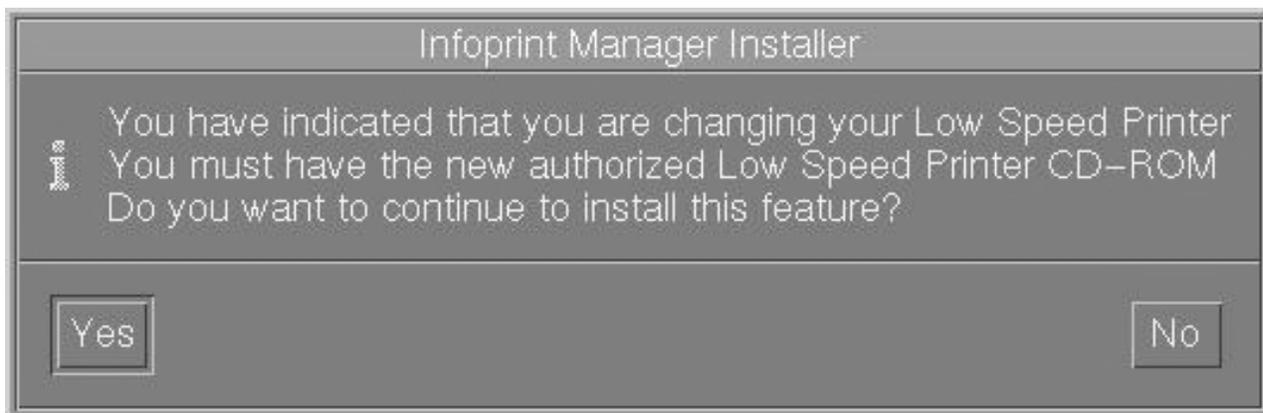
Figure 21. Infoprint Installer: prompt for correct CD-ROM pop-up dialog

If you click **Yes**, Infoprint installs the function and displays the results, before proceeding to step 8. If you click **No**, Infoprint proceeds to step 8.

8. When completed with the first CD-ROM, the Installer prompts you with a pop-up dialog box that asks: `Do you have additional features to install?`. Click **Yes** and proceed to step 9.

9. When you click **Yes**, the Installer prompts you with a second pop-up dialog box that says:

```
Remove CD-ROM
Insert new feature CD-ROM
Click OK when CD-ROM is ready
```

Follow these directions by removing the current CD-ROM from the CD-ROM drive and inserting the CD-ROM for the feature you wish to install (for example, the **Infoprint Manager SAP Print Feature**, LCD4-1921, into the CD-ROM drive, and clicking **Ok** on the dialog box.

As each CD-ROM is installed, Infoprint updates:

- The LUM database with the ECF located on the CD
- The "Features Installed" file with the correct information.

The Installer scrolls these updates through the field in the middle of this panel.

10. Once all features have been installed, the Installer displays a panel (Figure 22) that gives you the option to display the full set of features installed.
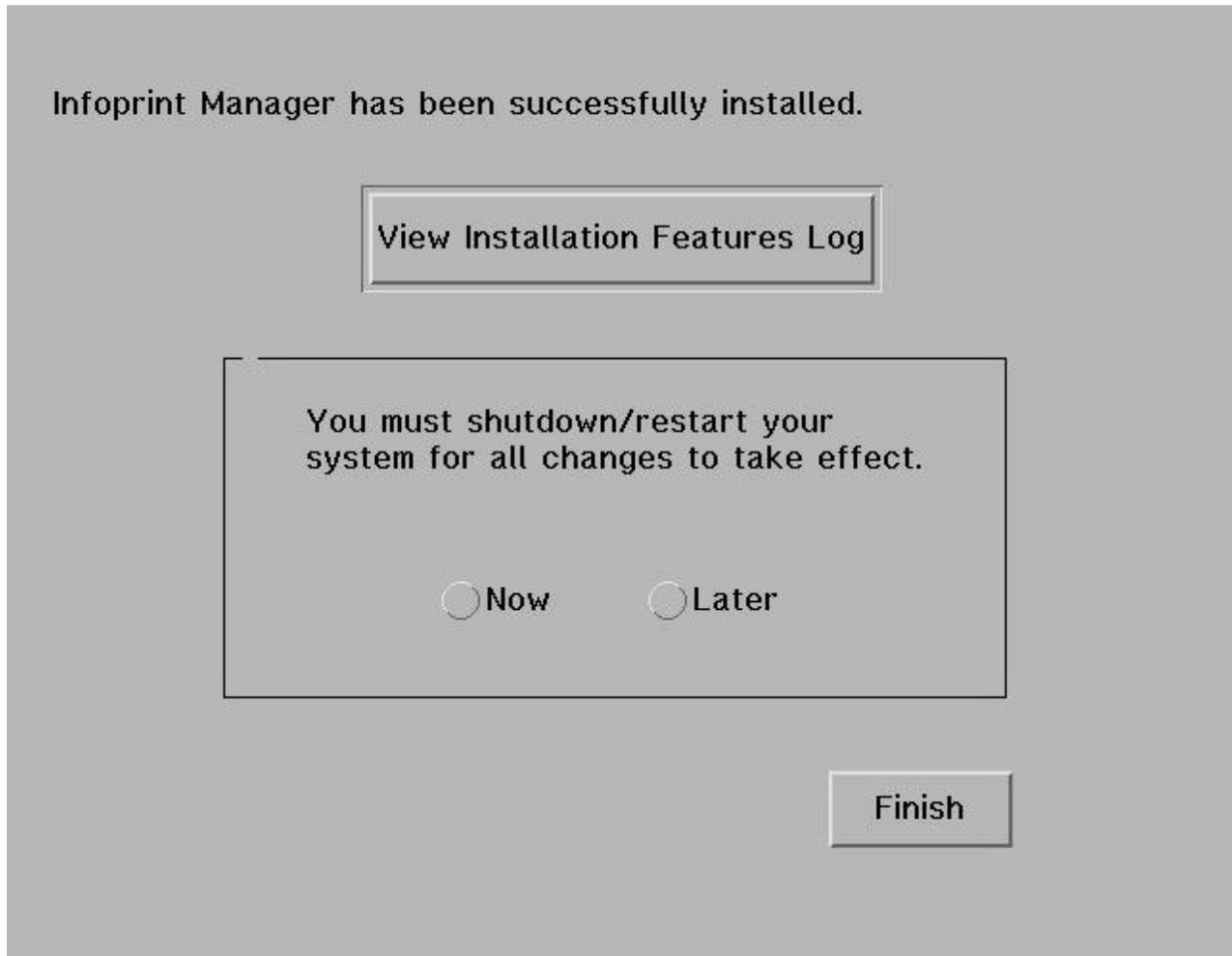
Figure 22. Final Infoprint Installer panel

If you click on the **View Installation Features Log** button, an AIX window appears with text similar to the following:

```
Infoprint Manager Options Installed
[Base]
Base=Yes

[Printer]
High=4
Medium=3
Low=2
Work=5
Fax=1

[Features]
Email=Yes
Font=No
PPFA=Yes
SAP=Yes
Security=No
JPSF=No
POD=No
```

In this sample file, note that it updates the number of medium-speed and high-speed printers (`Medium=3 and High=4`) installed in the complete list of functions installed on this system.

11. You can either decide to restart your system now, or just press **Finish** and exit the Infoprint Installer, remembering to restart the system at a later time.

   If you are asked if you want to reboot the system and you select **Now**, the AIX system shuts down immediately without any message to other users that a shutdown is to take place.

Installing clients on AIX non-Infoprint servers

The following contains a brief description of the command-line install required for installing the AIX Infoprint client, the Notification client, and the SAP clients on AIX servers that are not running Infoprint Manager, but need to communicate with an Infoprint AIX server.

Note: For each of these commands to run successfully, you must first mount the **Infoprint Manager Common Clients**, LCD4-1917, onto your AIX server.

To install both the AIX client and the Notification client on a non-Infoprint AIX server, enter the following command:

```
/cdrom/setup -c -n server_name -p port_number
```

For *server_name*, specify the host name or IP address of the Infoprint Manager server system with which this AIX client system will communicate. For *port_number*, specify the port that the server will be using for Infoprint communication. Optionally, you may use the **-P** flag to specify a default logical destination for job submission, and the **-L** flag to indicate a language preference for Infoprint messages. For more information about installing the Infoprint AIX client, see "Installing the Infoprint AIX client" on page 135.

To install only the Notifications client on a non-Infoprint AIX server, enter the following command:

```
/cdrom/setup -y -n server_name
```

For a complete description of the installation process, see "Installing the software on an AIX system" on page 147.

To install the SAP clients on a non-Infoprint AIX server, enter the following command:

```
/cdrom/setup -x -n server_name
```

For a complete description of the installation process, see *Infoprint Manager: SAP R/3 Configuration and Printing Tasks*.

Chapter 6. Using the Infoprint interfaces

This section lists the tasks you can complete with the Infoprint Manager Administration and Operations GUIs. 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 SMIT Administrator's interface 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. 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 10, "Infoprint Manager GUI software" on page 109.

Tasks you perform using the Infoprint Manager Administration GUI

Printer tasks:
* Create or copy a printer
* Move a printer
* Delete a printer
* Create, copy, and modify job and document defaults
* Change logical destinations
* Check the status of a printer
* Enable a printer
* Disable a printer
* Space a PSF printer
* Resume a printer
* Stop or pause a PSF or Infoprint Color printer
* Change media for a PSF, BSD, or Infoprint Color printer
* Change the AFP resource information
* Change AFP color options
* 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

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

Job tasks:
- Check the status of a queued or retained job
- Release a job

- Hold a 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

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 GUI windows
- Customize the appearance of the GUI
- 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

Installing or starting the Infoprint Manager Administration GUI

For information on installing and starting the Infoprint Manager Administration GUI, see Chapter 10, "Infoprint Manager GUI software" on page 109.

Tasks you perform using the Infoprint Manager Operations GUI

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, or Infoprint Color 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

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

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

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 GUI windows
- Customize the appearance of the GUI
- 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

Installing and starting the Infoprint Manager Operations GUI

For information on installing and starting the Infoprint Manager Operations GUI, see Chapter 10, "Infoprint Manager GUI software" on page 109.

Using the Infoprint SMIT administrator's interface

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

Note: Note that this list is not all inclusive; the DCE components are available only if you have installed the **Infoprint Manager for AIX Advanced Security/Scalability Feature**, LCD4-1920. Also, the miscellaneous configuration tasks and Infoprint Utilities each contain additional tasks.
- Start and stop Infoprint servers
- Access migration tools
- Perform troubleshooting procedures
- Access the Infoprint SMIT operator's GUI (see "Using the Infoprint SMIT production print GUI" on page 155)
- Perform miscellaneous configuration tasks
- Manage network interfaces
- Manage Infoprint security in a non-DCE environment
- Manage Infoprint security in a Distributed Computing Environment (DCE), including:
  - Manage Infoprint name spaces (DCE)
  - Control access to Infoprint objects (DCE)

- Use the Infoprint utilities

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

Starting the Infoprint SMIT administrator's interface

You have two basic methods of accessing the Infoprint SMIT administrator's interface:

- You can access the main menu of the Infoprint SMIT administrator's interface from the main AIX SMIT menu:
  1. Enter one of the following commands at the AIX command prompt. The first command starts SMIT in the AIXwindows mode. The second command starts SMIT in the ASCII mode:

     ```
     smit
     smitty
     ```

  2. Select **Infoprint Printing System**.
- Enter one of the following fastpath commands at the AIX command prompt to bypass the main AIX SMIT panel and go directly to the main panel for a group of Infoprint tasks.

Note: Note that most Infoprint SMIT panels contain fastpath commands that you can access by selecting the **F8 Image** key.

Table 3. SMIT fastpath commands

Command	Invokes
smit ipr smitty ipr	Main menu for the Infoprint SMIT administrator's interface
smit iprstrstp smitty iprstrstp	Menu for starting and stopping servers
smit iprmig smitty iprmig	Menu for Infoprint migration tools
smit iprtroub smitty iprtroub	Menu for Infoprint troubleshooting tasks
smit ppo_tasks smitty ppo_tasks	Menu for the Infoprint Production Print Operation's GUI
smit pd_psf_main smitty pd_psf_main	Menu for miscellaneous Infoprint configuration tasks
smit iprudce_interfaces smitty iprudce_interfaces	Menu for Infoprint network interface tasks
smit iprudce_ns smitty iprudce_ns	Menu for Infoprint namespace tasks
smit dce smitty dce	Menu for Infoprint DCE tasks
smit iprudce_security smitty iprudce_security	Menu for Infoprint DCE security tasks
smit iprufst_security smitty iprufst_security	Menu for Infoprint non-DCE security tasks

Table 3. SMIT fastpath commands (continued)

Command	Invokes
`smit ipru_main` `smitty ipru_main`	Menu for Infoprint utilities

Accessing the online help for the Infoprint SMIT administrator's interface

The online help for the Infoprint SMIT administrator's interface provides descriptions of panel controls, such as buttons, entry fields, and lists. You can access the help information using standard AIX SMIT help actions. If you are not familiar with using SMIT help, you can use the **Help** pull-down menu at the upper right corner of any AIXwindows SMIT panel. If you are using SMIT in the ASCII mode, access the main AIX System Management panel. Highlight the panel title and press **F1** to access help on using SMIT.

Tasks you can perform using the Infoprint SMIT administrator's interface

The following is a brief description of the tasks you can perform using the Infoprint SMIT administrator's interface. Use the online help for more detailed information.

Server tasks

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

Migration tools and tasks

The Infoprint SMIT administrator's interface menu selections for migration tools allow you to:

* Create a minimum Infoprint configuration.

  This task creates a logical destination (logical printer), queue, and actual destination (physical printer) in either an existing Infoprint server or a new Infoprint server.

* Migrate an existing AIX virtual printer.

  This task converts an existing AIX virtual printer into an Infoprint actual destination with the same characteristics as the virtual printer. Both the virtual printer you are converting and the actual destination you are creating must reside on the same AIX system.

Troubleshooting tasks

The Infoprint SMIT administrator's interface menu selections for troubleshooting allow you to:

* View a server error log

  This task opens a **vi** editor session containing the error log for the server that you specify. Server error logs contain messages about both successful and unsuccessful operations performed by the server and the objects the server contains. You can open an error log when you receive a notification message that instructs you to do so in order to learn more information about a particular problem.

* Enable/disable server tracing

This task should only be performed at the direction of an IBM Printing Systems service representative.

- Capture service/debug information

  This task should only be performed at the direction of an IBM Printing Systems service representative.

Configuring the Production Print Operations GUI

For more information on using this support, see "Using the Infoprint SMIT production print GUI" on page 155.

Configuring for receiving fax input

This support is available to you from the menu for miscellaneous Infoprint configuration tasks only if you have installed **Infoprint Manager for AIX Fax Line Feature**, LCD4-5577. For more information, see "Using Infoprint Fax" in the *Infoprint Manager for AIX: Procedures* manual.

DCE-specific tasks

The following topics are available only if you have installed the **Infoprint Manager for AIX Advanced Security/Scalability Feature**, LCD4-1920.

Network interface tasks: The Infoprint SMIT administrator's interface menu selections for network interfaces allow you to control which network interfaces can communicate with Infoprint. You can list the network interfaces that Infoprint ignores and make Infoprint stop or start ignoring a network interface.

Namespace tasks: The Infoprint SMIT administrator's interface menu selections for namespaces allow you to control which DCE namespaces belong to the Infoprint environment. You can show or change the default namespace, add namespaces, or remove namespaces.

DCE tasks: The Infoprint SMIT administrator's interface menu selections for DCE allow you to configure DCE, start and stop DCE daemons, and define DCE principals and groups. For more information, refer to *IBM Infoprint Manager for AIX: Procedures*.

Security tasks

If you have installed the **Infoprint Manager for AIX Advanced Security/Scalability Feature**, LCD4-1920, the Infoprint SMIT administrator's interface menu selections for security allow you to control the DCE groups that can access Infoprint servers, queues, and destinations and the level of access that they have.

If you are not using the Advanced Security/Scalability feature, the Infoprint SMIT administrator's interface menu selections for security allow you to control the non DCE groups that can access Infoprint servers, queues, and destinations and the level of access that they have.

For more information, refer to *IBM Infoprint Manager for AIX: Procedures*.

Creating default users

If you are using the non-DCE version of Infoprint Manager and are running a Print-on-Demand server configuration, you should control access to Infoprint administrator and operator functions by creating the default users **admin** and **oper** (security groups).

If you are using the DCE version of Infoprint, you merely need to select the DCE option on the Infoprint Installer to control access to Infoprint. If you are running a

non-DCE standard configuration , refer to the "Managing non-DCE Security for Infoprint Manager for AIX" procedure that is available from the *Infoprint Manager for AIX: Procedures* manual.

Running Infoprint as the **root** user is not recommended under any circumstances. The **admin** user will be allowed to perform both administrator and operator tasks on non-DCE Infoprint systems. The **oper** user will be able to perform operator tasks, but will be prohibited from performing administrative tasks. To set up these users, do the following:

1. Access the **Infoprint Utilities** main menu by:
   - If you do not have an **Infoprint Manager** icon on your front panel, open the **Infoprint** folder in the Application Manager and double click on the **Infoprint SMIT** icon. Then click **Infoprint Utilities**.
   - If you do have an **Infoprint Manager** icon on your front panel, open Infoprint Manager's popup menu and click on the **Infoprint SMIT** icon. Then click **Infoprint Utilities**.
2. Click **Create Default Users**.
3. Click **OK** when asked, "Are you sure?"
4. Note the passwords you set for the **admin** and **oper** users because they will be needed in the future.

