



Data General Corporation, Westboro, Massachusetts 01580

Customer Documentation

NetWare[®] for AViiON[®] Systems: Print Server

069-000706-00

A V I I O N[®]
P R O D U C T L I N E

NetWare[®] for AViiON[®] Systems: Print Server

069-000706-00

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NetWare® for AViiON® Systems: Print Server 069-000706-00

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Preface

This manual is for network supervisors experienced with PC hardware and software. We recommend reading "Overview of NetWare® Printing." If you are ready to install, see "Print Server Installation."

Organization

This manual contains five chapters and three appendixes. The following list gives an overview of what you will find in these chapters and appendixes:

- Chapter 1 summarizes NetWare® for AViiON® Systems printing services.
- Chapter 2 explains how to install and run a print server on your network.
- Chapter 3 suggests ways to print from applications not designed for network printing.
- Chapter 4 lists all tasks that you can perform with the printing utilities.
- Chapter 5 describes how to use each of the print utilities
- Appendix A provides help for some of the more common problems you may encounter when printing on your network.
- Appendix B lists memory requirements for network printing.
- Appendix C provides worksheets you can use in configuring your network.

Related Data General Manuals

In addition to this manual, the document set for NetWare for AViiON Systems includes:

NetWare® for AViiON® Systems: Concepts (069-000483). For all levels of NetWare users, this manual provides an alphabetically-arranged glossary of NetWare terminology. It will be particularly useful to supervisors who are performing their first installation of the NetWare for AViiON Systems product.

NetWare® for AViiON® Systems: Installation (069-000488). For network supervisors who will install NetWare software on an AViiON file server.

NetWare® for AViiON® Systems: System Administration (069-000487). For network supervisors who will use SCONSOLE to administer the AViiON file server.

NetWare® for AViiON® Systems: Troubleshooting and System Messages (069-000485). For all levels of network users, this manual contains solutions to common network problems and advice on preventing problems. It lists NetWare system messages alphabetically, citing a cause and recommended action for each.

NetWare® for AViiON® Systems: User Basics (069-000486). For first time users who are unfamiliar with networks, this manual provides a general overview of NetWare.

NetWare® for AViiON® Systems: Utilities (069-000484). For all levels of network users, this manual provides an alphabetically arranged reference for NetWare command line and menu utilities.

For simplicity, we use the following abbreviated titles (shown in italics) when referring to other manuals in this set.





Short Title	Full Title
<i>Concepts</i>	<i>NetWare® for AViiON® Systems: Concepts</i>
<i>Installation</i>	<i>NetWare® for AViiON® Systems: Installation</i>
<i>System Administration</i>	<i>NetWare® for AViiON® Systems: System Administration</i>
<i>Messages</i>	<i>NetWare® for AViiON® Systems: Troubleshooting and System Messages</i>
<i>User Basics</i>	<i>NetWare® for AViiON® Systems: User Basics</i>
<i>Utilities</i>	<i>NetWare® for AViiON® Systems: Utilities</i>

Reader, please note





This section explains conventions you find in the documentation and software as you perform print server tasks.

Menu utilities

Menu utilities use the following keys:

Key Screen display item	 Enter	 Esc (Escape)	 Del (Delete)	 Ins (Insert)
Menu	Select any display item	Returns to a previous item Exits after confirmation		
Form	Allows a field to be edited (Press <Enter> or <Esc> to exit) Displays a list	Returns to a previous item	May remove current information	
	Exits edit and moves to next field	Moves to next field if in edit mode.		
List	Accesses a menu Accesses a list Copies to a previous list May have no effect	Returns to a previous item	Allows items to be deleted after confirmation	May allow additional items to be added from another list May allow additional items to be added from an empty box
Entry Box	Accepts keyboard entry	Aborts entry and returns to a previous entry	Deletes character to the right, if any	May allow additional items to be added (or deleted) from a list
Confirmation Box	Accepts highlighted item	Closes box with no action		
Insert		Returns to a previous item		

You can use the arrow keys to highlight the option you want, or type the first letter(s) of an option to highlight it. You can also use <PageUp> and <PageDown>, or to move to the beginning or end of lists, <Ctrl><PageUp> and <Ctrl><PageDown>.

 (Help)	 (Modify)	 (Mark)	 (Exit)	Key <small>Screen display item</small>
Accesses help relating to each option Press twice for key assignments			Exits after confirmation	Menu
Accesses help relating to each field	Allows a field to be edited (Same as Enter) Displays a list		Exits after confirmation (changes to screens are lost)	Form
Accesses help relating to each item or about items in general	May allow you to edit item name	Marks an item for use in multiple file operations	Exits after confirmation (some changes may be lost, that is, some lists maintain info; some do not)	List
Accesses help relating to what can be entered			Exits after confirmation (information in box is not used)	Entry Box
Accesses help relating to main menu Accesses help relating to choices			Exits after confirmation	Confirmation Box
Accesses help relating to insert			Exits after confirmation	Insert

Commands

Commands at DOS and console prompts display the following syntax:

```
COMMAND path [Option...]
```

The conventions for this command format are explained below.

Convention	Description
-------------------	--------------------

COMMAND	Enter as shown; only host process commands are case-sensitive.
<i>path</i>	Replace with a directory path other than the default. Some utilities require a filename.
<i>Option</i>	Enter the uppercase letter(s) or spell out the option (not case-sensitive).
[]	Indicates that the enclosed item is optional.
[[]]	Indicates that all enclosed items are optional. If you use items in the inner brackets, you must use items in the outer brackets.
...	Indicates that more than one option can be used with the command. Separate options with a space.
	Indicates "either, or". Use either the item to the left or the item to the right of the vertical bar, but not both.
<Enter>	Indicates that you should press the enclosed key. In this example, press the Enter key.

The example below is for DOS.

```
NPRINT F:TONY.RPT Q=QUEUE2 C=2 <Enter>
```

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End of Preface

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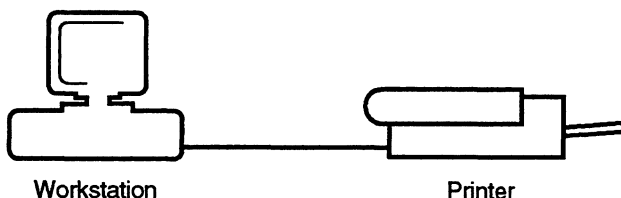
Overview of NetWare Printing

This section summarizes NetWare® for AViiON® Systems printing services. If this is your first NetWare installation, read this section before installing printing on your network. If you have experience installing NetWare, turn to "Print Server Installation" for specific instructions.

Printing on a network

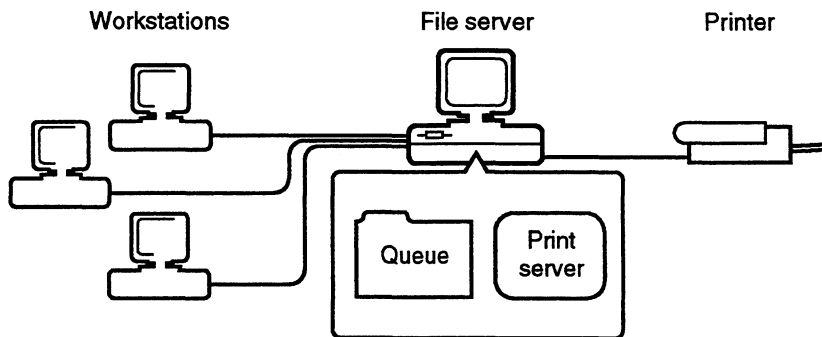
To network users, printing from a network workstation seems the same as standalone printing, but there are differences. When a standalone workstation sends a print job to a locally attached printer, the job is sent directly to the printer for processing.

