

***Xerox DocuPrint
2000 Series
100/115/135/155/180
EPS***

NPS/IPS Extension Operations Guide

701P21100
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Xerox Corporation
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Safety

Laser safety

WARNING

Adjustments, use of controls, or performance of procedures other than those specified herein may result in hazardous light exposure.

The Xerox DocuPrint printers are certified to comply with the performance standards of the U.S. Department of Health, Education, and Welfare for Class 1 laser products. Class 1 laser products do not emit hazardous radiation. The DocuPrint printers do not emit hazardous radiation because the laser beam is completely enclosed during all modes of customer operation.

The laser danger labels on the system are for Xerox service representatives and are on or near panels or shields that must be removed with a tool.

DO NOT REMOVE LABELED PANELS OR PANELS NEAR LABELS. ONLY XEROX SERVICE REPRESENTATIVES HAVE ACCESS TO THESE PANELS.

DANGER

**LASER RADIATION WHEN OPEN
AVOID DIRECT EXPOSURE TO BEAM**

Ozone information: U. S. only

This product produces ozone during normal operation. The amount of ozone produced depends on copy volume. Ozone is heavier than air. The environmental parameters specified in the Xerox installation instructions ensure that concentration levels are within safe limits. If you need additional information concerning ozone, call 1-800-828-6571 to request the Xerox publication 600P83222, *OZONE*.

Operation safety: U. S.

Your Xerox equipment and supplies have been designed and tested to meet strict safety requirements. They have been approved by safety agencies, and they comply with environmental standards. Please observe the following precautions to ensure your continued safety.

WARNING

Improper connection of the equipment grounding conductor may result in risk of electrical shock.

- Always connect equipment to a properly grounded electrical outlet. If in doubt, have the outlet checked by a qualified electrician.
- Never use a ground adapter plug to connect equipment to an electrical outlet that lacks a ground connection terminal.
- Always place equipment on a solid support surface with adequate strength for its weight.
- Always use materials and supplies specifically designed for your Xerox equipment. Use of unsuitable materials may result in poor performance and may create a hazardous situation.
- Never move either the printer or the controller without first contacting Xerox for approval.
- Never attempt any maintenance that is not specifically described in this documentation.
- Never remove any covers or guards that are fastened with screws. There are no operator-serviceable areas within these covers.
- Never override electrical or mechanical interlocks.

- Never use supplies or cleaning materials for other than their intended purposes. Keep all materials out of the reach of children.
- Never operate the equipment if you notice unusual noises or odors. Disconnect the power cord from the electrical outlet and call service to correct the problem.

If you need any additional safety information concerning the equipment or materials Xerox supplies, call Xerox Product Safety at the following toll-free number in the United States:

1-800-828-6571

For customers outside the United States, contact your local Xerox representative or operating company.

Operation safety: Europe

This Xerox product and supplies are manufactured, tested and certified to strict safety regulations, electromagnetic regulations and established environmental standards.

Any unauthorised alteration, which may include the addition of new functions or connection of external devices, may impact the product certification.

Please contact your Xerox representative for more information.

Warning markings

All warning instructions marked on or supplied with the product should be followed.



This WARNING alerts users to areas of the product where there is the possibility of personal damage.



This WARNING alerts users to areas of the product where there are heated surfaces, which should not be touched.

Electrical supply

This product shall be operated from the type of electrical supply indicated on the product's data plate label. If you are not sure that your electrical supply meets the requirements, please consult your local power company for advice.



This product must be connected to a protective earth circuit. This product is supplied with a plug that has a protective earth pin. This plug will fit only into an earthed electrical outlet. This is a safety feature. Always connect equipment to a properly grounded electrical outlet. If in doubt, have the outlet checked by a qualified electrician.

To disconnect all electrical power to the product, the disconnect device is the power cord. Remove the plug from the electrical outlet.

Ventilation

Slots and opening in the enclosure of the product are provided for ventilation. Do not block or cover the ventilation vents, as this could result in the product overheating.

