

InfoPrint Manager for AIX: Introduction and Planning Guide

Version 4 Release 3

G550-1060-02

InfoPrint Manager for AIX: Introduction and Planning Guide

Version 4 Release 3

G550-1060-02

Note:

Before using this information and the product it supports, read the information in "Notices" on page 49.

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This edition applies to InfoPrint Manager for AIX, Version 4 Release 3 Modification 0 with PTF UO00917 and to all subsequent releases and modifications until otherwise indicated in new editions.

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About this publication

This publication is for people who are interested in purchasing InfoPrint® Manager for AIX® and for people who perform the actual installation and configuration of an InfoPrint Manager environment.

This publication helps you prepare to use InfoPrint Manager for AIX. It describes the features of this product for driving printers across a wide range of speeds. It addresses migration from previous versions of InfoPrint Manager for AIX 4.2 at a high level. This publication also explains the differences between the AIX and Windows® versions of InfoPrint Manager.

Organization of this publication

This publication contains these chapters and appendix:

- Chapter 1, "Introducing InfoPrint Manager for AIX," on page 1
- Chapter 2, "Planning for configuration," on page 15
- Chapter 3, "Planning to print with host systems," on page 21
- Chapter 4, "Using AFP resources," on page 25
- Chapter 5, "Planning to share printers," on page 27
- Chapter 6, "Verifying prerequisites," on page 33
- Chapter 7, "Migrating to InfoPrint Manager for AIX Version 4.3.0," on page 39
- Chapter 8, "Collecting required information for the install," on page 41
- Chapter 9, "Reviewing software components," on page 43

Most recent information

For the most recent information about InfoPrint Manager, go to the InfoPrint Solutions Company Web site at <http://www.infoprint.com>.

The InfoPrint publication library

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

InfoPrint Manager common publication library

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

- *InfoPrint Manager: SAP R/3 Planning and Configuration Guide*, S550-1051. For print administrators who need to create and configure both the SAP R/3 environment, we recommend that users possess a detailed knowledge of a SAP R/3 environment, as well as administering and maintaining either AIX or Windows operating systems. This publication describes how a business enterprise that uses SAP R/3 can use either InfoPrint Manager for AIX or InfoPrint Manager for Windows to manage its print environment.
- *InfoPrint Manager: Reference*, S550-1052. For print administrators, operators, and application programmers with the need to do command-line functions. This

publication describes the commands, utilities, transforms, attributes, and attribute values associated with InfoPrint.

- *InfoPrint Manager: PSF and Server Messages*, G550-1053. This publication lists the PSF and Server messages and explanations from InfoPrint Manager.
- *InfoPrint Manager Print-on-Demand Feature: Submit Express User's Guide*, S550-1054. This publication is for the user who installs, configures, and uses Submit Express on a Windows or Macintosh workstation. Although you can use this publication for general guidance in using Submit Express, you should use the online Help to find more detailed instructions.
- *InfoPrint Job Ticketer: Job Ticketer User's Guide*, S550-1055. This publication is a guide for using the InfoPrint Job Ticketer Web application. This guide provides descriptions of tasks and procedures that an end-user needs to know to set up their workstation to use the application, and then to create, layout, store, retrieve print jobs, and submit the jobs to a print server for printing.
- *InfoPrint Job Ticketer: Administrator's Guide*, S550-1056. This publication is a guide for system administrators who are responsible for the InfoPrint Job Ticketer Web application. This guide provides information about the Job Ticketer system requirements, installation and configuration, system maintenance, security, and problem determination.

InfoPrint Manager for AIX publication library

InfoPrint Manager for AIX includes publications in PDF format on a CD-ROM supplied with the product.

The publications for InfoPrint Manager for AIX are:

- *InfoPrint Manager for AIX: Introduction and Planning Guide*, G550-1060. This publication gives an overview of InfoPrint Manager for AIX, introduces the concepts, and helps you prepare to use it. It addresses migration from previous versions of the product. And it explains the differences between the AIX and Windows versions of InfoPrint Manager.
- *InfoPrint Manager for AIX: Installation Instructions*, G550-1059. This publication describes how to install InfoPrint Manager for AIX 4.3. These instructions explain the procedures for local and remote installations.
- *InfoPrint Manager for AIX: Getting Started*, G550-1061. This publication helps you install and configure InfoPrint Manager for AIX. It focuses on the software configuration of server and client system.
- *InfoPrint Manager for AIX: Configuration and Tuning Guide*, S550-1062. This publication provides information about configuring and tuning the InfoPrint Manager for AIX, Version 4.3. This book is designed for the InfoPrint Manager administrator who needs to understand how to configure and tune an InfoPrint Manager system. It helps administrators to evaluate, develop, and maintain both a logical and hardware configuration for their environment.
- *Guidelines for Installing InfoPrint Manager for AIX 4.2 in an HACMP Configuration*, G550-1063. This publication helps you install and configure HACMP™ with InfoPrint Manager for AIX. It also describes how to use HACMP with InfoPrint Manager for AIX.
- *InfoPrint Manager for AIX: Using Generalized Fax*, S550-1064. This publication describes how to configure and use the Generalized Fax support that is included with InfoPrint Manager for AIX. This publication includes information about sending and receiving faxes from an InfoPrint Manager server.

- *InfoPrint Manager for AIX: Procedures*, G550-1066. This publication describes how to set up an InfoPrint environment, to submit print jobs, to schedule jobs, and to manage the print environment.

InfoPrint Manager for Windows publication library

InfoPrint Manager for Windows includes publications in PDF format on a CD-ROM supplied with the product.

The publications for InfoPrint Manager for Windows are:

- *InfoPrint Manager for Windows: Introduction and Planning Guide*, G550-1071. 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. Finally, this publication explains the differences between the AIX and Windows versions of InfoPrint.
- *InfoPrint Manager for Windows: Getting Started*, G550-1072. This publication helps you install and configure InfoPrint Manager for Windows. It focuses primarily on server and client system software configuration.
- *InfoPrint Manager for Windows: Procedures*, G550-1073. This publication describes the primary tasks necessary for setting up an InfoPrint environment, submitting print jobs, scheduling jobs, and managing the print environment.

Related publications

The related publications are:

- *AFP Conversion and Indexing Facility User's Guide*, S550-0436.
- *Page Printer Formatting Aid: User's Guide*, S550-0801.
- *Using OpenType Fonts in an AFP System*, G544-5876.

What's new in InfoPrint Manager for AIX Release 3

The enhancements and changes in this release apply to InfoPrint Manager for AIX :

- "Support for PSF and AIX print system"
- "Support for IBM Java Runtime Environment Version 5.0" on page xii
- "Support for Managed IPDS Dialog (MID)" on page xii
- "Support for color management resources added to selected transforms" on page xii
- "Support for Unicode Extended Code Pages" on page xii
- "Support for page count for AFP" on page xii
- "Support for separator pages for AFP Download Plus" on page xii
- "Support for BCOCA desired symbol width" on page xii

Important:

1. All client and server machines must be upgraded at the same time.
2. Make sure that all InfoPrint clients are at the same level as the InfoPrint Manager server installed for optimum performance and experience.

Support for PSF and AIX print system

InfoPrint Manager and InfoPrint ProcessDirector can now share Print Services Facility™ (PSF) and AIX print system components on the same AIX system. The

shared commands include **lp**, **enq**, **qprt**, and **lpr**. If you remove either InfoPrint Manager or InfoPrint ProcessDirector, the shared PSF and AIX print system components remain installed.

Note: InfoPrint Manager for AIX and InfoPrint Manager ProcessDirector must be at these minimum levels to support PSF and AIX print system component sharing:

- InfoPrint Manager for AIX Version 4 Release 3 Modification 0, Program Number 5648-F35
- InfoPrint ProcessDirector for AIX, Version 1 Release 3 Modification 1, Program Number 5765-G74 with PTF US00105

Support for IBM Java Runtime Environment Version 5.0

InfoPrint Manager now supports IBM® Java™ Runtime Environment Version 5.0. This is the only Java version supported by both the InfoPrint Manager clients and servers. However, InfoPrint Job Ticketer also supports Sun Java 5.0. All InfoPrint Manager components must use the same Java level.

Support for Managed IPDS Dialog (MID)

InfoPrint Manager now supports Managed IPDS™ Dialog (MID). This support allows additional sharing capability for specific print engines. Under this enhancement, the printer can request that the PSF host release its control of the print engine (but not drop the TCP/IP connection), thus allowing the print engine to print data streams other than IPDS during periods of time where the IPDS activity is minimal. This is to optimize the performance of the printer.

Support for color management resources added to selected transforms

Release 3 adds support for color management resources (CMRs) to the gif2afp, jpeg2afp, pdf2afp, ps2afp, and tiff2afp transforms. This support provides color fidelity with better printer performance.

Support for Unicode Extended Code Pages

Unicode Extended Code Pages (ECP) are code pages with additional information used by OpenType and TrueType fonts. This enables users to easily define new composite double-byte characters.

Support for page count for AFP

The page count for AFP™ function in InfoPrint Manager enables users to see the number of pages in an AFP file to be printed by PSF on a printer before sending it to the printer. Users can turn on and off this page count function. However, the result of the page count function might not be 100% accurate, because only the begin page group (BPG) and end page group (EPG) pages are counted.

Support for separator pages for AFP Download Plus

Release 3 adds support for AFP Download Plus (AFPDP) to have the option of sending the separator pages (header page, data set header page, and trailer page) in MOD:CA format to the receiver. When AFPDP is enabled to send the separator pages, the separator pages generated by InfoPrint Manager will be suppressed for these jobs.

Support for BCOCA desired symbol width

With release 3, end users can specify a symbol width rather than specify the size for each bar and space within the bar code symbol. This enables users to have direct control over the total width of a bar code symbol. Also, the total width of the bar code symbols created by the printers does not vary as much based on the printhead resolution.

Dropped support

With this release, InfoPrint Manager no longer supports:

- The Advanced Security/Scalability Feature. This includes the DCE version of the server and DCE-enabled clients.
- These PSF Functions:
 - PSF Direct
 - PSF DSS upload-SNA attachment
 - PSF DSS channel attachment
- The font downloader feature
- Impositioning assist function
- Tape Input
- The ability to view local files using plug-ins from the InfoPrint Job Ticketer
- Variable data support from InfoPrint Submit Express
- 3170 DSS support
- Printers that can only be driven by the 7913 IPDS Printer LAN attachment
- IBM AIX 5.1 and 5.2 systems
- LCDS and Meta Driver PRPQ

The InfoPrint Manager clients are no longer available in these languages:

- Danish
- Swedish
- Finnish
- Norwegian

Chapter 1. Introducing InfoPrint Manager for AIX

InfoPrint Manager for AIX is a flexible and scalable print management solution, providing you with many choices of how to expand and manage your print environment. Your print environment might be simple with a few high-speed devices located together, or you might support hundreds of printers dispersed across your enterprise. In either case, InfoPrint Manager helps you make the most of your printing resources.

Optimizing your print resources

Your print resources are the applications that generate print jobs, your printer devices, and the InfoPrint Manager objects that control the jobs as they process and print. Your default InfoPrint Manager configuration includes one InfoPrint Manager server, a queue, a logical destination, and an actual destination (physical printer). Before adding more InfoPrint Manager objects, consider how InfoPrint Manager can help you:

- Manage your printer devices and distribute your printing workload
Many print environments have a significant investment in printer devices and a significant printing workload. InfoPrint Manager gives you the ability to manage all of your printer hardware centrally. You can establish a configuration that lets you route jobs with common requirements to a particular printer or set of printers that support those types of jobs. This lets you mitigate situations where some printers are idle while others have a backlog of jobs waiting to print. By optimizing the use of each printer, you can distribute your print demands among all available printers.
- Balance the use of AIX operating systems
By balancing the printing work load, you can also optimize the use of your AIX systems that support printing. These systems can use a significant amount of their resources to accept, schedule, and process jobs, and to manage the printers they control. System usage includes processing time, memory, and fixed disk capacity. If you use several InfoPrint Manager servers running on several AIX or Windows systems, you distribute the printing demands of your organization and produce output more efficiently.
- Control print jobs
InfoPrint Manager provides you with flexibility in specifying defaults for your print jobs. You might want to use different job defaults for specific output devices or for specific types of jobs. When you configure your system, you should consider when and how you plan to use defaults and how to use them most effectively. Effective use of defaults can influence other configuration decisions you make.
- See significant events when they happen
InfoPrint Manager supports event notification to inform job submitters, operators, and administrators of conditions that require their attention. For example, InfoPrint Manager can notify operators when queues have a backlog of jobs or when the printers they operate are out of paper. Your job submitters can receive notification if InfoPrint Manager cannot schedule their jobs at the requested destination. Notifications include event messages to help your personnel diagnose and isolate the cause of the problem. When you configure InfoPrint Manager, you select the types of notification you want, thus ensuring

that the appropriate people are alerted when significant events occur. The most common form of notification is that a job has completed successfully. For example, when a set of payroll checks has finished printing, someone in the Payroll department can be notified that they are ready.

Continue with the next section that describes the different InfoPrint Manager objects and basic configuration considerations for each.

Understanding the InfoPrint Manager server

The InfoPrint Manager server contains a number of “objects” that are used to control the processing of submitted jobs. Objects include queues, logical destinations, actual destinations, and any defaults for job and document characteristics. The server administrator creates, deletes, and modifies these software objects to optimize the management and performance of the InfoPrint Manager environment.

The InfoPrint Manager server can also contain auxiliary sheets, media, resource-context, and transform objects. You can use auxiliary sheets to separate jobs and to print job identification information. Resource-context objects point to the directory locations of Advanced Function Presentation (AFP) resources, such as fonts and overlays, that some jobs require.

Basic print flow

You can submit print jobs to the InfoPrint Manager server in a variety of ways. Various print submission methods are described in Chapter 3, “Planning to print with host systems,” on page 21 and Chapter 5, “Planning to share printers,” on page 27. No matter which method you use, your jobs will travel similar paths once they get to the server.

In the most common configuration, you submit jobs to an InfoPrint Logical Destination (LD). The LD forwards the job to a print queue, and the print queue forwards the job to an InfoPrint Actual Destination (AD). The AD then sends the job to the printer. See **Job B** in Figure 1 on page 3 for an illustration. This configuration is especially useful if you have multiple printers and want to balance the workload between them.

Another common configuration is to submit jobs directly to the AD. The AD then forwards the job to the LD that is associated with it. The LD sends the job to a print queue, and the print queue sends the job back to the AD where it started. Then, the AD sends the job to the printer. See **Job A** in Figure 1 on page 3 for an illustration. This configuration is particularly useful when you need to make sure jobs are sent to a specific printer.

Note: If you submit jobs directly to an AD, the AD and LD that you associate with it must reside in the same server.

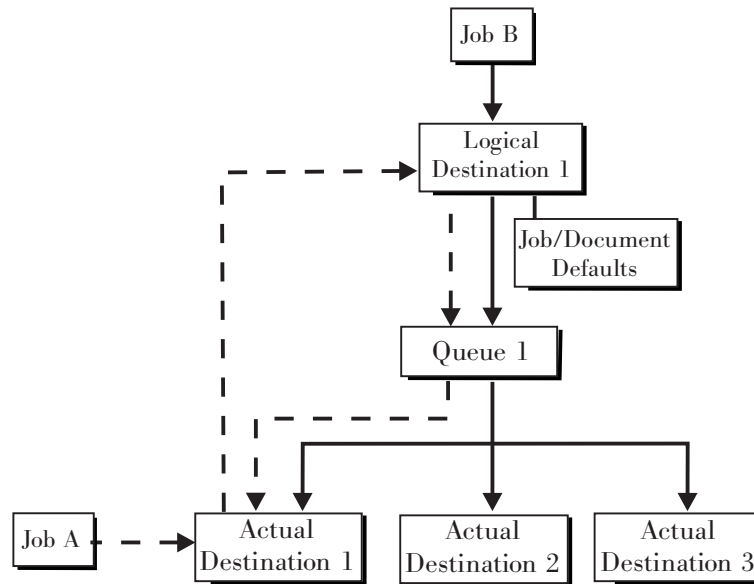


Figure 1. InfoPrint Manager print flow. Job B is submitted directly to a logical destination, while Job A is submitted to an actual destination

The following sections provide more information about the different kinds of InfoPrint objects and what happens to your print job at each step of the process.

Logical destinations

Logical destinations are objects in your InfoPrint Manager system that you can submit jobs to. In the simple print model shown in “Basic print flow” on page 2, the InfoPrint Manager environment has one default logical destination. You might want to add more logical destinations to support specific types of jobs and specific groups of job submitters. When you create an additional logical destination, you specify a name for the logical destination and associate it with a specific queue. The logical destination and the queue must reside in the same InfoPrint Manager server.

You can specify default job and document attributes for a logical destination, so that all jobs submitted to that logical destination are automatically assigned certain default values. This saves time for the job submitter, and helps make sure that jobs submitted will not fail because of missing resources. If necessary, the submitter can override the default values by explicitly setting the attributes at submission time.

Printer pooling (or clustering) is a powerful feature of InfoPrint Manager. Pooling allows jobs to be submitted to a single logical destination and then routed to appropriate physical devices. This feature enables you to distribute your work load evenly among available printing devices and to optimize printer utilization. It prevents bottlenecks where a large number of jobs are queued for a few printers while other equally capable printers sit idle. In short, printer pooling lets you see your output faster, and logical destinations make printer pooling possible.

Queues

A queue receives jobs from one or more logical destinations and routes jobs to one or more actual destinations. The queue holds a job until an actual destination capable of processing the job becomes available. In the simple print model shown in “Basic print flow” on page 2, the InfoPrint Manager environment has one

default queue. The queue and the actual destination that it sends jobs to do not have to be in the same server. The actual destination can be in an InfoPrint Manager server on a different AIX or Windows system.

Actual destinations

An actual destination represents an output device, such as a printer, fax machine, or electronic mailing system. In general, you create one actual destination for each physical output device that you use with InfoPrint Manager. It is possible to create more than one actual destination for a device, but that configuration is not common. You configure the actual destination to mirror the features and capabilities of the output device, such as the output resolution of a printer. You also configure the actual destination to control the order in which it processes jobs, for example, by job size or by submission time.

If you do not specify values for all of the attributes when you create an actual destination, InfoPrint Manager provides default values for many of them or obtains those values by using Simple Network Management Protocol (SNMP) requests. You can make modifications, as required, at a later time.

Host receivers

A host receiver provides the point of connection between InfoPrint Manager and a host system. The host system connects with the host receiver and downloads print jobs.

The MVS™ Download receiver receives print jobs from MVS and submits them to InfoPrint Manager. .

Note: Within InfoPrint Manager, the term MVS Download refers to both the Download for z/OS® feature of PSF for z/OS and the AFP Download Plus for z/OS feature of PSF for z/OS.