Other miscellaneous Infoprint tasks

The Infoprint SMIT administrator's interface menu selections for miscellaneous Infoprint configuration allow you to perform the following tasks:
- Load Driver onto S/370 Channel Emulator/A Adapter (See *Infoprint Manager for AIX: Procedures*.)
- Customize the Input Manager
- Interrupt the current job on an input device
- Work with tapes
- Clean up canceled jobs and leftover files
- Error log and trace options

Other tasks using Infoprint utilities

The Infoprint SMIT administrator's interface menu selections for Infoprint utilities allow you to perform the following tasks:
- Add or remove languages (see "Adding or removing languages" on page 46)
- Claim a new disk for use with Infoprint
- Configure AIX Fast Connect (See *Print-on-Demand Feature: Submit for Windows*, which is available from both the **Infoprint Manager for AIX Publications** CD-ROM (**SK2T-9346**) and the IBM Printing Systems web site. For more information on obtaining information from the Web, see "Most recent information" on page 3.)
- Configure Secondary servers (see "Installing secondary Infoprint servers" on page 47)
- Create Default users (see "Creating default users" on page 67)
- Enable or disable autostart (see "Enabling or disabling autostart" on page 45)
- Start or stop the notification daemon (See Chapter 14, "Installing and using Infoprint Manager Notifications" on page 145.)
- Start or stop the SAP callback and SAPconnect daemons (See *Infoprint Manager: SAP R/3: Configuration and Printing Tasks*.)
- Print a test job
- Tune system performance (See *Infoprint Manager for AIX: Procedures*.)

Chapter 7. Understanding Destination Support Systems (DSS)

The software that the actual destination uses to send jobs to the output device is called the destination support system (DSS). When you select a DSS for an actual destination, you must consider a variety of different criteria. These criteria include the type of destination (for example, fax machine, email server or printer), the document formats your destination accepts (for example **ipds**, **pcl** or **ps**), and the document formats you plan to send to Infoprint Manager to deliver to your printer, and in some cases the printer model that an actual destination represents (for example, only the IP2000 DSS supports the non-ipds IBM Infoprint 2000 printer). For the attributes supported by each DSS, refer to *Infoprint Manager: Reference*.

This chapter consists of the following topics:

- "Infoprint Manager for AIX Supported DSSs"
-
-

Infoprint Manager for AIX Supported DSSs

IBM Infoprint Manager for AIX supports the following DSSs:

PSF DSS

The PSF DSS can send jobs to Intelligent Printer Data Stream (IPDS), PCL or PPDS printers or upload jobs to the OS/390 system. The PSF DSS transforms jobs to IPDS, PCL, PPDS or AFP before sending them to the output device or destination. The PSF DSS can transform input data and drive printers concurrently, as well as support multiple document formats in the same job. The way a PSF DSS actual destination communicates with the output device or destination and the format of the data it sends to the device or destination depend on the attachment type. As a result, the PSF DSS is the most flexible DSS. For more information, see "Understanding attachment types for PSF actual destinations" on page 71.

AIX DSS

The AIX DSS drives printers like the AIX print-spooling subsystem. In standard AIX printing, users submit jobs to an AIX print queue. The AIX print-spooling subsystem schedules the jobs and passes them to a printer device by means of a backend program that is integrated into the AIX print-spooling subsystem, usually **piobe**, **piojetd**, **lexbe**, or **pioibmnpm**, and if the queue is a remote queue, **rembak**.

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

For Infoprint Manager to drive your printer with an AIX DSS, you need to install all the necessary software (driver files) that the AIX print spooling subsystem would need to drive your printer. You do not need to create AIX queues for Infoprint Manager to drive your printer with an AIX DSS. Unlike most AIX queues, the AIX DSS supports both multiple input data formats and multiple document formats in the same job.

BSD DSS

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

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

Infoprint 2000 DSS

Infoprint Manager for AIX uses the IP2000 DSS to send jobs and communicate with model Infoprint 2000 printers that do not use the AFCCU Channel Driver (non-IPDS printers).

3170 DSS

Infoprint Manager for AIX uses the 3170 DSS to send jobs and communicate with either an IBM InfoColor 70 printer or an Infoprint Color 100 printer.

Email DSS

Infoprint Manager for AIX uses the email DSS to send jobs as emails to electronic mailing systems.

Fax DSS

Infoprint Manager for AIX uses the FAX DSS to send jobs as faxes to fax devices.

Print Optimizer DSS

The Print Optimizer DSS is used to support Infoprint Manager impositioning (see the topic "Using Infoprint Manager Impositioning with the Infoprint 4100 Advanced Function Printing System" in the *Infoprint Manager for AIX: Procedures* manual). The Print Optimizer DSS permits IBM Infoprint Manager for AIX to provide a resource database function that accepts print submission through any supported Infoprint Manager submission method, RIPs the submitted PostScript or PDF files, separates the the RIPped AFP output into individual resource files (each representing one page of output), generates a unique object identifier for each generated resource file, stores information about the documents and generated resources in a database to allow quick queries of individual pages and quick lists of files ordered by various criteria, and detects generated resources (pages) that are identical to pages that are already in the database and reuses them. The Print Optimizer DSS applies only to a document format of **pjtf**.

sapconnect DSS

Infoprint Manager for AIX uses the sapconnect DSS to deliver incoming faxes to users on a SAP system. For more information refer to the topic "Creating an sapconnect Actual Destination on the Infoprint AIX Server" in the SAP R/3 Support: Configuration and Printing Tasks manual (**sapr341.pdf**) which is available from the Infoprint Manager for AIX 4.1 Product Library page (**http://www.printers.ibm.com/R5PSC.NSF/Web/ipmrefinfo41**).

Selecting a DSS

Selecting the right DSS in some cases is obvious. For example, it should be clear when you would create a fax, email, sapconnect, print optimizer, IP2000 or 3170 DSS. Selecting a DSS to drive other printers is more complicated and requires more understanding of the PSF, AIX and BSD DSSs.

One important factor is the document formats your printer accepts and the document formats of the jobs you plan to submit. The AIX and BSD DSSs pass through any data streams including PS, PCL5E, PCL6 and PCLXL. The PSF DSS has a variety of attachment types that need to be understood and is capable of converting the following input data streams to IPDS, PCL4, PCL5, PCLC or PPDS :

- AFPDS
- ASCII
- DBCS ASCII
- GIF
- EBCDIC
- JPEG
- PCL (PCL 6 and below)
- PDF (1.4 and below)
- PS (level 3 and below)
- PPDS
- SAP (ABAP and OTF)
- S/370 line data, also known as line data
- TIFF
- PPML

Understanding attachment types for PSF actual destinations

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

TCP/IP

A PSF TCP/IP attachment type actual destination drives an IPDS printer that is connected to the network. When sending IPDS to a printer, the PSF DSS uses the IBM Print Services Facility printing subsystem to communicate with the output devices. This subsystem provides excellent two way communication to the printer so Infoprint Manager has the best control and information regarding the job. For more information, see "PSF TCP/IP printer" on page 85.

Note: The Infoprint 1000 family of printers uses port 9100. Most other IBM printers default to port 5001. The value you set here must match the value set at the printer.

Channel

A PSF channel attachment type actual destination drives an IPDS printer that is channel connected to the IPM AIX server. When sending IPDS to a printer, the PSF DSS uses the IBM Print Services Facility printing subsystem to communicate with the output devices. This subsystem provides excellent two way communication to the printer so Infoprint Manager has the best control and information regarding the job.

The Intelligent Printer Data Stream (IPDS) printer device attaches to the Infoprint AIX server through an S/370 Channel Emulator/A adapter or an S/390 Channel Emulator/A adapter. When creating the actual destination, you must identify the slot number in the server that contains both the card and the hexadecimal control unit address of the printer device. For customers running on AIX servers that support channel attachments, you can follow the procedures for setting up this attachment that is described in the *Infoprint Manager for AIX: Procedures* chapter on installing and configuring printer devices and related hardware. For more information, see "PSF Channel printer" on page 86.

Upload-SNA

A PSF Upload-SNA attachment type actual destination uploads jobs in AFPDS format to either OS/390 or MVS. This DSS communicates with PSF for OS/390 or PSF for MVS through the SNA network (using SNA LU 6.2 protocol). Before creating the actual destination, you must determine the code pages used on both the AIX and host systems. Refer to *Infoprint Manager for AIX: Procedures* for more information on configuring for using the AFP Upload function. For more information about creating this DSS, see "Creating a PSF upload-SNA-attached actual destination" on page 102.

Upload-TCP/IP

A PSF Upload-TCP/IP attachment type actual destination uploads jobs in AFPDS format to either OS/390 or MVS. This DSS communicates with either PSF for OS/390 or PSF for MVS through the TCP/IP network. Before creating the actual destination, you must determine the Internet Protocol (IP) address of the OS/390 or MVS system and the port number at which the AFP Upload Server program on the host system receives requests. The port number is an integer from 5001 to 65535. You must also determine the code pages used on both the AIX and host systems. Refer to *Infoprint Manager for AIX: Procedures* for more information on configuring for using the AFP Upload function. For more information about creating this DSS, see "Creating a PSF upload-TCP/IP-attached actual destination" on page 102.

Other-Driver

A PSF other-driver attachment type actual destination drives a PCL (or PPDS) printer in the same manner as an AIX DSS. It is possible to configure this type of DSS to transform some data formats to PCL while passing some formats (such as PostScript and PCL) through to the device. For more information, see "PSF other-driver printer" on page 87.

Command

A PSF command attachment type actual destination requeues jobs to a PCL (or PPDS) printer queue. Infoprint Manager considers the job complete after delivering it to queue for this device. For more information, see "PSF Command printer" on page 91.

Selecting from among a PSF, AIX, and BSD DSS

Understanding the PSF attachment types help further determine which type of DSS to use for your printer. So if you want to upload jobs to OS/390 or MVS, you should create one of the PSF upload attachment type actual destinations, depending on your communication protocol with PSF running on the host (whether SNA or TCP/IP). If you want to drive an IPDS printer, you should create a PSF TCP/IP or channel-attached actual destination depending on how your IPDS printer is attached to the system.

The most complex decisions concern when to use either an AIX, PSF-other, BSD, or PSF Command DSS for printing. The following topics provide reasons for as well as reasons against using particular DSSs.

AIX DSS

If your input data formats (for example, PostScript and PCL) are the same as the formats accepted by your printer (you neither need nor desire that data be transformed), then driving your printer with an AIX DSS is a good choice. An Infoprint Manager AIX DSS can drive any printer an AIX queue can drive. By using one of the Infoprint Manager enhanced AIX backends (**pioibmnpm** or **pioinfo**), the AIX DSS also supports accurate job completion and job accounting. Before using one of these backends you must still install the driver files for you printer.

Note: The **pioibmdpm** backend that comes with IBM Infoprint 2085 or IBM Infoprint 2105 also provides accurate job completion and job accounting for those printers. It should not be used with other printers and the Infoprint Manager enhanced backends (**pioibmnpm** and **pioinfo**) should not be used with the Infoprint 2085 or Infoprint 2105 printers.

The hardest part of creating an AIX DSS is figuring out what the destination-command should be. If you configure an AIX queue for one of your printers, you can find the destination command you need to enter to create the AIX DSS actual destination in the **/etc/qconfig** file after **backend=** parameter for your AIX queue. Most of these backends work the same, except that they default to different port numbers. So if you want to use the Infoprint Manager enhanced backends to obtain accurate job completion and job accounting information, you just need to know the port number to use for your printer.

The AIX DSS destination command for the Infoprint Manager enhanced backends can be either of the following:

```
/usr/lib/lpd/pio/etc/pioinfo ip-address [port]
/usr/lib/lpd/pio/etc/pioibmnpm ip-address [port]
```

where *ip-address* is the IP address of the printer you want to use and *port* is the TCP/IP port that printer uses for both PCL and PostScript print jobs. If the port is not specified, it defaults to 9100 for **pioinfo** and to 2501 for **pioibmnpm**. On HP printers, the port is most often 9100; on most IBM printers, the port is 2501, but some newer IBM printers also use port 9100.

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

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

The following conditions must be true before you can set **wait-for-job-completion** to **true**:
- Your printer backend program must support accurate job completion. The **pioinfo** and **pioibmnpm** commands meet this requirement.
- Your printer must support the PJL language. If your printer supports SNMP, the server queries the printer to find out whether or not it supports PJL. Otherwise,

you must have an entry for your printer model in the **/usr/lpp/pd/bin/pjlprtrs.cfg** file. If any of the following conditions apply:

– A printer supports PJL but does not support SNMP
– A printer is not on when you start the Infoprint AIX server
– A printer's actual destination is not using Infoprint Manager's SNMP support

put an entry in the **pjlprtrs.cfg** file.
• Do not put an entry in the **pjlprtrs.cfg** file for a printer that does not support PJL.

See "Using the pjldetect command" for information on how to determine whether your printer supports PJL and "Adding the printer model to the pjlprtrs.cfg file" to put the entry in the **pjlprtrs.cfg** file.

When you have **wait-for-job-completion** set to **true**, your job remains in a processing state in Infoprint Manager until the last page has been stacked on the printer. The page count shown in the accounting log is the page count reported by the printer for that job. If you have requested a start sheet or end sheet, those pages are part of the page count.

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

The format for the **pjldetect** command follows:

```
pjldetect ip-address port
```

where *ip-address* is the Internet Protocol address of the printer you want to use and *port* is the TCP/IP port which that printer uses for PCL and PostScript print jobs. On HP printers, the port is most often 9100; on most IBM printers, the port is 2501. If you try both of these ports on a printer and receive a message that indicates that a connection to the printer could not be established, please consult your configuration manuals for the printers to find the TCP/IP port.

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

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

Note: If your printer does not support PJL, running **pjldetect** will most likely cause some data to print and a page to be ejected.

Adding the printer model to the pjlprtrs.cfg file
The **pjlprtrs.cfg** text file lists printer models that support setting **wait-for-job-completion** to **true**, but these printers either do not support SNMP, are not configured to use SNMP, or are not on when the Infoprint AIX server is started. Some systems use the **pjlprtrs.cfg** file because they can create printers with

the **wait-for-job-completion** attribute set to **true**, without having to verify through SNMP that the printer supports PJL. Without this capability, printers that have not been turned on would fail the SNMP/PJL test, and Infoprint would automatically set the **wait-for-job-completion** attribute to false. This would force administrators to reset the attribute to **true** after they turn on the printer.

If you have determined that your printer does support correct job completion, but it does not support SNMP, you can add the printer model to the **/usr/lpp/pd/bin/pjlprtrs.cfg** file. Only printers that are known to support PJL should be added to this file. You can find the AIX colon files in the **/usr/lpd/pio/predef** directory. Note that the model names in **pjlprtrs.cfg** file must match the model names you specify for the **destination-model** actual destination attribute for the AIX DSS.

A sample **pjlprtrs.cfg** file that lists the IBM 4317 and HP Laserjet 5 Si printers would look like the following:

```
ibm4317
hplj-5si
```

Note: Because both the IBM 4317 and the HP Laserjet 5 Si support SNMP, you would only place those models in the **pjlprtrs.cfg** file if you were setting **use-snmp** to **false** on the corresponding actual destinations or the printers were turned off when your Infoprint AIX server starts.

PSF-other DSS

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

Because the PSF-other DSS drives the printer just like an AIX DSS, everything about the AIX DSS applies. By default, a PSF-other DSS transforms all incoming document formats to PCL4, PCL5, PCL5C, or PPDS.

To configure a PSF-other Driver printer to not transform certain input data formats, you use the **Infoprint Manager Administration GUI** to perform 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 Infoprint Manager attributes to ensure that jobs are not transformed.

Document formats 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**
- **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**
- **jog-between-job-copies**
- **maximum-messages-printed**
- **maximum-transform-pages-ahead**
- **mvs-segment-id**
- **new-line-option**
- **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**
- **scanner-correction**
- **screen-frequency**
- **segment-file-size**
- **shared-formdef**
- **shift-out-shift-in**
- **start-on-new-sheet**
- **table-reference-characters**
- **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**

BSD DSS

You should use the BSD DSS only when there is either no other way to communicate with a device (for example, it is connected to a non-AIX processor) or you require:
- A terminating actual destination for the configurable transform subsystem
- An exit for your own use

The BSD DSS is capable of mapping Infoprint Manager job and document attributes to options for your destination command. Infoprint Manager uses the values in the **attribute-map** attribute attribute to map Infoprint Manager job and document attributes to options that append the **destination-command** value. This provides a means to customize the options passed from Infoprint Manager to your destination command. Each value of the attribute map consists of an Infoprint

Manager attribute name, a colon, and a string containing the option flag to which the attribute maps. Infoprint Manager appends the value of the attribute after the option flag in the generated command.

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

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

and your destination command is qprt **-c** **-P** mpcl, the BSD actual destination would generate the following command:

```
qprt -c -P mpcl -N copy_count_value -T job_name_value -D job_owner_value filename
```

The **attribute-map** attribute defaults to **destination-pass-through:-o**, which is appropriate if your destination command is **rembak**. Set your **attribute-map** attribute appropriately for your destination command.

If you are using the **rembak** destination command, the following **attribute-map** values are recommended:

attribute-map values to set	
• **job-name:o-Z** • **dest-pass-through:o**	`-x"attribute-map='job-name:-o Z printer-pass-through:-o'"`

If you are using the **qprt** destination command, the following **attribute-map** values are recommended:

attribute-map values to set	Example -x specification
• **copy-count:-N** • **job-name:-T** • **job-owner:-D**	`-x"attribute-map='copy-count:-N job-name:-T job-owner:-D'"`

If you are using the **lpr** destination command, the following **attribute-map** values are recommended:

attribute-map values to set	Example -x specification
• **copy-count:-#** • **job-name:-J**	`-x"attribute-map='copy-count:-# job-name:-J'"`

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

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

```
qprt -c -P mpcl
```

you can submit the command:

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

and expect the following result:

From dest-command attribute:	From job/document attribute:	From document's destination-pass-through attribute:	From document file names:
qprt –c –P mpcl	–N 2	–p15	/etc/motd

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

- Because Infoprint Manager does not directly control the printer device, printer status information and error detection are limited. For example, if the remote queue is up, but the printer device cannot print because of a hardware problem, the BSD actual destination remains in a normal state.

- For the same reason, job status information is limited. For example, Infoprint reports jobs as complete when they have been sent to the remote queue even though the printer device may be down. This means that you should not include BSD actual destinations in a pool. Jobs may be requeued on the remote queue and never actually printed, although other printers in the pool may be capable of printing them.

- Because most AIX print queues support only one data stream, BSD actual destinations usually accept only a single document format.