Standalone printing environment



On a network, a user's print job is stored temporarily in a queue until the print server can relay it to a printer.

Network printing environment



NetWare printing services

NetWare printing services control the network printing process at different stages and consist of the following:

- Print server
- Remote printer software
- Printing utilities

The print server sends print jobs from print queues to their assigned printers. Remote printer software allows printers attached to network workstations and AViiON servers to be used by other workstations. NetWare printing utilities control and monitor print queues and jobs.

NetWare print server

Two types of print servers are available in NetWare for AViiON Systems: a daemon (*pserver*) runs on the AViiON server, and an executable file (PSERVER) runs at a DOS workstation.

An AViiON print server supports 16 network printers and can service print queues on up to 8 file servers. Since you can have up to 4 print servers, NetWare for AViiON Systems can support up to a total of 64 printers.

PSERVER on a DOS workstation supports 16 printers. A print server sends print jobs from queues on a NetWare network to the printers assigned to these queues.

pserver

The *pserver* daemon loads the print server on the AViiON host. It is activated and deactivated with *sconsole*. Only remote printers can attach to the *pserver* daemon. It is run from */usr/bin/netware*.

PSERVER

PSERVER dedicates a DOS workstation as a print server. It is copied into SYS:PUBLIC during installation.

Remote printer software

NetWare for AViiON Systems has two remote printers—a host daemon (*rprinter*) and a DOS executable file (RPRINTER) running at a DOS workstation.

Before you can connect a remote printer, use PCONSOLE to

- Define the remote printer for the print server
- Assign a queue to the remote printer

The daemon must also be configured in *sconsole*. For more information, see *System Administration*.

rprinter

The *rprinter* daemon runs on the AViiON system and sends print jobs to AViiON system queues for service by DG/UX printers.

RPRINTER

RPRINTER is a terminate-and-stay-resident (TSR) program run in the background on a DOS workstation. It is copied into SYS:PUBLIC during installation and allows a printer attached directly to the workstation to be used by other workstations.

To use the printer as a standalone printer, you can remove the program from your workstation's memory, switch to private mode with the PSC command, or reboot the workstation.

NetWare printing utilities

NetWare printing utilities allow you to set up, control, and monitor the network printing process. You can use the utilities to print from applications that are not designed for network printing, to print from diskettes, and to print screen displays. If you usually print from a network-compatible application, you will seldom need the printing utilities except to set up and monitor your printing process.

The following chart gives you an idea of what each command is used for. For a complete description of the utilities, see "Utilities" in this manual.

Task	Software
Set up	PCONSOLE, sconsole
Run software	pserver, PSERVER, rprinter, RPRINTER, sconsole
Print files	CAPTURE, ENDCAP, NPRINT, nwlpr, PCONSOLE
Control printer and print server	PSC, PCONSOLE, sconsole
Customize	PRINTDEF, PRINTCON
Monitor printer and print server	PCONSOLE, pmonitor, PSC, pslist

Setting up network printing

Run PCONSOLE to set up the following:

- NetWare Print queues
- Print servers
- Printers

Print queues

Each network print job goes to a print queue on the file server. The queue stores the job until the printer is ready.

When you create a print queue in PCONSOLE, a corresponding directory is created in the SYS:SYSTEM directory. Each print job is stored as a file in the directory created for that queue. When the printer is ready, the print server takes the job from the queue and sends it to the printer(s) assigned to that queue.

Create the print queues in PCONSOLE before you set up the print server. We suggest that you create one queue for each printer to simplify your printing setup. Naming a queue by printer type or location helps indicate which queue is serviced by which printer.

When you create a print queue, user SUPERVISOR is automatically assigned as a print queue operator, and members of group EVERYONE are automatically assigned as print queue users. You can change these default assignments using PCONSOLE.

Queue operators

The supervisor can assign other users to be queue operators as necessary. Queue operators can edit print jobs, delete jobs from the queue (even jobs that are being printed), and modify the queue status by changing the operator flags.

Queue operators can also change the order in which print jobs are serviced. Printers normally service print jobs on a first-come, first-served basis.

Queue users

To send print jobs to a queue, a user must be designated as a print queue user. Unless the supervisor determines otherwise, every user is a member of group EVERYONE. Group EVERYONE is automatically assigned as a print queue user of each print queue.

Queue servers

When you create a print server, you must assign print queues to it. This authorizes the print server to take jobs out of the appropriate queue for each printer. A print server is defined and exists on only one file server. It can service and support queues on more than one file server.

You must have SUPERVISOR privileges on the file server to create and attach the print server. For more information, see "Print Server Installation."

Print servers

A print server takes print jobs out of a print queue and sends them to an appropriate network printer. After you create your print queues, create a print server using PCONSOLE.

Print server configuration

You must create a configuration in PCONSOLE that tells the print server

- The file servers and queues to which the print server should attach;
- The printers within the print server that are to be supported;
- The queues that each printer will service;
- Optionally, the users that should be notified if the printer needs service.

Each time you load the print server, it uses this configuration to set up the printing environment.

We also recommend that you assign the print server a password for security.

When you install a print server, user SUPERVISOR is automatically assigned as a print server operator, and members of group EVERYONE are automatically assigned as print server users. You can change these default assignments with PCONSOLE.

Print server operators

Print server operators have special privileges to dynamically control the print server. They can do the following tasks using PCONSOLE:

- Attach the print server to other file servers
- Determine who should be notified if the printer needs service
- Issue commands to the printer
- Change forms for the printer
- Change the queues serviced by a printer
- Change queue priority

- Bring down the print server
- Change the status of jobs in the queues

They cannot assign print server users or other print server operators. They also cannot change the static print server configuration.

Print server users

Print server users can monitor the status of the print server. All users (as members of the group EVERYONE) can monitor the use of the print server. You do not need to be a print server user to have the print server send your jobs to a printer. You need to be a queue user to insert your job in a queue. Once your job is in the queue, the print server sends it to a printer whether or not you are a print server user.

Printers

As part of creating the print server configuration with PCONSOLE, you must “define” the printers. An AViiON print server can support up to 16 printers. Since you can have up to 4 print servers, NetWare for AViiON Systems can support up to a total of 64 printers. You define a printer by specifying whether it is local or remote and which port it is attached to.

Local network printers

Local network printers are attached directly to a dedicated workstation running PSERVER. You can attach up to five local network printers, depending on the number of parallel and serial ports available on the workstation.

Remote network printers

Remote network printers are attached to network workstations or to the AViiON host. They can be used as standalone printers or, if you run RPRINTER, they can be used by other network users. Since you can attach a total of 16 printers to a pserver daemon and you can have up to 4 daemons, the number of remote printers supported from an AViiON system is 64.

Remote host printers

The *rprinter* AViiON process redirects network print jobs to DG/UX printers. Three control files—*PRTConfig*, *RPCConfig*, and *RPCControl*—handle host printer configuration, remote printer configuration, and remote printer control, respectively. You modify these files with the AViiON utility *sconsole*: choose “Configuration” from the main menu, then “Services Configuration,” and then “Remote Printer Configuration.” See *System Administration* for more information.