See Chapter 3, “Planning to print with host systems,” on page 21 for additional information about host printing.

Documents and jobs

A job is a unit of work you send to InfoPrint Manager for processing. A job can consist of a single file or many files. (To submit multiple files in a single job you must use the **pdpr** command, the InfoPrint Submit Express, or InfoPrint Job Ticketer.) In InfoPrint Manager terminology, each file in the job and its accompanying attributes is called a document. (Both jobs and documents include attributes that define their respective requirements.)

Job validation is the process of ensuring that there is an actual destination capable of processing the requirements of the job. The values of job and document attributes determine the requirements (such as duplex printing or card-stock media) that the actual destination printing the job must support.

A job can include a complete description of its requirements, or the job submission process can be streamlined through the use of defaults. See “Logical destinations” on page 3 for details.

Auxiliary sheets

An auxiliary sheet is a sheet of paper that can print at any or all of the these points during a job:

- At the beginning
- At the end
- Between sections

The auxiliary sheet can have information printed on it, or it can be blank. InfoPrint Manager provides five default types of auxiliary sheets, but you can customize your own sheets if necessary. You can also apply a *user-exit program* to control the information printed on an auxiliary sheet.

Media

A medium represents the type of media, that is, paper, envelopes, transparencies, or multi-part forms, that an actual destination prints on. You can configure a medium to describe its dimensions, color, purpose, or any other useful information.

InfoPrint Manager uses the names of media as values for actual destination attributes, such as **media-supported**. Actual destination attributes that reference media can use any name as long as the name is in syntax limits.

Resource contexts

When properly configured, InfoPrint Manager automatically locates the AFP resources (fonts, overlays, form definitions, page definitions, and page segments) that print jobs require. You can store the resources in a centrally available location and then use InfoPrint Manager resource contexts to identify the location. After you have configured the resource contexts, InfoPrint Manager automatically locates the AFP resources required by a job and then uses them for processing.

Transforms

Transforms are InfoPrint objects (like queues and destinations) that you create and configure in InfoPrint Manager. Transforms receive data in a particular format or formats, process the data in some way, and output the changed data. When you create a transform, you have complete control over what data format or formats it operates on and what type of processing it does. The processing that the transform performs can be anything from simply copying the data to a different place on disk, to filtering the data stream that the transform receives (for example, to remove a particular PostScript® order), to transforming the data to a completely different format (for example, converting PCL to AFP).

In addition, you can specify whether you want the file that the transform produces to be printed. If the transform doesn't submit the file to be printed (for example, if the transform completes its processing and saves the file to a different location), it is called a *terminating transform*.

Sizing your InfoPrint Manager environment

The number of InfoPrint Manager servers you need depends on many factors. In this section, we provide only an overview of the most important performance issues that can influence your server purchase plans. To begin, the features and configurations of each InfoPrint Manager server system are extremely important. Important server factors that affect printing system performance include these:

- Processor speed
- Number of processors
- Available RAM

- Available hard disk space
- Hard disk speed
- Number of hard disk drives
- Balance of InfoPrint Manager filesystems across available disk drives
- Tuning specifications for hard disk drivers
- Paging space allocations (drive locations and size)
- Number of data paths (single or dual)

The output devices that InfoPrint Manager drives are also important:

- Speed and resolution of printers or other output devices
- Number of concurrent processes for each actual destination
- Number of output devices per actual destination

Finally, how you submit print jobs to each InfoPrint Manager server is important:

- Number of client systems submitting jobs
- Frequency of job submission from client systems
- Speed of network data transfer
- Size (density) of jobs to be printed
- Complexity of jobs to be printed
- Number and types of input data streams
- Overall network traffic

Sizing your InfoPrint Manager environment is a complex task. It might be impossible to determine in advance precisely how many AIX systems and Windows 2000, Windows 2003, Windows XP, Windows Vista, or Windows 2008 systems will adequately serve your printing needs.

Note: You can run multiple InfoPrint Manager servers on one AIX system, but you can run only one InfoPrint Manager server on a Windows system.

Your InfoPrint Solutions Company sales representative can help you determine if you have enough physical printing devices to address the printing needs of your enterprise. Essentially, this is a question of how many pages of output must be produced in how much time. Your estimate of printed output, combined with the rated speeds of your print devices, should give you the information you require to guide printer purchases.

Determining how many servers you need to drive your printing devices, however, requires experimentation and patience. Consult with your InfoPrint Solutions Company sales representative to agree on a reasonable number to start with.

Finally, it is important to monitor the performance of your printing environment regularly to see how the system reacts to actual usage and the changing needs of your business. InfoPrint Manager provides useful tools to make such monitoring easy. You can use standard accounting and audit logs to collect statistical data on jobs processed by any printing device in your environment. You can even customize these logging activities to suit the needs of your business. These logs provide invaluable information on workload balancing. You can also use these logs to determine billing procedures or simply to determine how resources are being used at your installation.

Note: The InfoPrint Manager server provides standard accounting logs, and you can also get customized accounting and audit logs with printers that use the PSF DSS.

Understanding server configuration options

Because InfoPrint Manager for AIX Version 4 Release 3 provides print management for many different environments, it provides two different types of installation on the InfoPrint server: *standard* and *basic* installations. Once you have decided to use InfoPrint Manager, the next decision you must make is whether to use the standard server environment or the basic server option. The following sections describe how each server runs and should give you an idea of which installation you need.

Note: If you read over this following information and are unsure about which server configuration is best for you, consult with your InfoPrint Solutions Company representative to make sure that you create the environment that meets your needs.

Standard server environment

When you install the InfoPrint Manager server, a standard printing environment is created. This environment is generally appropriate for data center printing or distributed printing of many different types of data (including ASCII, line data, ditroff, GIF, JPEG, PCL, PDF, PostScript, XML, and TIFF data). Print jobs in the standard environment often consist of billing statements, payroll statements, and application forms. Users submit these jobs from a command line, a workstation application (such as a word processor), or an InfoPrint client (such as InfoPrint Select).

In a standard printing environment, InfoPrint Manager assigns jobs to printers through late binding. Late binding is much like going to a crowded restaurant and being put on a waiting list for the next available table: you are not “bound” to a particular table until one becomes available. You might have special requirements, such as a non-smoking table with six places (much like a print job that requires document finishing capabilities or a particular paper size), but the hostess (much like the scheduler on the InfoPrint server) handles these qualifications for you.

Basic server option

When you install the Print-on-Demand Feature, the standard server environment is replaced or extended with the basic printing environment. The basic printing environment is generally appropriate for commercial print shops printing large runs of image data (usually in PostScript or TIFF format). Users submit these jobs from a client (Windows or Macintosh) personal computer using InfoPrint Submit Express or InfoPrint Job Ticketer.

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 the 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 a 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 print job from one print queue to another).

Note: To use the basic view of the GUI instead of the standard view, see “Using the basic view of the GUI” in the *InfoPrint Manager for AIX: Getting Started*.

InfoPrint Manager interfaces

The main InfoPrint Manager interfaces are the InfoPrint Manager Administration GUI and the InfoPrint Manager Operations GUI, collectively known as the InfoPrint Manager GUIs. To administer your InfoPrint Manager environment, you will primarily use the InfoPrint Manager Administration GUI. You can use this Java-based interface to create, delete, or modify most InfoPrint objects. Printer creation wizards make it easy for you to create InfoPrint actual destinations.

To oversee the day-to-day operation of your InfoPrint Manager environment, you will use the InfoPrint Manager Operations GUI. This interface includes a subset of the functions available in the InfoPrint Manager Administration GUI. In the InfoPrint Manager Operations GUI, you can release jobs for printing and disable actual destinations. You cannot, however, modify the fundamental configuration of the InfoPrint Manager environment; you cannot delete or add logical destinations, for example.

Both of the InfoPrint Manager GUIs are installed on the AIX system that the InfoPrint Manager server is installed on. In addition, they can both be installed on remote Windows systems. As a result, administrators and operators can manage the InfoPrint Manager system without going to the AIX system that InfoPrint Manager is installed on.

Note: Mixing different levels of the interfaces, servers, or both might cause unexpected results with the Printer Details. Keep all of the clients and servers in the same namespace at the same level.

The third interface that you will use with InfoPrint Manager is called the InfoPrint SMIT administrator’s interface. You use the InfoPrint SMIT administrator’s interface to:

- Start and stop InfoPrint servers
- Access migration tools
- Perform troubleshooting procedures
- Access the InfoPrint SMIT Operator’s GUI (see “Using the SMIT Operator’s GUI” in *InfoPrint Manager for AIX: Getting Started*)
- Perform miscellaneous configuration tasks
- Manage security functions
- Use the InfoPrint utilities

Comparing InfoPrint Manager on different platforms

If you are trying to choose a platform (AIX or Windows) on which to run your InfoPrint Manager server, be advised that while InfoPrint Manager for AIX and InfoPrint Manager for Windows support many of the same features and functions, each product has unique features not available in the other.

Understanding common features

These InfoPrint Manager features are available on both platforms:

- Interoperability with other InfoPrint Manager servers (AIX or Windows)

- Impositioning, that is, arranging pages so they will appear in proper sequence after press sheets are folded and bound
- BSD and PSF device support systems
- Print-on-Demand, which includes:
 - A simplified “basic” version of the InfoPrint Manager server that defaults to one-to-one mapping of logical and actual destinations.
 - InfoPrint Submit Express client support
 - InfoPrint Job Ticketer support
- Support for these input document formats:
 - AFP
 - ASCII
 - DBCS ASCII
 - GIF
 - JPEG
 - Line data (EBCDIC)
 - PCL (PCL 6 and earlier)
 - PDF Version 1.7 and earlier
 - PostScript Level 3 and earlier
 - TIFF
 - SAP ABAP and OTF
 - XML
 - PPML
 - DITROFF
- Adobe® PostScript transform
- PCL transform
- XML transform
- Full event notification
- InfoPrint Manager Notifications to enable client systems to receive messages from InfoPrint Manager server systems
- The InfoPrint Manager Administration GUI for performing most administrative tasks
- The InfoPrint Manager Operations GUI for performing operator tasks
- InfoPrint Select client for job submission
- A powerful command-line interface to all InfoPrint Manager features
- Simple Network Management Protocol (SNMP) support
- MVS Download for job submission from z/OS, OS/390®, and MVS host systems
- InfoPrint Page Printer Formatting Aid (PPFA)
- The **pdaccount** command, which you can use to generate comma-delimited reports of print server data to be fed into spreadsheets
- Configurable transform support (through transform objects)
- InfoPrint SAP Print Feature, which includes the SAP Output Management Support (OMS) and the **sap2afp** transform.
- The IPP Gateway to allow you to print from an IPP client system to printers that are not IPP-enabled

Understanding InfoPrint Manager for AIX features

These features are currently only available in InfoPrint Manager for AIX:

- InfoPrint E-Mail output support
- Generalized Fax input and output support
- SAPconnect support for fax-in and fax-out in the InfoPrint SAP Print Feature
- Support for printers that use standard AIX printer backend programs (piobe and some versions of rembak)
- AFP Upload TCP/IP
- SMIT interface for performing tasks not supported by the InfoPrint Manager Administration GUI, including PPO and security administration

If you require the features currently only available on InfoPrint Manager for AIX, but prefer the Windows platform, consider a mixed environment of AIX systems and Windows systems. In many cases, a mixed environment provides you with immediate access to all InfoPrint Manager features.

Understanding InfoPrint Manager for Windows features

This release of InfoPrint Manager for Windows includes these features that are unique to the Windows platform:

- The InfoPrint Manager Management Console interface for performing administrative tasks not supported by the InfoPrint Manager Administration GUI. The InfoPrint Manager Management Console also features graphical administration of the security Groups and Access Control List (ACL).
- Interaction between InfoPrint Manager and the Windows print spool to expand InfoPrint capabilities
- Distributed Print Facility (DPF) for host printing
- Support for the Internet Print Protocol (IPP) to allow InfoPrint Manager to access a printer using a Uniform Resource Indicator (URI) string
- The Windows gateway printer to allow job submission to without using an InfoPrint Manager client. (The destinations appear as shared printers on the Windows network.)
- Customization of MVS Download without programming

Supported printers

InfoPrint Manager for AIX supports a wide range of printers from InfoPrint and other vendors.

PCL printers

InfoPrint Manager for AIX supports all compatible printers capable of interpreting the Hewlett-Packard Printer Control Languages (PCL 4, PCL 5, PCL 5c, PCL 5e, PCL XL, and PCL 6). InfoPrint Manager is capable of converting all kinds of datastreams to PCL 4, PCL 5, PCL 5c, or passing through any version of PCL to your PCL printer.

PostScript printers

InfoPrint Manager for AIX supports printing to PostScript printers by passing your PostScript directly to your PostScript printer.

Note: The AIX DSS now supports sending PDF files to printers. However, this feature is not turned on by default. If your printer supports PDF input, you have to add PDF to the actual destination **document-formats-supported** attribute. The support only works for AIX DSS actual-destinations created after PTF U823037 or higher is installed. Any existing AIX actual destinations need to be recreated by copying them to a new actual destination before adding PDF to the **document-formats-supported** attribute.

In addition with this PDF support, PSF-Other printers that specify the PDF value for the **document-formats-ripped-at-destination** attribute will also print PDF files.

PPDS printers

In addition, InfoPrint Manager is capable of driving any printer that accepts the Personal Printer Data Stream (PPDS). InfoPrint Manager is capable of converting all kinds of datastreams, except formatted ASCII, to PPDS, or passing through any version of PPDS to your PPDS printer.

Note: InfoPrint Manager only supports non-impact PPDS printers as PSF Other-driver and PSF Command devices.

IPDS printers

InfoPrint Manager for AIX supports IPDS printers including but not limited to:

- InfoPrint 75
- InfoPrint 100
- InfoPrint Color 130 Plus
- InfoPrint EMP156
- InfoPrint Pro C900 AFP
- InfoPrint Pro 907
- InfoPrint Pro 907EX
- InfoPrint Pro 1107
- InfoPrint Pro 1107EX
- InfoPrint Pro 1357
- InfoPrint Pro 1357EX
- InfoPrint 1145 (no MFP support)
- InfoPrint 1422
- InfoPrint 1532
- InfoPrint 1540 MFP
- InfoPrint 1552
- InfoPrint 1560 MFP
- InfoPrint Color 1567
- InfoPrint 1570 MFP
- InfoPrint 1572
- InfoPrint 1572 MFP

- InfoPrint 1580 MFP
- InfoPrint 1585
- InfoPrint Color 1654
- InfoPrint Color 1664
- InfoPrint Color 1754 Express
- InfoPrint Color 1759 MFP
- InfoPrint Color 1764
- InfoPrint Color 1764 MFP
- InfoPrint Color 1767
- InfoPrint Color 1769 MFP
- InfoPrint 1832
- InfoPrint 1834
- InfoPrint 1846 MFP
- InfoPrint 1850 MFP
- InfoPrint 1852
- InfoPrint 1854
- InfoPrint 1856 MFP
- InfoPrint 1860 MFP
- InfoPrint 1866 MFP
- InfoPrint 1870 MFP
- InfoPrint 1872
- InfoPrint 1880 MFP
- InfoPrint 1930 MFP
- InfoPrint 1940 MFP
- InfoPrint 2000 SCS and AFP Models
- InfoPrint 2060ES
- InfoPrint 2075ES
- InfoPrint 2085
- InfoPrint 2090ES
- InfoPrint 2105
- InfoPrint 2105ES
- InfoPrint 2190
- InfoPrint 2210
- InfoPrint 2235
- InfoPrint 3000
- 3160 Advanced Function Printer with Feature 4120, 4161, 4162, or 4163
- 3900 Advanced Function Printer Models 001, D01, D02, 0W1, 0W3, DW1, and DW2 (including support for the MICR Post-Processing Interface Feature, the Set Media Modifications command to drive post-processing devices, such as Beste Bunch spot color printers, and the Interface Feature 4720)
- 3930 Page Printer Models 03D and 03S
- 3935 Advanced Function Printer with Feature 4020, 4121, or 4161
- InfoPrint 4000
- InfoPrint 4000 Model ID5/ID6
- InfoPrint 4000 Model IR3/IR4

- InfoPrint 4100 MD1/MD2
- InfoPrint 4100 Model HD1/HD2
- InfoPrint 4100 Model HD3/HD4
- InfoPrint 4100 Model HD5/HD6
- InfoPrint 4100 Model HS1
- InfoPrint 4100 Model HS2
- InfoPrint 4100 Model HS3
- InfoPrint 4100 Model PD1/PD2
- InfoPrint 4100 Model PS1
- InfoPrint 4100 MS1
- 4312 Network Printer 12. OS Code Release Level 2.23 or later is required. For IPDS printing, the IPDS feature with IPDS Code Level 1.25 or later is required.
- 4317 Network Printer 17. OS Code Release Level 2.23 or later is required. For IPDS printing, the IPDS feature with IPDS Code Level 1.25 or later is required.
- 4324 Network Printer 24. OS Code Release Level 2.35 or later is required. For IPDS printing, the IPDS feature with IPDS Code Level 1.25 or later is required.
- 4400 Thermal Printer
- InfoPrint 5000 Model AD1/AD2
- InfoPrint 5000 Model AD3/AD4
- InfoPrint 5000 Model AS1
- InfoPrint 5000 Model AS3
- InfoPrint 6500
- InfoPrint 6700
- InfoPrint SP 8200 DN1

Supported data streams

InfoPrint Manager for AIX is capable of converting these data streams to IPDS, PCL 4, PCL 5, PCL 5c, or PPDS:

- Advanced Function Presentation™ (AFP)
- ASCII
- DBCS ASCII
- CompuServe Graphics Interchange format (GIF)
- Device-independent troff (ditroff)
- EBCDIC
- Joint Photographic Experts Group image (JPEG)
- PCL (PCL 6 and earlier)
- PDF (1.7 and earlier)
- PostScript (level 3 and earlier)
- SAP ABAP and OTF (with purchase of the InfoPrint Manager: SAP Print Feature)
- Tagged Image File Format (TIFF)
- XML
- Personalized Print Markup Language (PPML) (with purchase of the optional InfoPrint Manager: Print-on-Demand Feature)

In addition, InfoPrint Manager will pass through any data stream including PDF, PostScript, PPDS, PCL 5e, PCL XL, PCL 6 (which is a combination of PCL 5e and PCL XL), and PPDS.

Note: If you send PostScript data generated by an InfoPrint 17xx PS printer driver to an IPDS printer via InfoPrint Manager, specific controls inserted in the data stream are lost. To avoid this, you can use the generic PostScript driver.

To provide optimal system performance, the InfoPrint Manager server can transform input data and drive printers concurrently. InfoPrint Manager can support multiple document formats on the same printer.