- BSD physical printers do not generate auxiliary sheets. The system where the printer device is attached may create auxiliary sheets, but you cannot control them using Infoprint Manager attributes.

- If a job sent to a BSD actual destination includes multiple data sets, the output may be interleaved with the output from other jobs. For example, if you request two copies of a job, the printer device may print one copy, then another job, then the second copy.

PSF Command-attached DSS

You should use the PSF command attached DSS when you need to transform input data types to forward to a PCL printer you have no other way to reach. For example, if the PCL printer is physically connected to another system, this method may be the only way to print to it. Before you create the PSF command-attached actual destination, you must create the print queue to which the actual destination will submit requests.

Because PSF command-attached actual destinations requeue jobs to a local or remote queue, they share many of the limitations of BSD actual destinations listed in the BSD section. Unlike BSD actual destinations, they support multiple document formats because the PSF DSS automatically transforms all input data to PCL before sending it to the print queue. PSF command-attached printers also generate auxiliary sheets unlike BSD actual destinations. However, since the command used must be able to accept data from **STDIN**, the command-attached DSS cannot be **rembak**. As a result, a command-attached actual destination receives even less printer and job status than the BSD DSS printer.

Chapter 8. Creating and managing actual destinations

The Infoprint actual destination is the software representation of an output device. An actual destination can be a physical printer (representing a printer device), a fax destination (representing a fax machine), or an email destination (representing an electronic mailing address).

For help in selecting the type of actual destination to create, see Chapter 7, "Understanding Destination Support Systems (DSS)" on page 69.

You create and manage Infoprint actual destinations through the Infoprint Manager Administration GUI, the command line, or the migration utility. The following topics describe how you create new actual destinations and usage tips for displaying actual destination information:

- "Creating actual destinations with the Infoprint Manager Administration GUI" on page 82
- "Creating actual destinations with the command line" on page 101
- "Migrating an existing actual destination" on page 103

Create an actual destination for each output device used with your Infoprint Manager system. You can use the Infoprint Manager Administration GUI or the command line to create an actual destination. Your choice is determined by the DSS that you need as follows:

Table 4. Methods for creating actual destinations

DSS	Attachment	Method
PSF DSS	TCP/IP-attached	Administration GUI. See "PSF TCP/IP printer" on page 85.
PSF DSS	Channel-attached	Administration GUI. See "PSF Channel printer" on page 86.
PSF DSS	Upload-SNA-attached	Command line only. See "Creating a PSF upload-SNA-attached actual destination" on page 102.
PSF DSS	Upload-TCP/IP-attached	Command line only. See "Creating a PSF upload-TCP/IP-attached actual destination" on page 102.
PSF DSS	Other-driver-attached	Administration GUI. See "PSF other-driver printer" on page 87.
PSF DSS	Command-attached	Administration GUI. See "PSF Command printer" on page 91.
AIX DSS		Command line only. See "AIX Printer" on page 92.
BSD DSS		Administration GUI. See "BSD printer" on page 95.
Infoprint 2000 DSS		Administration GUI. See "Infoprint 2000 Printer" on page 96.
Email DSS		Administration GUI. See "Fax and Email" on page 97.

Table 4. Methods for creating actual destinations (continued)

DSS	Attachment	Method
FAX DSS		Administration GUI. See "Fax and Email" on page 97.
Print Optimizer DSS		Administration GUI. See "Print Optimizer" on page 98.
sapconnect DSS		Administration GUI. See "SAPconnect" on page 99.
3170 DSS		Command line only. See "Creating a 3170 actual destination" on page 102.

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

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

Creating actual destinations with the Infoprint Manager Administration GUI

The Infoprint Manager Administration GUI provides wizard support for creating the following types of actual destinations:

- "PSF TCP/IP printer" on page 85
- "PSF Channel printer" on page 86
- "PSF other-driver printer" on page 87
- "PSF Command printer" on page 91
- "AIX Printer" on page 92
- "BSD printer" on page 95
- "Infoprint 2000 Printer" on page 96
- "Fax and Email" on page 97
- "Print Optimizer" on page 98
- "SAPconnect" on page 99

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 5. 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, 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 5. 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**, note that Infoprint Manager set the following defaults as well:

Table 6. 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 7. PSF TCP/IP printer worksheet

Wizard prompt	Description	Value
Name	The name for the actual destination object (8-character limit).	
Server	The Infoprint server that controls this actual destination.	
Model	Select the printer model from the pull-down list in the Infoprint Manager Administration GUI. If the printer you are working with is not in the pull-down list, enter the name as it appears on the printer.	
TCP/IP address	The dotted-decimal IP address used to access this printer.	
TCP/IP port	The port used by the printer for communication. If no value is specified, the server selects a port number based upon the printer model. **Note:** The Infoprint 1000 family of printers uses port 9100. Most other IBM printers default to port 5001. The value you set here must match the value set at the printer.	
Logical destination	The logical destination that directs jobs to this actual destination. You can accept the default LD, use another existing LD, or create a new one for this printer.	__ Default __ Existing: _____ __ Create: _____
Logical destination's server	The server that contains the logical destination.	

Table 7. PSF TCP/IP printer worksheet (continued)

Wizard prompt	Description	Value
Queue	The queue that holds jobs destined for this actual destination.	If you selected a new LD, you get the following three options: __ Default __ Existing: _____ __ New: _____

To create this type of printer, use the **Create Printer Wizard** in the Infoprint Manager Administration GUI. (On the menu bar, click **Printer—>Create—>PSF—>TCP/IP**.) Referring to the worksheet above, provide 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 Channel printer

Create a PSF actual destination to represent an IPDS printer. Use the channel attachment type for an IPDS printer that PSF controls directly through an IBM S/370 Parallel Channel Emulator Card.

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

Table 8. PSF Channel printer worksheet

Wizard prompt	Description	Value
Name	The name for the actual destination object (8-character limit).	
Server	The Infoprint server that controls this actual destination.	
Model	Select the printer model from the pull-down list in the Infoprint Manager Administration GUI. If the printer you are working with is not in the pull-down list, enter the name as it appears on the printer.	
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.	

Table 8. PSF Channel printer worksheet (continued)

Wizard prompt	Description	Value
Channel slot number	The system slot number where the channel card is installed. In a multi-bus system, the card must be installed in **bus0**.Otherwise, the default value of 1 is appropriate.	
Logical destination	The logical destination that directs jobs to this actual destination. You can accept the default LD, use another existing LD, or create a new one for this printer.	__ Default __ Existing: _____ __ Create: _____
Logical destination's server	The server that contains the logical destination.	
Queue	The queue that holds jobs destined for this actual destination.	If you selected a new LD, you get the following three options: __ Default __ Existing: _____ __ New: _____

To create this type of printer, use the **Create Printer Wizard** in the Infoprint Manager Administration GUI. (On the menu bar, click **Printer—>Create—>PSF—>Channel**.) Referring to the worksheet above, provide the information as prompted by the wizard. For assistance, refer to the Infoprint Manager Administration GUI online help.

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

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

PSF other-driver printer

Create a PSF other-driver actual destination to represent a PCL printer. By default, a PSF other-driver printer transforms all incoming data streams into either PCL4, PCL5, PCL5C, or PPDS before sending the job to your printer. The actual destination submits jobs to the printer through the AIX backend program that is defined on the printer command (just like an AIX DSS).

By setting the **document-formats-ripped-at-destination** actual destination attribute, you can specify particular **document-formats** (such as PostScript and PCL) that will not be transformed by Infoprint Manager. Using this attribute allows you to eliminate the performance overhead of having PCL and PostScript documents

transformed into Advanced Function Presentation data, and then into PCL image data when your printer is capable of accepting those data streams.

The use of certain job and document attributes requires the actual destination to transform a job even if the job's document format is listed on the **document-formats-ripped-at-destination** attribute. For example, if you submit a PostScript job that contains the document attributes **form-definition** and **output-format**, Infoprint must transform this job to honor these attributes. For a complete list of the attributes that force Infoprint to transform the job, see "Document formats that cause a job to be transformed" on page 76, "Job attributes that cause a job to be transformed" on page 77, and "PSF header sheet attributes that cause a job to be transformed" on page 77.

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

Table 9. PSF other-driver printer worksheet

Wizard prompt	Description	Value
Name	The name for the actual destination object (8-character limit).	
Server	The Infoprint server that controls this actual destination.	
Model	This single-valued attribute indicates the make and model of the printer device represented by the PSF-other actual destination. Select the printer model from the pull-down list in the Infoprint Manager Administration GUI or enter a value. The value you specify must match the file prefix of a file in the **/usr/lpd/pio/predef** directory. For example, one of the files for a 4029 printer is **ibm4029.asc**. Therefore, the value you specify is ibm4029. **Note:** Specifying the predef format is optional for Infoprint printers that appear in the **Infoprint Manager Administration GUI** drop-down list, but it is required for all other printers. [1]	Examples from the **predef** directory: • hplj-3si • lexOptraN Example from the pull-down list:IBMNetworkPrinter12
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.	Leave this column blank.

Table 9. PSF other-driver printer worksheet (continued)

| Printer command | The printer command that submits a job to this destination. Include the full path name for the AIX print driver that came with your model printer.

This full path name is the command that would appear in the **/etc/qconfig** file if you had created an AIX queue for your printer.

As an alternative, you could use the IBM-supplied pioinfo or pioibmnpm AIX printer driver and supply the correct port number to ensure you get accurate job completion and accounting information[2]. | Examples[3] |
|---|---|---|
| Data stream | The data stream for PSF transforms to create (for example, PCL4, PCL5, PCL5C, or PPDS). | |
| Logical destination | The logical destination that directs jobs to this actual destination.

You can accept the default LD, use another existing LD, or create a new one for this printer. | __ Default

__ Existing: _____

__ Create: _____ |
| Logical destination's server | The Infoprint server that contains the logical destination. | |
| Queue | The queue that holds jobs destined for this actual destination. | If you selected a new LD, you get the following three options:
    __ Default
    __ Existing: _____
    __ New: _____ |

Table 9. PSF other-driver printer worksheet (continued)

Notes:

1. Regardless of whether you enter a value or pick a model from the **Infoprint Manager Administration GUI** drop-down list, the printer driver (including the **predef** files) must be installed on your AIX system.

2. Infoprint Manager provides two modified AIX printer back end programs that provide accurate job completion information and an accurate count of the pages printed: **/usr/lib/lpd/pio/etc/pioibmnpm** *ipaddress port* where *ipaddress port* defaults to 2501, which is the port used by most IBM printers and **/usr/lib/lpd/pio/etc/pioinfo** *ipaddress port* where *ipaddress port* defaults to 9100, which is the port used by non-IBM printers.

   To get this function with the IBM Infoprint 2105 and IBM Infoprint 2085 printers, you must use the **/usr/lib/lpd/pio/etc/pioibmdpm** *ipaddress port* printer driver that comes with the printer, where *ipaddress port* defaults to 2501

   The use of *port* is optional.

3. You can specify a variety of printer commands, depending upon the type of printer:
   - IBM Network Printer:`/usr/lib/lpd/pio/etc/pioibmnpm` **net12.boulder.ibm.com** where **net12.boulder.ibm.com** is a fully-qualified IP address.
   - JetDirect-attached printer: `/usr/lib/lpd/pio/etc/pioinfo` **myhp.boulder.ibm.com 9100**
     Note: You can also specify `/usr/lib/lpd/pio/etc/piojetd` followed by the IP address.
   - Markvision-attached printer: `/usr/markvision/bin/lexbe` **–h optra.boulder.ibm.com –p 0 -W 1 -T no END**

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**.) Referring to the worksheet above, provide the information as prompted by the wizard. For assistance, refer to the Infoprint Manager Administration GUI online help.

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

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

After you create the PSF Other-Driver attached printer with the **Create Printer Wizard**, you may want to passthrough PostScript and PCL data stream jobs. To configure for this support, you must go into the **Printer Properties** notebook for the printer and modify the **Formats to RIP at destination** field. The **Formats to RIP at destination** field can be found on the **Document** tab of the **Printer Properties** notebook when all the available properties are displayed. It 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**.

PSF Command printer

A PSF Command actual destination transforms all incoming data streams into either PCL4, PCL5, PCL5C, or PPDS before issuing your print command. Your print command must support **STDIN** (standard input) for receiving data.

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

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

Note: Prior to using this worksheet to create your Infoprint Manager actual destination, you need to create the queue to which you are forwarding the job.

Table 10. PSF Command printer worksheet

Wizard prompt	Description	Value
Name	The name for the actual destination object (8-character limit).	
Server	The Infoprint server that controls this actual destination.	
Model	Select the printer model from the pull-down list in the Infoprint Manager Administration GUI. If the printer you are working with is not in the pull-down list, enter the name as it appears on the printer.	
SNMP TCP/IP address	The dotted-decimal IP address for this printer. This value is used only for SNMP printers.	Infoprint Manager uses this value only to obtain printer SNMP information from the printer.
Printer command	The command string used to send a job to the appropriate AIX printer. Because this command must support **STDIN** for receiving data, the AIX backend **REMBAK** is not supported.	Example: /usr/bin/qprt -P *printerName* -dp -Z!
Data stream	The data stream created by PSF transforms and expected by the printing device (for example, PCL4, PCL5, PCL5C, or PPDS).	

Table 10. PSF Command printer worksheet (continued)

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

To create this type of printer, use the **Create Printer Wizard** in the Infoprint Manager Administration GUI. (On the menu bar, click **Printer—>Create—>PSF—>Command**.) Referring to the worksheet above, provide the information as prompted by the wizard. For assistance, refer to the Infoprint Manager Administration GUI online help.

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

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

AIX Printer

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

Before creating an AIX printer, complete the following worksheet.

Table 11. AIX printer worksheet

Wizard prompt	Description	Value
Name	The name for the actual destination object.	
Server	The Infoprint server that controls this actual destination.	

Table 11. AIX printer worksheet (continued)

Model	This single-valued attribute indicates the make and model of the printer device represented by the AIX actual destination. Select the printer model from the pull-down list in the Infoprint Manager Administration GUI or enter a value. The value you specify must match the file prefix of a file in the **/usr/lpd/pio/predef** directory. For example, one of the files for a 4029 printer is **ibm4029.asc**. Therefore, the value you specify is ibm4029. **Note:** Specifying the predef format is optional for Infoprint printers that appear in the **Infoprint Manager Administration GUI** drop-down list, but it is required for all other printers. [1]	Examples from the **predef** directory: • hplj-3si • lexOptraN Example from the pull-down list:IBMNetworkPrinter12
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.	Leave this column blank.
Printer command	The printer command that submits a job to this destination. Include the full path name for the AIX print driver that came with your model printer. This full path name is the command that would appear in the **/etc/qconfig** file if you had created an AIX queue for your printer. As an alternative, you could use the IBM-supplied **pioinfo** or **pioibmnpm** AIX printer driver and supply the correct port number to ensure you get accurate job completion and accounting information[2].	Examples[3]

Table 11. AIX printer worksheet (continued)

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

Notes:

1. Regardless of whether you enter a value or pick a model from the **Infoprint Manager Administration GUI** drop-down list, the printer driver (including the **predef** files) must be installed on your AIX system.

2. Infoprint Manager provides two modified AIX printer back end programs that provide accurate job completion information and an accurate count of the pages printed: **/usr/lib/lpd/pio/etc/pioibmnpm** *ipaddress port* where *ipaddress port* defaults to 2501, which is the port used by most IBM printers and **/usr/lib/lpd/pio/etc/pioinfo** *ipaddress port* where *ipaddress port* defaults to 9100, which is the port used by non-IBM printers.

   To get this function with the IBM Infoprint 2105 and IBM Infoprint 2085 printers, you must use the **/usr/lib/lpd/pio/etc/pioibmdpm** *ipaddress port* printer driver that comes with the printer, where *ipaddress port* defaults to 2501

   The use of *port* is optional.

3. You can specify a variety of printer commands, depending upon the type of printer:

   - IBM Network Printer:`/usr/lib/lpd/pio/etc/pioibmnpm` **net12.boulder.ibm.com** where **net12.boulder.ibm.com** is a fully-qualified IP address.

   - JetDirect-attached printer: `/usr/lib/lpd/pio/etc/pioinfo` **myhp.boulder.ibm.com 9100**
   Note: You can also specify `/usr/lib/lpd/pio/etc/piojetd` followed by the IP address.

   - Markvision-attached printer: `/usr/markvision/bin/lexbe` **-h optra.boulder.ibm.com -p 0 -W 1 -T no END**

To create this type of printer, use the **Create Printer Wizard** in the Infoprint Manager Administration GUI. (On the menu bar, click **Printer—>Create—>AIX**. Referring to the worksheet above, provide the information as prompted by the wizard. For assistance, refer to the Infoprint Manager Administration GUI online help.

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

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

BSD printer

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

Before creating a BSD printer, complete the following worksheet.

Table 12. BSD printer worksheet

Wizard prompt	Description	Value
Name	The name for the actual destination object.	
Server	The Infoprint server that controls this actual destination.	
SNMP TCP/IP address	The dotted-decimal IP address used to access this printer. This value is used only for SNMP printers. This field should be left blank if you are using **Rembak** as the printer backend.	
Printer command	The command to issue to submit a job to this remote destination. Typically, this is a call to the **rembak** command. For example, `/usr/lpd/rembak -S` *serverName* `-P` *printerName* `-N /usr/lib/lpd/aixshort.`	
Logical destination	The logical destination that directs jobs to this actual destination. You can accept the default LD, use another existing LD, or create a new one for this printer.	__ Default __ Existing: _____ __ Create: _____
Logical destination's server	The Infoprint server that contains the logical destination.	
Queue	The queue that holds jobs destined for this actual destination.	If you selected a new LD, you get the following three options: __ Default __ Existing: _____ __ New: _____

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

Referring to the worksheet above, provide the information as prompted by the wizard. For assistance, refer to the Infoprint Manager Administration GUI online help.

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

The BSD DSS is capable of mapping Infoprint Manager job and document attributes to options for your destination command. Infoprint Manager uses the values in the **attribute-map** attribute to map Infoprint Manager job and document attributes to options that append the **destination-command** value. This provides a means to customize the options passed from Infoprint Manager to your destination command. Each value of the attribute map consists of an Infoprint Manager attribute name, a colon, and a string containing the option flag to which the attribute maps. Infoprint Manager appends the value of the attribute after the option flag in the generated command. For more information about the **attribute-map** attribute works, see "BSD DSS" on page 77.