Printing ports

Most workstations can support up to three parallel printing ports (LPT1, LPT2, and LPT3) and two serial ports (COM1 and COM2).

If you are using a serial printer, you must specify the following parameters when you are defining your printer configuration:

- Baud rate
- Data bits
- Stop bits
- Parity
- XON/XOFF protocol

For DG/UX printers, you specify these parameters when you define the printer in *sysadm*.

Queue assignments

When you define the printer with *PCONSOLE*, you also specify which queues it services. We suggest that you assign one queue to each printer to simplify your printing setup.

All printer assignments are stored in the print server configuration on the file server. Each time the print server comes up, it retrieves these assignments.

If you want to change these assignments permanently, see “Change printer configuration.”

One printer can service multiple queues. For example, you could set up a special high-priority queue that is serviced before any other queue. Each time you specify which queue should be serviced by a printer, you are prompted for the priority queue (1 to 10). If you use priority 1 for the high priority queue and 5 for the others, the special one is serviced more often.

Multiple printers can service one queue. For example, you can have three identical printers printing jobs from a single queue, which enables you to maintain a first-come, first-served approach to printing large numbers of jobs. If you want a single queue serviced by multiple printers, assign that queue to each printer.

You can also have a single workstation running PSERVER service multiple remote printers connected to the network through RPRINTER. A job waiting in this print server's queue automatically goes to the next of these printers that becomes available.

Bringing up the print server

Once the print queues, print servers, and printers are set up, you can bring up the print server.

pserver

Use *sconsole* at the AViiON system console to bring up *pserver*. For more information, see "Utilities" in this manual or *System Administration*. You can also edit the file *psinit* in `/usr/bin/netware` to automatically bring up *pserver* when NetWare Services are started.

PSERVER

First set the SPX connections on the dedicated workstation's SHELL.CFG file (SPX CONNECTIONS=60). Then boot the workstation, log in to the network, and run PSERVER.

Printing files and display screens

Once the print server is running, you can print from any application designed for network printing, or you can print with the NetWare printing utilities.

Printing from applications designed for network printing

Many applications are designed for network printing. They speed printing by sending their print jobs directly to the NetWare queue instead of sending them to the local LPT1 port and having them redirected with CAPTURE. The application documentation includes specific instructions for printing files.

Printing from applications not designed for network printing

If you are using applications that are not designed for network printing, NetWare provides five utilities that allow you to print files: CAPTURE, ENDCAP, NPRINT, *nwlp*, and PCONSOLE.

CAPTURE/ENDCAP

Use CAPTURE to print screen displays or to print from applications that are not set up to print on networks. CAPTURE redirects any print command issued to a local printing port and sends it to a print queue.

If you do not specify a queue in a CAPTURE or NPRINT command, you receive an error message and your job does not print. You can also use CAPTURE to send data to a file rather than to a print queue.

You can enter CAPTURE at the command line, or you can include it in your login script or in an AUTOEXEC.BAT file to set up network printing each time you log in to the file server.

Use ENDCAP to end the CAPTURE command and to direct your print commands back to the local workstation printing ports.

For a complete explanation of CAPTURE, see "Utilities" in this manual.

NPRINT

Use the DOS executable NPRINT to print files that were created in applications or as ASCII text files. NPRINT routes the files to a specified print queue. You can specify printing parameters at the command line, or you can set up a print job configuration as a shortcut (with PRINTCON).

To print a file with NPRINT, you must specify the directory path and filename of the file you want sent to the queue. You can use wildcard characters to print more than one file at a time.

To print files that have embedded printer codes, use the "No Tabs" option in NPRINT, or set up a print job configuration, specifying "byte stream" in the "File Contents" option.

For a complete explanation of NPRINT, see "Utilities" in this manual.

nwlp

Use the UNIX® process *nwlp* to print files that were created in UNIX applications or as text files. You can include several options.

For a complete explanation of *nwlp*, see "Utilities" in this manual.

PCONSOLE

Use PCONSOLE to print files that were created in applications or as ASCII text files. Like NPRINT, PCONSOLE routes the files to a specified print queue. However, PCONSOLE allows you to select your file and specify printing parameters from a menu rather than at the command line.

For a complete explanation of how to use PCONSOLE, see "Utilities" in this manual.

Customizing the printing environment

If you will print frequently from applications that are not designed for network printing, you can customize your printing environment with PRINTDEF and PRINTCON.

PRINTDEF and PRINTCON simplify printing with CAPTURE, NPRINT, and PCONSOLE. We suggest that you use PRINTDEF and PRINTCON in the following two cases only:

- If you have problems resetting your printer to default fonts after using different printing setups

For example, if you are printing spreadsheets and letters on the same printer, you may have some problems with the printer resetting after each print job.

- If you want to specify different forms or print configurations when using CAPTURE, NPRINT, and PCONSOLE

PRINTDEF creates a database that stores print forms and print device definitions (print devices are equipment such as printers and plotters). There is no global print definition; you must create or copy the definition for each user.

Print device definition files (.PDF)

These files are used to issue specific commands to the printer at the beginning of a print request. You can set up these files in any of the following three ways:

- Use the print device definitions that NetWare includes for commonly used printers. They are automatically placed in the SYS:PUBLIC directory when you install NetWare.
- Import print definitions set up on another file server.
- Set up your own printer definitions using PRINTDEF, if your printer is not found in the device definitions provided by NetWare.

Print job configurations

Print job configurations control the way a job is printed.

PRINTCON uses the information set up in PRINTDEF to create customized print job configurations. PRINTCON creates individual databases of print job configurations for each user.

A primary advantage of setting up print job configurations is that users printing a file using PCONSOLE, CAPTURE, or NPRINT can choose a print job configuration instead of entering all the print job specifications each time they want to print. The printer returns to its default settings after the job is completed.

As you set up printing on the network, you can

- Create print job configurations for each user, using the forms, devices, and modes defined in PRINTDEF.
- Select the default print job configuration.
- Copy print job configurations from one user to another.

You can set up print job configurations for any user. In addition, users can set up their own print job configurations. For a list of the parameters you can specify, see PRINTDEF in "Utilities" in this manual.

Sending commands to the print server/printer

You can send commands to the print server and printer with PCONSOLE or with PSC (Print Server Commands), the command line equivalent to PCONSOLE. You can perform the following tasks:

- View the status of printers
- Pause the printer temporarily
- Stop printing the current job
- Start the printer
- Mark the top of the form
- Rewind a print job (only in PCONSOLE)
- Advance the printer to the top of the next page

- Mount a new form
- Bring down the print server (only SUPERVISOR or print server operator in PCONSOLE)

With PSC, you can also remove a remote printer from the list of network printers so that it can be used as a standalone printer.

You can use the DOS SET command to set a default print server and printer number for PSC so that you do not have to specify the print server and printer at the command line each time you execute PSC.

See PSC in "Utilities" in this manual for a complete explanation.

End of Chapter

Print Server Installation

This section explains how to install and run a print server on your network. If your print server will service queues on one file server, you can use the following instructions to set it up. If you want to service queues on multiple file servers, after you set up printing for the first file server, continue with "Set up printing on additional file servers." Be sure to use the Printing Worksheet from appendix C while you work in this section.

Task	Page
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Choose type of print server

Before you can install a print server on your network, you must decide which type you will use. When choosing your print server, consider available hardware resources, security needs, location, and performance.

pserver

If you do not want to dedicate a computer to print services, you can run *pserver* as a process on the AViiON server. Each *pserver* daemon on the AViiON server can support 16 printers. Since you can have up to 4 daemons, NetWare for AViiON Systems supports up to 64 printers.