Chapter 2. Planning for configuration

Destination configuration models show the relationships among logical destinations, job- and document-attribute defaults, queues, and actual destinations. Your standard InfoPrint destination configuration, the one created during installation, has a one-to-one relationship between a logical destination and an actual destination, and provides minimal job- and document-attribute default setting. As you customize your InfoPrint environment to support your printing needs, you might want to consider a more complex destination configuration model.

For any of the configuration models, while the logical destination and the queue that it sends jobs to must reside in the same InfoPrint server, the actual destination can be running in a different InfoPrint server running on a different AIX or Windows system. However, to submit jobs directly to the actual destination, the actual destination must reside in the same server as the logical destination and queue.

Default model

The default model has a one-to-many relationship between a logical destination and two or more actual destinations. It also lets you submit jobs directly to properly configured actual destinations. (In this way, the default model is similar to the “Desktop destination configuration model” on page 16, but it requires you to create and manage fewer objects.) To support direct submission to actual destinations, the default model requires the actual destination to be associated with a logical destination. A job submitted to an actual destination is rerouted to the associated logical destination. At the logical destination, the job derives its job and document defaults. The job is then routed through the associated queue and back to the actual destination.

InfoPrint Manager uses this destination configuration model by default. (A single queue and a single logical destination are created automatically when you install InfoPrint Manager.) You must configure the actual destinations to enable direct submission.

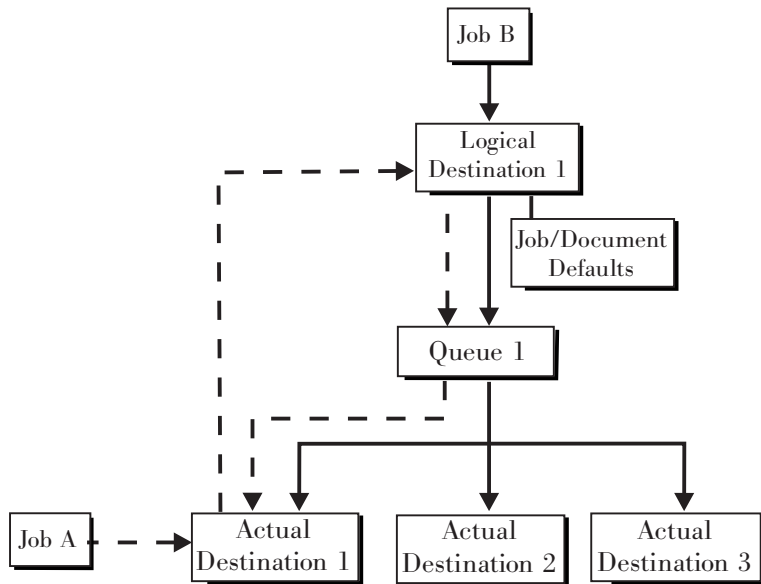


Figure 2. Default destination configuration model. Job A (submitted to an actual destination) prints on that actual destination. Job B (submitted to the logical destination) prints on the first actual destination that can support it.

This is a very flexible model that lets you enjoy the benefits of printer pooling, while retaining complete control over where certain jobs print.

Desktop destination configuration model

The desktop destination configuration model, as shown in Figure 3, has a one-to-one relationship between a logical destination and an actual destination. The desktop model represents the way you typically manage and use a workstation printer. This model should be familiar to you if you have an existing printing system that you are adding InfoPrint to. The capabilities of the actual destination directly control the types of jobs that your users can print, fax, or send by electronic mail with this destination configuration.

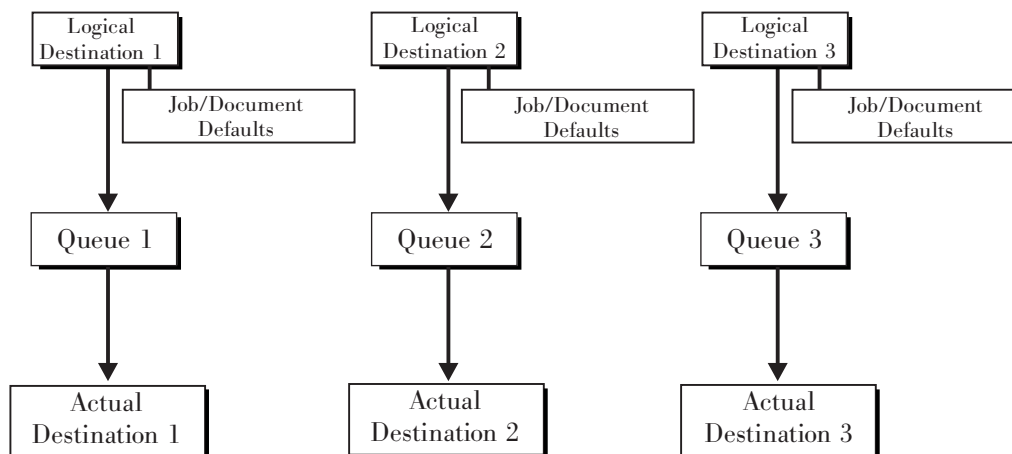


Figure 3. Desktop destination configuration model

Pool destination configuration model

Like the default destination configuration model, the pool destination configuration model has a one-to-many relationship between a logical destination and two or more actual destinations.

The pool destination configuration model, as shown in Figure 4, has a one-to-many relationship between a logical destination and two or more actual destinations.

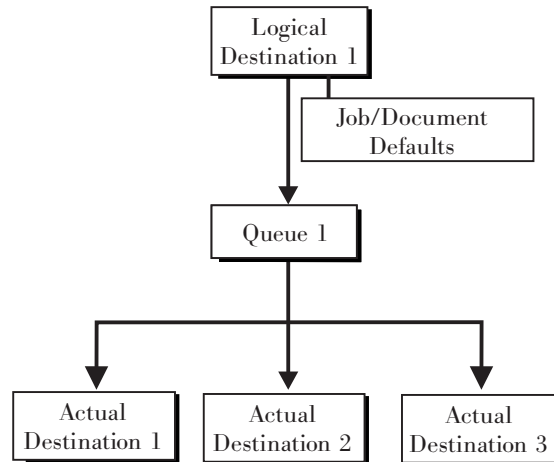


Figure 4. Pool destination configuration model

This model is very effective when you have output devices that you want to group together based on things such as location, capability, speed, and capacity. You might also want to group them based on who uses them or who manages the output they generate. For example, all jobs sent to a specific group of printers come from the department that generates monthly statements for your customers. The jobs use the same set of job- and document-attribute defaults, including the form that they print on and the overlay they require. The printer operators responsible for the printers direct all of the output to a mail room for distribution. The pool model is also very beneficial in workload balancing.

Note: You can submit a job directly to an actual destination with the Pool destination configuration model, but you won't achieve a pooling effect; the job will only be scheduled to the actual destination you submitted it to.

Funnel destination configuration model

The funnel destination configuration model has a many-to-one relationship between two or more logical destinations and one actual destination. Figure 5 on page 18 shows the funnel configuration.

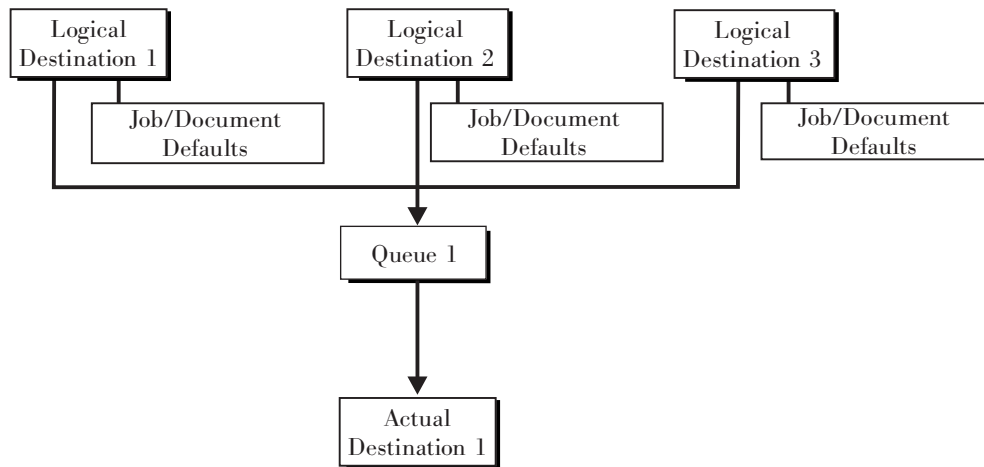


Figure 5. Funnel destination configuration model

This is a flexible configuration model that provides you with the ability to more closely control setting job and document defaults for jobs. For example, you can configure one logical destination to provide job and document defaults for PostScript jobs and another logical destination to support jobs using AFP resources.

Hourglass destination configuration model

The hourglass destination configuration model, shown in Figure 6, has a many-to-many relationship between logical destinations and actual destinations. The hourglass model provides both the workload balancing benefit of the pool model and the flexible job- and document-defaulting benefits provided by the funnel model. The hourglass model is the most flexible of the destination configuration models.

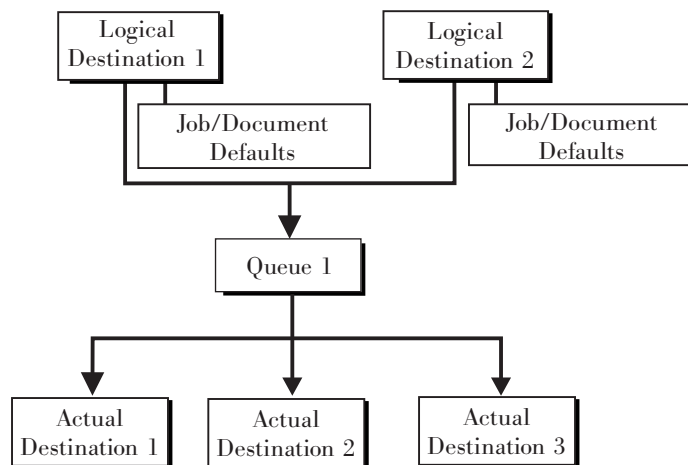


Figure 6. Hourglass destination configuration model

Recommended distributed configuration model

To manage your print environment efficiently in a distributed environment (as shown in Figure 7), we recommend organizing your destinations using the hourglass configuration model and using multiple queues and default jobs to control the work flow through your InfoPrint Manager for AIX servers. Define queues based upon operators, rather than based upon the number of devices defined in your installation. Whether your installation has one operator for every ten printers at your site or an operator managing all the printers on a particular floor, grouping printers by queue makes management of all printers and print jobs much easier because one person can monitor a single queue.

Having one person monitor a single queue is highly efficient. An operator can use the **InfoPrint Manager Administration GUI** to view a particular queue. Because InfoPrint uses queue authorization to manage the security settings on print jobs, an operator has a much easier job overseeing this support without having to switch from one queue to another. You can create default jobs and associate them with different logical destinations to make sure that the queue schedules these jobs on the correct actual destinations. For example, the initial-value-job associated with LogDest1 can default **actual-destination-requested** to ActDest1, so that jobs submitted to LogDest1 are scheduled to ActDest1. Since **actual-destination-requested** is a multiple-valued attribute, you can also specify more than one actual destination on the initial value job's **actual-destination-requested** attribute and let other job and document attributes (such as **document-format**) determine which actual destination is selected.

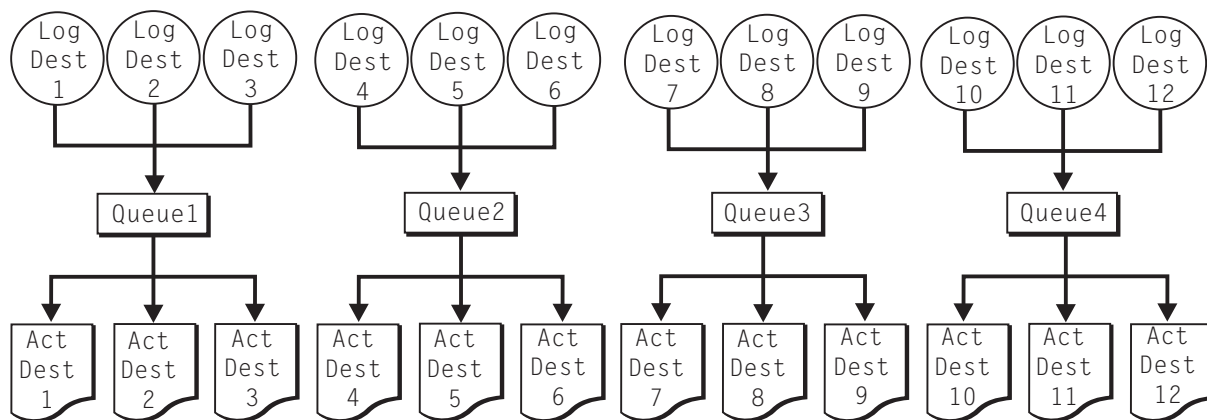


Figure 7. Distributed configuration model. With this model, you can have different actual destinations associated with different logical destinations through the job and document defaults you specify.

Chapter 3. Planning to print with host systems

InfoPrint Manager provides several options for printing to or from host systems, depending on how many functions you need and where you want to control printing from (the host system or InfoPrint Manager). All of the options allow you to share printers between host and LAN applications, though some require more configuration than others. Available host printing options include:

- **MVS Download**

The MVS Download receiver daemon in InfoPrint Manager supports both Download for z/OS and AFP Download Plus for z/OS. If you use MVS Download feature of PSF for z/OS or AFP Download Plus feature of PSF for z/OS, you can spool jobs to remote locations, so that the remote print operator can control printing.

Note: Within InfoPrint Manager, the term MVS Download refers to both the Download for z/OS feature of PSF for z/OS and the AFP Download Plus for z/OS feature of PSF for z/OS.

- **Infoprint[®] Server on z/OS**

If you use Infoprint Server on z/OS, you can submit jobs on the host for spooling to a remote InfoPrint Manager server. The IP PrintWay[™] component of Infoprint Server, which contains an LPR, and the InfoPrint Manager LPD must be running. When you submit a job on the host, you can specify advanced InfoPrint options, such as form definitions and page definitions. The remote print operator controls printing after InfoPrint Manager receives the job.

- **LPR**

Remote systems that support LPR (RFC 1179) can also submit output to InfoPrint Manager for AIX through its LPD gateway using the TCP/IP protocol. The AIX line printer daemon (**LPD**) works with the InfoPrint LPD Gateway to route incoming jobs from remote clients to InfoPrint destinations. Some LPR clients, such as the AIX LPR or the **lprafp** utility supplied with InfoPrint Manager for AIX, can pass print parameters to InfoPrint Manager (using the **-o** flag). However, not all LPR clients support optional parameters.

- **AFP Upload**

AFP Upload allows InfoPrint users to print AFP data from AIX and Windows platforms on their existing MVS Host system printers.

Print shop scenarios

To see how InfoPrint Manager can best manage your particular print environment, consider these sample scenarios.

A black box shop

A data center located on the East coast of the United States provides billing statements to five regional offices around the country, submitting output to a set group of printers. Because these users want to keep all resource management on their MVS systems, they can use the MVS Download in InfoPrint Manager with AFP Download Plus for z/OS as a black box solution. They never have to move resources, and they can send jobs to their remote offices to print immediately. All print job and resource management takes place at the central host.

Printing from the LAN and the host

This print shop wants to spend the day shift printing staff reports from the local LAN. On the night shift, it wants to use the same InfoPrint 4000 printer to print billing statements from the pSeries® server. By creating the destination through the InfoPrint Manager Administration GUI, the print administrator can make sure that the same destination can print jobs from both the LAN and the host.

Distributed print shop using remote spooling

A data center prints a monthly series of in-house reports. The jobs that generate the output are run during the evening off-shift (so they do not interrupt other work during the day), then held on the system. The shop saves bandwidth costs by sending the print files once, then printing them at rated speed as many times as needed. Although this data center only has a 56 KB link, MVS Download prevents performance problems caused by inefficient line speed. MVS Download waits for the entire job to be spooled before starting to print it on a high-speed continuous forms printer. Because this shop wants to integrate all their print servers while retaining the ability to send jobs once and print them many times, the MVS Download feature of InfoPrint Manager best meets their needs by allowing them to control all jobs locally.

Managing resources with MVS Download

When you use the MVS Download function, all print resources must reside on the AIX system where the InfoPrint Manager server is installed. You can manage these resources in one of these ways:

- Download these resources to InfoPrint Manager through a standard file transfer protocol (FTP) in binary format. This method works best when resources do not change often.
- Use the Network File System (NFS) mount command to make OS/390 or MVS systems containing resources accessible to the AIX server that InfoPrint Manager is running on. Because this solution can cause a great deal of network traffic, you should be careful when choosing this solution if your resources change frequently.
- Use MVS Download to submit a resource instead of a print job and send it to all print resource libraries defined on your InfoPrint Manager server. This method requires you to customize your MVS Download exits and configuration.

When you use the MVS Download function in InfoPrint Manager with AFP Download Plus for z/OS, the resources for the print jobs are normally sent with the print job as inline resources used for that job and the resources do not need to reside on the InfoPrint Manager server. However, if AFP Download Plus is configured to not send all resources as inline resources, then the resources that are not sent inline must reside on and be managed by the InfoPrint Manager server.

Managing resources with AFP Upload

If a data center has migrated its applications to AIX platforms, but still has its printers attached to the MVS host, they can use AFP Upload. By using AFP Upload, InfoPrint Manager for AIX acts as a passthrough point for sending AFP files (or files it can convert to AFP) to the MVS server, which places them on the JES spool. AFP Upload communicates through the TCP/IP protocol from the AIX system to the PSF host. AFP resources must be resident on the PSF host. By submitting jobs to the MVS host, a data center performs resource management at

the PSF host, so they can use SMF accounting records and take advantage of their operators' familiarity with host systems. Resource names and other parameters can be passed as attributes from the AIX client to the MVS system.

Chapter 4. Using AFP resources

After creating the text for your document, you will probably want to format it to make it more readable and interesting. You can use images—such as charts, graphs, logos, boxes, and lines—to illustrate or to separate various sections. You can also use fonts to emphasize different areas of text. You might like to draw from a catalog of predefined graphic and text elements created for your enterprise. You might like to combine text and graphic elements into segments (such as footers, headers, or side bars) that you can position as single units on the page. To ensure consistency, you can specify common elements and layout for documents of the same type.

Advanced Function Presentation™ (AFP™) resources provide powerful tools for controlling the appearance of your documents. InfoPrint Manager includes a number of AFP resources. The different types of AFP resources follow:

Color management resource

Color management resource (CMR) is an architected resource that is used to carry all of the color management information required to render a print file, document, group of pages or sheets, page, or data object with color fidelity.

Data object resources

Data object resources are a type of AFP resource; they can be an IOCA file or a type of file natively supported by a particular model of printer (for example, an EPS file on an InfoPrint Color 130 plus). In addition, if you use the transforms that come with InfoPrint Manager to convert objects into AFP first, these non-native types of files can be used as data object resources as well. In InfoPrint Manager, data object resources are grouped with BCOCA™ and GOCA objects, and they are collectively known as presentation object containers.