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

Infoprint 2000 Printer

Create an Infoprint 2000 actual destination to use the IBM Infoprint 2000 printer (non-IPDS model) for either AFP printing or as a PCL or PostScript printer.

Before creating an Infoprint 2000 actual destination, complete the following worksheet.

Table 13. Infoprint 20000 Destination worksheet

Wizard prompt	Description	Value
Name	The name for the actual destination object.	
Server	The Infoprint server that controls this actual destination.	
Model	The type of printer.	IP2000
TCP/IP address	The dotted-decimal IP address used to access this printer.	

To create this type of printer, use the **Create Printer Wizard** in the Infoprint Manager Administration GUI. (On the menu bar, click **Printer—>Create—>Infoprint 2000**. Referring to the worksheet above, provide the information as prompted by the wizard. For assistance, refer to the Infoprint Manager Administration GUI online help.

Note: If the **Create Infoprint 2000** printer option is not shown in the **Printer** menu, you can add it to the menu using customizing options in the Infoprint Manager Administration GUI. Select the **Customize** option from the **Options** menu to open the Customize dialog. Select the **Printer** tab and

select the Menu checkbox for **Infoprint 2000 printer**. Click **OK** to apply your change and close the dialog. The **Create Infoprint 2000** printer option displays in the **Printer** menu.

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

Fax and Email

Create either a Fax or an Email actual destination when you want Infoprint Manager to either fax or email your jobs.

Before creating either a Fax or an Email actual destination, complete the following worksheet.

Table 14. Fax or Email Destination worksheet

Wizard prompt	Description	Value
Name	The name for the actual destination object.	
Server	The Infoprint server that controls this actual destination.	
Logical destination	The logical destination that directs jobs to this actual destination. **Note:** IBM recommends that you create a separate logical destination object so that the same logical destination does not feed jobs to both a printer and one of these non-print destinations.	__ Default __ Existing: _____ __ Create: _____
Logical destination's server	The Infoprint server that contains the logical destination.	
Queue	The queue that holds jobs destined for this actual destination.	If you selected a new LD, you get the following three options: __ Default __ Existing: _____ __ New: _____

To create this type of printer, use the **Create Printer Wizard** in the Infoprint Manager Administration GUI. (On the menu bar, click **Other—>Create—>***destination_type*, where *destination_type* is either Email or Fax.) Referring to the worksheet above, provide the information as prompted by the wizard. For assistance, refer to the Infoprint Manager Administration GUI online help.

Note: If either the **Create Fax** or **Create Email** destination option is not shown in the **Other** menu, you can add it to the menu using customizing options in the Infoprint Manager Administration GUI. Select the **Customize** option from the **Options** menu to open the Customize dialog. Select the **Other** tab and select the Menu checkbox for either the **Fax** or **Email** destination. Click

OK to apply your change and close the dialog. The **Create Fax** or **Create Email**destination option displays in the **Other** menu.

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

Print Optimizer

Create a Print Optimizer actual destination if you are using a model of the Infoprint 4100 Advanced Function Printing System printer to take advantage of the Infoprint Manager Impositioning Assist solution.

Before creating a Print Optimizer actual destination, complete the following worksheet.

Table 15. Print Optimizer Destination worksheet

Wizard prompt	Description	Value
Name	The name for the actual destination object.	
Server	The Infoprint server that controls this actual destination.	
Optimize for printer	Specify the appropriate model of the IBM Infoprint 4100 Advanced Function Printing System printer.	`Infoprint4100-PD1-PD2`
Location of resources	Enter the location where the print optimizer stores its resource database and output files. **Note:** Leave this field blank if you want the server to provide a default value of **/var/pd/**servername**/resources**.	
Resource space threshold	Specifies the percentage of disk space the resource database should not exceed. **Note:** Leave this field blank if you want the server to provide a default value.	
Print Optimizer server port	Specifies the port number on which the print optimizer will listen for requests that do not come in through the normal Infoprint Manager client/server communications port. Leave this field blank if you want the server to provide a default value.	

Table 15. Print Optimizer Destination worksheet (continued)

Wizard prompt	Description	Value
Logical destination	The logical destination that directs jobs to this actual destination. **Note:** IBM recommends that you create a separate logical destination object so that the same logical destination does not feed jobs to both a printer and one of these non-print destinations.	__ Default __ Existing: _____ __ Create: _____
Logical destination's server	The Infoprint server that contains the logical destination.	
Queue	The queue that holds jobs destined for this actual destination.	If you selected a new LD, you get the following three options: __ Default __ Existing: _____ __ New: _____

To create this type of printer, use the **Create Printer Wizard** in the Infoprint Manager Administration GUI. (On the menu bar, click **Other—>Create—>Print Optimizer....**) Referring to the worksheet above, provide the information as prompted by the wizard. For assistance, refer to the Infoprint Manager Administration GUI online help.

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

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

SAPconnect

Create a SAPconnect destination to provide fax-in support to an SAP R/3 client that has been configured to use Infoprint Manager for AIX.

Before creating a SAPconnect actual destination, complete the following worksheet.

Table 16. SAPconnect Destination worksheet

Wizard prompt	Description	Value
Name	The name for the actual destination object.	
Server	The Infoprint server that controls this actual destination.	

Table 16. SAPconnect Destination worksheet (continued)

Wizard prompt	Description	Value
SAP gateway service	Enter the name of the SAP gateway service with which the actual destination registers.	Specify any value, but fill in this panel.
SAP gateway host	Enter the name of the host where the SAP gateway service identified in the SAP gateway service field is running.	Specify any value, but fill in this panel.
SAP client	Enter the name of the SAP client that the actual destination will log onto, such as 090.	090
SAP user ID	Enter the SAP logon id that the actual destination will use to log onto the SAP system to which it will be delivering jobs, such as faxes.	sapuser1
SAP password	Enter the password for the SAP-logon userid identified in the SAP user ID field. This password is not visible on list attribute queries.	
SAP program ID	Enter the program ID specified in the SAP RFC destination that was created on the SAP system for this actual destination.	Specify any value, but fill in this panel.
SAP system hostname	Enter the hostname of the SAP system to which jobs, such as faxes, will be delivered by the actual destination. The system hostname must be in a name format, such as sapa, and not an ip-address format.	sapa
SAP system name	Enter the three-character name of the SAP system, such as SJD, to which jobs, such as faxes, will be delivered by the actual destination.	SJD
SAP system number	Enter the system number of the SAP system, such as 04, to which jobs, such as faxes, will be delivered by the actual destination.	04

Table 16. SAPconnect Destination worksheet (continued)

Wizard prompt	Description	Value
Logical destination	The logical destination that directs jobs to this actual destination. **Note:** IBM recommends that you create a separate logical destination object so that the same logical destination does not feed jobs to both a printer and one of these non-print destinations.	__ Default __ Existing: _____ __ Create: _____
Logical destination's server	The Infoprint server that contains the logical destination.	
Queue	The queue that holds jobs destined for this actual destination.	If you selected a new LD, you get the following three options: __ Default __ Existing: _____ __ New: _____

To create this type of printer, use the **Create Printer Wizard** in the Infoprint Manager Administration GUI. (On the menu bar, click **Other—>Create—>SAPconnect Destination**.) Referring to the worksheet above, provide the information as prompted by the wizard. For assistance, refer to the Infoprint Manager Administration GUI online help.

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

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

Creating actual destinations with the command line

You can create any actual destination using the command line instead of the Infoprint Manager Administration GUI. Attribute files are useful for this purpose. Infoprint Manager provides samples in the **/usr/lpp/pd/attr** directory. You can either copy or create your own, as well as creating them from existing actual destinations by using the archive function of the **pdls** command and directing the output to a file:

```
pdls -c pr -r archive prt1 > /myattrfile.txt
```

To create an actual destination with an attribute file, use
```
pdcreate -X attrfile.txt server1:prt1
```

where **prt1** is the name of the new actual destination.

You must specify the following information when you create an actual destination:
- The printer model
- The name of the queue for the actual destination
- The realization of the destination-actual
- The destination support system (DSS), which defaults to PSF
- The name of the server where you want to create the new actual destination
- The name of the new actual destination

Because there are no templates for PSF upload-TCP/IP-attached actual destinations, PSF upload-SNA-attached actual destinations, and 3170–attached actual destinations, you must use the **pdcreate** command to create these actual destinations.

Creating a PSF upload-SNA-attached actual destination

For PSF upload-SNA-attached actual destinations you must also specify (in addition to the list provided above:
- The PSF DSS attachment type
- The ASCII code page used on AIX
- The EBCDIC code page used on MVS (default ibm-037)

For example, you might enter the following command:

```
pdcreate -x "destination-realization=actual
   attachment-type=upload-sna associated-queue=Server1-q
   destination-model='IBM 3820' ascii-character-mapping=ibm-850
   ebcdic-character-mapping=ibm-837"
   Server1:Destination10
```

Note: PSF upload-SNA-attached and upload-TCP/IP-attached printers do not support ASCII format.

Creating a PSF upload-TCP/IP-attached actual destination

For PSF upload-TCP/IP-attached actual destinations, you must specify:
- The PSF DSS attachment type
- The IP address of the host system
- The port number used by the AFP Upload server running on the host
- ASCII character mapping value
- The EBCDIC code page used on MVS (default ibm-037)

For example, you might enter the following command:

```
pdcreate -x "destination-realization=actual
   attachment-type=upload-tcpip associated-queue=Server1-q
   destination-model='IBM 3820' ascii-character-mapping=ibm-850
   destination-tcpip-internet-address=westmvs3.boulder.ibm.com
   ebcdic-character-mapping=ibm-837
   destination-tcpip-port-number=6001" Server1:Destination9
```

Note: PSF upload-SNA-attached and upload-TCP/IP-attached printers do not support ASCII format.

Creating a 3170 actual destination

For 3170 actual destinations, which can apply to either an IBM InfoColor 70 printer or an IBM Infoprint Color 100 printer, you must also specify:
- The IP address of the printer device
- Destination Support System
- Color Rasterized Image Processors (RIPs) servers

For example, you might enter the following command:

```
pdcreate -x "destination-realization=actual destination-support-system=3170
associated-queue=Server1-q color-rip-servers=ripmachine1:11126 ripmachine2:11126
printer-model=InfoColor70
printer-tcpip-internet-address=1.2.3.4" Server1:Destination12
```

For more information, refer to *Infoprint Manager: Reference* or the **pdcreate** man page.

Migrating an existing actual destination

You use the **pdmigpp** utility to migrate an existing AIX queue to an Infoprint Manager actual destination. You specify the name of an existing AIX print queue, the name of the server in which you want to create the actual destination, the actual destination name, and the name of the Infoprint Manager queue from which the actual destination receives jobs.

You can use the **pdmigpp** utility from a SMIT panel or from the command line. To access the SMIT panel, enter:

```
smit pd_migpp
```

To migrate an existing AIX printer from the command line, enter:

```
pdmigpp my_asc Server1 ActDest1 Queue1
```

where *my_asc* is the AIX print queue, *Server1* is the server name, *ActDest1* is the actual destination name, and *Queue1* is the Infoprint Manager queue name.

Chapter 9. The search order for AFP resources

Using a resource-context object is an easy way to ensure that Infoprint Manager locates the AFP resources required to process a job. However, there are a number of ways to override the specifications of the resource-context object and direct Infoprint Manager to use different resources for a given job. The following describes the order in which Infoprint Manager for AIX and Infoprint Manager for Windows search for AFP resources:

1. The path specified by the **resource-context-user** document attribute.
2. The paths specified by one of the following document attributes, depending on the type of resource:
   - **resource-context-font**
   - **resource-context-form-definition**
   - **resource-context-overlay**
   - **resource-context-page-definition**
   - **resource-context-page-segment**

   Note: If one of these document attributes contains a value, Infoprint Manager ignores any location specified by the same attribute of a default document object.
3. The path specified by the **resource-context** document attribute.
4. The path specified by the **PSFPATH** environment variable.
5. The paths specified by the resource-context attributes of the actual destination. These attributes have the same names as the document attributes identified in step 2.
6. For fonts, the directory where the IBM AFP Font Collection: Fonts for AIX and Windows is installed.

Once a resource is located, the search ends, and the located resource is used to process the job. If Infoprint Manager ultimately cannot find a required resource, it prints an error message advising you of the missing resource. Infoprint Manager reports that the job completed successfully.

The preceding information may make planning for resource-context objects in your Infoprint Manager environment appear complicated. But in most cases, it is actually quite simple. If the only AFP resources you use are the AFP resources that shipped with Infoprint Manager, there is no need to use resource-context objects. All of your resources are located automatically because these resources reside in the **reslib**, **fontlib**, and AFP Font Collection directories described above. If, on the other hand, you have custom AFP resources, make sure that you *do not* store them in the **reslib**, **fontlib**, or AFP Font Collection directories. These directories are controlled by Infoprint Manager, and any custom resources stored in these locations may be corrupted by installing, uninstalling, or servicing Infoprint Manager software. Store any custom AFP resources in a directory outside the Infoprint Manager install path and use resource-context objects to provide access to them.

For more information on resource-context objects, refer to the **Creating a New Resource-Context Object** Administrator procedure on *Infoprint Manager for AIX: Procedures* or on the IBM Printing Systems website at

http://www.ibm.com/printers. For more the path to the Infoprint Manager
information, see "Most recent information" on page 3.

Part 3. Getting started with client systems

Chapter 10. Infoprint Manager GUI software

Before you perform any of the steps documented here, you should understand the general features and requirements of Infoprint Manager.

There are two Infoprint Manager GUIs: the Infoprint Manager Administration GUI and the Infoprint Manager Operations GUI. When you install the Infoprint Manager server, you automatically install both GUIs on that system. The Infoprint Manager Operations GUI provides a subset of the functionality available in the Infoprint Manager Administration GUI.

You can also install either one or both GUIs on a suitable Windows 98, Windows NT, Windows 2000 or Windows XP 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 on Windows

Both Infoprint Manager GUIs require the IBM Cross Platform Technologies for Windows® (CPT) Version 2.0 Runtime Environment, IBM Build cn130-2020124. This is the only supported build level of the Runtime Environment for running the Infoprint Manager GUIs. If you have a previous version of the Infoprint Manager GUIs, you should uninstall them before you install the new Runtime Environment and the new GUIs.

Important Note:: If you plan to install one or both of the Infoprint Manager GUIs as well as Infoprint Select, be sure 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:

   `IBM Build cn130-2020124`
3. If the output from the command does not contain the text above, uninstall the currently installed Runtime Environment component:
   a. Click the Windows **Start** button and select **Settings –> Control Panel**, then double-click the **Add/Remove Programs** icon.
   b. Find the currently installed version of the **IBM Runtime Environment** in the list of programs that can be removed and click **Add/Remove**. Follow the instructions on the screen to complete the process.
   c. Remove the JRE or Runtime Environment entry from the PATH environment variable.

If necessary, follow these steps to install the required CPT Runtime Environment:

1. Insert the Infoprint Manager Common Clients CD-ROM into the drive. The install program will start automatically.
2. Select the **Install Products** button, and then select the Cross Platform Technologies button.

It may take a minute for the installer to start. Do not click on any other part of the screen until the installer begins. If you do, the installer window may be hidden behind other windows.

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**.

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:
   ```
   IBM Build cn130-2020124
   ```

Installing the Operations GUI on Windows

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

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

1. Insert the Infoprint Manager Common Clients CD-ROM into the drive. The install program will start automatically.
2. Select the **Install Products** button, and then select the Operations GUI button. You will be asked to select a language for the installation.

   It may take a minute for the installer to start. Do not click on any other part of the screen until the installer begins. If you do, the installer window may be hidden behind other windows.

3. Follow the instructions on the installation screens, paying attention to the following guidelines:
   - If you are installing over a previous version of the Infoprint Manager GUI software, click **yes** for all questions about replacing files. If you will be using this GUI to work with an Infoprint Manager for Windows server, do not change any of the selected check boxes.
   - 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.
   - The recommended version of the Infoprint Manager GUI offers the recommended view. You can also choose to use the **Basic** view by installing it from **Infoprint Manager Common Clients** CD-ROM, LCD4–1917. The installer asks if you want to place icons for either or both of the views on your desktop.
   - The Infoprint Manager Operations GUI requires approximately 9.1 MB of memory on your hard drive, whether you install one view or both.

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.

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 the **Install Products** button, and then select the Administration GUI button. You will be asked to select a language for the installation.

   It may take a minute for the installer to start. Do not click on any other part of the screen until the installer begins. If you do, the installer window may be hidden behind other windows.

3. Follow the instructions on the installation screens, paying attention to the following guidelines.

   - If you are installing over a previous version of the Infoprint Manager GUI software, click **yes** for all questions about replacing files. If you will be using this GUI to work with an Infoprint Manager for Windows server, do not change any of the selected check boxes.

   - 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.

   - The recommended version of the Infoprint Manager GUI offers the recommended view. You can also choose to use the **Basic** view by installing it from **Infoprint Manager Common Clients** CD-ROM, LCD4–1917. The installer asks if you want to place icons for either or both of the views on your desktop.

   - The Infoprint Manager Administration GUI requires approximately 9.5 MB of memory on your hard drive, whether you install one view or both.

Starting the Infoprint Manager Administration GUI from the AIX command line

You can start the Infoprint Manager Administration GUI from an aixterm window.

- To open the standard view, enter:

  ```
  ipguiadvadm
  ```

- To open a basic view, after completing the tasks in "Using the basic view of the GUI" on page 112, enter:

  ```
  ipguibasicadm
  ```

Starting the GUIs on Windows

To launch the Infoprint Manager Administration GUI, double-click the **Administration Infoprint** icon on your desktop. To launch the Infoprint Manager Operations GUI, double-click the **Operations Infoprint** icon on your desktop.

Table 17. The Infoprint Manager GUI icons

Infoprint Manager Administration GUI	Infoprint Manager Operations GUI

If the icon is not on the desktop, click the Windows **Start** button and select **Programs—>IBM Infoprint Manager —> Administration Infoprint** to launch the Infoprint Manager Administration GUI or **Programs—>IBM 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 2000 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.