Choose type of print server

PSERVER

The dedicated workstation print server offers two advantages. First, you reduce the workload on your AViiON file servers. Second, because your printers and print servers are located away from the file server, you enhance file server security.

All print servers can be run with the RPRINTER program. RPRINTER allows you to connect network printers to any DOS-based workstation attached to your network. This improves security and offers flexibility in locating your printers.

The AViiON server's host process *rprinter* also allows printers to be attached directly to the AViiON server or placed elsewhere on the network.

The print server does not service queues on NetWare v2.0a file servers.

Set up hardware

After you decide which print server to use, you need to prepare and connect your network printers. Printers can be attached to the AViiON file server (using *rprinter*), to the dedicated workstation print server (local printers), or to workstations on the network (remote printers). For more information, see "Overview of NetWare Printing."

1. Prepare network printers for installation.

1a. Install add-on printer ports if necessary.

Most file servers and workstations approved for a NetWare network come with at least one serial and one parallel port built into the system board. If you plan to attach more printers, you can install printer port add-on boards. See the add-on board documentation for instructions.

If you are attaching a printer to a dedicated print server, record the interrupt you chose for the add-on board on the Printing Worksheet. Be sure it does not conflict with any other interrupt settings being used.

1b. Set the printer hardware communication parameters.

For parallel printers, no hardware communication settings are necessary to communicate with the file server.

For serial printers, the data-transfer protocol is defined by the following parameters:

- Baud rate
- Data bits
- Stop bits
- Parity
- XON/XOFF protocol

Serial printer communication parameters are specific to the type of printer you are installing. Refer to the instructions supplied by the printer hardware manufacturer, and make the settings now.

2. Connect printers to the file server, the dedicated workstation print server, the router, or workstations running remote printers.

- If you are using *pserver* and *rprinter*, connect your printers to the ports on the AViiON system or elsewhere on the network. You must define these printers through the DG/UX *sysadm* utility.
- If you are using PSERVER, connect your printers to the ports on the dedicated workstation print server.
- If you are using RPRINTER, connect your printers to the workstations running RPRINTER.

3. Record and set Interrupts.

Record the interrupts that the printing ports use to signal the processor. If you use built-in printing ports, check the documentation that came with your computer for the printing port interrupt number.

Set up hardware

If you cannot change the configuration of your printing port or if you have used all available interrupts, you can use the “polled” designation. Polled printing does not use interrupts. However, it may not send data to the printer as quickly.

If you are using a remote printer, you must select an interrupt.

If you use interrupts, you must select a value. Choose a value between 3 and 7 that does not conflict with any other settings you have made.

Record the machine and the port that you connect each printer to, and the interrupt that each port uses on the Printing Worksheet. You will need this information when you define your printers.

For printers attached to the AViiON server, we recommend that you make sure you can print successfully to the printer through UNIX print commands such as *lp* before continuing.

Install a print server

The following steps show you how to create print queues and the print server, define printers, and assign queues to printers.

1. Create print queues.

1a. Log in as SUPERVISOR.

1b. Enter PCONSOLE and select “Print Queue Information.”

1c. Press <Insert> and type the queue name. Then press <Enter>.

Repeat this step for each print queue you want to create. We suggest you create one print queue for each printer.

1d. Assign queue operators and users (optional).

The system automatically assigns SUPERVISOR as print queue operator and group EVERYONE as print queue users. To assign different print queue operators and users, press <Enter> to access the "Print Queue Information" menu.

- **Assign queue operators.** Select "Queue Operators" and press <Insert>. Select the user or group you want to assign as a queue operator.
- **Assign queue users.** Select "Queue Users" and press <Insert>. Select the user or group you want to assign as a queue user.

1e. Press <Escape> to return to the "Print Queue Information" menu.

1f. Press <Escape> as needed to return to the "Available Options" menu.

2. Create print server.

2a. Select "Print Server Information" from the "Available Options" menu.

2b. Press <Insert>, and type the name of the print server; then press <Enter>.

2c. Select the appropriate print server. The "Print Server Information" menu appears.

2d. Assign print server password and print server operators and users (optional).

Although a password is not required, we suggest you assign one for security.

Install a print server

The system automatically designates SUPERVISOR as print server operator and group EVERYONE as print server users.

To assign a print server password and different operators and users, press <Enter> to access the "Print Server Information" menu.

- **Assign a password.** Select "Change Password." Type in the new password and press <Enter>. Retype the password and press <Enter>.
- **Assign print server operators.** Select "Print Server Operators" and press <Insert>. Select the user or group you want to assign as a print server operator.
- **Assign print server users.** Select "Print Server Users" and press <Insert>. Select the users you want to assign as print server users.

3. Specify which additional file servers the print server will service (optional).

If you will service queues on only one file server, skip to Step 4.

3a. Select "Print Server Configuration" from the "Print Server Information" menu.

3b. Select "File Servers To Be Serviced." The name of your default file server appears.

3c. Press <Insert>. The list of available file servers appears. You can select up to seven additional file servers that contain queues you want the print server to service.

If you choose to service queues on multiple file servers, you must complete "Set up printing on additional file servers" after you finish setting up the print server on the current server.

3d. Press <Escape> to return to the "Print Server Configuration" menu. Skip to Step 4b to continue.

4. Define printers.

4a. Select “Print Server Configuration” from the “Print Server Information” menu.

4b. Select “Printer Configuration.”

4c. Select the printer number you want to define; then complete the “Printer # Configuration” form.

Name. Enter the descriptive name of the printer.

Type. Select the appropriate type of printer from the following options:

- **Parallel (LPT) or Serial (COM).** Use this option if you are attaching the printers directly to a dedicated workstation print server. Specify the LPT or COM port you use.
- **Remote Parallel (LPT) or Remote Serial (COM).** Use this option if you are attaching the printer to a network workstation. Specify the LPT or COM port you use.
- **Remote Other/Unknown.** Use this option if you are using *rprinter* to provide the print server with information about the printer. This allows you to set up a printing slot for a remote printer without specifying which port the printer is attached to.

NOTE

Choose the **Remote Other/Unknown** option for DG/UX-based printers.

- **Defined elsewhere.** Use this option when you are setting up printing for additional file servers. See “Set up printing on additional file servers” for more information.

After you select the printer type, the default settings for the other options are filled in automatically. If you need to change the default settings, see “Printer configuration parameters” in PCONSOLE for a complete description of each item.

Install a print server

4d. Press <Escape> and save the changes.

4e. Press <Escape> to return to the “Print Server Configuration Menu.”

4f. Set up user notification (optional).

If you want a user to be notified when the printer needs service, select “Notify List for Printer.” Select the appropriate printer and press <Insert>. Select the user, and type in the number of seconds before the user is notified for the first and subsequent times. Press <Escape> and save your changes.

Repeat Steps 4b through 4f for each printer you want to define.

5. Assign queues to the printers.

When you assign queues to the printers you have defined, you authorize the print server to service these queues.

5a. Select “Queues Serviced by Printer” from the “Print Server Configuration Menu.”

5b. Select the appropriate printer.

5c. Press <Insert>. The “Available Queues” window appears.

5d. Select the queue that this printer will service, and enter a number from 1 to 10 to indicate the priority level of the queue. Press <Enter>.

The highest priority is 1.