Fonts A font is a single size and typeface in a particular type family, including letters, numerals, punctuation marks, special characters, and ligatures.

Form definitions

Form definitions provide instructions on how output devices position data on the page. Form definitions can specify overlays, a paper source for cut-sheet printer devices, duplexed printing, text suppression, data position, and the number and modifications of pages.

Page definitions

Page definitions contain the formatting controls for line data. Page definitions can include controls for the number of lines per logical page, font selection, print direction, and the mapping of individual fields to positions on the logical page.

Page segments

Page segments contain text and images that you can include at any addressable point on a page or an electronic overlay.

Overlays

Overlays are collections of predefined data—such as lines, shading, text boxes, or logos—that can merge with variable data on a page or a form during printing or transmission.

You can also purchase additional resources or even create your own custom resources. To create page definitions and form definitions, you can purchase the Page Printer Formatting Aid (PPFA) for AIX, which is an optional feature of InfoPrint Manager for AIX (see Chapter 9, “Reviewing software components,” on page 43) .

InfoPrint Manager provides several methods for accessing AFP resources. If the only AFP resources available are those that shipped with InfoPrint Manager, they are accessed automatically when a job needs them. If, however, you are using other AFP resources, you must specify the location of these resources. There are also ways to specify resource locations through job submission parameters and environment variables. Finally, each document in a job can specify the path to each of the AFP resource types it requires. You can elect to handle these specifications with a default document associated with a logical destination.

Important: Do not store custom AFP resources in the same directory with the AFP resources included with InfoPrint Manager. If you ever need to reinstall or update InfoPrint Manager, your custom resource files could be corrupted or deleted.

You can use resource-context objects to access your AFP resources. Resource-context objects identify the locations of different types of AFP resources that jobs sent to PSF actual destinations can reference. Resource-context objects let you encapsulate the directory path name in one place. You then specify the resource-context object name rather than a directory name when specifying where to find resources. Later, if the location of a resource changes, you only need to modify the path name specified in the corresponding resource-context object.

You must use the **pdcreate** command (at an AIX command prompt) to create a resource-context object. You then reference this object when you create or modify a PSF actual destination in the InfoPrint Manager Administration GUI. Jobs can also reference resource-context objects through their contained documents. Both the actual destination and the resource-context objects that are referenced must reside in the same InfoPrint Manager server.

Chapter 5. Planning to share printers

In many environments, sharing printers lets you get the most benefit from your printers. One of the primary benefits of using InfoPrint Manager is the ability to have various host and client systems share printing resources at a variety of levels. The level of sharing used depends on the requirements of the environment.

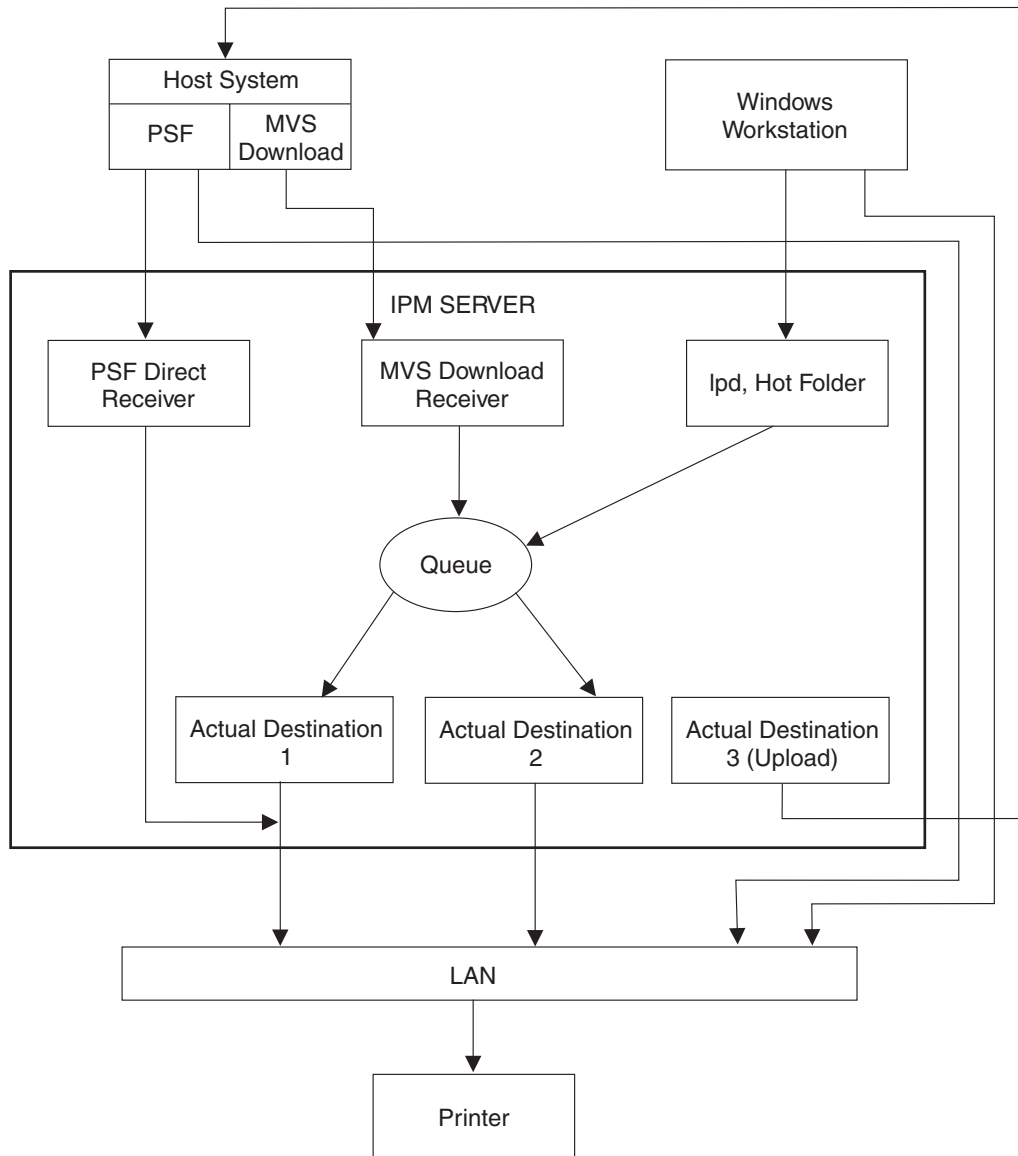


Figure 8. Sharing printers

Methods for sharing printers

You can share printers by having the print drivers share the communication link with the printer or by having various clients submit jobs to the same print queue. Print drivers communicate directly to printers. Print drivers include host PSF printers and InfoPrint Manager actual destinations.

Sharing the communication link with IPDS printers

Since only one print driver can have an open communication link with an IPDS printer at a time, management of multiple print drivers is necessary. This can be done in one of two ways:

- Manually start and stop the InfoPrint Manager actual destinations and Host PSF printers to control the print driver operating the printer
- Configure the print drivers to wait for the printer to become available and to release the communication link when the print drivers have nothing to print.

The **connection** timer identifies how long to wait for the printer to become available. The **release** or **inactivity** timer identifies how long the print driver should maintain the communication link when it has no work to do. When a print driver is actively feeding jobs to the printer, the print driver continues to do so as long as the interval between job submissions is not longer than the specified release or inactivity time. The print driver controls the printer until the flow of jobs sufficiently slows. The release or inactivity time values make sure that the destination is shared equally between the printer drivers, which is important. For detailed information about setting these values in InfoPrint Manager, see “Sharing actual destinations with a host” in *InfoPrint Manager for AIX: Procedures*.

You must configure the print drivers when one or more of these are configured to drive the same printer:

- InfoPrint Manager actual destinations
- Host PSF printers

When you configure the print drivers, these conditions apply:

- There is no single point of control and auditing for all jobs printed. Multiple interfaces must be used to determine all pending jobs for a printer.
- There is no automated job prioritization between jobs from different print drivers. Manual actions are required to force an active print driver to release the printer to allow another waiting print driver to use it.
- Aside from the printer and network, there is not a single point of failure.

Sharing the communication link with PostScript, PCL, or PPDS printers

When InfoPrint Manager sends PostScript, PCL, or PPDS to a printer, no configuration is necessary to allow print sharing between:

- InfoPrint Manager actual destinations
- Windows workstations
- LPR clients submitting directly to the printer

Most printers will automatically print jobs in the order that the jobs are received. Some configuration options might be available on some printers.

Submitting jobs to the same print queue

When you submit jobs to the same print queue, only one print driver communicates with the printer. The print driver can either be an InfoPrint

Manager actual destination or a PSF for OS/390 defined printer. All jobs are managed on either one InfoPrint Manager queue or one PSF for OS/390 defined printer.

Using an InfoPrint Manager actual destination

You can use these methods to submit jobs to one InfoPrint Manager queue:

- MVS Download Receivers when jobs are received from Host MVS Download drivers
- LPD when jobs are received from LPR clients on any platform
- Hot Folder when jobs are received from a mapped network directory
- InfoPrint Manager Select, Submit Express, and IPP clients when jobs are received directly from the Windows client
- Command line using a **pdpr** command
- IP Printway if you do not use DPF or MVS Download to submit jobs

When you submit print jobs to the same queue, these apply:

- There is a single point of control and auditing for all jobs printed. A single InfoPrint Manager interface can be used to determine all pending jobs for the printer.
- There is automated job prioritization between jobs. Several methods of prioritization are available.
- There is a single point of failure.

Using a PSF for z/OS or OS/390 defined printer

InfoPrint Manager for AIX provides the ability to upload AFP jobs to the JES spool through a TCP/IP communications link. Jobs can be submitted to InfoPrint Manager using any of the methods described in “Using an InfoPrint Manager actual destination.” When the jobs are directed to a PSF Upload actual destination, the jobs are placed on the JES spool with existing host print jobs. Final control of the print jobs is performed on the z/OS or OS/390 system. You use the InfoPrint Manager system to control jobs that it sends to the z/OS or OS/390 system.

When you upload jobs to the JES spool, these apply:

- There is a single point of control and auditing for all jobs printed. An z/OS or OS/390 interface can be used to determine all pending jobs for the printer.
- There is automated job prioritization between jobs.
- There is a single point of failure.

Sharing printers between host and LAN applications

To get the most out of your printers, you can share them among your host and LAN applications.

Printing from existing host applications

There are several ways you can submit jobs from host applications to InfoPrint Manager:

- MVS Download sends jobs to an MVS Download Receiver.
- The LPR client sends jobs to the LPD utility on the InfoPrint Manager server.

- If you use InfoPrint Server on z/OS, you can submit jobs on the host for spooling to a remote InfoPrint Manager server. The IP PrintWay component of InfoPrint Server, which contains an LPR, and the InfoPrint Manager LPD must be running. When you submit a job on the host, you can specify advanced InfoPrint options, such as form definitions and page definitions. The remote print operator controls printing after InfoPrint Manager receives the job.

Note: As described in “Methods for sharing printers” on page 27, the method used affects how the printer is shared.

For more information, see Chapter 3, “Planning to print with host systems,” on page 21.

Printing from existing LAN applications

It is extremely important in many networked environments to allow existing applications to submit print jobs. PC users expect to be able to select **Print** from the **File** menu when they want to produce printed output. There are five ways that users can submit print jobs to InfoPrint Manager for AIX destinations from their workstations. Choose the one that best suits your environment.

- Install InfoPrint Select on all Windows workstations
- Install InfoPrint Job Ticketer on all Windows workstations
- Install InfoPrint Submit Express on Windows or Macintosh workstations
- Enable the Internet Printing Protocol (IPP) gateway on the InfoPrint Manager server and create IPP client printers on client workstations
- Create an InfoPrint hot folder that automatically submits files that are stored in it to an InfoPrint Manager destination

Using InfoPrint Select

To use InfoPrint Select (available for Windows) to enable job submission from applications, you must install and configure InfoPrint Select on the workstation. During this configuration, you must make a destination controlled by InfoPrint Manager known to the client system. On Windows clients, you use the Windows **Add Printer Wizard** to add a local printer, load the appropriate driver, and assign a unique port to each InfoPrint Manager destination. The InfoPrint Select client is available on the *InfoPrint Manager: Common Client* CD-ROM, LCD4-5642. Installation instructions are included in the *InfoPrint Manager for AIX: Getting Started*.

With InfoPrint Select in place, the user receives relevant event notifications generated by InfoPrint Manager. Typically, this notification simply informs the user that a job has completed successfully. If, however, an error occurs in the processing of a job, the event notifications include information to help you diagnose the problem. With InfoPrint Select, you are also provided access to the InfoPrint Manager command-line interface, including the **pdpr** command. This provides client-application access to all the AFP print attributes that can control such jobs. Finally, the InfoPrint Select user can submit jobs to destinations controlled by either InfoPrint Manager for Windows or InfoPrint Manager for AIX.

Your enhanced InfoPrint Select client allows you to:

- Specify InfoPrint job attributes when submitting a job to the server
- Support the cancelling, holding, and releasing of jobs in a queue

For more information about these specific enhancements, consult the help system.

Using InfoPrint Submit Express

To use InfoPrint Submit Express (available for Windows and Mac 10.4.5 or higher), you must install and configure InfoPrint Submit Express on the workstation. The InfoPrint Submit Express clients and installation instructions are available with the InfoPrint Manager for AIX: Print-on-Demand Feature.

With InfoPrint Submit Express in place, commercial print shops can create job tickets, submit print jobs to the InfoPrint Manager for AIX server, and track the progress of those jobs. A job ticket contains all the specifications for a job (including layout and finishing options), as well as the files that are associated with that job. The job ticket refers to the customer's job data and pulls them together in a job bundle. InfoPrint Submit Express allows client users to make use of all the data stream transforms (PCL, PostScript, TIFF, GIF, and JPEG) that are available from the InfoPrint Manager for AIX server. Finally, the InfoPrint Submit Express user can submit jobs to destinations controlled by InfoPrint Manager for AIX.

Using InfoPrint Job Ticketer

InfoPrint Job Ticketer is a Web application that you can use to create, lay out, store, and retrieve print jobs, and to submit the jobs for printing. The InfoPrint Job Ticketer application is installed on the InfoPrint Manager for AIX server. Users can access InfoPrint Job Ticketer in their Web browser on a client workstation running Windows or Macintosh 10.4.5. Installation instructions are provided with the InfoPrint Manager for AIX: Print-on-Demand Feature.

When InfoPrint Job Ticketer is installed on the InfoPrint Manager server, users provide input on the user interface to create and submit print jobs to the server. They can also import print jobs or job tickets that were created with InfoPrint Submit, InfoPrint Submit Express, IBM Job Ticket Composer, or any JDF job ticket to create an InfoPrint Job Ticketer print job. A print job contains all of the specifications for a job (including layout and finishing options), along with the print files that are associated with the job. InfoPrint Job Ticketer clients can make use of all the data stream transforms (PCL, PostScript, TIFF, GIF, and JPEG) that are available from the InfoPrint Manager for AIX server and submit jobs to destinations controlled by InfoPrint Manager for AIX.

Using an IPP Gateway

InfoPrint Manager includes an IPP gateway that allows users anywhere in the network to submit jobs through InfoPrint Manager, even to printers that are not IPP-enabled. Users install IPP client software on their workstations, then follow the instructions provided with the IPP client to access a printer managed by a remote printer server.

The IPP gateway provides the InfoPrint Manager administrator with straightforward control over which destinations are accessible to applications. This feature does not provide detailed event notification from InfoPrint Manager, but users can receive detailed notification if they install InfoPrint Manager Notifications on their workstations.

Using InfoPrint Manager hot folders

An InfoPrint Manager *hot folder* is a directory that is associated with a logical destination. When you copy or move a file to the hot folder, InfoPrint Manager automatically submits the job to that logical destination. The hot folder directory

can be created on any system that the InfoPrint Manager server and all job submitters can access, including the system that the InfoPrint Manager server is installed on. The directory should then be shared so that all of the users who need to copy files to it can access it. To submit files to the hot folder, users copy their files to that directory from their local systems.

If you set the **notification-profile** attribute in an attributes file and submit that file along with your print file, you can receive notification messages about the print jobs you submit using hot folders.¹ Otherwise, this feature does not provide detailed event notification from InfoPrint Manager.

1. Additional information about using hot folders, including creating attribute files, is available in the *InfoPrint Manager for AIX: Getting Started* and the *InfoPrint Manager for AIX: Procedures*.

Chapter 6. Verifying prerequisites

Before installing InfoPrint Manager for AIX, you should verify that you have satisfied the hardware and software requirements in this chapter.

Understanding hardware requirements

This section defines the minimum hardware requirements for the InfoPrint Manager solution.

AIX hardware requirements for print load light

Minimum configuration:

- IBM 400MHz Power3-II processor, or 600 MHz RS64 processor, or 1.0GHz Power4 processor or faster
- 1 GB of memory
- 18 GB of DASD
- CD-ROM
- 17-inch graphical display

AIX hardware requirements for print load heavy

- IBM 7028 pSeries 630 server
- 4GB of memory
- Two 36.4GB drives
- CD-ROM drive
- Two 1.2GHz processors
- Appropriate printer and LAN attachments
- 21-inch graphical display

AIX hardware requirements for print load high performance

- 8GB of memory
- Two 36.4GB drives
- CD-ROM drive
- Four 1.45GHz processors
- Appropriate printer and LAN attachments
- 21-inch graphical display

Note: To install this product, your system must have a greater than standard VGA driver.

Client hardware requirements

We recommend these minimum Windows configuration for all InfoPrint clients:

- 800 MHz Pentium® III processor
- 256 MB RAM or more
- CD-ROM drive

- 10 MB available hard disk space or more
- LAN connection (either Ethernet or Token-Ring)
- Access to at least one InfoPrint Manager server (either on a local system or remotely over a LAN)

To communicate with other systems across a LAN (including InfoPrint Manager server systems), you must install a suitable token-ring, ethernet, or FDDI adapter card and connect the appropriate cabling.

Printer attachment requirements

RS/6000 requirements

You need one or more IBM 4033 LAN Connections for Printers and Plotters Models 1 or 3 or IBM 7318 Serial Communications Network Servers if you are connecting more than one parallel-attached printer or two serial-attached printers to one RS/6000[®]. Each 4033 has one parallel port and one serial port that you can connect printers to. You can connect multiple 4033s to one RS/6000 to accommodate your parallel- and serial-attached printer needs as determined by performance considerations. Each 7318 provides two parallel and sixteen serial ports on the network.

TCP/IP-attached printer requirements

Printers must be TCP/IP-attached to the RS/6000 using their Ethernet or Token-Ring attachments.