The Infoprint Manager Administration GUI allows the administrator to access almost all of the functions available in Infoprint Manager for AIX. See the Infoprint Manager Administration Procedures, available on your Infoprint Manager Publications CD-ROM or on the IBM Printing Systems web site at http://www.ibm.com/printers, for additional information.

On the Printing Systems homepage, click Infoprint Manager under **Resources for**, then click Infoprint Manager for AIX on the Infoprint Manager Family homepage. Select **Product Library** from the right-hand navigation bar, then under **Administrator** click **Procedures**.

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.

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). These jobs often include variable data for direct mail programs. Users submit these jobs from a client (Windows or Macintosh) personal computer using Infoprint Submit or a scanning tool and related software.

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**.

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, type one of the following commands at the command line, depending on which version of the product you are using:

Table 18. Starting the special version of the operations GUI

Infoprint Manager for Windows	Infoprint Manager for AIX
operAdvs operBasics	ipguiadvs ipguibasics

Note: The commands pertaining to the Basic view of the Operations GUI are available only if you have purchased and installed the Print-on-Demand Feature of Infoprint Manager for AIX.

Uninstalling the GUIs on Windows

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 **Add/Remove** (Windows NT) or the **Change/Remove** (Windows 2000) button.

   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 don't 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 InstallShield Uninstaller screens that display.

Chapter 11. Using Infoprint Select to submit a job

Infoprint Select allows you to submit jobs from a Windows workstation to a destination (whether print, fax, or e-mail) that is managed by Infoprint. 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. The command line also allows you to interface more directly with Infoprint Manager and to specify AFP and other print options.

This section contains procedures for installing and using Infoprint Select on the Windows platform. The following topics are covered:

- "Installing Infoprint Select"
- "Installing DCE support for Infoprint Select with an Infoprint Manager for AIX DCE server" on page 116
- "Configuring your Infoprint Manager server to work with Infoprint Select" on page 116

Once you have installed Infoprint Select, you can use the following procedures to configure and use the product:

- "Creating Infoprint Select printers" on page 117
- "Printing from applications" on page 129
- "Commands you can use with Select" on page 131

Installing Infoprint Select

Important Note: If you plan to install one or both of the Infoprint Manager GUIs as well as Infoprint Select, be sure to install the GUI(s) first.

Follow these steps to install Infoprint Select on a Windows system from the **Infoprint Manager Common Clients**, LCD4-1917, CD-ROM:

Note: If you plan to use Infoprint Select to submit print jobs to an Infoprint Manager for AIX server that uses the IBM Distributed Computing Environment (DCE) for AIX, refer to "Installing DCE support for Infoprint Select with an Infoprint Manager for AIX DCE server" on page 116 before you continue with the installation.

1. Insert the Infoprint Manager Common Clients CD-ROM into the drive.
2. The install program will start automatically.
3. Select the Install Infoprint Products button, and then select the Infoprint Select button.
4. Follow the instructions on the installation screens to install the program.
5. Choose the type of install based upon your installation:
   - A **typical install** if you only wish to use the **pdls**, **pdpr**, and **pdq** commands, or if you are using non-DCE Infoprint servers.
   - A **custom install** if you are running an Infoprint DCE server and want to print to a restricted printer or use more than the **pdpr**, **pdls**, and **pdq** Infoprint commands.

Installing DCE support for Infoprint Select with an Infoprint Manager for AIX DCE server

If you have IBM Distributed Computing Environment (DCE) installed on your computer at version 2.0 or later and your Infoprint AIX server was installed using the Advanced Security/Scalability (DCE) feature, you may choose to install DCE Support through the Custom installation method on InstallShield. DCE Support will allow you to use more than the **pdpr**, **pdls**, and **pdq** Infoprint Manager commands when communicating with Infoprint Manager servers that require DCE authorization. In addition, the Infoprint Manager administrator may restrict access to a printer to users who are logged into DCE with a particular DCE user ID or DCE group ID so you would not be able to submit jobs without the DCE support.

Before you can use the extra commands or print to a restricted printer, you must do the following during the install process:

1. Select **Custom** on the **Setup Type** window.
2. Ensure that both **Program Files** and **DCE support** are selected on the next window.
3. Proceed with the install instructions.
4. Log into DCE as an authorized user or member of an authorized group.

Configuring your Infoprint Manager server to work with Infoprint Select

In order for Infoprint Select to submit print, fax, or email jobs to Infoprint Manager properly, you must configure each Infoprint Manager logical destination to accept jobs from Infoprint Select. Use the Infoprint Manager Administration GUI as described in the following procedure to configure each logical destination correctly. If you want to use the command line instead of the GUI, use the **pdset** command to set the **client-driver-names** attribute.

Note: It is highly recommended that users who submit jobs with Infoprint Select send them to Infoprint logical destinations, not to Infoprint actual destinations.

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

   Note: To be able to complete this procedure, you must have the authority to use the **pdenable**, **pddisable**, and **pdset** commands. If you do not have that authority, your user id must be added to the access control lists (ACLs) on your Infoprint Manager server. Information about security and how users can be authorized to Infoprint Manager is found in the topics "Managing Infoprint security with DCE" and "Managing non-DCE security for Infoprint Manager for AIX" in the *IBM Infoprint Manager for AIX: Procedures* manual.

2. Launch the Infoprint Manager Administration GUI.
3. Select one of the logical destinations that will receive print jobs from Infoprint Select by clicking on it once.
4. On the menu bar, click **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. Repeat from 6 for all of the drivers that users will use with Infoprint Select.

9. Click **OK**.

Configuring for Fax and Email jobs with Select

If your logical destination is configured to send jobs to either a fax or an email DSS, you also need to set the logical destination's **destination-support-system** attribute is set to either **fax** or **email**, whichever is appropriate. You can modify this value through the **pdset** command. For example, the following sets a **destination-support-system** value of `fax` for the logical destination **fax1–ld**.

```
pdset -x "destination-support-system=fax" fax1–ld
```

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:

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.
- The names of logical destinations to use
- The names of the drivers to associate with each logical destination
- Where the driver files are located (on a CD-ROM, on a network server, or on your local system)

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 actual destination attributes that apply only to PSF DSS printers.

Drivers and Finishing

The automatic data stream transforms that PSF printers use do not support finishing (stapling). As a result, if you plan to use Infoprint Select to submit PCL or PostScript jobs to a PSF printer (destination), 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 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, even if the job is only one page long.
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.

Creating Infoprint Select printers on Windows 98 systems

Adding your first Infoprint Select printer on Windows 98 systems
Follow this procedure to add an Infoprint Select printer to your Windows 98 system:

1. On the Windows desktop, double-click the **My Computer** icon.
2. Double-click the **Printers** folder icon.
3. Double-click the **Add Printer** icon. The **Add Printer Wizard** window displays. Click **Next**.
4. Select **Local Printer** and click **Next**.
5. Click **Have Disk**.
   a. Click **Select Printer Driver**, or if you want to use the PPDs, click **Browse**.
   b. Navigate to the directory where you installed Infoprint Select. (By default, this is c:\Infoprint\Select.) This directory holds the required ibmprt95.inf file.
   c. Click **OK**.
   d. Click **OK** to close the **Install from Disk** window.
6. Select the printer you want to use and click **Next**.
7. If the next dialog is a notification that the printer driver already exists, select **Replace existing driver** and click **Next**.
8. In the **Available ports** list, highlight **Infoprint (Infoprint Select)** and click **Next.**

   Note: If you just installed Infoprint Select and cannot find it in the list, restart your system and start this procedure again from the beginning. If you cannot find the Infoprint Select port after you re-start the system, you may have to re-install Infoprint Select.

9. 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**.
10. When you are asked **Would you like to print a test page?**, select **No** and click **Finish**.

    Note: The printer does not appear instantaneously in the Printers window.

If an **Insert Disk** dialog appears, click **OK** to close it.

At this point, a **Files Needed** dialog may appear. In all likelihood, the required file (adfonts.mfm) is already present on your system. If the **Files Needed** dialog appears, follow these steps:
1. Click the **Browse** button.
2. Navigate to c:\windows\system, and select the file that is needed.
3. Click **OK**.
4. Click **OK** to close the **Copying Files** dialog and to complete the configuration.

If the **Files Needed** dialog appears again, follow a similar procedure to copy the files from the \windows\system or the Infoprint Select installation directory. You should find all missing files in one of these two locations.

If you cannot find a file in either of these directories, you must retrieve it from the operating system CD-ROM or floppy disks.

Next, update your port settings for this new printer:
1. On the Windows desktop, double-click the **My Computer** icon.
2. Double-click the **Printers** folder.

3. In the **Printers** window, right-click the icon for the first Infoprint Select printer you created and select **Properties** from the pop-up list.

4. In the **Properties** window, click the **Details** tab.

5. On the Details tab, click **Port Settings**. The **Infoprint Port** window displays.

6. In the **Print Server** field, select **Infoprint Manager** from the drop–down list.

7. In the **Host Name** field, type the host name of your Infoprint Manager server.

8. 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.

9. Click **Refresh Printer Selection List**.

10. Select the appropriate printer from the list.

11. Click **OK**.

12. Click **OK** to close the Properties window.

Specifying the logical destination name: Now you need to specify the logical destination name 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=*logicaldestinationname*

3. Save your changes and close the autoexec.bat file.

4. Restart the Windows system to make this change effective.

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 98 systems".

Changing print driver properties: Next, you need to configure the print driver to work correctly with Infoprint Select to send binary data instead of ASCII data by doing the following:

1. In the **Printers** window, select the printer that you just created.

2. Click **File—>Properties** and the *Printer* **Properties** appears, where *Printer* is the printer that you just created.

3. Click the **PostScript** tab and click **Advanced...**. The **Advanced PostScript Options** dialog box appears.

4. Click **Pure Binary Data**.

5. Click **OK** in the **Advanced PostScript Options** dialog box.

6. Click **OK** in the **Printers** window.

Adding an additional Infoprint Select printer on Windows 98 systems

Before adding an Infoprint Select printer to your Windows 98 environment, you must first collect the information described in "Collecting required information" on page 117. Also, you must perform the appropriate server configuration as described in "Configuring your Infoprint Manager server to work with Infoprint Select" on page 116.

To print to an additional Infoprint Select printer, you must add an additional Infoprint Select port. Otherwise the configuration is similar to that described above in "Adding your first Infoprint Select printer on Windows 98 systems" on page 118.

Follow these steps to add an additional Infoprint Select port:

1. On the Windows desktop, double-click the **My Computer** icon.

2. Double-click the **Printers** folder.

3. In the **Printers** window, right-click the icon for the first Infoprint Select printer you created and select **Properties** from the pop-up list.

4. In the **Properties** window, click the **Details** tab.

5. In the **Details** tab, click **Add Port**.

6. In the **Add Port** window, select **Other**.

7. Select **Infoprint Select** as the type of port and click **OK**.

8. In the **Infoprint Port** dialog, type a name for the new port, such as Infoprint-2. (Use a name that is not used by any other port.) Click **OK**.

9. Select **Infoprint (Infoprint Select)** from the **Print to the following port** pulldown list. This will restore the original port assignment for the initial Infoprint Select printer. (The port you just created still exists and will soon be used for the additional Infoprint Select printer.)

10. Click **OK** to close the **Properties** window.

After creating this new Infoprint Select port, follow the steps described in "Adding your first Infoprint Select printer on Windows 98 systems" on page 118, but select the new Infoprint Select port (for example, Infoprint-2) in step 8. Remember to configure the new port in step 5.

Creating Infoprint Select printers on Windows ME systems

Adding your first Infoprint Select printer on Windows ME systems

Follow this procedure to add an Infoprint Select printer to your Windows ME system:

1. On the Windows desktop, double-click the **My Computer** icon.

2. Double-click the **Printers** folder icon.

3. Double-click the **Add Printer** icon. The **Add Printer Wizard** window displays. Click **Next**.

4. Select **Local Printer** and click **Next**.

5. Click **Have Disk**.

   a. Click **Browse**.

   b. Navigate to the directory where you installed Infoprint Select. (By default, this is c:\Infoprint\Select.) This directory holds the required ibmprt95.inf file.

   c. Click **OK**.

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

6. Select the printer you want to use and click **Next**.

7. If the next dialog is a notification that the printer driver already exists, select **Replace existing driver** and click **Next**.

8. In the **Available ports** list, highlight **Infoprint (Infoprint Select)**.

   Note: If you just installed Infoprint Select and cannot find it in the list, restart your system and start this procedure again from the beginning. If you cannot find the Infoprint Select port after you re-start the system, you may have to re-install Infoprint Select.

9. Click **Configure Port**. The **Infoprint Port** window displays.

10. In the **Print Server** field, select **Infoprint Manager** from the drop–down list.

11. In the **Host Name** field, type the host name of your Infoprint Manager server.

12. 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.
13. Click **Refresh Printer Selection List**.
14. Select the appropriate printer from the list.
15. Click **OK**.
16. Click **Next**.
17. 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. Select whether or not the printer should be the default. Click **Next**.
18. When you are asked **Would you like to print a test page?**, select **No** and click **Finish**.

   Note: The printer may not appear instantaneously in the Printers window.

If an **Insert Disk** dialog appears, click **OK** to close it.

At this point, a **Files Needed** dialog may appear. In all likelihood, the required file (adfonts.mfm) is already present on your system. If the **Files Needed** dialog appears, follow these steps:

1. Click the **Browse** button.
2. Navigate to c:\windows\system, and select the file that is needed.
3. Click **OK**.
4. Click **OK** to close the **Copying Files** dialog and to complete the configuration.

If the **Files Needed** dialog appears again, follow a similar procedure to copy the files from the \windows\system or the Infoprint Select installation directory. You should find all missing files in one of these two locations.

If you cannot find a file in either of these directories, you must retrieve it from the operating system CD-ROM.

Specifying the logical destination name: Now you need to specify the logical destination name 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=*logicaldestinationname*
3. Save your changes and close the autoexec.bat file.
4. Restart the Windows system to make this change effective.

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 ME systems" on page 123.

Changing print driver properties: Next, you need to configure the print driver to work correctly with Infoprint Select to send binary data instead of ASCII data by doing the following:

1. In the **Printers** window, select the printer that you just created.
2. Click **File—>Properties** and the *Printer* **Properties** appears, where *Printer* is the printer that you just created.
3. Click the **PostScript** tab and click **Advanced...**. The **Advanced PostScript Options** dialog box appears.

4. Click **Pure Binary Data**.
5. Click **OK** in the **Advanced PostScript Options** dialog box.
6. Click **OK** in the **Printers** window.

Adding an additional Infoprint Select printer on Windows ME systems

Before adding an Infoprint Select printer to your Windows ME environment, you must first collect the information described in "Collecting required information" on page 117. Also, you must perform the appropriate server configuration as described in "Configuring your Infoprint Manager server to work with Infoprint Select" on page 116.

To print to an additional Infoprint Select printer, you must add an additional Infoprint Select port. Otherwise the configuration is similar to that described above in "Adding your first Infoprint Select printer on Windows ME systems" on page 121.

Follow these steps to add an additional Infoprint Select port:
1. On the Windows desktop, double-click the **My Computer** icon.
2. Double-click the **Printers** folder.
3. In the **Printers** window, right-click the icon for the first Infoprint Select printer you created and select **Properties** from the pop-up list.
4. In the **Properties** window, click the **Details** tab.
5. In the **Details** tab, click **Add Port**.
6. In the **Add Port** window, select **Other**.
7. Select **Infoprint Select** as the type of port and click **OK**.
8. In the **Infoprint Port** dialog, type a name for the new port, such as Infoprint-2. (Use a name that is not used by any other port.) Click **OK**.
9. Select **Infoprint (Infoprint Select)** from the **Print to the following port** pulldown list. This will restore the original port assignment for the initial Infoprint Select printer. (The port you just created still exists and will soon be used for the additional Infoprint Select printer.)
10. Click **OK** to close the **Properties** window.

After creating this new Infoprint Select port, follow the steps described in "Adding your first Infoprint Select printer on Windows ME systems" on page 121, but select the new Infoprint Select port (for example, Infoprint-2) in step 8. Do not forget to configure the new port in step 9.

Creating Infoprint Select printers on Windows NT systems

Adding your first Infoprint Select printer on Windows NT systems

Before adding an Infoprint Select printer to your Windows NT environment, you must first perform these steps:
- Collect the information described in "Collecting required information" on page 117.
- Configure the server as described in "Configuring your Infoprint Manager server to work with Infoprint Select" on page 116.

Follow these steps to add an Infoprint Select printer to your Windows NT system:

1. On the Windows desktop, click the Windows **Start** button and select **Settings –> Printers**.
2. Double-click the **Add Printer** icon. The **Add Printer Wizard** window displays.
3. Select **My Computer** and click **Next**.
4. In the **Available ports** list, find **Infoprint Select** and check the box next to it.

   Note: If you just installed Infoprint Select and cannot find it in the list, restart your system and start this procedure again from the beginning. If you cannot find the Infoprint Select port after you re-start the system, you may have to re-install Infoprint Select.

5. Click **Configure Port**. The **Infoprint Port Configuration** dialog displays.
6. In the **Print Server** field, select **Infoprint Manager** or **Infoprint Manager Server** from the dropdown list.
7. In the **Host Name** field, type the host name of your Infoprint Manager server.
8. 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.
9. Click **Refresh Printer Selection List**.
10. Select the appropriate printer from the list.
11. Click **OK**.
12. Click **Next**.
13. Click **Have Disk**.
    a. Click **Browse**.
    b. Navigate to the directory where you installed Infoprint Select. (By default, this is c:\Infoprint\Select.) This directory holds the required ibmprint.inf file.
    c. Click **OK**.
    d. Click **OK** to close the **Install from Disk** window.
14. Select the printer driver you wish to install and click **Next**.
15. If the next dialog tells you that the printer driver already exists, select **Replace existing driver** and click **Next**.
16. 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**.
17. Confirm that the **Not shared** radio button is selected and click **Next**.
18. When you are asked **Would you like to print a test page?**, select **No** and click **Finish**.