This product should not be placed in a built-in installation unless proper ventilation is provided, please contact your Xerox representative for advice.

Never push objects of any kind into the ventilation vents of the product.

Operator accessible areas

This product has been designed to restrict operator access to safe areas only. Operator access to hazardous areas is restricted with covers or guards, which would require a tool to remove. Never remove these covers or guards.

Maintenance

Any operator product maintenance procedures will be described in the user documentation supplied with the product. Do not carry out any maintenance on the product, which is not described in the customer documentation.

Before cleaning your product

Before cleaning this product, unplug the product from the electrical outlet. Always use materials specifically designated for this product, the use of other materials may result in poor performance and may create a hazardous situation. Do not use aerosol cleaners, they may be flammable under certain circumstances.

CE mark: Europe only



January 1, 1995: Council Directive 73/23/EEC, amended by Council Directive 93/68/EEC, approximation of the laws of the member states related to low voltage equipment.

January 1, 1996: Council Directive 89/336/EEC, approximation of the laws of the member states related to electromagnetic compatibility.

March 9, 1999: Council Directive 99/5/EC, on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity.

A full declaration of conformity, defining the relevant directives and referenced standards, can be obtained from your Xerox representative.

In order to allow this equipment to operate in proximity to Industrial, Scientific and Medical (ISM) equipment, the external radiation for the ISM equipment may have to be limited or special mitigation measures taken.

This is a Class A product. In a domestic environment this product may cause radio frequency interference, in which case the user may be required to take adequate measures.

Shielded interface cables must be used with this product to maintain compliance with Council Directive 89/36/EEC.

Radio and telecommunications equipment directive (Europe only)

Certification to 1999/5/EC Radio Equipment and Telecommunications Terminal Equipment Directive:

This Xerox product has been self-certified by Xerox for pan-European single terminal connection to the analog public switched telephone network (PSTN) in accordance with Directive 1999/5/EC.

The product has been designed to work with the national PSTNs and compatible PBXs of the following countries:

Austria	Germany	Luxembourg	Sweden
Belgium	Greece	Netherlands	Switzerland
Denmark	Iceland	Norway	United Kingdom
Finland	Ireland	Portugal	
France	Italy	Spain	

In the event of problems, contact your local Xerox representative in the first instance.

This product has been tested to, and is compliant with, TBR21, a specification for terminal equipment for use on analog switched telephone networks in the European Economic area.

The product may be configured to be compatible with other country networks. Please contact your Xerox representative if your product needs to be reconnected to a network in another country. This product has no user-adjustable settings.

NOTE: Although this product can use either loop disconnect (pulse) or DTMF (tone) signaling, it should be set to use DTMF signaling. DTMF signaling provides reliable and faster call setup.

Modification or connection to external control software, or to external control apparatus not authorized by Xerox, invalidates its certification.

For further information

For more information on Environment, Health and Safety in relation to this Xerox product and supplies, please contact the following customer help lines:

Europe:+44 1707 353434

USA:1 800 8286571

Canada:1 800 8286571

Introduction

This document provides all the information you need to install, set up, and operate the NPS/IPS Extension option on the DocuPrint 2000 Series 100/115/135/155/180 EPS. It also describes the procedure for switching between operating modes and provides troubleshooting information. This document is intended for the site system administrator who is responsible for installing and setting up the NPS/IPS Extension option, and for the operator or Trusted User, who is responsible for the day-to-day operations.

About this guide

Before using this documentation, become familiar with its contents and conventions.

Contents

This guide contains the following:

- Chapter 1, “Product overview,” provides detailed explanations of the NPS/IPS Extension option.
- Chapter 2, “Installation planning,” gives you the information that you need to prepare for installation of the NPS/IPS Extension software.
- Chapter 3, “Changing print modes,” provides procedures for switching between EPS, and NPS/IPS operating systems.
- Chapter 4, “Problem solving,” provides troubleshooting information about switching between print modes.

An index is provided at the end of this document.