Understanding AIX software requirements

InfoPrint Manager for AIX requires the AIX operating system is installed at one of these Versions:

- AIX 5.3 Maintenance Level 5 or higher
- AIX 6.1

To ensure correct operation, InfoPrint Manager requires that certain components of the AIX operating system be installed on your RS/6000 system. It is up to you to install the base level of these components from your AIX product CD-ROMs before starting the InfoPrint Installer for Version 4.3.0 (see *InfoPrint Manager for AIX: Installation Instructions* for more information about using the InfoPrint Installer).

To install the InfoPrint Manager base, we recommend that you simply run the InfoPrint Installer. If you are missing any required base AIX filesets for Version 4.3.0, the installer lists them and directs you to install them from your AIX product CD-ROMs.

To make the installation as easy as possible, the InfoPrint installer will automatically apply service to your AIX software to meet InfoPrint Manager prerequisites. This service is needed to make sure that InfoPrint Manager will function properly. Be advised, however, that the installer will not automatically apply service that is hardware-specific.

InfoPrint Manager supports running on Version 5.3 in a 32-bit or 64-bit kernel environment, or Version 6.1 in a 64-bit kernel environment.

Note:

1. With PTF U807769, existing InfoPrint Manager for AIX customers who want to migrate to Version 4.3.0 must be at AIX Versions:
 - AIX 5.3 Maintenance Level 5 or higher
 - AIX 6.1
2. AIX Version 5.3 and 6.1 offer different print spoolers: the legacy AIX PowerPC® print subsystem and the System V print subsystem. InfoPrint Manager for AIX requires the use of the legacy AIX PowerPC print subsystem. InfoPrint Manager does not support the System V print subsystem.
3. The default kornshell for 5.3 and 6.1 is Kornshell 88.

Note: Do not use Kornshell 93 with InfoPrint Manager for AIX.

Verifying AIX filesets for Version 4.3.0

InfoPrint Manager for AIX requires the AIX operating system to be installed at Version 5.3, Maintenance Level 2 or higher. It also expects the Common Desktop Environment (CDE) to be installed on the system. InfoPrint Manager has specific dependencies on the base-level filesets listed below, all of which can be installed from the AIX operating system Version 5.3 CD-ROMs.

Note: If you are running a later version of AIX, such as 6.1, you will find that your CD-ROMs contain later versions of some of these filesets. Because this is a list of **minimal** requirements, you should install the later versions from your AIX CD-ROMs.

Verifying requirements for all InfoPrint Manager installations

These filesets are required on each AIX system where you will install InfoPrint software:

- bos.loc.iso.en_US 5.1.0.0 (Base System Locale ISO Code Set—U.S. English)
- bos.mh 5.1.0.35 (Mail Handler)
- bos.rte 5.1.0.51 (Base Operating System Runtime)
- bos.rte.libc 5.1.0.59 (libc Library)
- bos.rte.libpthreads 5.1.0.51 (libpthreads Library)
- printers.rte 5.1.0.50 (Printer Backend)
- X11.apps.msmit 5.1.0.50 (AIXwindows msmit Application)
- X11.base.rte 5.1.0.53 (AIXwindows Runtime Environment)
- X11.loc.en_US.Dt.rte 5.1.0.0 (AIX CDE Locale Configuration—US English)
- X11.loc.en_US.base.lib 5.1.0.0 (AIXwindows Client Locale Configuration—US English)
- X11.loc.en_US.base.rte 5.1.0.15 (AIXwindows Locale Configuration—US English)
- X11.motif.lib 5.1.0.53 (AIXwindows Motif Libraries)
- X11.msg.en_US.base.rte 5.1.0.0 (AIXwindows Runtime Environment Messages—US English)

Note: Regardless of the language that you plan to use when installing InfoPrint Manager, you must apply the X11.loc.en_US* filesets, as well as the bos.loc.iso.en_US fileset listed above.

If these filesets are not already present on the system, they will be installed automatically by the InfoPrint Installer:

- xlc.rte 6.0.0.0 (C Set ++® for AIX Application Runtime)

- x1C.aix50.rte 6.0.0.17 (C Set ++ Runtime for AIX 5.0)
- vaccp.cmp.rte 6.0.0.0 VisualAge C++ Compiler Application Runtime

Displaying currently installed AIX filesets

You can verify if the prerequisite filesets are already installed on the AIX system by using the AIX `lslpp` command. For example, you can check the Mail Handler fileset by entering this at the command line:

```
lslpp -l bos.mh
```

If the fileset is installed, AIX displays the level, state, and description of the fileset. If the fileset is not installed, AIX issues an error message. For missing filesets, use the AIX system management interface tool (SMIT) to install the appropriate filesets from the AIX CD-ROM.

Locating missing required filesets

If your system is missing any required filesets, the InfoPrint Installer will identify them for you. Any required filesets that are not included on the InfoPrint Manager for AIX media can be found on one of the AIX operating system CD-ROMs. In general, AIX fileset prerequisites must be obtained from the operating system CD-ROMs.

Installing required filesets

Before you begin

To install requisite software from the AIX CD-ROM media, do these steps:

1. Log into the AIX system as **root**.
2. Insert the appropriate AIX operating system CD-ROM into the CD-ROM reader. (See "Locating missing required filesets" for details on fileset locations.)
3. Open a terminal window. By default, the terminal icon is contained in a popup menu above the text editor icon that appears on the task bar.
4. Type this on the command line:
`smit install_all`
5. Click the **List** button and select your CD-ROM device name (`/dev/cd0`, for example).
6. Click the **List** button next to the **SOFTWARE to install** field and select the required fileset(s) from the list presented.
7. Click **OK** to close the **Multi-select List** dialog box.
8. Click **OK** to install the software.
9. Click **OK** in the **ARE YOU SURE?** dialog box.
10. Press the **F12** key to exit SMIT.

Verifying updates to AIX filesets for InfoPrint Manager for AIX Version 4.3.0

InfoPrint Manager for AIX Version 4.3.0 requires no fileset updates to install on these AIX operating systems:

- AIX Version 5.3 (32 and 64 bit kernels) (5300-01 + APAR IY66626)
- AIX Version 6.1 (64 bit kernel)

Verifying AIX Version 5.3 filesets updated by the InfoPrint Installer

The InfoPrint Installer automatically updates AIX filesets to these levels (if they are not already updated to higher levels):

- bos.rte.libc 5.1.0.59 (libc Library)
- X11.apps.msmit 5.1.0.50 (AIXwindows msmit Application)

If you are having problems with InfoPrint Manager, you can verify that the installer has correctly updated these filesets by following the procedure in “Displaying currently installed AIX filesets” on page 36.

AFP Download Plus prerequisites

- For the AFP Download Plus multiple dataset function, AFP Download Plus you must install APAR OA15317.
- For the compression between AFP Download Plus and InfoPrint Manager, AFP Download Plus APAR OA16693 must be installed.
- For the AFP Download Plus for z/OS version 4.1 or 4.2, you must install APAR OA28035 on AFP Download Plus for z/OS. Otherwise, the systems will not work with an InfoPrint Manager system that has this new function installed even if this new function is not used.

Client software prerequisites

To run InfoPrint Select on a client system, you must have one of these operating systems installed:

- Windows 2000 Professional SP4
- Windows 2000 Server SP4
- Windows XP Professional SP2 or later
- Windows Server 2003 Standard Edition SP1
- Windows Server 2003 R2 Standard Edition SP2
- Windows Server 2003 Enterprise Edition SP2
- Windows Server 2003 R2 Enterprise Edition SP2
- Windows Vista Business Edition
- Windows Vista Enterprise Edition
- Windows Server 2008 Standard Edition (x86 only)

To run an InfoPrint Manager GUI on a client system, you must have one of these operating systems installed:

- Windows 2000 Professional SP4
- Windows 2000 Server SP4
- Windows 2003 Server Standard Edition
- Windows XP Professional SP2 or later
- Windows Server 2003 Standard Edition SP1
- Windows Server 2003 R2 Standard Edition SP2
- Windows Server 2003 Enterprise Edition SP2
- Windows Server 2003 R2 Enterprise Edition SP2
- Windows Vista Business Edition

- Windows Vista Enterprise Edition
- Windows Server 2008 Standard Edition (x86 only)

Chapter 7. Migrating to InfoPrint Manager for AIX Version 4.3.0

For detailed information about migrating InfoPrint Manager for AIX from Version 4.2 to Version 4.3.0, see *InfoPrint Manager for AIX: Installation Instructions*.

Attention: Migrating to InfoPrint Manager for AIX Version 4.3.0 requires environment-wide updates. If you plan to migrate a server, be sure to allocate time and resource to make these upgrades:

- Upgrade all client applications (management and submission) on all networked workstations to 4.3.0 levels
- Upgrade all interoperating InfoPrint Manager for AIX servers to 4.3.0
- If you plan to interoperate with InfoPrint Manager for Windows, upgrade to InfoPrint Manager for Windows Version 2.3.0

The InfoPrint Installer will automatically migrate your predecessor product configuration to InfoPrint Manager for AIX Version 4.3.0.

Note:

1. Refer to *InfoPrint Manager for AIX: Installation Instructions* for detailed instructions on backing up your InfoPrint Manager for AIX Version 4.2 system and restoring configuration files after the migration.
2. Any optional features of previous versions of InfoPrint Manager for AIX that are installed on the system will be removed when the base server software is migrated to Version 4.3. This is done because optional features at previous versions might be incompatible with the Version 4.3 server.

Preparing to migrate to InfoPrint Manager for AIX Version 4.3.0

Before running the InfoPrint Installer to migrate to InfoPrint Manager for AIX Version 4.3.0, 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 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.

The migration process will interrupt any active print jobs that have been submitted. You should take steps to delete all active and pending jobs prior to migrating.

During the process of installing the InfoPrint software, your AIX software might be updated to make sure that InfoPrint will function properly. For more details on the service-level prerequisites of InfoPrint Manager, see “Verifying updates to AIX filesets for InfoPrint Manager for AIX Version 4.3.0” on page 36. If you are missing any required AIX filesets for Version 4.3.0, the installer will direct you to install them from your AIX product CD.

Chapter 8. Collecting required information for the install

The InfoPrint Installer helps you load and configure InfoPrint Manager on your AIX system. If you have an AIX system with Version 5.3 prerequisites, you can use your InfoPrint CD to install InfoPrint on your system. When you use the InfoPrint Installer, you can accept the default setup values provided for you or enter your own values. If you accept the default values, very little configuration information is required from you.

Before you install InfoPrint 4.3.0, you should back up your system. You should check that you have all prerequisite software installed by following the procedure in “Verifying AIX filesets for Version 4.3.0” on page 35. You might need to contact InfoPrint support to obtain missing prerequisites.

You will need this information:

- Decisions regarding the configuration options you select during the install
- The invoice shipped with your software or package list
- The communications worksheet that you received from your InfoPrint Solutions Company representative and have filled out. You can also use the “Communications worksheet” provided in this chapter.

Configuration options you select during the install

During the installation process, you will be asked to make decisions regarding the ways you can choose to configure your InfoPrint Manager for AIX server:

- If you want to configure InfoPrint Manager to support interoperability between more than one machine (either AIX or Windows) or between one or more AIX and Windows servers?
- What language is your server?
- Do you want to install the basic GUIs?
- Do you want to install the InfoPrint Job Ticketer, if you are installing the Print-on-Demand Feature?
- How large is your file system and what size print jobs will you be processing?

The invoice shipped with your software

You will need this information from your invoice:

- The names of the options you purchased
- The number and types of printer licenses purchased

Communications worksheet

Do you currently use TCP/IP address over the local area network? ___Yes ___No

Note: A TCP/IP address is a set of four numbers separated by periods. Each number is between 0 and 255. A typical TCP/IP address is 9.99.94.211.

Describe your local area network:

- Token ring ___4MB ___16MB
- Ethernet
 - Ethernet protocol _____
 - 10/100/1000 Ethernet (copper) cables _____
 - 10/100 Ethernet cables _____
- Gigabit SX (fiber) _____
- AIX server host name _____
 - Internet address ____.____.____.____
 - Network mask ____.____.____.____
 - Secondary AIX server host name _____
 - Internet address ____.____.____.____
 - Network mask ____.____.____.____
- Printer name _____
 - TCP/IP address ____.____.____.____
- Printer name _____
 - TCP/IP address ____.____.____.____
- Gateway address _____

Once you have the necessary information, you can go to *InfoPrint Manager for AIX: Installation Instructions*.

Planning for printers

Each actual destination in your InfoPrint Manager environment must be configured. The specific information required to do each configuration varies according to the destination support system (DSS) and attachment type to be used. To determine the appropriate DSS and attachment type, see “Understanding Destination Support Systems (DSS)” in *InfoPrint Manager for AIX: Getting Started*.

A worksheet is available to help you prepare to create each type of printer in the *InfoPrint Manager for AIX: Getting Started*.

Chapter 9. Reviewing software components

InfoPrint Manager consists of a number of different hardware and software components. **Base components** are included when you purchase InfoPrint Manager for AIX, while **optional components** are additions to the base product that you can purchase and install through additional product CD-ROMs.

The *InfoPrint Manager for AIX: Base Server* CD-ROM, LCD4-5654, 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 these components are installed with the server; you cannot eliminate any of them:

- **InfoPrint Manager server**
- **InfoPrint Manager graphical user interfaces (GUIs)**
Allow you to administer print operations from the system that the server is installed on.
- **InfoPrint Manager Notifications server**
Lets the InfoPrint Manager server send status messages about InfoPrint objects to InfoPrint Manager Notifications clients.
- **InfoPrint Manager Notifications client**
Lets the InfoPrint Manager server display messages on the system that it is installed on.

Table 1 lists the components that are included on the *InfoPrint Manager: Common Clients* CD-ROM, LCD4-5642. Each client has its own installer and must be installed separately. All of the components can be installed on multiple systems.

Table 2 on page 45 lists the separately installable features that are available with InfoPrint Manager for AIX Version 4.3.0.

Table 1. Contents of the Common Clients CD-ROM shipped with InfoPrint Manager server

Common Client	Description
InfoPrint Select	InfoPrint Select lets you submit jobs to InfoPrint Manager from word processors, spreadsheets, and other desktop applications. You can submit jobs to InfoPrint Manager with print options or attributes, and you can also hold, release, and cancel jobs. InfoPrint Select comes with a powerful command line as well.
AFP Printer Driver for Windows	The AFP print driver lets you produce Advanced Function Presentation (AFP) output from desktop applications. Use the AFP print driver in conjunction with InfoPrint Select to obtain a high degree of control over the appearance of your printed documents.
PostScript printer description (PPD) files	The PostScript Printer Description (PPD) files are composed of ASCII text PostScript data that is used to provide device specific information to an application. A device might include any hardware or software that generates output by interpreting PostScript input. Device specific information can include finishing operations, paper dimensions, available fonts, the amount of memory, and paper or file processing options.

Table 1. Contents of the Common Clients CD-ROM shipped with InfoPrint Manager server (continued)

Common Client	Description
InfoPrint Manager GUI	The InfoPrint Manager GUI includes the InfoPrint Manager Administration and Operation GUIs (Graphical User Interfaces) that are used for most of your day-to-day InfoPrint Manager tasks.
InfoPrint Manager Notifications	The InfoPrint Manager Notifications Client enables remote systems to receive messages generated by either an InfoPrint Manager AIX server or an InfoPrint Manager Windows server.
SAP Clients (AIX and Windows) Note: The clients for SAP systems running on Sun Solaris or HP-UX are included with the SAP Print Feature.	SAP Client code is installed on a SAP system so that you can use the SAP system with either an InfoPrint Manager AIX server or an InfoPrint Manager Windows server. See the <i>SAP R/3 Printing and Configuration Guide</i> , S550-1051, on the InfoPrint Solutions Company web site. To obtain the latest version of this manual from the World Wide Web, see: http://www.infoprint.com
AIX Client	The AIX Client lets you enter InfoPrint Manager commands (such as pdpr) for AIX systems where InfoPrint Manager has not been installed, and lets you enter the lp , lpr , and qprt AIX print commands on the AIX command line to a remote InfoPrint Manager AIX server or InfoPrint Manager Windows server.
HP-UX Client	The HP-UX Client installs InfoPrint Manager commands on an HP-UX system and lets users of HP-UX 11.0 and later to issue InfoPrint commands over a TCP/IP-connected network to either an InfoPrint Manager AIX server or an InfoPrint Manager Windows server.
Sun Solaris Client	The Sun Solaris Client installs InfoPrint Manager commands on a Sun Solaris system and lets users of Sun Solaris 5.7 (equivalent with Sun Solaris) system and lets users of Sun Solaris 7 and later to issue InfoPrint commands over a TCP/IP-connected network to either an InfoPrint Manager AIX server or an InfoPrint Manager Windows server.
Linux[®] Client	The Linux Client installs InfoPrint Manager command on a Linux system and lets Linux users on Intel [®] -based machines to issue InfoPrint commands over a TCP/IP-connected network to either an InfoPrint Manager AIX server or an InfoPrint Manager Windows server.
Macintosh client	The Macintosh OS Client installs InfoPrint Manager commands on a Macintosh system and lets users of Mac OS 10.5.6 and later to issue InfoPrint commands over a TCP/IP-connected network to either an InfoPrint Manager AIX server or an InfoPrint Manager Windows server.
InfoPrint Manager Command Line Client (for Windows)	The InfoPrint Manager Command Line Client installs InfoPrint Manager command on a Windows system and lets you issue InfoPrint commands over a TCP/IP-connected network to either an InfoPrint Manager AIX server or an InfoPrint Manager Windows server.