- Repeat Steps 5c and 5d to assign additional queues to this printer.
- Repeat Steps 5a through 5d for each printer you have defined.

5e. Press <Escape> to exit PCONSOLE.

If you are servicing queues on only one file server, you can skip the next sections. Go to "Define the host printer configuration" to continue.

If you are servicing queues on multiple file servers, you must complete the following section, "Set up printing on additional file servers," before you can run the print server.

Define additional print servers

Each AViiON print server can support 16 printers. Since NetWare for AViiON allows you to run up to 4 print servers, you can access as many as 64 printers. Follow the steps in the preceding section to define as many print servers as you require. To start additional print servers correctly, you must edit the file *psinit* in the `/usr/bin/netware` directory. The file contains information on what you need to change. After you edit this file, all print servers start automatically when NetWare Services start.

Set up printing on additional file servers

If you chose to service queues on more than one file server when you installed the print server on the original file server, you must now set up print server accounts and queues on each additional file server. You must have SUPERVISOR rights or enlist the help of the network supervisor for each file server.

1. Attach to additional file servers.

1a. In PCONSOLE, select "Change Current File Server" from the "Available Options" menu.

1b. Either select a listed file server or press <Insert> to select from other available file servers.

Set up printing on additional file servers

2. Create print queues.

2a. Select “Print Queue Information” from the “Available Options” menu.

2b. Press <Insert> and type the queue name; then press <Enter>.

The system assigns SUPERVISOR as print queue operator and group EVERYONE as print queue users. To assign different print queue operators and users, see previous section “Install a print server,” Step 1d of “Create print queues.”

2c. Press <Escape> to return to the “Available Options” menu.

3. Create print server.

3a. Select “Print Server Information” from the “Available Options” menu.

3b. Press <Insert>, and type the exact name of the print server you created on your original file server; then press <Enter>.

3c. Select the print server you just created. The “Print Server Information” menu appears.

If you want to assign a password for the print server, see previous section “Install a print server,” Step 2d of “Create print server.” If you assign the same password you used in the originally print server account, the print server will not prompt for an additional password when it runs.

4. Define printers.

4a. Select “Print Server Configuration” from the “Print Server Information” menu.

4b. Select "Printer Configuration."

4c. Select the printer number you want to define. Use the same printer number that you defined in the print server account on the original file server; then complete the "Printer # Configuration" form.

Name. Enter the descriptive name of the printer. We suggest you use the same printer name that you used for the original print server.

Type. Use the "Defined elsewhere" option. Since you have already defined the printer, you do not need to enter all the printer information.

4d. Press <Escape> and save the changes.

4e. Press <Escape> to return to the "Print Server Configuration Menu."

If you want a user on this file server to be notified in case the printer needs service, see previous section "Install a print server," Step 4f of "Define printers."

Repeat Steps 4b through 4e for each printer you want to define.

5. Assign queues to the printers.

When you assign queues to the printers you have defined, you automatically authorize the print server to service these queues.

5a. Select "Queues Serviced by Printer" from the "Print Server Configuration Menu."

5b. Select the appropriate printer.

5c. Press <Insert>. The "Available Queues" window appears.

5d. Select the queue that this printer will service, and enter a number from 1 to 10 to indicate the priority level of the queue. Press <Enter>.

Set up printing on additional file servers

- Repeat Steps 5c and 5d to assign additional queues to the printer.
- Repeat Steps 5a through 5d for each printer you have defined.

5e. Press <Escape> to exit PCONSOLE. You are now ready to bring up the print server on your network.

At this point, you should have completed the following tasks:

- Defined an identically named print server on each of the file servers that will be serviced
- Configured printers with identical numbers on those file servers with "Defined elsewhere" in the "Type" field
- Assigned each defined printer to the queue to be serviced

Define the host printer configuration

This section applies only if you have printers attached to your AViiON system and you want NetWare users to print to them. The printer must first function properly as a DG/UX printer before you configure for NetWare. See the manual *Customizing the DG/UX™ System* for information about configuring printers on your AViiON server.

The printer(s), print queue(s), and print server(s) must be defined in PCONSOLE before completing this section. See "Install a print server" if this is not done yet. The following steps describe how to configure a DG/UX printer to function with NetWare.

1. Log in to the AViiON system as root.
2. Change to the /usr/bin/netware directory.
3. Type the following:

```
./sconsole <Enter>
```

4. Access the Configuration Menu.

5. Access the Services Configuration Menu.
6. Access the Remote Printer Configuration Menu.
7. Access the Host Printer Configuration Menu.
8. Access the Add A Host Printer To System screen.
9. Enter the host printer's name, the host ID, the priority level, and the form name.
 - **Host printer name.** The name of the host printer, which is case-sensitive, is for use when configuring *rprinter*. For convenience, make the host printer name the same as the DG/UX queue name.
 - **Host ID.** The host ID is the name of the DG/UX printer or queue you want to define.
 - **Priority level.** The priority level can be any number from 1 to 40; 1 is the highest priority.
 - **Form name.** A form name can be left blank unless you want to assign a form for which the queue is configured in PRINTDEF.
10. Return to the previous menu.
11. Access the Remote Printer Control Menu.
12. Access the Add A Remote Printer screen.

Define the host printer configuration

13. Enter the print server name, printer slot number, and host printer name.

- **Print server name.** Enter the same print server name specified in PCONSOLE.
- **Printer slot number.** The printer slot number (for example, 0 for Printer 0) can be found in PCONSOLE after selecting the printer under "Printer Configuration." See "Define printers" for details.
- **Host printer name.** Refer to "host printer name" in Step 9.

Bring up the print server

Follow the instructions below for loading the type of print server you chose.

To run AVIIION *pserver*:

1. Log in to the AVIIION system as root.
2. Change to the `/usr/bin/netware` directory.
3. Type the following:

```
./sconsole <Enter>
```
4. Access the Administration Menu.
5. Access the Startup/Shutdown NetWare Menu.
6. Access the Start Print Server screen.

Enter "Y" to start the print server, then the primary file server name, print server name, and the server login password. The print server name is case-sensitive and must match the print server name specified in PCONSOLE.

7. Access the Start Remote Printer screen.

Enter "Y" to start the remote printer.

8. Exit *sconsole*.

NOTE

Each AViiON print server can support 16 printers. Since NetWare for AViiON allows you to run up to 4 print servers, you can access as many as 64 printers. To start additional print servers that you have defined when NetWare Services are started, you must edit the file *psinit* in the */usr/bin/netware* directory. The file contains information on what you need to change.

Run PSERVER

PSERVER and its supporting files were copied into SYS:PUBLIC during installation. To bring up the print server, you must have access to these files. You can either be logged in to the file server with a search drive mapped to SYS:PUBLIC, or you can have the necessary files on a local floppy or hard disk drive.

- 1. To ensure that the dedicated workstation has enough open SPX connections, include the following line in its SHELL.CFG file.**

```
SPX connections=60
```

- 2. Boot DOS and load the NetWare shell.**
- 3. At the dedicated workstation prompt, type**

```
PSERVER printserver <Enter>
```

This assumes that PSERVER.EXE is on the local hard drive. If it is not, you must log into a server first.

Run PSERVER

4. Modify the system AUTOEXEC.BAT file.

The workstation automatically loads the print server each time it comes up if you modify the AUTOEXEC.BAT file with a DOS text editor. Include the following line in the file:

```
PSERVER printserver
```

This assumes that PSERVER.EXE is on the local hard drive. If it is not, you must log into a server first.