Conventions

This guide uses the following conventions:

- **All caps and angle brackets:** Within procedures, the names of keys are shown in all caps within angle brackets (for example, press <ENTER>).
- **Angle brackets:** Variable information, or the position of a specified argument in the command syntax, appears in angle brackets (for example, List Fonts <Pattern>).
- **Bold:** Within procedures, text and numbers that you enter are shown in bold (for example, enter **privilege operator**).
- **The word “enter” within procedures:** The two-step process of keying in data and pressing <ENTER> (for example, enter **y**).
- **Italics:** Document and library names are shown in italics (for example, the *Xerox DocuPrint NPS/IPS Guide to Managing Print Jobs*).
- **Quotation marks:** Keywords you can enter as arguments appear in quotes (for example, “USLetter”).
- **Vertical bars:** Alternatives to specified arguments are separated by vertical bars (for example, Set Time <Time | Remote Host Name | IP Address>).

NOTE: Notes are hints that help you perform a task or understand the text.

CAUTION

Cautions alert you to an action that could damage hardware or software.

WARNING

Warnings alert you to conditions that may affect the safety of people.

Documentation

This section lists related publications and provides information on printing the customer documentation.

DocuPrint 2000 Series 100/115/135/155/180 EPS documentation

The following documents contain information on the Xerox DocuPrint 2000 Series 100/115/135/155/180 EPS:

- *Xerox DocuPrint 2000 Series 100/115/135/155/180 EPS Electronic Customer Documentation CD*
- *Xerox DocuPrint 2000 Series 100/115/135/155/180 EPS Operator Guide*
- *Xerox DocuPrint 2000 Series EPS Using LCDS Print Description Language*
- *Xerox DocuPrint 2000 Series 100/115/135/155/180 EPS Installation Planning Guide*
- *Xerox DocuPrint 2000 Series 100/115/135/155/180 EPS NPS/IPS Extension Operations Guide*
- *Xerox DocuPrint 2000 Series EPS Tape Client Job Submission Guide*
- *Xerox DocuPrint EPS Font Reference Manual*
- *Xerox DocuPrint 2000 Series 100/115/135/155/180 EPS Operator Quick Reference Card*
- *Xerox DocuPrint 2000 Series 100/115/135/155/180 EPS Customer Information Quick Reference Card*
- *Xerox DocuPrint 2000 Series 100/115/135/155/180 EPS Job Submission Quick Reference Card*
- *Xerox DocuPrint 2000 Series 100/115/135/155/180 EPS Addendum to Getting Started for DocuSP 03.05.00/03.06.00*
- *Xerox DocuPrint 2000 Series 100/115/135/155/180 EPS Operator Training Instructor Guide*
- *Xerox DocuPrint 2000 Series 100/115/135/155/180 EPS Operator Training Participant Guide*
- *Xerox DocuPrint 2000 Series 100/115/135/155/180 EPS Programmer/Administrator Self-Study*

NPS/IPS publications

For customers who have the NPS/IPS Extension configuration and are using the Network Printer Series software, the following related publications are available:

- *Xerox DocuPrint 96/4635/180 NPS/IPS V8.0 Interactive Customer Documentation CD*
- *Xerox DocuPrint 96/4635/180 NPS/IPS System Overview Guide*
- *Xerox DocuPrint 96/4635/180 NPS/IPS Guide to Performing Routine Maintenance*
- *Xerox DocuPrint 96/4635/180 NPS/IPS Troubleshooting Guide*
- *Xerox DocuPrint 96/4635/180 NPS/IPS Master Index*
- *Xerox DocuPrint 96/4635/180 NPS/IPS Installation Planning Guide*
- *Xerox DocuPrint 96/4635/180 NPS/IPS Customer Information Quick Reference Card*
- *Xerox DocuPrint NPS/IPS Guide to Configuring and Managing the System*
- *Xerox DocuPrint NPS/IPS Guide to Submitting Jobs from the Client*
- *Xerox DocuPrint NPS/IPS Guide to Managing Print Jobs*
- *Xerox DocuPrint NPS/IPS Guide to Using Page Description Languages*
- *Xerox DocuPrint NPS/IPS Solutions Guide for IPDS Printing*
- *Xerox DocuPrint NPS/IPS Decomposition Service and Tools Guide*
- *Xerox DocuPrint NPS/IPS Glossary*
- *Generic MICR Fundamentals Guide*