Table 2. Separately-priced features available with InfoPrint Manager Server

InfoPrint Manager Features	Description
<p><i>Print-On-Demand Feature (LCD4-5644)</i></p>	<p>Print-On-Demand is the commercial print option available with InfoPrint Manager for AIX. With this support you can obtain:</p> <ul style="list-style-type: none"> • Personalized Print Markup Language (PPML) transform, which is an emerging XML-based data stream that can include PDF, PostScript, TIFF, and JPEG objects. The PPML transform converts PPML data into AFP data • InfoPrint Manager server (Basic) • InfoPrint Submit Express • InfoPrint Job Ticketer • Halftone Management System • IBM 32-bit Runtime Environment for Windows, Java 2 Technology Edition, Version 5.0 SR6
<p><i>SAP Print Feature (LCD4-5646)</i></p>	<p>A business enterprise that uses SAP can use this print feature to print to InfoPrint Manager for AIX. The SAP Print Feature contains the sap2afp transform for converting both Advanced Business Application Programming (ABAP) data and Output Text Format (OTF) data to AFP for printing, the SAP OMS (Output Management Support) support for obtaining enhanced status regarding print jobs, and the SAPconnect support for both sending and receiving faxes on a SAP R/3 system. See the <i>SAP R/3 Printing and Configuration Guide</i>, S550-1051, on the InfoPrint Solution Company web site.</p> <p>To obtain the latest version of this manual from the World Wide Web, see: http://www.infoprint.com</p>
<p><i>Page Printer Formatting Aid (PPFA) Feature (LCD4-5647)</i></p>	<p>PPFA lets users of Advanced Function Presentation (AFP) products create form definitions and page definitions on a variety of different operating systems. 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.</p>
<p><i>Japanese PostScript Feature (LCD4-5656)</i></p>	<p>This feature lets InfoPrint Manager users to print the Kanji fonts required by PostScript.</p>
<p><i>Workgroup Printer Engine (LCD4-5649)</i></p>	<p>Required to install and use InfoPrint-driven printers that print in the range of 0 to 62 pages per minute.</p>
<p><i>Low Speed Printer Engine (LCD4-5650)</i></p>	<p>Required to install and use InfoPrint-driven printers that print in the range of 63 to 91 pages per minute.</p>
<p><i>Medium Speed Printer Engine (LCD4-5651)</i></p>	<p>Required to install and use InfoPrint-driven printers that print in the range of 92 to 116 pages per minute.</p>
<p><i>High Speed Printer Engine (LCD4-5652)</i></p>	<p>Required to install and use InfoPrint-driven printers that print 117 pages per minute or faster.</p>

Appendix. Accessibility

Accessibility features help a user who has a physical disability, such as restricted mobility or limited vision, use software products successfully. The major accessibility features in the InfoPrint Manager for Windows let users:

- Use assistive technologies such as screen-readers and screen magnifier software.
- Operate specific or equivalent features using only the keyboard.
- Customize display attributes such as color, contrast, and font size.

Using assistive technologies

Assistive technology products, such as screen-readers, function with the user interfaces found in the InfoPrint Manager for Windows. Consult the assistive technology documentation for specific information when using it to access the InfoPrint Manager for Windows.

Keyboard navigation of the user interface

The InfoPrint Manager for Windows user interface complies with the accessibility guidelines for HTML. Users can use keyboard shortcuts or function keys (PF keys) to access the InfoPrint Manager for Windows user interface. For example, Alt+Shift+F2 lets you skip to the main content. see your browser documentation for keyboard shortcuts and default settings for the PF keys and for explanations about how to modify their functions.

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Glossary

This glossary defines technical terms and abbreviations used in InfoPrint Manager.

Special Characters

.Guidefaults file

A file created by InfoPrint in the home directory of a person using the InfoPrint GUI. InfoPrint uses this file to save and reference information about the servers you are monitoring and the windows you are working in.

A

Access Control List (ACL)

In computer security, a collection of all access rights for one object.

ACL Access Control List.

acl editor

A command line interface that lets you view, add, update, and delete access authorization records in an ACL.

action In the InfoPrint GUI, an icon that represents an operation that you can perform on an InfoPrint object. You drag and drop the action onto an object to initiate the operation for that object. For example, using the **Enable** action to enable a disabled actual destination.

actual destination

In InfoPrint, an object that represents the output device that performs the printing or transmission function. See *email destination*, *fax destination*; see also *physical printer*, *printer device*; contrast with *logical destination*.

additive color system

A system that reproduces an image by mixing (adding) appropriate quantities of red, green, and blue light (the additive primary colors) to create all other colors of light, either direct or transmitted. When the additive primaries are superimposed on one another, they create white light. Contrast with *subtractive color system*.

administrator

In InfoPrint, the person who creates and manages one or more components of a

printing system, such as servers and actual destinations. By default, InfoPrint gives administrators authorization to perform some InfoPrint operations and to access certain information that is not available to the operators or job submitters.

Adobe Acrobat

An Adobe software program that provides instant access to documents in their original format, independent of computer platform. With the Adobe Reader, you can view, navigate, print, and present any Portable Document Format (.pdf) file.

Adobe PageMaker

A desktop publishing program that produces PostScript documents.

Adobe PostScript Raster to Image Transform (RIP)

See *raster image processor (RIP)*.

ADSM/6000

Advanced Distributed Storage Manager.

Advanced Distributed Storage Manager (ADSM/6000)

A program that provides storage management for archived files.

Advanced Function Common Control Unit (AFCCU™)

An IBM RISC-based control unit with code common to all printers that use the AFCCU.

Advanced Function Presentation (AFP)

A set of licensed programs, together with user applications, that use the all-points-addressable concept to print data on a wide variety of printers or to display data on a wide variety of display devices. AFP includes creating, formatting, archiving, retrieving, viewing, distributing, and printing information.

Advanced Function Presentation data stream (AFP data stream)

The printer data stream used for printing AFP data. The AFP data stream includes composed text, page segments, electronic

overlays, form definitions, and fonts downloaded from the operating system to the printer.

A presentation data stream that is processed in AFP environments. The AFP data stream includes MO:DCA-P-based data streams.

Advanced Interactive Executive (AIX)

An operating system used with RS/6000 computers. The AIX operating system is IBM's implementation of the UNIX[®] operating system.

AFCCU

Advanced Function Common Control Unit.

AFP Advanced Function Presentation.

AFP data stream

Advanced Function Presentation data stream.

ainbe The printer input/output backend program used by the PSF DSS to send jobs to printer devices. Depending on the incoming data stream of the job, the PSF DSS might have transformed the data stream of the job before the backend program sending it to the printer device.

AIX Advanced Interactive Executive.

AIX-attached printer

A printer device, attached to an RS/6000 computer through the network or through a serial or parallel port that receives jobs from an AIX print queue.

In InfoPrint, a PSF physical printer that represents an AIX-attached printer device. See also *direct-attached printer*, *TCP/IP-attached printer*, *upload-TCP/IP-attached printer*.

AIX destination support system

In InfoPrint, the destination support system that communicates with the standard AIX print backend (**piobe**), or with certain variations of the **rembak** print backend, to print jobs.

AIX physical printer

In InfoPrint, the object representing a printer device that uses the AIX destination support system.

aliasing

In a digitized image, the creation of diagonal lines by combining short

horizontal and vertical line segments that approximate the path of the desired line.

all-points-addressability (APA)

The capability to address, reference, and position text, overlays, and images at any defined point of the printable area of the paper or display medium.

alphameric

Synonym for *alphanumeric*.

alphanumeric

Pertaining to a character set containing letters, digits, and other symbols such as punctuation marks. Synonymous with *alphameric*.

AMPV

Average monthly print volume.

analog

Pertaining to a continuous variable sampling of information between two points that achieves an even, smooth transition of photographic material.

analog color proof

An off-press color proof made from separation films.

anti-aliasing

The rendering of hard-edged objects so that they blend smoothly into the background. PhotoShop offers anti-aliasing when rasterizing an EPS file.

Removing the jagged "stairstep" quality in diagonal lines produced on a computer screen by aliasing. This removal is effected by creating less densely shaded fields parallel to the diagonal line.

APA All-points-addressability.

API Application Program Interface.

Application Program Interface (API)

The call interface between a client program and the procedures that implement the printing system, as defined by the specification. Clients use the API to access servers. (P)

architecture

The set of rules and conventions that govern the creation and control of data types such as text, image, graphics, font, fax, color, audio, bar code, and multimedia.

archiving

The transfer of digital information from an online system onto floppy disk, compact disc, or other media for offline storage. The original copy is deleted from the online system. See also *retrieval*.

array inkjet

An ordered collection of multiple print heads used in an inkjet printer.

ASCII American National Standard Code for Information Exchange. The standard code, using a coded character set consisting of 7-bit coded characters (8 bits including a parity check). The ASCII code is used for information exchange among data processing systems, data communications systems, and associated equipment. The ASCII character set includes control characters and graphic characters.

asynchronous

Pertaining to two or more processes that do not depend upon the occurrence of specific events, such as common timing signals. (T)

In InfoPrint, occurring without a regular or predictable time relationship to a specified action. Contrast with *synchronous*.

attachment type

Defines the method by which a printer device is attached to the AIX system from which it receives data. See *AIX-attached printer*, *direct-attached printer*, *TCP/IP-attached printer*, and *upload-TCP/IP-attached printer*.

attribute

A defined characteristic of an object, such as the number of copies required of a job, or the document formats accepted by an actual destination.

attribute name

A string that identifies an attribute. Typically, in InfoPrint attribute names consist of two or more words separated by hyphens.

attribute value

The element of an attribute that specifies the characteristics relating to the attribute.

authorization

In computer security, verification of the eligibility of a user to access an object.

authorized user

A person with the appropriate permissions to access an object or to issue a command.

automatic recovery

A function of printer logic that permits the printer to reprint a job if the job is misprinted or damaged or if a component has failed.

auxiliary sheet

In InfoPrint, an object that represents a particular sheet of paper, blank or otherwise, that can precede a job, separate documents in a job, or follow a job.

auxiliary-sheet selections

A particular combination of start, separator, and end sheets that print with jobs on a particular printer device.

B**backend**

In AIX, the program that is invoked by the **qdaemon** process to run a print or batch job. Synonymous with *backend program*.

backend program

Synonym for *backend*.

backlog

In InfoPrint, the amount of time calculated by InfoPrint that is required to print all of the jobs currently in a queue.

backspace

In InfoPrint, the action used to back up and reprint pages in a job.

bar code

A code representing characters by sets of parallel bars of varying thickness and separation that are read optically by transverse scanning.

An array of parallel rectangular bars and spaces that together represent data elements or characters in a particular symbology. The bars and spaces are arranged in a predetermined pattern following unambiguous rules defined by the symbology.

BCOCA

Bar Code Object Content Architecture™.

Bezier curves

A method of defining curves using anchor

points, control handles, and tangent lines. The PostScript path passes through anchor points. Its approach direction is along the tangent lines that are controlled by the control handles. Many personal computer programs use this drawing method. Type 1 PostScript fonts are defined using Bezier curves.

binding

The cover and materials that hold a book together. See *edition binding*, *perfect binding*, *spiral binding*, *wire-o binding*.

The process of applying the binding to a book.

In InfoPrint, assigning a job to an actual destination. See *early binding*, *late binding*.

bitmapped

Pertaining to an image formed by a rectangular grid of pixels. Each pixel is assigned a value to denote its color. One-bit images are black and white; 8-bit images have 256 colors (or grays); 24-bit images have full color. CMYK images have 32-bits per pixel to encode 256 levels in each of four channels. Bitmapped images are also called raster images.

bleed An extra amount of printed image that extends beyond the trim edge of the sheet. Bleed ensures that no white gap appears at the edge of the sheet.

boot To prepare a computer for operating by loading an operating system.

BSD Berkeley Software Distribution.

BSD destination support system

In InfoPrint, the destination support system that generates a print command string that the shell runs to print jobs.

BSD physical printer

In InfoPrint, the object representing a printer device that uses the BSD destination support system.

burn In platemaking, an exposure. Burn is named because of the extremely bright ultraviolet lamps used to transfer images from film to plate.

In photography, to lengthen the final exposure time to increase the final density of print.

C

cathode ray tube (CRT)

A vacuum tube in which a beam of electrons can be moved to draw lines or form characters or symbols on its luminescent (phosphor-coated) screen. CRTs are the heart of all modern computer display screens. Black and white displays have only one phosphor scanned by one electron beam, while color displays have RGB phosphors scanned by three beams.

CDE Common Desktop Environment.

child See *parent/child relationship*.

choke In color printing, an area whose dimensions have been reduced to avoid overlapping another color. Contrast with *spread*.

class Synonym for *object class*.

clean In InfoPrint, an action used to remove all the jobs from specified servers, actual destinations, or queues, or to remove all the jobs submitted to specified logical destinations.

CLI Command Line Interface.

client In InfoPrint, the component of the print system that assembles a print request and submits the request to a server. The client generates the local ID numbers for each job, submits the jobs to the servers, and keeps track of where each user's jobs have been submitted.

CMR Color Management Resource.

CMY Cyan, magenta, yellow.

CMYK
Cyan, magenta, yellow, black.

collator

In some printers a special-purpose hard drive disk array used to store RIPped files and later transfer them to the LED print heads for imaging.

color balance

The relative levels of cyan, magenta, and yellow channels in an image to produce accurate color rendition of an original image.

color correction

The adjustment of the color balance in an image to produce accurate color rendition

of an original image. Color correction is used for two- or three-spot-color jobs.

color key

A color proof similar to Cromalin, but typically not laminated and not necessarily accurate in color. Color keys are used to verify that breaks or color assignments and traps have been made accurately.

Color management resource

Color management resource (CMR) is an architected resource that is used to carry all of the color management information required to render a print file, document, group of pages or sheets, page, or data object with color fidelity.

Command Line Interface (CLI)

A type of user interface where commands are specified on the command line. Contrast with *Graphical User Interface*.

Common Desktop Environment (CDE)

A graphical user interface running on a UNIX operating system.

complex attribute

In InfoPrint, an attribute that can have multiple values with each value containing multiple components.

constant data

Data that does not change between copies of a document and that is merged with variable data to produce personalized documents. For example, a form letter (constant data) can be merged with a customer's name and address (variable data).

contextual help

A type of online help that provides specific information about each selectable object, menu choice, notebook tab, field, control, and pushbutton in a window.

control strip

A strip of information that can be attached to a print job and used to measure registration and density.

Cromalin

The Dupont color proofing system. Four layers (CMYK) of light-sensitive material are exposed through final halftone negative films, then laminated together on an opaque backing to produce a color- and trap-accurate final proof showing

actual halftone dot structure. Cromalin is sometimes called an analog proof.

crop

To remove unwanted areas of an image, usually indicated by crop marks on the original.

CRT

Cathode ray tube.

CTS

Cutter-trimmer-stacker.

cutter-trimmer-stacker (CTS)

A post-processing device attached to a printer device and used for paper handling.

cyan, magenta, yellow (CMY)

The subtractive primary colors.

cyan, magenta, yellow, black (CMYK)

The four basic colors used in offset printing, as opposed to the three basic colors of light: red, green, and blue. Magenta, yellow, and cyan are the subtractive primaries. Black is added to provide better density and to produce a true black.

D

daemon

A program that runs unattended to perform a standard service. Some daemons are triggered automatically to perform their tasks; others operate periodically. Daemon processes generally provide a service that must be available at all times to more than one task or user, such as sending data to a printer.

DAT

Digital audio tape.

data stream

All information (data and control commands) sent over a data link.

A continuous stream of data that has a defined format.

In InfoPrint, pertaining to the incoming format of the job and the output format required by the printer device. InfoPrint transforms the incoming format into the output format, as required. See also *document format*.

DB2*/6000

DataBase 2/6000.

deadline

In InfoPrint, a queuing technique where the next job assigned to the first position

in the queue is the one whose deadline is closest. Contrast with *FIFO* (*first-in-first-out*), *job-priority*, *longest-job-first*, and *shortest-job-first*.

default document

In InfoPrint, an object that represents default attribute values for a document in a job. Synonymous with *initial value document*.

default job

In InfoPrint, an object that represents default attribute values for a job. Synonymous with *initial value job*.

default object

In InfoPrint, a general term that refers either to a *default document* or a *default job*. Synonymous with *initial value object*.

default value

A value stored in the system that is used when no other value is specified.

delete In InfoPrint, an action used to delete default objects, jobs, logical destinations, actual destinations, or queues from the server.

desktop publishing

Performing print-related activities on a personal computer, including but not limited to layout, design, photo manipulation, creating fonts, editing text, color separation, scanning, and animation.

destination

See *actual destination*, *logical destination*.

destination support system (DSS)

In InfoPrint, the programs that an actual destination uses to communicate with the output device. Synonymous with *device support system*. See *AIX destination support system*, *BSD destination support system*, *email destination support system*, *Generalized Fax destination support system*, and *PSF destination support system*.

device An individual piece of equipment (hardware) that attaches to a computer, such as a printer device.

device address

The identification of an input or output device by its channel and unit number.

device driver

A file that communicates with a specific device such as a printer, disk drive, or

display. An application that sends output to a device controls the actions of the device through the device driver. See *printer driver*.

device support system (DSS)

Synonym for *destination support system*.

DFS™ Distributed File Service.

digital Pertaining to data represented by digits, sometimes with special characters and the space character.

digital audio tape (DAT)

A high-capacity, low-cost bulk storage system used for archiving, copying (for backup purposes), and transferring large files. Typical DAT units store 1.3 GB on inexpensive cassette tapes.

digital color proof

An off-press color proof made from a color printer attached to a computer.

digital printing

A filmless and plateless printing process in which digital data for each page is transferred directly to a light-sensitive drum and then to paper for a final image.

direct-attached printer

A printer device, attached to an RS/6000 computer through the network or through a serial or parallel port.

In InfoPrint, a PSF physical printer that represents a direct-attached printer device. See also *AIX-attached printer*, *TCP/IP-attached printer*, and *upload-TCP/IP-attached printer*.

disable

In InfoPrint, an action used to stop the acceptance of jobs on destinations, queues, or servers, or to stop writing information to logs.

distributed print system

A computer system with the ability to interchange print data and controls among different computing environments with the intent of printing the data on a different system from the one where the print request was generated. For example, in host-to-LAN distributed printing, data that is located on the host is printed on printers attached to a local area network.

dithering

A technique of filling the gap between

two pixels with another pixel having an average value of the two to minimize the difference or to add detail to smooth the result.

document

In InfoPrint, an object representing a grouping of data in a job. A job can contain one or more documents. The documents in a job can differ from each other in some ways. For example, they can contain different data and can have different document formats. A document in a job can contain printable data or a resource that is not printable by itself. See *file-reference document*, *printable document*, and *resource document*.

document element

A portion of a document at least a single page in size.

document format

In InfoPrint, a document format describes the type of the data and control characters in the document, such as line data or PostScript. The format of the data determines which printer devices are capable of printing the document and whether InfoPrint must transform the format.

document identifier

A string that identifies a document in a job. It consists of a job ID followed by a period (.) and a document sequence number. For example, 12.2. Document sequence numbers are integers starting at 1.

Document Printing Application (DPA)

An ISO/IEC 10175 standard that addresses those aspects of document processing that enable users in a distributed open systems environment to send electronic documents to shared, possibly geographically-dispersed printers. InfoPrint supports the DPA standard.

document transfer method

In InfoPrint, the transfer method describes how documents are transferred to, or acquired by, servers. See *pipe-pull* and *with-request*.

document type

In InfoPrint, the document type describes the kind of data in the document. A

printable document can only contain printable data. A *resource document* can only contain data such as fonts or form definitions that are not printable. A *file reference document* can only contain names of files entered on separate lines.

dot The individual elements of a halftone.

dot gain

An increase in the size of a halftone dot during printing, caused by ink spreading. Generally, this value is known precisely, and the scanning and filming production process is calibrated to compensate for it. The Cromalin proofing system simulates this effect.

dots per inch (dpi)

A measure of data density per unit distance. Typical values for desktop publishing range from 200 to 300 dpi.

DPA Document Printing Application.