When the 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. In the **Files Needed** dialog, 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 NT operating system CD-ROM.
   b. In the **Files Needed** dialog, click **Browse**.

c. Navigate to the *d*:\I386\Pscript.dl_ file (where *d:* is your CD-ROM drive) and select the file that is needed.

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 NT systems".

Adding an additional Infoprint Select printer on Windows NT systems

Before adding an Infoprint Select printer to your Windows NT environment, you must first collect the information described in "Collecting required information" on page 117. Also, you must perform the appropriate server configuration as described in "Configuring your Infoprint Manager server to work with Infoprint Select" on page 116.

To print to an additional Infoprint Select printer, you must add an additional Infoprint Select port. Otherwise the configuration is similar to that described above in "Adding your first Infoprint Select printer on Windows NT systems" on page 123.

To add an additional Infoprint printer to your Windows NT environment, follow these steps:

1. On the Windows desktop, click the Windows **Start** button and select **Settings –> Printers**.
2. Double-click the **Add Printer** icon. The **Add Printer Wizard** window displays.
3. Select **My Computer** and click **Next**.
4. Click **Add Port**.
5. In the **Printer ports** dialog, find the **Infoprint port monitor** and select it.
6. Click **New Port**.
7. 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.)
8. Click **Close** to return to the **Add Printer Wizard**. The port you just created is selected.
9. Continue with step 5 of the procedure documented in "Adding your first Infoprint Select printer on Windows NT systems" on page 123, configuring the new port you just added.

Creating Infoprint Select printers on Windows 2000 systems

Adding your first 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 117.
- Configure the server as described in "Configuring your Infoprint Manager server to work with Infoprint Select" on page 116.

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 where you installed Infoprint Select. (By default, this is c:\Infoprint\Select.) This directory holds the required ibmprint.inf file.

   c. Click **OK**.

   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, find the **Print Server** field and select **Infoprint Manager** or **Infoprint Manager Server** from the dropdown list.

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.

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:\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.dl_ 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 environment, you must first collect the information described in "Collecting required information" on page 117. Also, you must perform the appropriate server configuration as described in "Configuring your Infoprint Manager server to work with Infoprint Select" on page 116.

To print to an additional Infoprint Select printer, you must add an additional Infoprint Select port. Otherwise the configuration is similar to that described above in "Adding your first Infoprint Select printer on Windows 2000 systems" on page 125.

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 port monitor** 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 with step 6 of the procedure documented in "Adding your first Infoprint Select printer on Windows 2000 systems" on page 125, configuring the new port you just added.

Creating Infoprint Select printers on Windows XP systems

Adding your first Infoprint Select printer on Windows XP systems

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

- Collect the information described in "Collecting required information" on page 117.

- Configure the server as described in "Configuring your Infoprint Manager server to work with Infoprint Select" on page 116.

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

1. From the Windows desktop, click **Start—>Printers and Faxes**.

2. Select to **Add a printer**. 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 where you installed Infoprint Select. (By default, this is c:\Infoprint\Select.) This directory holds the required ibmprint.inf file.

   c. Click **OK**.

   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, find the **Print Server** field and select **Infoprint Manager** or **Infoprint Manager Server** from the dropdown list.

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.

18. Click **Refresh Printer Selection List**.

19. Select the appropriate printer from the list.

20. Click **OK**.

21. 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 XP operating system CD-ROM.

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

   c. Navigate to the *d*:\I386\Pscript.dl_ 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 environment, you must first collect the information described in "Collecting required information" on page 117. Also, you must perform the appropriate server configuration as described in "Configuring your Infoprint Manager server to work with Infoprint Select" on page 116.

To print to an additional Infoprint Select printer, you must add an additional Infoprint Select port. Otherwise the configuration is similar to that described above in "Adding your first Infoprint Select printer on Windows XP systems" on page 127.

To add an additional Infoprint printer to your Windows XP system, follow these steps:

1. From the Windows desktop, click **Start—>Settings—>Printers—>Add Printer**.

2. Select to **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 with step 6 of the procedure documented in "Adding your first Infoprint Select printer on Windows XP systems" on page 127, configuring the new port you just added.

Printing from applications

The following considerations must be considered when printing from applications with Infoprint Select:

DCE Considerations

When using a DCE Select client, it is always a good idea to log into DCE. If you are not using an integrated DCE login, you need to run the Infoprint Select login program from the **Infoprint Select** folder in the **Start** menu. When you are printing to a DCE destination that defines printing as a protected operation (the logical destination specifies **authorize-jobs=true**), Infoprint Select cannot determine your credentials unless you have logged into DCE. When you try to print to a DCE print-protected destination and Select is unable to determine your

credentials, you receive an error message asking you to run the Infoprint Select Login program from the Infoprint Select folder in your **Start** menu.

DCE credentials can expire when you are logged in for too long. If this happens, you receive an error message asking you to run the Infoprint Select Login program to refresh your credentials the next time you try to print to a DCE print-protected destination.

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. For example, Figure 23 shows the File Print dialog for Lotus Notes.

If the printer selected (or your default printer) is an Infoprint Manager Select printer, your job is sent to the Infoprint server.
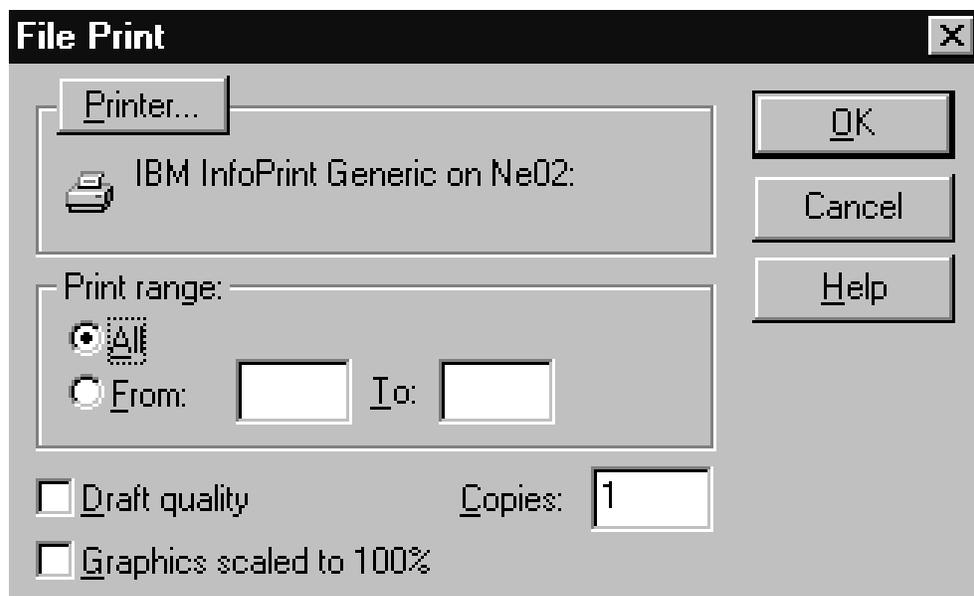
Figure 23. Printing from Lotus Notes

Configuring for receiving notifications with Select on Windows

When you submit a print job using Infoprint Select, a default notification profile is sent with the job. That notification profile sets the delivery method to either **email** (if you have the Select message window running) or to **none** (if you don't have it running). To use the email delivery method, you must set the **smtp-server-host** attribute on your Infoprint Manager server to the IP address or DNS hostname of the system that your SMTP mail server runs on. Refer to *Infoprint Manager: Procedures* for instructions on setting up and managing notifications for Select.

Faxing from Infoprint Select

If the Infoprint Manager Select printer is configured to send jobs to a fax or an email Infoprint DSS (as described in "Configuring for Fax and Email jobs with Select" on page 117), then another window appears that allows you to enter either the fax number or the email address, as well as other optional information.
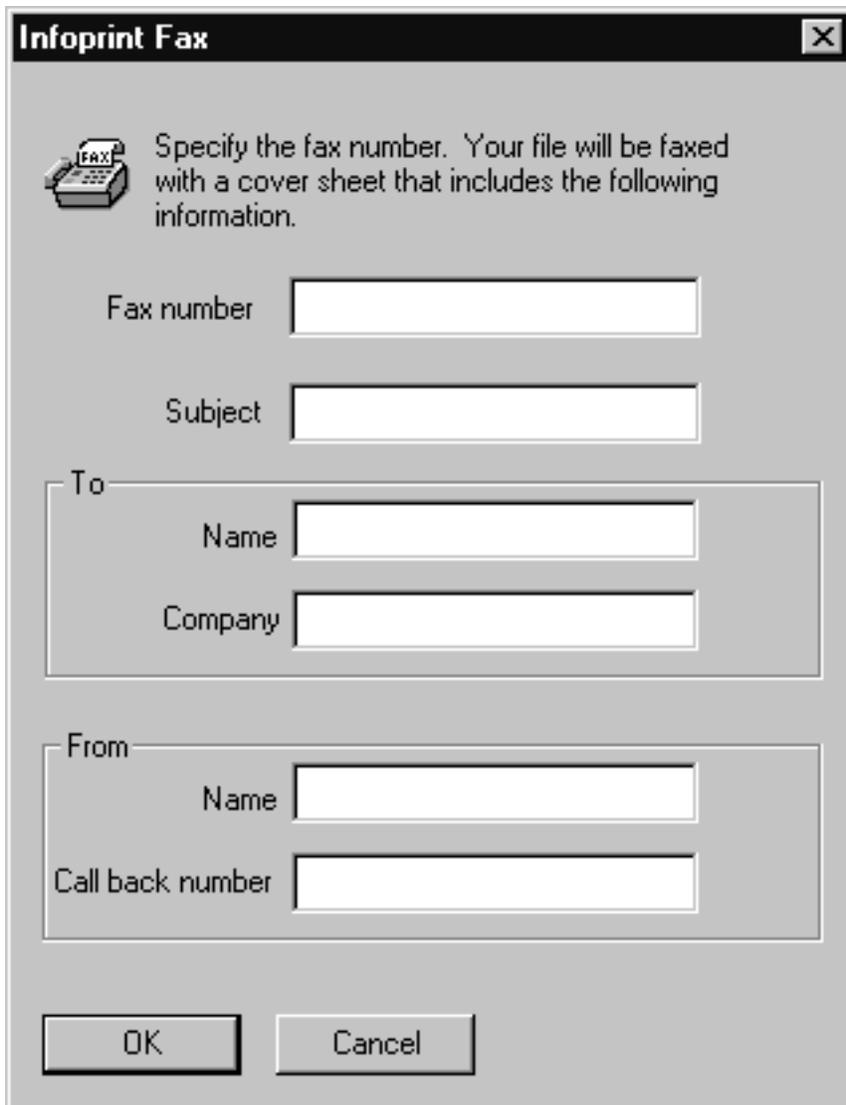
Figure 24. Infoprint Fax pop-up window.

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.

Information about security and how users can be authorized to Infoprint Manager is found in the topics "Managing Infoprint security with DCE" and "Managing non-DCE security for Infoprint Manager for AIX" in the *IBM Infoprint Manager for AIX: 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 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.

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
```

Chapter 12. Using the Infoprint AIX client

The Infoprint AIX client is installed on all Infoprint AIX servers with the **Infoprint Manager for AIX Base Server**, LCD4-1916. 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**, LCD4-1917, or the **Infoprint Manager for AIX Base Server**, LCD4-1916. This client can be used to send commands to Infoprint Manager for either AIX or Windows servers.

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 the IBM Infoprint Manager for AIX site at http://www.ibm.com/printers 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

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 AIXwindows 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
```
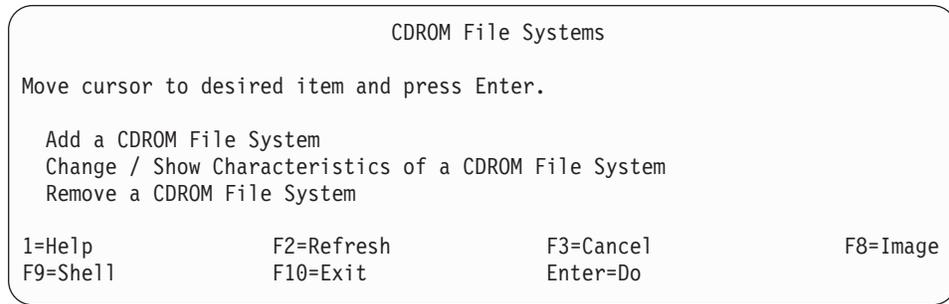
Figure 25. SMIT CDROM File Systems panel

> 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
```
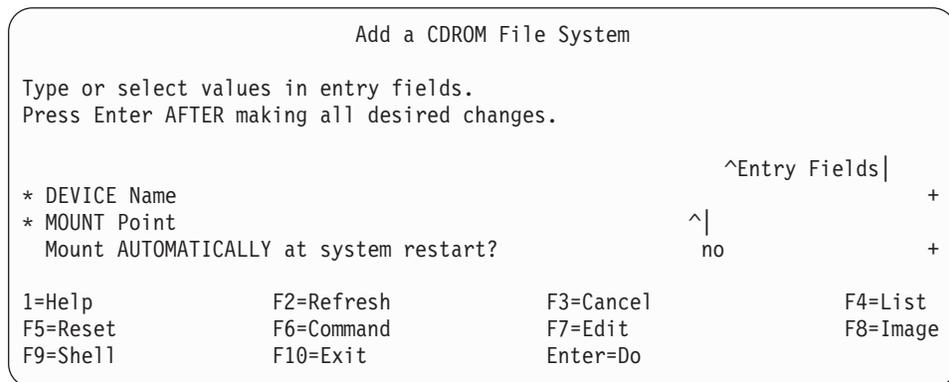
Figure 26. SMIT Add a CDROM File System panel

> 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** (AIXwindows version) or press **Enter** (ASCII version).
> f. Select **Cancel** (AIXwindows 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 to which the AIX client submits jobs.
           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 topics "Managing Infoprint security with DCE" and "Managing
non-DCE security for Infoprint Manager for AIX" in the *IBM Infoprint Manager for
AIX: 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 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 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
```

Submitting a fax job

To submit the cover sheet `faxcover` and the file `Memo1` to the logical destination `faxout` for transmission to fax number 1-709-123-4567, enter:

```
pdpr -d faxout -x "fax-number=17091234567 document-type=cover-sheet"
   -f faxcover -x "document-type=printable" Memo1
```

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, 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 13. Setting up hot folders to submit jobs

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

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

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

Creating a hot folder

To create a hot folder:

1. Make sure that file sharing is available on the Infoprint server system. Many file sharing methods are available, but IBM recommends the methods shown in Table 19.

   Table 19. Recommended file sharing methods

Server	Client	Method	Refer to
AIX	AIX	Network File Sharing (NFS)	*System Management Guide: Communications and Networks*
AIX	Windows	AIX FastConnect for Windows	*System Management Guide: Communications and Networks*
Windows	Windows	Server Message Block (SMB) (standard Windows folder sharing)	Windows help

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

3. If the hot folder does not exist, you may optionally create it. Be sure to give it the appropriate universal or group write permission.
   - If the hot folder already exists, or if you create it now, it will remain after you delete the associated logical destination.
   - If it does not exist and you do not create it now, it will be created automatically in the next step and will be deleted when you delete the associated logical destination.

4. Set the **hot-folder-directory** attribute for the logical destination to the full path name of the hot folder as it is known on the server system.

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

Note that a hot folder can be associated with only one logical destination; and a logical destination can be associated with only one hot folder.

Note: Just like any other Infoprint job submission method, attribute values specified in a default document and in default job attributes for the logical destination are used for all jobs submitted through the hot folder, unless the job submitter overrides them.

Accessing a hot folder

From a client system, you can access the hot folder in the same way as any shared directory. You do not have to install any Infoprint client software. For more information, see the references in Table 19 on page 141.

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

Submitting jobs through a hot folder

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

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. To override these values:

1. Create an attributes file called *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`. In this file, specify the attributes and values that you want. 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 that this file is the same format as an attribute file specified with the **-X** flag on a **pdpr** print command. For information about job and document attributes, refer to *Infoprint Manager: Reference*.

2. Copy or move the attributes file to the hot folder. The .att file extension tells Infoprint not to print the attributes file. You must ensure that the attributes file is either copied or moved to the hot folder before you copy or move the print file to the hot folder.

   Note that this step is optional because you can create the attributes file within the Hot Folder directory.

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

By default hot folder jobs are submitted with job notifications turned off. If you want to get notifications on hot folder jobs, you must specify a **notification-profile** with an explicit **delivery-address** in the **.att** file.

Staging jobs

Because it takes time to copy or move files, Infoprint may try to submit a large job before it is completely in the hot folder. You can prevent the submission of partial jobs by *staging* large jobs.

To do this:

1. Copy the file to the hot folder with the extension .stg. Infoprint ignores files with this extension.
2. When the copy is complete, rename the copy with the original extension.

Submitting multiple-document jobs

To print multiple documents in a single job:

1. Create a subdirectory in the hot folder called *jobname*.stg, where *jobname* is any name you choose. The .stg extension prevents Infoprint from processing the directory.
2. Copy the documents you want to print into the subdirectory in the same order that you want to print them.

   Note: If you copy multiple files in a single operation, they may not be copied in the same order that you selected them. If the print order matters, copy the files one at a time.

   When using multiple documents in an impositioning print job, your chances of a transform timeout are reduced if the documents are in the approximate order they are used in the job ticket. For example, ensure that a cover is placed before the contents of a job to avoid the cover being used on the first sheet so the transform does not have to wait for the print optimizer to RIP through the entire book content.

3. 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.
4. Rename the subdirectory from *jobname*.stg to *jobname*. Infoprint then submits all the files in the subdirectory as a single job.

Chapter 14. Installing and using Infoprint Manager Notifications

Infoprint Manager Notifications is an application that you can use to receive messages about Infoprint objects, such as print jobs that you submit to Infoprint Manager, or destinations, queues, and servers that you manage. For example, Infoprint Manager can send you a message when a job you submit is finished printing so you know that you can pick it up, or it can let you know that there is something wrong with the printer and no jobs can be printed until someone resolves the problem.