Printing customer documentation

To print the latest version of the customer documentation:

1. Create a queue, specifying ASCII for input and duplex for output.
2. Insert the DOC CD into the CD drive.
3. Open a UNIX terminal window on the graphical user interface.

4. Enter:

```
cd /cdrom/quantumedoc/pdfs
```

5. To list the names of all documents in PDF format, enter:

```
ls -l
```

6. Enter the lpr location:

```
cd /usr/ucb
```

7. To print the selected file (document), enter:

```
lpr -P queueName/cdrom/  
quantumedoc/pdfs/fileName
```

where filename is the name of the file to be printed.

1. Product overview

The NPS/IPS Extension is an option for the DocuPrint 2000 Series 100/115/135/155/180 EPS that enables your printing system to operate in two different print modes: Enterprise Printing System (EPS), and Network Printer Series/IPDS Printing System (NPS/IPS). These print modes allow your printing system to handle more data streams, giving you added flexibility and increased productivity.

This chapter introduces the NPS/IPS Extension option hardware and software components, features, functions, and modes of operation.

System overview

The DocuPrint 2000 Series 100/115/135/155/180 EPS prints high quality, high-resolution monochrome documents in simplex (one-sided) or duplex (two-sided) mode at high production speeds from LCDS, PostScript, and PCL data streams. Jobs may be sent to the EPS printer from client workstations over a network or from a mainframe host computer over a channel.

The NPS/IPS Extension option expands the printing capabilities of the 2000 Series 100/115/135/155/180 EPS. With this option installed, the EPS has the additional ability to print jobs from an IPDS data stream, as well as utilize the extended network printing capabilities that are available in NPS/IPS mode.

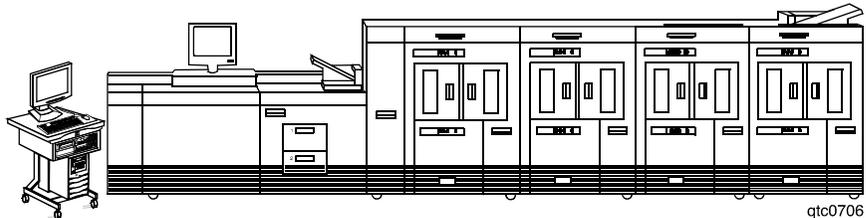


Figure 1-1. The Xerox DocuPrint 2000 Series 100/115/135/155/180 EPS

The NPS/IPS Extension consists of two components that are easily added to your printing system:

- Hardware: An external fixed disk drive
- Software: NPS/IPS 8.0 operating system software

You can switch between print modes by performing a few simple steps. This procedure is described in chapter 3, “Changing print modes.”

Operating system software

The DocuPrint 2000 Series 100/115/135/155/180 EPS operates from the standard internal fixed disk drive, and the EPS software release level must be 2.10.00 or higher. The DocuPrint NPS/IPS operates from an external fixed disk drive, and the NPS/IPS software level must be 7.4.1 or higher.

Network Printer Series (NPS) and IPDS Printing System (IPS) overview

The DocuPrint NPS/IPS enables personal computer (PC), Sun workstation, DEC workstation, HP/Apollo, IBM RS/6000, and Apple Macintosh users to print PostScript level 2, HP PCL5e, or ASCII documents. These documents are then submitted to the printing system over a network connection.

The system also enables IBM hosts running appropriate levels of PSF to print IPDS data. The NPS/IPS emulates an IBM AFP Group 3 Page Printer with the Advanced Function Image and Graphics (AFIG) option.