DPF Distributed Print Facility.

dpi Dots per inch.

drag and drop

In graphical user interfaces, a procedure by which you perform actions and tasks. Using the mouse, you drag (move) an action or object icon to a new position where you want the action or task to occur.

DSS Destination support system.

dummy

A rough paste-up or hand-drawn representation of the anticipated finished product. A dummy is used for basic design and pagination.

duplex printing

Printing on both sides of the paper. Contrast with *simplex printing* (1).

Printing on both sides of the paper, placing output images on the media in a head-to-head format, so that the top of one image is at the same edge as the top of the next image. Contrast with *tumble duplex printing*; see also *simplex printing* (2).

E**early binding**

In InfoPrint, assigning a job to an actual destination as soon as it is accepted. Early

binding permits InfoPrint to estimate the time when the job will be completed. Contrast with *late binding*.

edition binding

A type of book binding in which printed sheets are folded into 16- or 32-page signatures. Four-page endleaves are pasted on the outside of the first and last signature. The signatures are then collated by machine and sewn together using special sewing machines. Contrast with *perfect binding*, *spiral binding*, and *wire-o binding*.

electronic document

A document stored in a computer instead of printed on paper.

electronic mail

Correspondence in the form of messages sent between workstations over a network. Synonymous with *email*.

electrophotographic

Pertaining to a type of printer technology that creates an image on paper by uniformly charging the photoconductor, creating an electrostatic image on the photoconductor, attracting negatively charged toner to the discharged areas of the photoconductor, and transferring and fusing the toner to paper.

em

In composition, a unit of measurement exactly as wide and as high as the point size of the font being set. The name is derived from the fact that the letter M in early typefaces was usually cast on a square body.

email Electronic mail.

email destination

In InfoPrint, an actual destination representing an electronic mailing system.

email destination support system

In InfoPrint, the destination support system that supports email destinations.

embellishments

Variable data added to all copies of assembled pages to make the unit appear like a whole; for example, headers, footers, a table of contents, and chapter separations.

en In composition, exactly one-half an em.

enable

In InfoPrint, the action that makes a destination, queue, or server able to accept jobs, or a log able to accept information.

end sheet

The sheet of paper, blank or otherwise, that can follow a job. See also *auxiliary sheet*.

Enhanced X-Windows

A tool designed to permit multiple application processes to operate in multiple windows displayed on a virtual terminal. See *X-Windows*.

environment variable

Any one of a number of variables that describe the way an operating system runs and the devices it recognizes.

error log

A data set or file in a product or system where error information is stored for later access.

estimate

The professional cost analysis made by a print shop in response to a customer's request for a price quotation on a print job.

event In InfoPrint, an occurrence in the printing system during an operation; for example, the completion of a command.

event log

In InfoPrint, a collection of messages about events that have occurred.

event notification

The notification that is sent by InfoPrint for an event.

F

fax destination

In InfoPrint, an actual destination representing a fax device.

FIFO (first-in-first-out)

In InfoPrint, a queuing technique where the next job assigned to the first position in the queue is the job that has been in the queue for the longest time. InfoPrint processes jobs in the order in which they are received. Contrast with *deadline*, *job-priority*, *longest-job-first*, and *shortest-job-first*.

file-reference document

In InfoPrint, a file containing the names of other files, each entered on a separate line. Job submitters can specify this file for printing when they specify a document type of **file-reference**; InfoPrint prints each file listed in the reference document.

File Transfer Protocol (FTP)

In TCP/IP, the application protocol that makes it possible to transfer data to and from host computers and to use foreign hosts indirectly.

finisher

A hardware device attached to a printer that performs such operations as folding or stapling the printed pages.

finishing

In a print shop, the final operations on a printed product, such as stapling, trimming, drilling, folding, embossing, varnishing, gluing, shrink wrapping, perforating, laminating, collating, and so on.

flag

A modifier of a command that specifies the action of the command. A dash usually precedes a flag. Synonymous with *option*. See also *keyword*.

FOCA Font object content architecture.

folder In the InfoPrint GUI, an object that represents a container for a collection of similar objects. For example, the Retained Jobs folder contains retained jobs.

font A family of characters of a given size and style; for example, 9-point Helvetica.

One size and one typeface in a particular type family, including letters, numerals, punctuation marks, special characters, and ligatures.

A paired character set and code page that can be used together for printing a string of text characters. A double-byte font can consist of multiple pairs of character sets and code pages.

form definition

A resource object used by InfoPrint that defines the characteristics of the form or printed media, which include: overlays to be used, the paper source (for cut-sheet printers), duplex printing, text

suppression, and the position of composed-text data on the form.

forward space

In InfoPrint, the action used to move ahead and skip the printing of a specified number of pages in a job.

FPO Low-quality (sometimes photographic) images placed in a dummy to represent final images. Desktop publishing software produces images as display-screen resolution FPOs.

front panel

In the CDE, a workspace area containing controls that represent various tasks you can perform and workspace switches.

FTP File Transfer Protocol.

G

GCR Gray component replacement.

Generalized Fax destination support system

In InfoPrint, the destination support system that supports generalized fax destinations.

GIF Graphics Interchange Format.

global change

In the InfoPrint GUI, an action used to make changes to one or more attributes of several objects at once. You can also perform the same action on several objects of the same object class at the same time; for example, disabling two or more actual destinations at the same time.

global character

A character or set of characters used to specify an unknown number or set of characters in a search string. In InfoPrint, a global character is represented by an asterisk (*).

global ID

Global job identifier.

global job identifier

An unambiguous job identifier. In InfoPrint, it is represented as the name of the server managing the job followed by a colon (:) and a generated integer. This ID uniquely identifies the job in the InfoPrint server.

glyph An image, usually of a character, in a font.

GOCA

Graphics object content architecture.

graphic character

A visual representation of a character, other than a control character, that is normally produced by writing, printing, or displaying.

Graphical User Interface (GUI)

A type of user interface that takes advantage of a high-resolution monitor and includes a combination of graphics to implement an object-action paradigm, the use of pointing devices, menu bars, overlapping windows, and icons. Contrast with *Command Line Interface*.

Graphics Interchange Format (GIF)

A compressed graphics format widely used on the Internet.

gray component replacement (GCR)

Synonym for *under color removal (UCR)*.

gray scale

A strip of standard gray tones, ranging from white to black, placed at the side of the original copy during photography to measure the tonal range and contrast obtained.

GUI Graphical User Interface.

gutter The blank area or inner margin from the printing area to the binding.

H

halftone

A printing method that simulates continuous-tone shading using dots of varying sizes laid out on a rectangular grid. Larger dots simulate darker tones and smaller dots simulate lighter tones. Typical grid spacings are 85 lines per inch (lpi) (newspaper), 133 lpi (low end), 150 lpi (midrange), and 175+ lpi (high quality).

help In the InfoPrint GUI, an action used to display the online help for a specific template, object, action, button, control, or area in an application window.

The name of a button used to access the online help.

hold An indication determined by the **job-hold**

attribute that is used to keep a job in the queue and prevent InfoPrint from scheduling it.

hostname

The name given to an AIX system.

hot folder

A workstation directory where users copy jobs to submit them to print.

hypertext

A way of presenting information online with connections between one piece of information and another. These connections are called hypertext links. See also *hypertext link*.

hypertext link

A connection between one piece of information and another. Selecting a link displays the target piece of information.

I

icon A graphic symbol displayed on a screen that a user can click to invoke a function or software application.

image Toned and untoned pels arranged in a pattern.

image data

Rectangular arrays of raster information that define an image.

imagesetter

A high resolution (1270–3600+ dpi) printer that uses an Argon (green) laser to write to film using digital input. Imagesetting is the step before Cromalin proofing and platemaking.

imposition

The process of arranging pages on a press sheet to ensure the correct order during final cutting, folding, and binding. Electronic imposition builds press sheets automatically during the RIP and outputs film formatted for immediate use in platemaking.

InfoPrint

A solution of software and hardware products that can supplement or replace the offset presses and copiers in print shops with high-quality, non-impact, black and white or process color printers. InfoPrint takes documents from creation to the published, kitted, and shipped product.

In InfoPrint software publications, InfoPrint Manager for AIX or any of its components.

InfoPrint Manager for AIX

The software component of InfoPrint. InfoPrint Manager for AIX handles the scheduling, archiving, retrieving, and assembly of a print job and its related resource files. It also tracks the finishing and packaging of the printed product.

InfoPrint Manager for AIX is based on Palladium technology developed at MIT/Project Athena. It conforms to the ISO DPA and POSIX standards.

InfoPrint Network

The local area network running TCP/IP protocol that InfoPrint uses to communicate among servers, clients, and output devices.

InfoPrint Select

The component of InfoPrint Manager for AIX that lets you submit jobs from an OS/2® or Windows workstation.

InfoPrint Submit Express

The component of InfoPrint Manager that lets you submit jobs with a job ticket from a Windows or Macintosh workstation.

InfoPrint 20

A black and white, large-format, cut-sheet, workgroup laser printer with optional duplexing and 600-dpi resolution.

InfoPrint 60

A duplex, black and white, cut-sheet printer with 600-dpi resolution.

InfoPrint 62

A non-impact, continuous-forms printer that runs at a maximum of 62 impressions-per-minute (depending on forms size), and is factory set to run at either 240 or 300 dpi on a maximum paper size of 370.8 mm (14.6 in.).

InfoPrint 4000

A duplex, black and white, continuous-forms printer with 600-dpi resolution.

initial value document

Synonym for *default document*.

initial value job

Synonym for *default job*.

initial value object

Synonym for *default object*.

initially settable attribute

An attribute whose value can be established when an object is created but cannot be subsequently set or modified. See also *resettable attribute*; contrast with *non-settable attribute*.

input focus

The area of a window where user interaction is possible from either the keyboard or the mouse.

input tray

For a printer device, the container that holds the medium upon which the printer prints its output.

Intelligent Printer Data Stream™ (IPDS)

An all-points-addressable data stream that enables users to position text, images, and graphics at any defined point on a printed page.

Information that the host sends to IPDS printers. This information generally contains basic formatting, error recovery, and character data and enables the printers to make decisions.

An architected host-to-printer data stream that contains both data (text, image, graphics, and bar codes) and controls defining how the data is to be presented. IPDS provides a device-independent interface for controlling and managing all-points-addressable (APA) printers.

International Organization for Standardization (ISO)

An organization of national standards bodies from various countries established to promote development standards to facilitate international exchange of goods and services, and develop cooperation in intellectual, scientific, technological, and economic activity.

Internet

A wide area network connecting thousands of disparate networks in industry, education, government, and research. The Internet network uses TCP/IP as the protocol for sending information.

Internet Protocol

The set of rules that determines how to

route data from its source to its destination in an internet environment.

intervening jobs

In InfoPrint, the number of jobs in a queue that are scheduled to print before the job in question.

IOCA Image object content architecture.

IP address

The 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 send one or more documents together in a single session. A job includes the data to be printed or sent and resources such as fonts, images, and overlays. Depending on how it was submitted, it can also include a job ticket. Synonymous with *job bundle* and *print job*.

job bundle

Synonym for *job*.

job data

The page descriptions, merge data, and embellishments that compose a document in a job, either directly or by reference.

job ID

A local or a global identifier that identifies a job to a job submitter, administrator, operator, or InfoPrint. See *local job identifier*, *global job identifier*.

job-priority

In InfoPrint, a queuing technique where the next job assigned to the first position in the queue is the one with the highest priority. Contrast with *deadline*, *FIFO* (*first-in-first-out*), *longest-job-first*, and *shortest-job-first*.

job submitter

In InfoPrint, the person who submits jobs for printing. Often, this person is an application programmer who maintains applications that generate data to be printed.

job ticket

The customer's hardcopy or electronic instructions listing all the variables describing a print job, either directly or by reference. The print shop can add specifications to the job ticket and can print the job ticket.

Joint Photographic Experts Group (JPEG)

A compressed graphics format widely used on the Internet.

JPEG Joint Photographic Experts Group.

K

kerning

In typesetting, adjusting the relative spacing of two characters to improve their appearance and readability. Kerning pairs are specific sets of characters with built-in relative spacing. Some typefaces have as many as 100 kerning pairs.

keyword

A name or symbol that identifies a parameter.

Part of a command operand that consists of a specific character string, such as **DSNAME=**.

kitting

In a print shop, packaging the completed published work with attendant binders, tabs, diskettes, and other equipment or information, before shipping the finished product.

L

LAN Local Area Network.

laser (light amplification by stimulated emission of radiation)

In InfoPrint printers, a device that emits a beam of coherent light that forms the image on the photoconductor that is subsequently transferred to the paper.

late binding

In InfoPrint, waiting to assign a job to an actual destination until it is about to be processed. Late binding permits InfoPrint to route a job to the first suitable actual destination that becomes available. Contrast with *early binding*.

LED Light-emitting diode.

light-emitting diode (LED)

The imaging device element for electrophotographic print units.

lines per inch (lpi)

A measure of the density of the grid used to space halftone dots. Typical grid spacings are 85 lpi (newspaper), 133 lpi (low end), 150 lpi (midrange), and 175+ lpi (high quality).

Local Area Network (LAN)

A computer network at one location that consisting of devices connected to one another and communicating. This network can also be connected to a larger network.

local ID

Local job identifier.

local job identifier

In InfoPrint, a job identifier automatically generated by the server, identifying the job to the person who submitted it. InfoPrint maps a local job ID to a global job ID.

locale The human language and character set of information presented to a user.

In InfoPrint, the language InfoPrint uses when sending notification and error messages or displaying the InfoPrint graphical user interfaces.

log A collection of messages or message segments added to a file for accounting or data collection purposes.

To record messages in a file.

logical destination

In InfoPrint, an object to which users submit their jobs. The logical destination routes jobs to one or more actual destinations representing output devices such as printers, electronic mail systems, or fax machines. See also *logical printer*; contrast with *actual destination*.

logical printer

In InfoPrint, a type of logical destination. The logical printer routes jobs to one or more physical printers representing printing devices.

logical unit (LU)

A type of network accessible unit that

enables end users to gain access to network resources and communicate with each other.

logical unit (LU) 6.2

A type of logical unit that supports general communication between programs in a distributed processing environment. LU 6.2 is characterized by (a) a peer relationship between session partners, (b) efficient utilization of a session for multiple transactions, (c) comprehensive end-to-end error processing, and (d) a generic application program interface (API) consisting of structured verbs that are mapped into a product implementation.

longest-job-first

In InfoPrint, a queuing technique where the next job assigned to the first position in the queue is the longest job in the queue. Contrast with *deadline*, *FIFO (first-in-first-out)*, *job-priority*, and *shortest-job-first*.

lpi Lines per inch.

LU Logical unit.

M**magnetic ink character recognition (MICR)**

Identification of characters printed with ink that contains particles of magnetic material.

mainframe processor

A functional unit that interprets and executes instructions in a large computer to which other computers are connected so that they can share the facilities the mainframe provides.

makeready

All the setup work involved in preparing a press for a print run.

manage

In the InfoPrint GUI, the action used to put an object into a mode where its icon reflects changes of status.

mechanical

A camera-ready layout. The mechanical can consist of multiple sheets or overlays for each spot or process color used. Final images, if not stripped in later, should be at final size, cropped and screened to the correct line frequency.

medium

In InfoPrint, an object representing the physical material upon which a job is printed.

merge data

Data that is unique to each copy of a document and that customizes the document; for example, serial numbers or mailing information. Merge data is typically a small percentage of the total data in the document.

message catalog

A file of all the possible messages than can display during the processing of an application.

MICR Magnetic ink character recognition.

Mixed Object Document Content Architecture™ (MO:DCA™)

An architected, device-independent data stream for interchanging documents.

MO:DCA-P

Mixed Object Document Content Architecture Presentation.

modify

In InfoPrint, an action used to modify the values of attributes in the object attributes notebook.

moire Undesirable interference patterns caused by two overprinting halftone screens with incorrect halftone dot angles.

monospaced

In typesetting, pertaining to a typeface in which all the characters have equal widths. Monospaced typefaces are useful for tabulating figures.

Multiple Virtual Storage (MVS)

An operating system developed by IBM. The design of MVS incorporates an addressing architecture that provides a unique address space to each job in the system.

MVS Multiple Virtual Storage.

N

N_UP Pertaining to the number of forms placed together in a layout. Typical layouts are 2_UP, 4_UP, 8_UP, 16_UP, and so on. N_UP printing is done to use the maximum area of the print sheet.

namespace

A global name repository available to all utilities and API procedures. The namespace contains mappings of object names to other related objects. For example, the namespace provides the mapping of a logical destination to the server in which it is located.

Network File System (NFS)

A protocol developed by Sun Microsystems that uses Internet Protocol to allow a set of cooperating computers to access each other's file systems as if they were local.

newline options

The different ways in which the printer determines how lines are delimited in a document data stream.

NFS Network File System.

non-process-runout (NPRO)

A printer function that moves the last printed sheet to the stacker of the printer device.

non-settable attribute

An attribute that is neither initially settable nor resettable. The values for these attributes are controlled by InfoPrint. Contrast with *initially settable attribute* and *resettable attribute*.

notification

The act of reporting the occurrence of events.

In InfoPrint, notification of events appears as messages in event logs or messages sent to administrators, operators, and job submitters. In the InfoPrint GUI, notification of events also appears as changes to the appearance of icons.

notification-profile

In InfoPrint, an attribute associated with an object that contains information designating the people to whom InfoPrint sends notification about events for that object, which event information it sends, and how it sends the information.

NPRO Non-process-runout.

O

object A collection of attributes that represent a physical or logical entity in the print system. For example, a specific printer

device is represented by an actual destination (physical printer) object. An object is identified by its object name. Objects are grouped into classes. See also *object class*.

object class

A group of objects that share a common definition and therefore share common properties, operations, and behavior as defined by their attributes. For example, all InfoPrint queue objects are in the same object class and each queue has the same set of queue attributes. However, the values for those attributes can differ for each queue in the queue object class.

Object Identifier (OID)

In architecture, a notation that assigns a globally unambiguous identifier to an object or a document component. The notation is defined in international standard ISO.IEC 8824(E).

object name

The alphanumeric term that identifies an object.

object state

The state of an object indicates its availability and readiness for performing its functions. An object can be in one of a number of states such as ready, busy, or unknown.

OCR Optical character recognition.

octet A byte that consists of eight binary digits (bits).

offset stacking

In certain printer devices, a function that allows the printer to offset the printed output pages for easy separation of the jobs.

OID Object Identifier.

open destinations window

In the InfoPrint GUI, the action used to open a new application window displaying the logical and actual destinations associated with a queue.

Open Prepress Interface (OPI)

An industry standard for replacing low-resolution images in review documents with high-resolution images needed for high-quality final output.

Open Software Foundation (OSF)

A nonprofit research and development organization created by a consortium of companies that work together to develop software in the open systems market.