Run remote printers

If you want the print server to service a remote printer attached to an AViiON host or to a workstation, you must run *rprinter* at the AViiON server or RPRINTER at the workstation.

To attach printers directly to the AViiON system, we recommend that you use *sconsole* to set up, start, and stop the host process *rprinter*. See *rprinter* in "Utilities" in this manual or *System Administration* for more information.

RPRINTER and its supporting files were copied to SYS:PUBLIC during installation. You must have a search drive mapped to this directory or have a copy of the necessary files on a local floppy or hard disk.

You do not need to be logged in to the file server to run RPRINTER, if it and its supporting files have been copied to the local hard disk. However, you must have the NetWare shell loaded.

You should check the SHELL.CFG file of the workstation attached to the printer for the following line:

```
LOCAL PRINTERS=0
```

If this line appears, delete it or comment it out. Then reboot the workstation so that RPRINTER will work.

At the remote workstation prompt, type

```
RPRINTER [printserver printernumber] <Enter>
```

If you type RPRINTER without options, you are prompted to select the print server and the printer number.

Print on the network

Now that your print server is running, you can print files from any application, or you can print text files and screen displays with the NetWare printing utilities.

Printing from applications designed for network printing

Many applications are designed for network printing. The application documentation will include information about setting up printing on a network.

Printing from applications not designed for network printing

If you are using applications that are not designed for network printing, you can use the following NetWare printing utilities to print files: CAPTURE, ENDCAP, NPRINT, *nwlp*, and PCONSOLE.

Each utility is explained fully in "Utilities" in this manual.

Printing text files (screen displays, and so forth)

Use NPRINT, *nwlp*, or PCONSOLE to print ASCII text files. You must specify parameters at the command line with NPRINT and *nwlp*. PCONSOLE is a menu utility that allows you to select files and parameters from a menu.

Each utility is explained fully in "Utilities" in this manual.

Where to go from here

If you will print primarily from applications designed for network printing, you must set up printing according to the application documentation.

If you will use the NetWare utilities to print, you should read "Customizing Printing."

End of Chapter

Customizing Printing

This section is intended primarily for users who will use applications not designed for network printing. This section suggests ways to simplify printing with NetWare utilities. Printing is customized with PRINTDEF and PRINTCON.

PRINTDEF and PRINTCON are used to simplify printing with CAPTURE, NPRINT, and PCONSOLE. We suggest you use PRINTDEF and PRINTCON in two cases only:

- If you are having problems with your printer resetting to default fonts when you use different printing setups

For example, if you are printing spreadsheets and letters on the same printer, you may have some problems with the printer resetting after each print job.

- If you want to specify different forms or print configurations when you are using CAPTURE, NPRINT, and PCONSOLE

PRINTDEF creates a database that stores print device definitions (print devices are equipment used to print, such as printers and plotters) and print forms.

For each printer you use, you can set up a print device definition that issues specific commands to the printer at the beginning of a print request. You can also set up a list of the types of forms you use on the printer.

PRINTCON uses the information set up in PRINTDEF to create customized print job configurations for each user. A print job configuration controls the way a job is printed.

A primary advantage of setting up print job configurations is that when users print a file using PCONSOLE, CAPTURE, or NPRINT, they can choose a print job configuration instead of entering all the print job specifications each time they want to print.

If you want to use PRINTCON and PRINTDEF, complete Steps 1 through 3. To copy print job configurations for other users, continue with Step 4.

1. Define print devices.

You can define print devices in three ways:

- Copy the print device definitions you need from the 30 definitions provided with NetWare. Continue with this step.
- Set up a print device definition that is not included in those provided with NetWare. See “Define print device functions” in PRINTDEF.
- Copy print device definitions from another file server. See “Copy print device definitions from another file server” in PRINTDEF.

NetWare includes print device definitions for the printers listed below. The print device definitions have a .PDF extension and are placed in SYS:PUBLIC when you install NetWare.

Apple Imagewriter® II	Hewlett-Packard LaserJet III/IIID
Apple Laserwriter® II/Plus	Hewlett-Packard LaserJet IIISi-PCL
Citizen 120-D	Hewlett-Packard
Citizen 20	LaserJet IIISi-Postscript
Citizen 224	IBM ProPrinter™ 4201
Cltoh 310/315	IBM ProPrinter II/XL
Cltoh 600	NEC Spinwriter® 2050/3050
Diablo® 630	NEC Spinwriter 8810/8830
Epson® FX80™/FX100	NEC Pinwriter® P-6
Epson FX-800	Okidata® Microline® 192/193
Epson FX86e/FX286e	Okidata 290
Epson LD-2500	Okidata 390
Epson LQ-800/LQ-1000	Okidata Laserline® 6
Epson LX-80	Panasonic 1080/1080i
Epson LX-800	Panasonic 1091/1091i
Hewlett-Packard LaserJet® II/IIID	Star NX-1000
Hewlett-Packard LaserJet	Star Gemini 10X
Postscript Cartridge	Toshiba P321

To copy print device definitions, you must be logged in as SUPERVISOR and complete the following steps:

- 1a. Enter PRINTDEF and select "Print Devices" from the "PrintDef Options" menu.
- 1b. Select "Import Print Device."
- 1c. If you are not in the SYS:PUBLIC directory, use the Backspace key to erase the current directory name; then type the directory name, SYS:PUBLIC, and press <Enter>.
- 1d. In the "Available .PDFs" list, select the .PDF file you want to add to your PRINTDEF list of files.

If you try to copy a file that has the same name as an existing print device definition, the "New Device Name" entry box appears, prompting you to rename the new print device definition. Type the revised name and press <Enter>.

The new print device definition is added to the print definition database. You are returned to the "Print Device Options" menu.

- 1e. To save the PRINTDEF database with the new print device definition, press <Escape> twice.

Select Yes from the "Exit PrintDef" confirmation box; then select "Save Data Base, then EXIT."

If you do not need to set up additional print device definitions, continue with Step 2.

To set up additional print device definitions, see "Define print device functions" in PRINTDEF.

2. Define the forms your printer uses.

Print forms are the types of paper you print on. You can specify what form you want to print on when you set up print job configurations. For example, you might want some jobs to be printed on letter-size sheets of paper and others on green-bar continuous-feed paper.

Define the forms your printer uses

The print server recognizes forms by name and number. For your convenience, PRINTDEF assigns form names to the form numbers. If you send a print request that requires a specific form, the job will not be printed until that form is mounted in the printer.

To define print forms, complete the following steps:

2a. Enter PRINTDEF.

2b. Highlight “Forms” and press <Insert>.

2c. Type the name of the new form you want to define in the “Forms Definition Form” entry box and press <Enter>.

The first character of the form name must be alphabetic, and the form name cannot exceed 12 characters. Use an underscore (`_`) between words instead of a space. Examples of form names include `White_8x11`, `Continuous`, `Checks`, `Green_Bar`, `Normal`, and `Standard`.

- Type the number you want to assign to the form and press <Enter>.

Assign the most commonly used form as form 0, since 0 is the default form. Form numbers must fall between 0 and 255.

- Type the length of the form in lines per page and press <Enter>.

The number must fall between 1 and 255. For example, if your printer is set at six lines per inch, a sheet that measures 8.5 by 11 inches would be 66 lines long.

Type the width of the form in characters per line and press <Enter>.