The DocuPrint NPS/IPS can receive data at 240 or 300 dpi and full-page IOCA images at 600 dpi. The system can also use 600 dpi fonts. All 240 or 300 dpi resources are interpolated to 600 dpi by the printing system for higher print quality.

For more detailed DocuPrint NPS/IPS product information, refer to the *DocuPrint NPS/IPS System Overview Guide*.

IBM hosts supported

The following IBM hosts are supported for NPS/IPS with a network connection:

- MVS
- OS/2
- OS/400 (TCP/IP only)
- AIX

Connectivity

One or more of the following network communications systems may be used to transport documents from the client workstations to the printing system:

- Ethernet local area network (LAN) running TCP/IP, AppleTalk, or Novell NetWare network protocol software.
- Token Ring running TCP/IP, Novell 3.x, or AppleTalk network protocol software.
- FDDI running TCP/IP, Novell 3.x, or AppleTalk network protocol software.

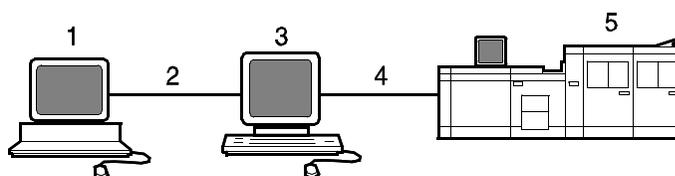


Figure 1-2. DocuPrint NPS/IPS through Token Ring or Ethernet

1. Host system (workstation or mainframe)
2. Token Ring or Ethernet network connection
3. Controller
4. Printer interface cable
5. Printer

For more detailed DocuPrint NPS/IPS product information, refer to the *DocuPrint NPS/IPS System Overview Guide*.

Data streams supported

The Xerox DocuPrint 2000 Series 100/115/135/155/180 EPS with optional NPS/IPS Extension hardware and software supports the following data formats:

- PostScript Level 2
- PostScript Level 3 with PDF
- PCL 5e
- LCDS
- IPDS
- VIPP
- ASCII
- TIFF

The following table shows the print mode (EPS, NPS, or IPS) in which the printing system must be operating to process specific data formats.

Table 1-1. Print mode required to process supported data streams

Acceptable data stream	PCL5e	PostScript Level 2	PostScript Level 3 with PDF	ASCII	VIPP	TIFF	LCDS	IPDS
Required print mode	EPS or NPS	NPS	EPS	EPS or NPS	EPS or NPS	EPS or NPS	EPS	IPS

NOTE: When printing an IPDS job using DocuPrint NPS/IPS, PostScript and PCL data streams can be spooled in the background. If a PostScript or PCL job is printing, the NPS/IPS software will report a not-ready condition back to the host until the printer becomes available.

Differences in supported software features

Because of differences between NPS/IPS and EPS in regard to the PostScript, PCL, ASCII, and VIPP interpreters, some features are supported in NPS/IPS mode that are not supported in EPS mode, and vice versa. Listed below are some features that are supported differently by the two different operating systems.

EPS only:

- Queue overrides
- Multiple queues
- DocuSP job ticket
- 178 default PostScript fonts
- Level 3 PostScript interpreter

NPS/IPS only:

- Background and cycle forms
- xgfnub (ability to add a VIPP Start command in front of a file)
- Resource-based scheduling, based on Document Structuring Convention (DSC)
- FIFO (first in, first out) print order
- NPS/IPS job ticket
- Document forwarding
- Two-sided (duplex) tab stock printing
- Virtual printer/document attributes

NOTE: You can access some equivalent options on the EPS by using the Job Manager and Queue Manager windows.