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

The Infoprint Manager notifications server and notifications client software are both automatically installed on the system that your Infoprint Manager server software runs on. In addition, you can install the notifications client on any other Windows or AIX system that is network-connected. Follow the procedures in this chapter if you want to install and use the Infoprint Manager Notifications client to receive messages from your Infoprint Manager server or just follow the directions in "Starting and using Infoprint Manager Notifications on an Infoprint AIX system" on page 148 to use the client on your Infoprint server.

For Infoprint Manager Notifications to work, one and only one Infoprint Manager Notification server must be running in your Infoprint Manager cell. (For information about handling the Notification server in multiple server Infoprint Manager environments, see "Multi-server environments" on page 149). Both Infoprint Manager for AIX and Infoprint Manager for Windows should automatically start a Notification server on port 8200, but you should verify it is running. Each Notification client defaults to receive notifications from server `notification` on port 8200.

If you ask the site network administrator to add `notification` as an alias for the hostname of the Infoprint server running the notification server to the site's Domain Name System (DNS) nameserver, the default settings in all the Notification clients work. If you ever move the Notification server to another host, you only need to update the notification alias in the DNS server for the default settings in all the Notification clients to work.

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

For the Infoprint Manager Notification client to receive notification messages from the Infoprint Notifications server, the delivery address setting in the Notification client must match the delivery address in the notification profile of the Infoprint Manager destination, job, or other object. Refer to ''Using Infoprint Manager Notifications'' in *Infoprint Manager for AIX: Procedures* for information about setting up notification profiles.

Preparing to install Infoprint Manager Notifications on Windows

Infoprint Manager Notifications requires the IBM Cross Platform Technologies for Windows® (CPT) Version 2.0 Runtime Environment, Build level cn130–20020124. This is the only supported Runtime Environment for running Infoprint Manager Notifications.

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:

   `IBM Build cn130-2020124`

3. If the output from the command does not contain the text above, uninstall the currently installed Runtime Environment component:

   a. Click the Windows **Start** button and select **Settings –> Control Panel**, then double-click the **Add/Remove Programs** icon.

   b. Find the currently installed version of the **IBM Runtime Environment** in the list of programs that can be removed and click **Add/Remove**. Follow the instructions on the screen to complete the process.

   c. Remove the JRE or Runtime Environment entry from the PATH environment variable.

If necessary, follow these steps to install the required CPT Runtime Environment:

1. Insert the Infoprint Manager Common Clients CD-ROM into the drive. The install program will start automatically.
2. Select the **Install Products** button, and then select the Cross Platform Technologies button.

   It may take a minute for the installer to start. Do not click on any other part of the screen until the installer begins. If you do, the installer window may be hidden behind other windows.

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**.

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:

   `IBM Build cn130-2020124`

Installing the software on a Windows client

Follow these steps to install the Infoprint Manager Notifications software on a remote system.

1. Insert the **Infoprint Manager Common Clients** CD-ROM into the drive.
2. The install program will start automatically.
3. Select **Install Products**, and then select **Infoprint Manager Notifications**.
4. Follow the instructions on the installation screens to install the program.

   There are two installation files to choose from:

   - If you are installing Infoprint Manager Notifications on a Windows system running in Traditional Chinese, click **Notifications – Traditional Chinese**

- If you are installing on any other language Windows system, use **All Other Languages**.

Installing the software on an AIX system

The Infoprint Notification client is installed on all Infoprint AIX servers with the **Infoprint Manager for AIX Base Server**, LCD4-1916. To install the Infoprint Notification 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** CD-ROM, 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 AIXwindows 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
```
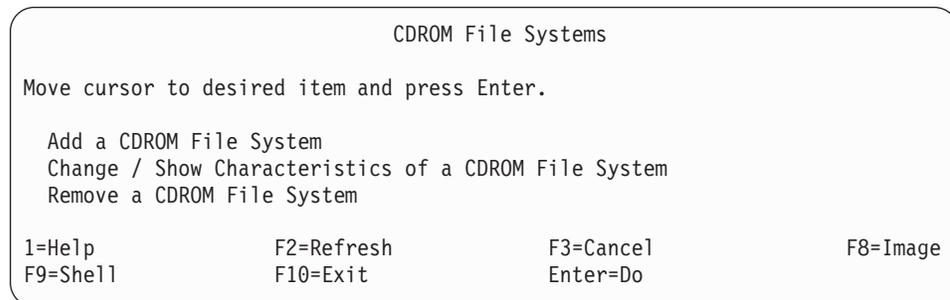
Figure 27. SMIT CDROM File Systems panel

   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
```
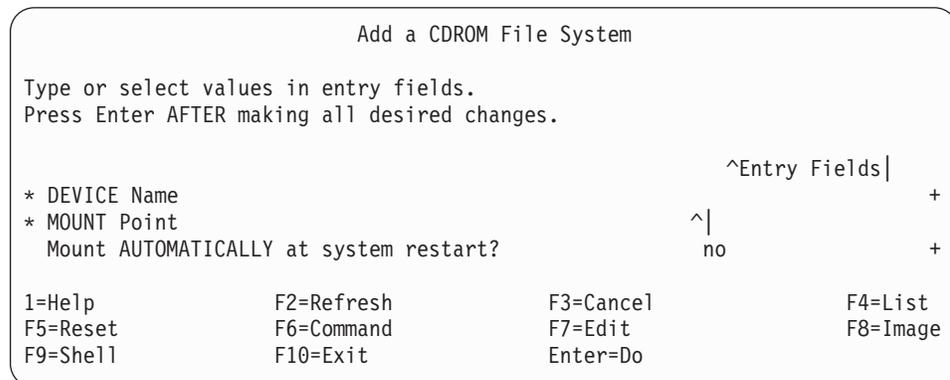
Figure 28. SMIT Add a CDROM File System panel

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** (AIXwindows version) or press **Enter** (ASCII version).

f. Select **Cancel** (AIXwindows 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 notification client:

   `/cdrom/setup -y -n ServerName -l locale`

   where:
   ServerName
          is the name of the host where the Infoprint server you want to communicate with (**PDHOST**) is running.
   locale   is the locale of the notification client. The default is **en_US** (U. S. English). The **-l** *locale* flag is optional.

Starting and using Infoprint Manager Notifications on an Infoprint AIX system

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

Note: If the site network administrator adds a notification alias for the hostname of the Infoprint server running the notification server to the site's Domain Name System (DNS) nameserver, the default settings will not have to be changed on each notification client.

Starting and using Infoprint Manager Notifications on a Windows client

To launch Infoprint Manager Notifications, click **Start—>Programs—>Infoprint Manager Notifications** to run the software.

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

Note: If the site network administrator adds a notification alias for the hostname of the Infoprint server running the notification server to the site's Domain Name System (DNS) nameserver, the default settings will not have to be changed on each notification client.

Receiving messages

In order to receive messages, you must have Infoprint Manager Notifications not only installed, but running on your workstation. On both Windows and AIX systems, you can minimize the notification window if you do not want it open on your desktop. You will have to restore it when you want to check the messages that have arrived.

Tip: On Windows systems, you can put Infoprint Manager Notifications in your Startup folder, so it will automatically start whenever you log on.

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

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

Multi-server environments

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

Uninstalling Infoprint Manager Notifications on Windows

To uninstall Infoprint Manager Notifications, follow these steps:

1. From the **Start** menu, click **Settings—>Control Panel**.
2. Double-click the **Add/Remove Programs** icon.
3. Select **Infoprint Manager Notifications**.
4. Click **Add/Remove** (Windows NT) or the **Change/Remove** (Windows 2000).

   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 don't see first panel of the uninstaller the 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.

Uninstalling Infoprint Manager Notifications on AIX

To uninstall Infoprint Manager Notifications, do the following:

From the AIX command line, specify the following:

```
setup -Y
```

Infoprint Manager removes the Notification client from the AIX server.

Chapter 15. Using the LPD Gateway with Infoprint Manager for AIX

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

This topic describes the different **LPR** clients that you can use to send print jobs to IBM Infoprint Manager for AIX:

- "Submitting Print Jobs through the LPD from a non-AIX UNIX System".
- "Submitting Print Jobs through the LPD from a non-UNIX System".

Submitting Print Jobs through the LPD from a non-AIX UNIX System

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

Regardless of what **LPD** subsystem you decide to use, IBM recommends that you specify it in the **/etc/inittab** file to ensure that the client starts on a system reboot and is always available.

Submitting print jobs from a non-AIX UNIX System with the Infoprint (lprafp) LPR Client

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

Submitting Print Jobs through the LPD from a non-UNIX System

To to submit jobs from a VM, OS/390, or AS/400 system through the LPD Gateway to an Infoprint AIX server, you can use any **LPR** client, but cannot specify advanced Infoprint options on the **-o** flag. If submitting jobs from an MVS or OS/390 system, you may want to consider purchasing MVS Download as an alternative that allows you to specify a richer set of Infoprint print options.

Part 4. Appendixes

Appendix. Using the Infoprint SMIT production print GUI

You can perform most Infoprint operations tasks and some Infoprint administrative tasks by using the Infoprint SMIT operator's GUI.

This appendix provides information on customizing, starting, and accessing help for the Infoprint SMIT production print GUI. It also includes a brief description of the tasks you can perform through the interface.

This appendix consists of the following topics:
- "Tasks you can perform using the Infoprint SMIT production print GUI"
- "Customizing the Infoprint SMIT production print GUI" on page 156
- "Starting the Infoprint SMIT production print GUI" on page 158

Tasks you can perform using the Infoprint SMIT production print GUI

The following is a brief description of the tasks you can perform using the Infoprint SMIT production print GUI. Use the online help for more detailed information. You can perform tasks in four major areas: monitoring print system status, controlling jobs, controlling queues, and controlling actual destinations.

Monitoring print system status

The Infoprint SMIT production print GUI menu selections for system status allow you to perform the following tasks:
- List pending, processing, and printing jobs for the queue you are monitoring
- List retained jobs in the queue
- Show the status of the queue
- Show the status of the actual destination or destinations that receive jobs

You can customize the job, queue, and actual destination information that you receive by editing the environment file for the Infoprint SMIT production print GUI.

Controlling jobs

The Infoprint SMIT production print GUI menu selections for controlling jobs allow you to perform the following tasks:
- Pause and resume jobs
- Hold and release jobs
- Cancel active and retained jobs
- Assign **job-batch** values to jobs
- Change the priority of jobs
- Assign jobs to specific actual destinations
- Specify the forms that jobs require
- View the status of jobs
- View summaries of jobs that require specified forms or that belong to specified job batches

Controlling queues

The Infoprint SMIT production print GUI menu selections for controlling queues allow you to perform the following tasks:

- Pause and resume queues. Paused queues continue to receive jobs, but Infoprint does not schedule the jobs to actual destinations.
- Change the queue you are monitoring. You use the queue information file to control the queues that you can switch to, as well as the actual and logical destinations that are associated with the queue.

Controlling actual destinations

The Infoprint SMIT production print GUI menu selections for controlling actual destinations allow you to perform the following tasks:

- Pause and resume actual destinations. Paused actual destinations still accept jobs from their queues, but they do not process and print the jobs.
- Disable and enable actual destinations. Disabled actual destinations process jobs already assigned to them but do not accept new jobs from their associated queues.
- Backspace and forward space actual destinations. You can cause Infoprint to back up or skip forward a specified number of pages in the job currently printing on a specific actual destination.
- Specify the forms that are currently loaded in the printer device. You can specify the type of form that is loaded in each input tray of the printer.
- Specify **job-batches-ready** values for actual destinations. You can set up actual destinations so that they will process jobs that request a specific **job-batch** value.
- Shut down an actual destination so that it no longer processes jobs. You can specify how you want to shut down the actual destination with regards to how the shutdown process saves checkpoint information about the current job.

Customizing the Infoprint SMIT production print GUI

Before using the Infoprint SMIT production print GUI, you specify which Infoprint components and attributes you want to monitor by setting environment variables in one or more environment files. Initially, you can use the default environment file that is supplied with Infoprint. During installation, Infoprint adds information about the environment file in the /etc/environment file to provide system-wide defaults.

Customizing the default Infoprint SMIT production print GUI environment file

The default Infoprint SMIT production print GUI environment file is ppo.env, which Infoprint stores in the /usr/lpp/pd/bin directory during installation. The **ppo.env** file contains a series of export statements for environment variables that specify information about your Infoprint system. Infoprint bases the setting of some environment-variable values on objects that are created during installation. Other environment variables have no values; you can update them as you expand your Infoprint system. Figure 29 on page 157 shows the default environment file.

```
# Set up the PPO environment variables

if [ "$PPO_BIN" = "" ] ; then
    export PPO_BIN=/usr/lpp/pd/bin"
fi

if [ "$PPO_QUEUE_INFO_FILE" = "" ] ; then
    export PPO_QUEUE_INFO_FILE="$PPO_BIN/queue_info"
fi

export PPO_JOB_DETAILS_ATTRS="\
job-identifier,\
job-name,\
current-job-state,\
job-state-reasons,\
required-resources-not-ready\
intervening-jobs,\
job-priority,\
actual-destination-requested,\
destinations-assigned,\
submission-time,\
started-printing-time,\
pages-completed,\
default-medium"
export PPO_QUEUE_ATTRS="queue-name,queue-state,\
actual-destinations-ready,actual-destinations-assigned"
export PPO_PP_ATTRS="destination-name,destination-state,enabled,\
assoc-queue,problem-message,media-ready,job-batches-ready"
export PPO_FORM=""
export PPO_RETENTION="48:00"
export PPO_SERVER=`hostname`
export PPO_LP=LP-NAME
export PPO_LPS="LP-NAME"
export PPO_QUEUE=Q-NAME
export PPO_PPS="PP-NAME"
export PPO_JOB_BATCH=""
export PPO_CANCEL_ALL_OPTION="1"
```

Figure 29. Default environment file—Infoprint SMIT production print GUI

You can make copies of the default Infoprint SMIT production print GUI environment file and customize the copies to match your Infoprint system. You should create an environment file for each queue you have. Refer to *Infoprint Manager: Reference* for a table of environment variables that affect the Infoprint SMIT production print GUI. Then use an AIX editor to make changes to the environment file.

Customizing the queue information file

While you are using the Infoprint SMIT production print GUI, you can change the queue you are monitoring if you previously set up a queue information file. A queue information file maps queue names to their corresponding environment files. Figure 30 shows the contents of the default queue information file, /usr/lpp/pd/bin/queue_info.

```
queue_name_1 pathname-of-the-corresponding-ppo.env-file
queue_name_2 pathname-of-the-corresponding-ppo.env-file
```

Figure 30. Queue information file—Infoprint SMIT production print GUI

To set up and use a queue information file, complete the following steps:

1. Create an environment file for each queue that you want to monitor through the Infoprint SMIT production print GUI. Specify the appropriate values for the environment variables. Store the environment files in either the directory represented by the **PDBASE** environment variable or the directory represented by the **PDNAMESP** environment variable. If operators on different AIX systems will share the files, store them in the directory represented by the **PDNAMESP** environment variable. For more information, see "Customizing the default Infoprint SMIT production print GUI environment file" on page 156.

2. Update the queue_info file in the /usr/lpp/pd/bin directory. For example, you have two queues, `ksrv-q1` and `ksrv-q2`. Their respective environment files are `q1.env` and `q2.env`, located in the /usr/lpp/pd/bin directory. Update the queue_info file with the following entries:

   ```
   ksrv-q1 /usr/lpp/pd/bin/q1.env
   ksrv-q2 /usr/lpp/pd/bin/q2.env
   ```

   Notes:
   1. You must include the full path for each environment file you specify.

   2. If you create a queue information file with a different name or store it in a different directory, ensure that the **PPO_QUEUE_INFO_FILE** environment variable in all of your environment files specifies the correct directory and file name.

   3. To use the queue information file, you must start the Infoprint SMIT production print GUI with the **startppo** command. For more information, see "Starting the Infoprint SMIT production print GUI".

Specifying your default environment file

The **PPO_ENV_FILE** environment variable controls the environment file that the Infoprint SMIT production print GUI uses when you start the interface. During installation, the following line was added to the /etc/environment file:

```
PPO_ENV_FILE=/usr/lpp/pd/bin/ppo.env
```

This statement defines the environment file that is shipped with Infoprint as the default. To use a different environment file, update the statement in the /etc/environment file.

For example, if you have a customized environment file that is called `master.env` located in the /var/pd directory, use the following export statement:

```
PPO_ENV_FILE=/var/pd/master.env
```

Starting the Infoprint SMIT production print GUI

There are two methods of starting the Infoprint SMIT production print GUI:

- If you are at an AIX command prompt, enter one of the following commands:
  - To access the Production Print Operations panel in the AIXwindows mode, enter:

    ```
    startppo
    ```

  - To access the Production Print Operations panel in the ASCII mode, enter:

    ```
    startppo -t
    ```

    All Infoprint SMIT production print GUI SMIT panels display in ASCII mode; however, status windows display as graphical motif windows.

- If you are using the Infoprint SMIT administrator's interface, follow these steps:
  1. Return to the main panel titled Infoprint Production Printing System.

2. Select **Production Print Operations**.

Notes:

1. You cannot change queues as specified by the queue information file if you access the Infoprint SMIT production print GUI through a SMIT session that was not started with the **startppo** command.

2. The **startppo** command also has a **-g** flag that you can use to control the initial size and position of the Infoprint SMIT production print GUI window. Specify the value for the flag in the form:

   ```
   width×height+xoffset+yoffset
   ```

   For example, if you enter `startppo -g 800×500+100+200`, the window that opens is 800 pels wide, 500 pels high, offset 100 pels from the left edge of the terminal display, and down 200 pels from the top of the display.

3. You cannot start the ASCII mode of the Infoprint SMIT production print GUI in the background. For example, do not use the following command:

   ```
   startppo -t &
   ```

Accessing the online help for the Infoprint SMIT production print GUI

The online help for the Infoprint SMIT production print GUI provides descriptions of panel controls, such as buttons, entry fields, and lists. You can access the help information by using standard AIX SMIT help actions. If you are not familiar with using SMIT help, you can use the **Help** pull-down menu at the upper right corner of any AIXwindows SMIT panel. If you are using SMIT in the ASCII mode, access the main System Management panel. Highlight the panel title and press **F1** to access help on using SMIT.