The number must fall between 1 and 999. Always measure width as though your printer can print only 10 characters per inch. For example, if you are using a sheet that measures 8.5 by 11 inches, enter 85 characters per line.

2d. To save changes, press <Escape>; then answer Yes to the “Save Changes” confirmation box by pressing <Enter>. The new form is listed in the “Forms” list.

2e. Repeat Steps 2b through 2d for each form you want to define.

If you need to edit a form, highlight that form in the "Forms" list and press the Modify key (<F3> on most computers). Follow Steps 2b through 2d to make changes.

To delete a form from the "Forms" list, highlight that form and press <Delete>. Press <Enter> to confirm your decision.

2f. To exit PRINTDEF after you have finished defining forms, press <Escape> twice; then press <Enter> to access the "Exit Options" menu. Select "Save Data Base, then EXIT."

3. Set up print job configurations.

You can set up a print job configuration by specifying certain parameters. You use these print job configurations as a shortcut when using NPRINT, CAPTURE, and PCONSOLE. You can use the "*j=jobconfiguration*" flag with NPRINT and CAPTURE, or you can specify which print job configuration you want to use on the PCONSOLE print form.

You must have defined a form before setting up a print job configuration. The first print job configuration you create becomes your default. When you define other configurations, you can select which will be your default.

Each user has a separate PRINTCON.DAT file. You can set up a print job configuration for one user and then copy it to other users, or you can allow users to set up their own print job configurations.

To set up a print job configuration, complete the following steps:

3a. Enter PRINTCON, and select "Edlt Print Job Configurations."

3b. Press <Insert>, and type the name of the print job configuration you want to add in the "Enter New Name" entry box; then press <Enter>.

Set up print job configurations

For example, you might want to set up a print job configuration to print a monthly report that requires special formatting. You could name the print job configuration "Month."

The "Edit Print Job Configuration" form appears in a format similar to the following:

Edit Print Job Configuration "Month"			
Number of copies:	1	Form name:	Ledger
File contents:	Byte stream	Print banner:	Yes
Tab size:		Name:	DEVIN
Suppress form feed:	No		
Notify when done:	No		
Local printer:	1	Enable timeout:	No
Auto endcap:	Yes	Timeout count:	
File server:	FOUR		
Print queue:	PSLASER		
Print server:	(Any)		
Device:	(None)		
Mode:	(None)		

To make changes in the job configuration, highlight the item you want to modify and press <Enter>. Make the appropriate change by typing in a new value or by choosing an item from the menu provided. Press <Enter> to save the change. For a complete explanation of each item, see the list of "Print job configuration parameters" in PCONSOLE.

3c. Once you have set up your print job configuration, press <Escape>.

3d. Select Yes to save the changes. If you want to copy this print job configuration to other users, complete Step 4.

4. Copy print job configurations.

Each user has a unique print job configuration file that stores print job configurations created by or for that user. This file, PRINTCON.DAT, is stored in the user's mail directory.

You can copy print job configurations from one user to another.

You cannot copy a single job configuration at a time. You must copy the whole file, including all job configurations. When you copy one user's print job configuration file to another user, the copied file overwrites the target user's existing file.

Since users can create their own print job configurations, be sure to check with users before copying a PRINTCON.DAT file over their existing file.

If you have just finished creating or editing print jobs, you have to exit PRINTCON and save your current print job information before copying it to other users.

To copy a print job configuration, complete the following steps:

- 4a. Enter PRINTCON and select "Copy Print Job Configurations" from the "Available Options" menu.**
- 4b. Type the name of the user (usually SUPERVISOR) whose job configuration file you want to copy in the "Source User" entry box, and press <Enter>.**
- 4c. Type the name of the user whose print job configuration file you want to replace in the "Target User" entry box, and press <Enter>. The file is copied.**
- 4d. Press <Escape> to exit PRINTCON. The second user can now use all of the first user's job configurations as his or her own.**

End of Chapter

Task Index

The task index lists all tasks that you can perform with the printing utilities. Look up the task you want to complete; then refer to the corresponding utility.

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End of Chapter

Utilities

This section contains an alphabetical listing of printing utilities. Uppercase text indicates a DOS utility (for example, NPRINT), while lowercase italics indicates an AViiON host-based utility (for example, *nwlp*).

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If your application supports network printing, you do not need to use PRINTDEF, PRINTCON, CAPTURE, and ENDCAP.

The following tables match basic tasks to the appropriate utilities and summarize what each utility can do.

Task	Software
Set up	PCONSOLE, sconsole
Run software	pserver, PSERVER, rprinter, RPRINTER, sconsole
Print files	CAPTURE, ENDCAP, NPRINT, nwl, PCONSOLE
Control printer and print server	PSC, PCONSOLE, sconsole
Customize	PRINTDEF, PRINTCON
Monitor printer and print server	PCONSOLE, pmonitor, PSC, pslist

Utility	Description
CAPTURE	Redirect print output from a DOS workstation to a network printer.
ENDCAP	Revoke the effect of the CAPTURE command.
NPRINT	Print files outside an application.
nwl	Print files outside an application from the AViON system.
PCONSOLE	Set up print configuration files and print queues, issue commands to the print server and printers. Print files.
pmonitor	See print server status from the AViON system.
PRINTCON	Simplify issuing the NPRINT and CAPTURE commands by creating print job configurations.
PRINTDEF	Define forms and print devices to create database for use in creating print job configurations.
PSC	Issue commands from DOS workstation and see status of printers and print server.
pserver	The print server on the AViON system.
PSERVER	The print server executable file for a dedicated DOS workstation.
pslist	See available print servers from the AViON system.
rprinter	Use a printer attached to the AViON system as a network printer.
RPRINTER	Use a printer attached to a DOS workstation as a network printer.

CAPTURE

(CAPTURE print queue)

Command Line
Utility



Why use CAPTURE?

Use CAPTURE to print screen displays, to save data to a network file, and to print to a network printer from an application not designed to run on a network.

Command format

CAPTURE [*option ...*]

Replace *option* with one or more of the options listed below.

S How	Form= <i>form</i> or <i>n</i>
NOT Ify	Copies= <i>n</i>
No NOTIfy	Tabs= <i>n</i>
T imeout= <i>n</i>	No Tabs
A utoendcap	No Banner
No Autoendcap	NAME = <i>name</i>
L ocal= <i>n</i>	B anner= <i>bannertext</i>
S erver= <i>filesrvr</i>	F ormFeed
Q ueue= <i>queue</i>	No FormFeed
C reate= <i>path</i>	K eep
J ob= <i>jobconfiguration</i>	

Instead of specifying these options in a CAPTURE command, you can define your preferred print options and set them up in PRINTCON as unchanging configurations. You can then use the Job option to indicate which print job configuration to use. If you do not specify options with CAPTURE, jobs are printed according to the default print job configuration defined in PRINTCON.

If no print job configurations are defined, CAPTURE follows the defaults listed with the CAPTURE options. The options are explained in the following section.

CAPTURE does not support printer numbers or print server names. Send print requests to queues rather than to printers.

CAPTURE

Command options

SHow

Include this option to view the current status of LPT (local parallel printing) ports to determine

- Whether they are captured;
- Whether they are set to send data to a network printer or to a file;
- How the CAPTURE options are set.

Including the SHow option does not affect the capture of an LPT port. You cannot use SHow with other CAPTURE options.

NOTIfy

Include this option if you want to be notified that your data has been printed. A message appears across the bottom of your screen: "*Jobname printed on Printername.*" This option does not notify you if the printer has a problem or if your job cannot be printed.