- 51 default PostScript Type 1 fonts
- Level 2 PostScript interpreter

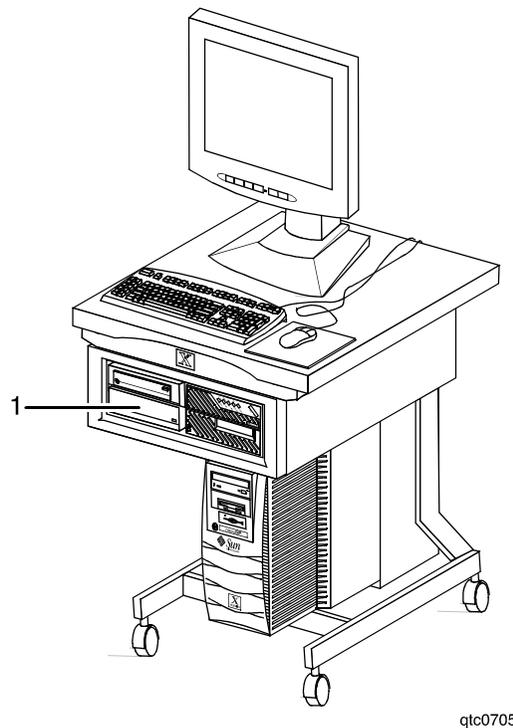
NOTE: Ensuring that the queue names on the EPS are unique and different from the Virtual Printer names on the NPS/IPS, will help prevent jobs from being sent to the wrong print mode. Be sure to consider this when setting up your clients.

Components of the NPS/IPS Extension

The NPS/IPS Extension option consists of the following system components, which are added to the base DocuPrint 2000 Series 100/115/135/155/180 EPS configuration:

- 9.1 gigabyte (GB) or larger external fixed disk drive
- 1 meter SCSI cable
- AC power cord
- NPS/IPS version 7.4.1 software or higher

The external fixed disk drive is located above the quarter-inch cartridge (QIC) tape drive within the controller stand, and is connected to the processor through the SCSI cable. This external disk drive requires a separate AC power source.



qtc0705

Figure 1-3. Controller with external fixed disk drive

1. External fixed disk drive

2. Installation planning

This chapter helps you prepare for delivery and installation of the NPS/IPS Extension option. It is intended for the person who is responsible for coordinating the installation of the NPS/IPS Extension option at your site, and provides an overview of the tasks associated with installation.

For complete installation planning details, refer to the *DocuPrint NPS/IPS Installation Planning Guide* and the *DocuPrint 2000 Series 100/115/135/155/180 EPS Installation Planning Guide*.

Preparing for installation

The Xerox representative needs certain information about your environment to complete the software installation and configuration process for the NPS/IPS Extension option.

DocuPrint NPS Extension

The following information provides an overview of activities associated with setting up your system to accept PostScript, PCL, or ACSII jobs. Some of the most typical tasks that must be performed prior to installation are:

- Identify networked client workstations that will be used to submit jobs.
- Install network to system location, if applicable.
- Establish network addresses

**Information
needed for
installation**

Be prepared to provide the Xerox personnel with the following information during installation:

- Network information such as host-name, IP address, IP netmask, default router
- AppleTalk network information, if applicable
- Novell network information, if applicable
- Superuser password
- Accounting information
- Xerox client software information
- lpr information
- UNIX command tool availability

Since you are upgrading your DocuPrint 2000 Series 100/115/135/155/180 EPS, many of these parameters have already been determined. However, you should refer to “Preparing for installation” in the *Installation Planning Guide* for specific information.

DocuPrint IPS Extension

The following is an overview of the tasks associated with setting up your system to accept IPDS data from an IBM host. Some tasks that typically need to be performed prior to installation are:

- Install Token Ring to the system location, if applicable.
- Install Ethernet to the system location, if applicable.
- Define the printer to your host as an AFP Type 1, Group 3 printer.
- Specify a superuser password.

Defining the printer to a host

In order to send data from the IBM host to the printing system, you must define the printer on your host. The IBM host to which you are connecting the printing system to, as well as the type of connection used, will determine how the printer is defined on the host.

For example, you may connect the printing system to an AS/400 host through a Token Ring network, or to a PC with OS/2 software via Ethernet.

For detailed information about defining the printer to your specific host and connectivity requirements, refer to “Preparing for installation” in the *DocuPrint NPS/IPS Installation Planning Guide*.