OpenType font (OTF)

An extension of the TrueType font format that adds:

- Support for PostScript outlines
- Better support for international character sets
- Broader support for advanced typographic control

open window

In the InfoPrint GUI, the action used to open a new application window representing one or more objects displayed in the currently open application window.

operation

An action performed on one or more data items.

operator

In InfoPrint, the person responsible for printer devices. Also, this person performs a subset of tasks for InfoPrint queues and actual destinations and performs some job-related tasks.

OPI Open Prepress Interface.

optical character recognition (OCR)

Conversion of scanned text to editable ASCII characters.

option A modifier of a command that specifies the action of the command. A dash usually precedes an option. Synonymous with *flag*. See also *keyword*.

orphan logical destination

In the InfoPrint GUI, an object that represents a logical destination that is not associated with an existing queue.

orphan logical printer

In the InfoPrint GUI, an object that represents a logical printer that is not associated with an existing queue.

OSF Open Software Foundation.

overlay

A collection of constant data, such as lines, shading, text, boxes, or logos, that is electronically composed in the host

processor and stored in a library, and that can be merged with variable data during printing.

OTF OpenType font.

P

PAC Privilege Attribute Certificate.

page definition

A resource that contains the formatting controls for line data.

In InfoPrint, a resource that defines the rules of transforming line data into composed pages and text controls.

page segment

A resource that contains composed text and images, which are prepared before formatting and included during printing.

Palladium

A distributed print system developed at MIT/Project Athena with participation from Digital Equipment Corporation (DEC), International Business Machines (IBM), and Hewlett-Packard (HP). It is a reference implementation for the OSI Document Printing Architecture (DPA) standard, ISO/IEC 10175.

pane In the Work Area of the InfoPrint Manager Administration GUI, an area containing a group of objects of a specific type, such as an actual destinations pane.

parent/child relationship

In InfoPrint, servers, queues, and destinations are related to one another in a parent/child relationship. For example, a server is the parent of all the queues that reside in that server, and these queues are its children.

pass through

In InfoPrint, referring to options submitted with a job that are used by the device driver, but not InfoPrint. InfoPrint does not process or validate this information; it passes it along to the device driver. See *printer driver*.

path The route used to locate files; the storage location of a file. A fully qualified path lists the drive identifier (if any), directory name, subdirectory name (if any), and file name with the associated extension.

pause In InfoPrint, the action used to

temporarily halt the printing or transmission of jobs on actual destinations or the distribution of jobs from servers or queues.

pdcreate

In InfoPrint, the command used to create a new object and set its attributes to specified values.

PDF Portable Document Format.

Printer description file.

pdmsg

In InfoPrint, a utility used to display information about a message.

pdpr In InfoPrint, the command used to create and submit a job, consisting of one or more documents, to a server for printing or transmission.

perfect binding

A type of book binding in which the pages are held together with flexible adhesive. Contrast with *edition binding*, *spiral binding*, and *wire-o binding*.

permissions

In AIX, codes that determine who can access a file and what operations they can perform on the file.

physical printer

In InfoPrint, a type of actual destination that represents a printer device. See also *printer device*.

piobe The standard printer input/output backend program used by AIX for printing. See also *ainbe*.

pipe-pull

In InfoPrint, a document transfer method where InfoPrint saves the documents in a file and transfers the address of the file to the server. InfoPrint transfers the file to the server upon the request from the server. This is an efficient transfer method for large jobs and is the default transfer method at job submission. Contrast with *with-request*.

plex A document or actual destination attribute used to define the placement of output images on the page. See the plex values *simplex* and *tumble*.

Portable Document Format (PDF)

An Adobe PostScript data format that can be viewed or printed.

Portable Operating System Interface for Computer Environments (POSIX)

An Institute of Electrical and Electronics Engineers (IEEE) standard for computer operating systems.

POSIX

Portable Operating System Interface for Computer Environments.

PostScript

Adobe's page description language. PostScript has become a standard for graphic design and layout software. PostScript files can contain both vector and raster data. Fonts are described using PostScript coding. Many desktop publishing systems produce PostScript data as their output data stream.

PostScript printer description (PPD)

A file that contains options for printing PostScript data on various printer devices.

PPD PostScript printer description.

preflight

To assess all resources for a job before the actual print run.

prepress

Work done in the print shop before printing a job, such as preparing data and art, page imposition, color retouching, electronic editing, and page layout.

print database

The set of files on disk that provide a permanent repository for the attributes of all print objects, such as logical destinations, queues, and actual destinations.

print job

Synonym for *job*.

Print Quality Enhancement (PQE)

A printer facility that provides edge smoothing along diagonal lines, fine fidelity protection, and independent boldness control.

Print Services Facility (PSF)

Any of several programs, including PSF for AIX, PSF/MVS, PSF/VM, and PSF/VSE, that produce printer commands from the data sent to them.

print system

A group of one or more print servers and one or more printing devices, which

might or might not be located in the same geographical area. The components of a print system are assumed to be interconnected in some manner, providing at least one network interface to print clients, and acting synergistically to supply the defined document print service. (D)

printable document

In InfoPrint, an object that represents text or data to be printed by a job. Contrast with *resource document*.

printer description file (PDF)

A file that contains options for printing PostScript data on a specific printer device.

printer device

The physical output device that performs the printing function. See also *physical printer*.

printer driver

A file that describes the physical characteristics of a printer or other peripheral device. This file is used to convert graphics and text into device-specific data at the time of printing or plotting. Synonymous with *device driver*.

priority

In InfoPrint, a number assigned to a job that determines its precedence in being printed. Jobs with higher priority numbers are handled before jobs with lower priority numbers.

process color

Color made up of CMYK links simulating a specified color. This is the traditional method of reproducing continuous tone color images (color separations). Because of the nature of color inks, certain inks do not reproduce well.

processor

In a computer, a functional unit that interprets and executes instructions. A processor consists of at least an instruction control unit and an arithmetic and logic unit. (T)

promote

In InfoPrint, the action used to move a job to the beginning of the queue so that it will print on the next available printer that can handle that job.

protocol

A set of semantic and syntactic rules that determines the behavior of functional units in achieving communication.

PSF Print Services Facility.

PSF destination support system

In InfoPrint, the destination support system that communicates with PSF for AIX to print jobs.

PSF physical printer

In InfoPrint, the object representing a printer device that uses the PSF destination support system.

Q**QuarkXpress**

A desktop publishing system produced by Quark, Incorporated.

queue In InfoPrint, an object that manages a collection of jobs that are waiting to print. A queue receives jobs from one or more logical destinations and sends jobs to one or more actual destinations.

A line or list formed by items waiting for processing.

R

raster A pattern of dots defined at varying data depths. Black and white images are one-bit (on/off); grayscale images are 8-bit (256 levels); RGB images are 24-bit; CMYK images are 32-bit.

raster image processor (RIP)

A processor in which a PostScript data stream is converted into dot patterns that are transferred to the final print medium. InfoPrint uses an Adobe RIP to convert PostScript to IPDS for such printers as the InfoPrint 4000 and InfoPrint 60.

rc.pd In InfoPrint, a utility used to start the InfoPrint servers listed in the `/etc/pd.servers` file.

read-only

In InfoPrint, describes an attribute value that cannot be set by the user but can change based on other activity.

ready A state in which an object is ready and able to perform tasks.

An available resource, such as a value of the **media-ready** attribute. Contrast with *supported*.

red, green, blue (RGB)

The colors of CRT display phosphors. RGB images are for screen display only. They must be converted to CMYK images before printing.

registration

The accuracy of printing on paper relative to the edges of the paper.

The accuracy of printing a single color (cyan, magenta, or yellow) relative to black.

The accuracy of printing on one side of a page relative to printing on the reverse side of the page.

reprographics

The process of copying or duplicating documents or information.

requested

In InfoPrint, pertaining to the specific values of attributes requested by a job when it is submitted. The requested attribute values of a job are validated against supported attribute values for an actual destination to determine if the printer can handle that job. Contrast with *supported*.

resettable attribute

An attribute whose value can be set or modified after an object has been created, assuming the object is in an appropriate state to be modified. See also *initially settable attribute*; contrast with *non-settable attribute*.

resource

In AFP, a file containing a collection of printing instructions used when printing a job. Resources include fonts, overlays, form definitions, page definitions, and page segments.

resource context

In InfoPrint, an object that contains directory path information that helps the print system locate resources needed for printing a job. The resources include fonts, overlays, form definitions, page definitions, and page segments.

resource document

In InfoPrint, an object that represents a

resource, such as graphics or fonts, used by a job to print a printable document. Contrast with *printable document*.

resubmit
In InfoPrint, an action used to reroute pending or retained jobs to a different logical destination than the one through which the job was originally submitted.

resume
In InfoPrint, the action used to resume the printing of paused jobs or resume the distribution of jobs from paused servers or queues.

retained job
In InfoPrint, an object that represents a job that is being stored in the print system for a specified amount of time, normally after the completion of printing the job. A retained job does not reside in a queue.

retention
The process of storing data after completion of a process for a certain length of time.

retrieval
The process of bringing digital archived data out of storage and into online memory for reuse. See also *archiving*.

RGB Red, green, blue.

RIP Raster image processor.
To convert data to dot patterns using a raster image processor.

root user
In the AIX environment, the system user with the most authority who can log in and execute restricted commands, shut down the system, and edit or delete protected files. Synonymous with *superuser*.

RPC Remote Procedure Call.

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 in a job. See also *auxiliary sheet*.

server In InfoPrint, the object that accepts configuration, management, and printing requests, performs the requested operations, and sends responses back as a result of the operation.

settable attribute
See *initially settable attribute*, *resettable attribute*.

severity
An indication of how serious an error condition is.

shell In the AIX operating system, a command interpreter that acts as an interface between the user and the operating system. In InfoPrint documentation, all shell examples use the Korn shell.

shift-out, shift-in code
Control characters used to indicate the beginning and end of a string of double-byte, ideographic characters.

shortest-job-first
In InfoPrint, a queuing technique where the next job assigned to the first position in the queue is the shortest job in the queue. Contrast with *deadline*, *FIFO (first-in-first-out)*, *job-priority*, and *longest-job-first*.

shut down
In InfoPrint, the action used to halt all server or actual destination processes without deleting the server or actual destination.

signature
A group of pages that are printed, folded, cut, and bound together. Manual placement of pages in the signature is determined using a folding dummy.

simplex

In InfoPrint, the value of the document or actual destination **plex** attribute indicating that output images are placed on the media in a head-to-head format, so that the top of one image is at the same edge as the top of the next image. Depending on the value of the document or actual destination **sides** attribute, the document can be printed on one or both sides of the paper. Contrast with *tumble*; see also *simplex printing* and *duplex printing*.

simplex printing

Printing on only one side of the paper. Contrast with *duplex printing* (1).

Printing on one or both sides of the paper, placing output images on the media in a head-to-head format, so that the top of one image is at the same edge as the top of the next image. Contrast with *tumble duplex printing*; see also *duplex printing* (2).

SMIT System Management Interface Tool.

SNA Systems Network Architecture.

spiral binding

A type of book binding in which wire or plastic coils are threaded through a series of holes or slots in the binding edge. Contrast with *edition binding*, *perfect binding*, and *wire-o binding*.

spot color

Individual colored inks formulated to exactly match a specified color. Spot color is used when CMYK process color cannot produce a reasonable facsimile of the color or when vivid color is needed. Spot color is also used when fluorescent or metallic colors are needed.

spread

In color printing, an area whose dimensions have been enlarged to eliminate white space between it and another color. Contrast with *choke*.

start sheet

The sheet of paper, blank or otherwise, that can precede a job. See also *auxiliary sheet*.

state Synonym for *object state*.

stripping

The process of mechanically assembling

film into plate layouts. Page imposition takes place during stripping.

subnet mask

A bit template indicating which part of an IP address represents the network. A 1 in the subnet mask means that the corresponding bit in the IP address is part of the network address; a 0 means that it is not. For example, if the IP address is 9.99.12.137 and the subnet mask is 255.255.255.0, the network address is 9.99.12.0.

subnetwork

Any group of nodes that have a set of common characteristics, such as the same network ID.

In the AIX operating system, one of a group of multiple logical divisions of another network, such as can be created by TCP/IP.

subtractive color system

A system that reproduces an image by mixing (adding) appropriate quantities of cyan, magenta, and yellow paints on white paper. These paints reflect certain colors and absorb—or subtract—others. Contrast with *additive color system*.

superuser

Synonym for *root user*.

supported

In InfoPrint, pertaining to the specific job attribute values that the actual destination can accept during job validation. InfoPrint validates the requested attribute values of the job against the supported attribute values of the actual destination to determine whether the actual destination can handle that job. Contrast with *requested*.

synchronous

Occurring with a regular or predictable time relationship to a specified action. Contrast with *asynchronous*.

system administrator

Synonym for *administrator*.

System Management Interface Tool (SMIT)

In the AIX operating system, an interface tool for installation, maintenance, configuration, and diagnostic tasks. SMIT lets you perform tasks without entering any commands.

Systems Network Architecture (SNA)

The description of IBM's logical structure, formats, protocols, and operational sequences for sending units through, and controlling the configuration and operation of, networks.

T

table reference character (TRC)

An optional control character in a print data set. The TRC identifies the font used to print the record and can be used to select a font during printing.

Tagged Image File Format (TIFF)

A digital format for storing scanned images. TIFF files are also referred to as raster format files (as opposed to vector format files). When used in desktop publishing, TIFF files produce only a low-resolution FPO image; the high-resolution data remains on the hard disk.

task help

A type of online help that provides a list of tasks that can be completed with a selected object. When you select a task, the help provides step-by-step information about how to complete the task.

TCP/IP

Transmission Control Protocol/Internet Protocol.

TCP/IP-attached printer

A printer device attached to an RS/6000 computer through telecommunication lines using the TCP/IP protocol.

In InfoPrint, a PSF physical printer that represents a TCP/IP-attached printer device. See also *AIX-attached printer*, *direct-attached printer*, and *upload-TCP/IP-attached printer*.

template

In the InfoPrint Manager Administration GUI, an object that represents a set of default attribute values that has been defined for creating a particular type of object, such as an actual destination.

ticket See *job ticket*.

TIFF Tagged Image File Format.

Transmission Control Protocol/Internet Protocol (TCP/IP)

A set of communication rules used in the Internet and in any network that follows the U.S. Department of Defense standards for inter-network protocol. TCP provides a reliable host-to-host protocol between hosts in packet-switched communications networks and in interconnected systems of such networks. It assumes that the Internet Protocol (IP) is the underlying protocol. See also *Internet Protocol*.

trapping

In desktop publishing, the amount of overlap in overprinting colors. Trapping prevents white paper showing through gaps caused by normal errors in registration. On sheet-fed presses, trapping is usually 0.25 point. See also *choke* and *spread*.

TRC Table Reference Character.

TrueType font (TTF)

A font format based on scalable outline technology with flexible hinting. Glyph shapes are based on quadratic curves. The font is described with a set of tables contained in a TrueType Font File.

TTF TrueType font.

tumble

In InfoPrint, the value of the document or actual destination **plex** attribute indicating that output images are placed on the media in a head-to-toe format, so that the top of one image is at the same edge as the bottom of the next image. The document must be printed on both sides of the paper. Contrast with *simplex*.

tumble duplex printing

Printing on both sides of the paper, placing output images on the media in a head-to-toe format, so that the top of one image is at the same edge as the bottom of the next image. Contrast with *simplex printing (2)*, *duplex printing (2)*.

U

UCR Under color removal.

under color removal (UCR)

Conversion of neutral color areas to black ink that reduces use of CMY inks, improves trapping, and reduces setup time. Generally, UCR is performed during

image scanning, but some RIPs perform it during processing. Synonymous with *gray component replacement (GCR)*.

unmanage

In the InfoPrint Manager Administration GUI, the action used to put an object into a mode where its icon does not reflect the changes of status for the object.

upload printer

See *upload-TCP/IP-attached printer*.

upload-TCP/IP-attached printer

In InfoPrint, a PSF physical printer that represents a printer device attached through an MVS system and managed by PSF/MVS. InfoPrint communicates with the MVS system through the TCP/IP network. See also *AIX-attached printer*, *direct-attached printer*, and *TCP/IP-attached printer*.

V

validate

In InfoPrint, to compare the attribute values requested by a job with the supported attribute values of the actual destinations in the system and to determine whether there is an actual destination capable of printing or sending the job.

value A specific characteristic of an attribute.

variable

A name used to represent a data item whose value can change while the program is running.

variable data

Data that can be changed between copies of a document. For example, a form letter (constant data) can be merged with variable data, such as a customer's name and address to produce personalized documents.

varnish

A protective layer applied to a finished sheet, usually for photos, but sometimes used as a design element because of its reflective qualities. Varnishes can be tinted.

vector An absolute coordinate point and line in space. PostScript files can contain vector artwork. Vector files are converted to rasters during the RIP process.

velox A black and white photographic print made from a halftone negative, to be used as a proof copy.

vignette

An image with soft, fade-away edges.

Virtual Machine (VM)

An IBM licensed product that manages the resources of a single computer so that multiple computing systems appear to exist.

A virtual data processing system that appears to be at the exclusive disposal of a particular user, but whose functions are accomplished by sharing the resources of a real data processing system. (T)

Virtual Storage Extended (VSE)

An IBM licensed program whose full name is the Virtual Storage Extended/Advanced Function. It is a software operating system controlling the execution of programs.

Visual Systems Management (VSM)

In AIX, a type of graphical user interface that allows system management through the direct manipulation of objects.

VM Virtual Machine.

VSE Virtual Storage Extended.

VSM Visual Systems Management.

W

web A roll of paper used in web or rotary printing.

well In the InfoPrint Manager Administration GUI, an area in a pane that contains a group of objects related to the objects in the pane; for example, a queues well in a servers pane.

what you see is what you get (WYSIWYG)

Refers to the fact that the composite image displayed on the screen at a computer workstation has the appearance of the final printed image.

window

A rectangular area of the screen that you can move about, place on top of, or pull under other windows, or reduce to an icon.

wire-o binding

A continuous double series of wire loops

run through punched slots along the binding side of a booklet. Contrast with *edition binding*, *perfect binding*, and *spiral binding*.

with-request

In InfoPrint, a document transfer method where the client transfers the documents directly to the server. Contrast with *pipe-pull*.

workstation

A terminal or microcomputer, usually one that is connected to a mainframe or to a network, at which a user can use applications.

write access

A level of authorization that grants the ability to modify data.

WYSIWYG

What you see is what you get.

X

X-Windows

A network-transparent windowing system developed by MIT. It is the basis for Enhanced X-Windows, which runs on the AIX Operating System.

xerography

A dry printing process using corona-charged photoconductive surfaces to hold latent images that are developed with a dry toner and then transferred to paper and fused with heat.

Xstation

A terminal that is connected through a network to an RS/6000 computer, from which a user can perform command-line functions and run X-Windows based applications.

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