Requesting help for menu selections on a SMIT panel

The method of accessing help for a SMIT panel depends on whether you are in AIXwindows mode or ASCII mode.

AIXwindows mode

Complete the following steps to receive contextual help on a menu selection:

1. Press **Ctrl + F1**. All the menu selections on the panel are highlighted. The mouse pointer changes to a question mark. A **Help Message** window opens with instructions on how to access help. Figure 31 on page 160 shows an example of the results of pressing **Ctrl + F1** for a SMIT panel.
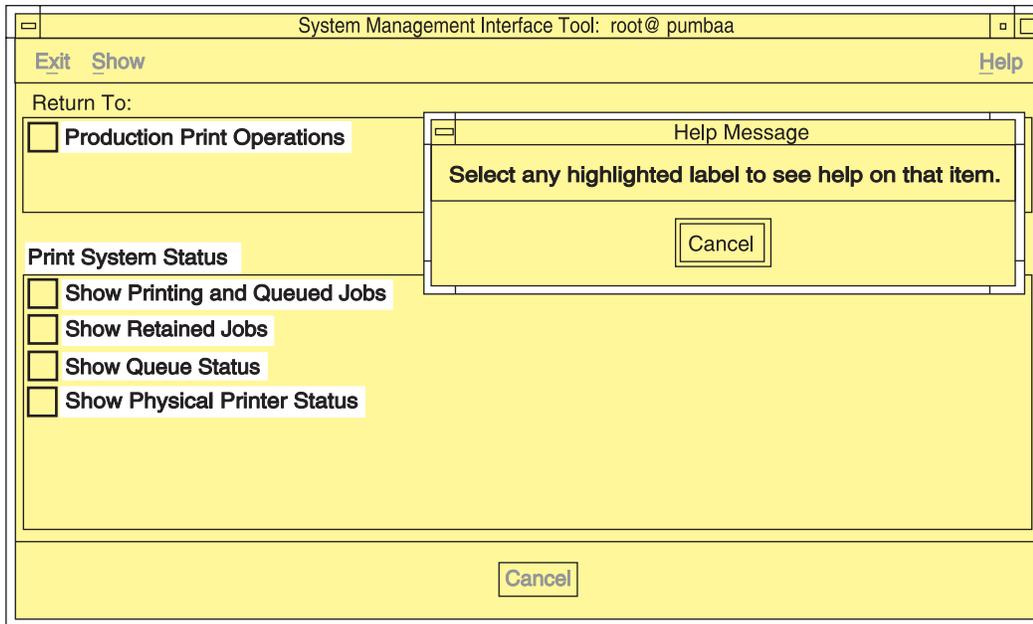
Figure 31. Help for SMIT panel menu selections

2. Select any highlighted menu selection on the panel. An Information Message window opens.

3. Select the **OK** button on the Information Message window after you have read the information. All menu selections on the panel remain highlighted.

4. If you want to view the help for another item, select it.

5. When you have completed viewing the information, select the **Cancel** button on the Help Message window to remove the highlighting and return to normal SMIT operations.

Note: You can also manually highlight a menu selection by using the **Tab** and arrow keys to navigate to the selection. Pressing **F1** for a highlighted menu item opens the help window for that item.

ASCII mode

Complete the following steps to receive contextual help on a menu selection:

1. Use the arrow keys to highlight a menu selection.

2. Press **F1**. A Contextual Help window opens.

3. When you have completed viewing the help information, press the **Enter** key. The window closes.

Complete the same steps to view the help for any other menu selections.

Requesting help for fields and buttons on a SMIT window

The method of accessing help for fields and buttons on a SMIT window depends on whether you are in AIXwindows mode or ASCII mode.

AIXwindows mode

Complete the following steps to receive help for fields and buttons on a SMIT window that was accessed from a SMIT panel:

1. Select the button labeled with a question mark at the bottom right of the window. A Help window displays beneath the SMIT window. Figure 32 shows the results of selecting the question mark button.
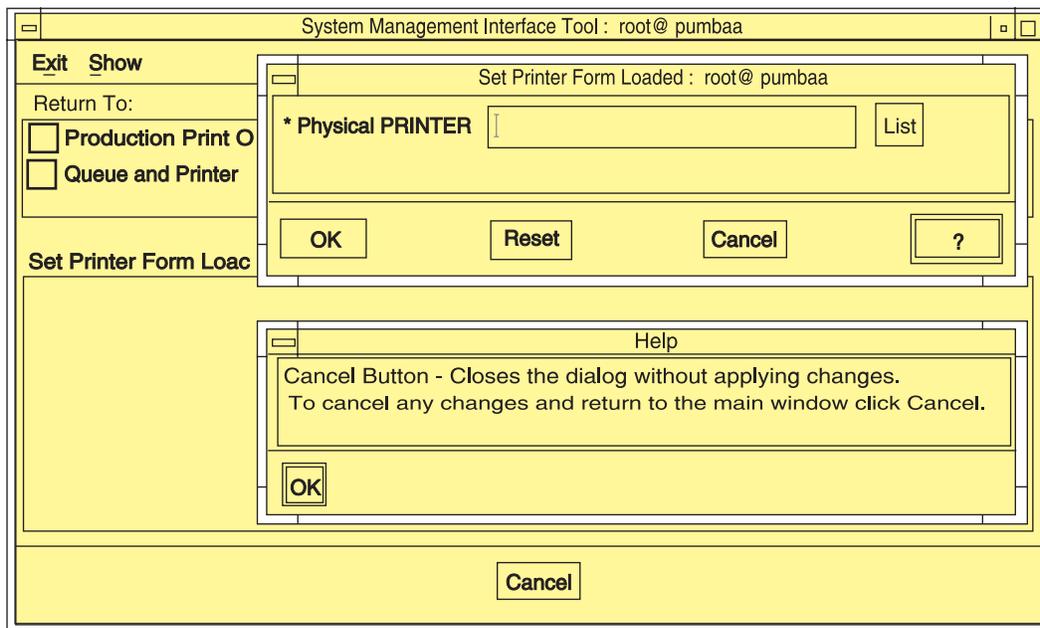
Figure 32. Help for SMIT window fields and buttons

2. Move the mouse pointer over the fields and buttons in the window. The text in the Help window changes, displaying help for the field under the mouse pointer.
3. When you have completed viewing all of the information, select the **OK** button on the Help window to close it and return to normal SMIT operations.

ASCII mode
Complete the following steps to receive help for fields on a SMIT panel in which you can enter or list information:
1. Use the arrow keys to highlight a field name.
2. Press **F1**. A Contextual Help window opens.
3. When you have completed viewing the help information, press the **Enter** key. The window closes.

Complete the same steps to view the help for any other field selections.

Requesting help for SMIT status windows
The Infoprint SMIT production print GUI displays separate status windows that show the results of queries you make. The status windows also provide help for the tasks you can perform from them. The status windows are the same for both AIXwindows mode and ASCII mode. Figure 33 on page 162 shows a status window.

```
┌─────────────────────────────────────────────────────────────────────────────┐
│ ▭                           Printer Status                            ▫ ▢     │
│─────────────────────────────────────────────────────────────────────────────│
│  File   Object                                                         Help   │
│ ┌───────────────────────────────────────────────────────────────────────────│
│ │Find:                                                                        │
│ └───────────────────────────────────────────────────────────────────────────│
│  Error:  no object has been selected.                                         │
│ ┌──────────────────────────────────────────────────────────────────────┐ ┌─┐ │
│ │ Wed Apr 30 14:14:07 MDT 1997                                           │ │▲│ │
│ │                                                                        │ ├─┤ │
│ │                        Problem  Media            Job                   │ │ │ │
│ │ Printer   State  Enabled   Queue  Message  Ready          Batches Ready│ │ │ │
│ │ ────────  ─────  ───────   ─────          ──────          ──────       │ │ │ │
│ │ ksrv-pp   idle   true     ksrv-q          na-letter-white              │ │ │ │
│ │ ksrv-pp2  idle   true     ksrv-q          na-letter-white              │ │ │ │
│ │ ksrv-pp3  idle   true     ksrv-q          na-letter-white              │ │ │ │
│ │ ksrv-pp4  idle   true     ksrv-q          na-letter-white              │ │ │ │
│ │                                                                        │ │ │ │
│ │                                                                        │ │ │ │
│ │                                                                        │ │ │ │
│ │                                                                        │ │ │ │
│ │                                                                        │ ├─┤ │
│ │                                                                        │ │▼│ │
│ └──────────────────────────────────────────────────────────────────────┘ └─┘ │
│ ┌─┐                                                                       ┌─┐  │
│ │◄│                                                                       │►│  │
│ └─┘                                                                       └─┘  │
└───────────────────────────────────────────────────────────────────────────────┘
```
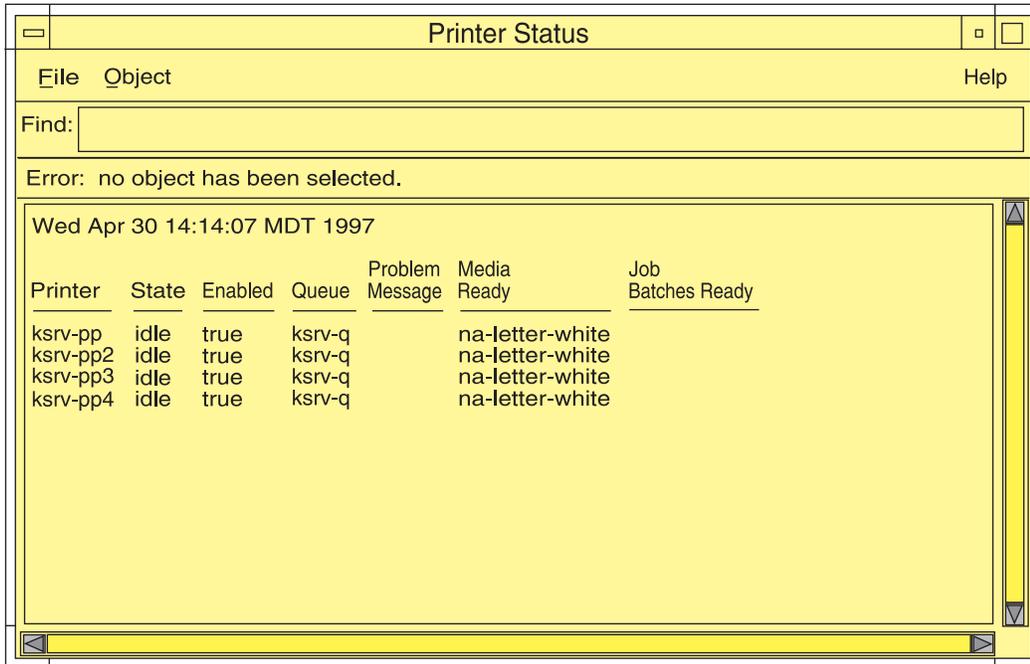
Figure 33. Help for SMIT status windows

Complete the following steps to receive help for menu selections on SMIT status windows.

1. Select the **Help** menu at the far right of the menu bar for the status window. A pull-down menu displays with one entry for each of the tasks you can perform from the window.

2. Select an item from the list. A Help window displays providing instructions on performing the task.

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EuroReady

Infoprint Manager is capable of processing data containing the euro sign. Font character sets and code pages that contain and map the euro sign consistently with the application must be present either in a host library or in the printer. AFP fonts that support the euro sign are included in the AFP Font Collection (Program Number 5648-B33).

Glossary

This glossary provides definitions of specialized terms used by Infoprint. This glossary does not define terms that are defined in non-technical dictionaries or that have no special meaning in information processing.

Sources and References

This glossary includes definitions from the following sources:

- Definitions reprinted from a published section of the International Organization for Standardization's (ISO) *Vocabulary—Information Processing* or from a published section of the ISO *Vocabulary—Office Machines* are identified by the symbol (I) following the definition.
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- Definitions from *AIX Version 4.1 Topic Index and Glossary* are identified by (X).
- Definitions from *IBM Dictionary of Computing*.
- Definitions that are specific to IBM 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).   (1) In computer security, a collection of all access rights for one object. (2) 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). (1) 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. (2) 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 may 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. (1) 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. (2) 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. (1) The rendering of hard-edged objects so that they blend smoothly into the background. PhotoShop offers anti-aliasing when rasterizing an EPS file. (2) 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. (1) Pertaining to two or more processes that do not depend upon the occurrence of specific events, such as common timing signals. (T) (2) 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. (1) A code representing characters by sets of parallel bars of varying thickness and separation that are read optically by transverse scanning. (2) 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. (1) The cover and materials that hold a book together. See *edition binding*, *perfect binding*, *spiral binding*, *wire-o binding*. (2) The process of applying the binding to a book. (3) In Infoprint, assigning a job to an actual destination. See *early binding*, *late binding*. (4) 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. (1) In platemaking, an exposure. Burn is named because of the extremely bright ultraviolet lamps used to transfer images from film to plate. (2) 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.

channel-attached printer. (1) A printer attached to an RS/6000 by cables, rather than through telecommunication lines. (2) In Infoprint, a PSF physical printer that represents a channel-attached printer device. See also *AIX-attached printer*, *direct-attached printer*, *TCP/IP-attached printer*, *upload-SNA-attached printer*, *upload-TCP/IP-attached printer*.

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. IBM Infoprint Control and IBM Infoprint Submit include clients; you can also install the IBM Infoprint Select clients on workstations.

CMY. Cyan, magenta, yellow.

CMYK. Cyan, magenta, yellow, black.

collator. In some printers, for example, the IBM InfoColor 70, 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.

DataBase 2/6000 (DB2*/6000). The component of the Infoprint Library that indexes data for easy retrieval.

data stream. (1) All information (data and control commands) sent over a data link. (2) A continuous stream of data that has a defined format. (3) 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*, *fax destination support system*, *PSF destination support system*, and *3170 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.   (1) A printer device, attached to an RS/6000 through the network or through a serial or parallel port. (2) 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. Values for printing with the IBM InfoColor 70 range as high as 600 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. (1) Printing on both sides of the paper. Contrast with *simplex printing (1)*. (2) 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.

fax destination support system. In Infoprint, the destination support system that supports fax destinations.

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. (1) A family of characters of a given size and style; for example, 9-point Helvetica. (2) One size and one typeface in a particular type family, including letters, numerals, punctuation marks, special characters, and ligatures. (3) 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.

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. (1) 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. (2) 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

IBM InfoColor 70. A duplex, process color, web-fed printer with 600-dpi resolution.

IBM 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.

IBM Infoprint Control. The administration and management component of IBM Infoprint Manager for AIX. It runs on AIX and provides a complete set of system administrator and operator functions to control all aspects of a print environment, as well as job submitter printing functions to submit and control jobs.

IBM Infoprint Library. A component of IBM Infoprint Manager for AIX. IBM Infoprint Library is a document archival and retrieval system in which job tickets and their associated resource files (graphics, fonts, images, and PostScript data) are stored and from which these data types can be retrieved for reuse.

IBM Infoprint Manager for AIX. The software component of IBM Infoprint. IBM 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.

IBM Infoprint Manager for AIX is based on Palladium technology developed at MIT/Project Athena. It conforms to the ISO DPA and POSIX standards.

IBM Infoprint Network. The local area network running TCP/IP protocol that Infoprint uses to communicate among servers, clients, and output devices.

IBM Infoprint Scan. The component of IBM Infoprint Manager for AIX that allows users to scan images as TIFF files to be included in jobs submitted by Infoprint Submit from a Windows workstation.

IBM Infoprint Select. The component of IBM Infoprint Manager for AIX that allows users to submit jobs from an OS/2 or Windows workstation.

IBM Infoprint Submit. The component of IBM Infoprint Manager for AIX 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.

IBM Infoprint 60. A duplex, black and white, cut-sheet printer with 600-dpi resolution.

IBM 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.).

IBM Infoprint 4000. A duplex, black and white, continuous-forms printer with 600-dpi resolution.

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. (1) IBM Infoprint. (2) In IBM Infoprint software publications, IBM Infoprint Manager for AIX or any of its components, especially IBM Infoprint Control.

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). (1) An all-points-addressable data stream that enables users to position text, images, and graphics at any defined point on a printed page. (2) Information that the host sends to IBM IPDS printers. This information generally contains basic formatting, error recovery, and character data and enables the printers to make decisions. (3) 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 may 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. (1) A name or symbol that identifies a parameter. (2) 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 IBM 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. (1) The human language and character set of information presented to a user. (2) In Infoprint, the language Infoprint uses when sending notification and error messages or displaying the Infoprint graphical user interfaces.

log. (1) A collection of messages or message segments added to a file for accounting or data collection purposes. (2) 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. (1) The act of reporting the occurrence of events. (2) 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).

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.

P

PAC. Privilege Attribute Certificate.

page definition. (1) A resource that contains the formatting controls for line data. (2) 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 VSM administrator's 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. (1) Portable Document Format. (2) 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 may or may 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. (1) 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. (2) 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 may change based on other activity.

ready. (1) A state in which an object is ready and able to perform tasks. (2) 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. (1) The accuracy of printing on paper relative to the edges of the paper. (2) The accuracy of printing a single color (cyan, magenta, or yellow) relative to black. (3) 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. (1) Raster image processor. (2) 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 may be printed on one or both sides of the paper. Contrast with *tumble*; see also *simplex printing* and *duplex printing*.

simplex printing. (1) Printing on only one side of the paper. Contrast with *duplex printing (1)*. (2) 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. (1) Any group of nodes that have a set of common characteristics, such as the same network ID. (2) 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. (1) A printer device attached to an RS/6000 through telecommunication lines using the TCP/IP protocol. (2) 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 VSM administrator's 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.

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 VSM administrator's 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). (1) An IBM licensed product that manages the resources of a single computer so that multiple computing systems appear to exist. (2) 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 VSM administrator's 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.

Numerics

3170 destination support system. The destination support system used by the IBM InfoColor 70 to print jobs.

3170 physical printer. A physical printer representing an IBM InfoColor 70 printer device.

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Special Characters

Numerics

A

I

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Infoprint Manager for AIX
Getting Started
Version 4 Release 1

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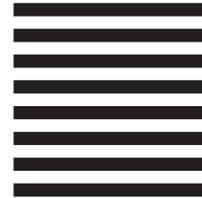
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