Installation process

To efficiently install and set up the NPS/IPS Extension option on your 2000 Series 100/115/135/155/180 EPS system, certain activities need to be performed by you and by Xerox.

Xerox is responsible for the physical installation of the NPS/IPS Extension hardware and IPS/NPS software. The steps in the installation process typically occur in the following order:

1. Xerox personnel install the NPS/IPS software and the NPS/IPS Extension hardware.
2. Xerox personnel obtain a software license authorizing you to use the IPS/NPS software.
3. Xerox personnel connect the printing system to the network or channel.
4. Xerox personnel and you configure the printing system, clients, or IBM host as applicable to submit jobs.
5. Xerox personnel conduct initial operator training.

For detailed information about the activities that you and Xerox personnel perform during installation, refer to Installation in the *Xerox DocuPrint NPS/IPS Installation Planning Guide*.

Software licensing

When the NPS or IPS software is purchased, the owner needs a license to use it. Until the license is enabled at the printing system, jobs are not processed and printed.

NOTE: For an NPS/IPS Extension, software licenses are required. Refer to your Xerox DocuPrint NPS/IPS Installation Planning Guide for further information on licenses.

3. Changing print modes

This chapter provides information on switching between the various print modes of the printing system.

Changing from EPS print mode to NPS/IPS print mode

NOTE: You must be logged in the system as either a Trusted User or System Administrator to switch from EPS to NPS/IPS mode.

Use the following procedure to change operating modes of the printing system from EPS mode to NPS/IPS mode.

1. On the DocuSP Print Services window, click the Queue Manager module. The Queue Manager window opens.
2. In the Queue Manager window, hold all queues by performing the following:
 - a. From the Options menu, select **Select All**.
 - b. From the Accept menu, select **No**.
 - c. From the Release Menu select **No**.

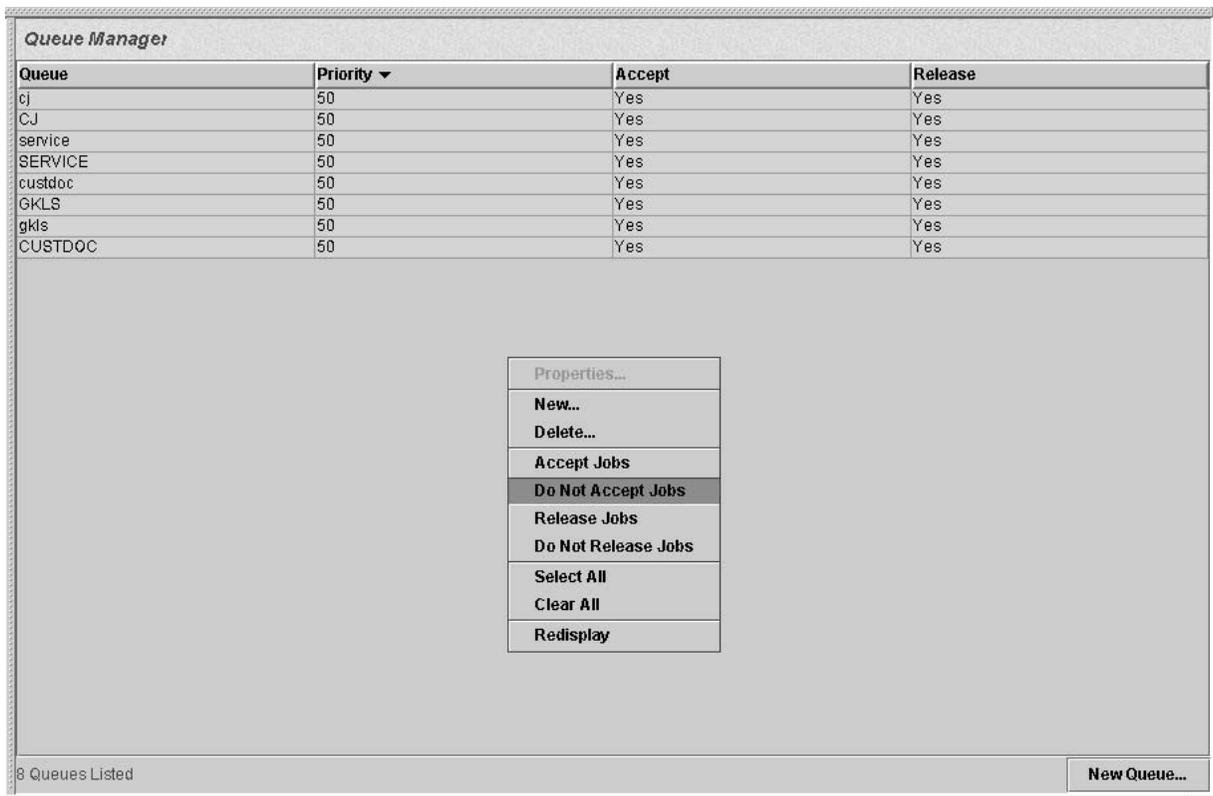


Figure 3-1. Queue Manager window with pop-up menu displayed

3. If your system is channel-attached, disable the online gateway. (Click **Help** on the Online Manager window for this procedure.)
4. Right-click on the screen background to open the Workspace background menu.
5. From the Workspace menu, select **Boot IPS/NPS**.

In a few minutes, the printing system reboots and starts in NPS/IPS print mode.

Changing from NPS/IPS print mode to EPS print mode

Use the following procedure to change operating modes of the printing system from NPS/IPS mode to EPS mode.

NOTE: You must be logged in the system as either an Operator or Administrator to switch between NPS/IPS and EPS modes.

1. At the command line, enter **stop printing**.
2. Enter **list documents**. Wait for any document currently pending or being printed to complete.
3. From the Workspace background menu, select **Start EPS Printing**.
4. On the confirmation window that appears, click **Confirm**. Within a few minutes, the printing system reboots and starts in EPS print mode, displaying the graphical user interface.



Figure 3-2. Graphical user interface, EPS mode

Refer to the DocuPrint 2000 Series 100/115/135/155/180 EPS customer documentation set for information and procedures for operating in EPS print mode.

4. Problem solving

This chapter describes how to solve some specific problems that may occur when you are using switching from one mode to another.

Mode switching problems

Use the following information if you experience problems when switching print modes.

Table 4-1. Mode switching problems

Condition	Possible causes	Corrective actions
Does not boot from EPS to NPS/IPS print mode.	External rigid disk drive is not powered ON (LED on the right front of the external disk drive is not illuminated). SCSI cable between external rigid disk drive and processor is not properly connected.	Ensure that the drive is plugged into the power strip at the rear of the controller stand. Ensure that the SCSI cable is connected to the single-ended SCSI connector on the rear of the processor unit.

Information to have when calling for service

In the United States, if you are unable to correct the problem, call the following number:

1-800-822-2979

For customers outside the United States, call your local service representative. A model-specific phone number is attached to your printer at installation time.

Before you call, make note of the following:

- Status code numbers and messages that appear on the controller screen and the printer console
- Indicator lights that are lit

- Name of your printer, for example, DocuPrint 2000 Series180 EPS
- Serial number of your printing system (a 9-digit alphanumeric code located on the frame inside the printer, behind the narrow door to the far left, on the front of the printer)
- Problems you are experiencing
- Whether the problem is an EPS or NPS/IPS problem

Additional information you may wish to note prior to calling includes:

- An explanation of how output differs from what was expected
- An assessment of whether the symptoms follow a pattern or occur randomly

Also note any special conditions that may be related to the problem, such as:

- New applications
- Changes made to the software
- Recent service performed
- Previous conditions under which the application has printed properly

Give this information to a customer service representative, who will discuss the situation and give you an estimated time of arrival, or assist you over the phone to resolve the problem.

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C

CE mark ix
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