Default: NOTIfy disabled

NoNOTIfy

Include this option if you do not want to be notified that your data has been printed. Use it only if NOTIfy is enabled in your print job configuration and you want to disable it. Do not confuse this option with the notification option in PCONSOLE that informs designated users when the printer is having problems.

Default: NoNOTIfy enabled

Timeout=*n*

Include this option if you want to print from an application without exiting the application. Replace *n* with a number (1 through 1,000). The Timeout option sends data to the printer a specified number of seconds after the application last writes to a file. If your timeout is not long enough, you may have problems printing some files, especially files with graphics. Increase the timeout if only parts of files are being printed or if the files do not print at all.

Default: TI=0 (Timeout disabled)

Autoendcap

Include this option if you want to send data to a network printer or to a network file when you enter or exit an application. Autoendcap is useful if you want to save several different screens or files from the same application to the same network file. Autoendcap does not automatically end the capture of an LPT port.

Default: Autoendcap enabled

NoAutoendcap

Include this option to prevent data from being sent to a network printer or a file when you enter or exit an application. This option is useful if you want to save several screens or files from different applications to the same network file.

Default: NoAutoendcap disabled

Local=*n*

Include this option to indicate which of your workstation's LPT ports (local parallel printing ports) to capture. Replace *n* with 1, 2, or 3. The workstation doesn't need to have three physical LPT ports; these are logical connections.

Default: L=1

CAPTURE

Server=fileserv

Include this option to indicate which file server the print job should be sent to. Replace *fileserv* with the name of the file server.

Default: Your default file server

Queue=queuename

Include this option to indicate which queue the print job should be sent to. If multiple queues are mapped to a printer, you must include this option. Replace *queuename* with the name of a queue.

Default: As specified in PRINTCON. If one is not specified, you will get the message "No default queue name can be found on server SERVER_NAME."

CRate=path

Include this option to create a file in which to store data. Specify where you want to store the file (file server, volume, directory, and filename). If you want to save the file in your default (current) directory, replace *path* with the name of the file you want to create. You must use a network drive with the CRate option.

Default: None

Job=jobconfiguration

Include this option to specify which print job configuration to use. Print job configurations are created in PRINTCON. (The first is the default, unless you change it.) Replace *jobconfiguration* with the name of the print job configuration.

Default: None, unless created by PRINTCON

Form=*form* or *n*

Include this option to specify which form to print the job on. Replace *form* with the name of the form, or replace *n* with the number of the form. (You must define forms using PRINTDEF before users can use form names instead of numbers.)

Default: F=0

Copies=*n*

Include this option to indicate how many copies you want to print. Replace *n* with the number of copies (1 to 255).

Default: C=1

Tabs=*n*

Include this option if your application does not have a print formatter (most applications do). Replace *n* with a number (0 to 18). The number of spaces you specify indicates the number of characters in one tab stop.

Default: T=8

NoTabs

Include this option if your application has a print formatter (most applications produce printer-specific codes). This option ensures that all the tab characters in your print job arrive at the printer unchanged. The appearance of the tab character varies according to the printer that you use. **Use this option if you have problems printing graphics.**

Default: NoTabs disabled

CAPTURE

NoBanner

Include this option to specify that no banner page be printed.

Default: NoBanner disabled

NAME=*name*

Include this option to specify the text that appears on the upper part of the banner page. Replace *name* with any word or phrase up to 12 characters long.

Default: The username you used to log in

Banner=*bannername*

Include this option to specify the text that appears on the lower part of the banner page. Replace *bannername* with any word or phrase up to 12 characters long. You can use an underline character to represent a space between words (for example, ON_THE_GO); however, the underline character will be printed.

Default: B=LST:

FormFeed

Include this option to enable a form feed after your print job has been printed. FormFeed enabled means that the printer starts printing the next job at the top of the next sheet of paper. However, if an application automatically enables form feed at the end of a file, adding this option causes an extra blank page to be fed through.

Default: FormFeed enabled

NoFormFeed

Include this option to disable form feed.

Default: NoFormFeed disabled

Keep

Include this option to ensure that the file server keeps all data it receives from your workstation if your workstation hangs or loses power while you are capturing data to the file server. When the file server notices your workstation is no longer connected, it sends the data it received from your workstation to a print queue for printing. Use this option if you plan to capture data over several hours.

If you do not include the Keep option and your workstation hangs during the capture, the file server discards the data it has received.

Default: Keep disabled

CAPTURE

Print screen displays

To print information displayed on your screen, follow these steps.

1. Before you access the screen that you want to print, type

```
CAPTURE [option ...] <Enter>
```

You can include any of the CAPTURE options except SHow.

2. Access the screen you want to print.

3. Press <Shift><Print Screen>.

Your workstation might hang if you press the <Shift> <Print Screen> keys when none of your LPT ports are captured and no local printers are attached to your workstation. To prevent this, include the following in the SHELL.CFG file on your workstation boot diskette:

```
LOCAL PRINTERS = 0
```

4. If you want to print more screens, repeat Steps 2 and 3.

5. When you have selected the screens you want printed, return to the DOS prompt and type the following:

```
ENDCAP <Enter>
```

ENDCAP sends your print job to the default print queue of your default file server, and the job is printed. ENDCAP also ends the capture of your LPT port.

Save data to a network file

To save information displayed on your screen to a network file, follow these steps:

1. Type

```
CAPTURE CR=path [option ...] <Enter>
```

Replace *path* with a network directory path, including the filename where you want to save a file. You can include any of the CAPTURE options except SHow.

2. Access the screen you want to print.
3. Press <Shift><Print Screen>.
4. If you want to save additional screens to the file, repeat Steps 2 and 3.
5. Return to the DOS prompt.
6. To end the capture of your LPT1 port, type

```
ENDCAP <Enter>
```

Save data from several applications

Suppose you want to move in and out of applications saving data from each application, and have all the data stored in one file called TESTFILE in your default directory. Use the CReate and the NoAutoendcap options. Type

```
CAPTURE CR=TESTFILE NA <Enter>
```

Use <Shift><Print Screen> in each application and ENDCAP to close the file when you are finished.

CAPTURE

Save data to a file server you are not attached to

If you specify a file server you are not attached to in your CAPTURE command, CAPTURE will attach you as user GUEST unless one of the following applies:

- GUEST requires a password. In this case, you are prompted to enter a username and password.
- GUEST has no effective rights to the file server's print queue or disk space. In this case, you cannot create or send a file to that queue or disk space.

Print to a network printer

To print to a network printer from an application that is not designed to run on a network, follow these steps:

1. Type

CAPTURE [OPTIONS] <Enter>

You can include any of the CAPTURE options except SHow.

2. Enter your application.

3. Print your data using the print keys for your application.

Your application sends the print job to the LPT DOS devices. Before it arrives, CAPTURE redirects it to the default print queue of your default file server.

4. When you have finished printing the files you need, exit the application.

If Autoendcap is enabled, your job is queued when you exit the application. If Timeout is enabled, the job is sent to the print queue in the specified number of seconds.

5. To end the capture of your LPT port, type

ENDCAP <Enter>

Print data without exiting an application

Use the Timeout option to print from an application without exiting it. You can use the NOTIfy option if you want to know when your job has been printed. Type

```
CAPTURE TI=2 NOTI <Enter>
```

Two seconds after the application last writes to the file, CAPTURE sends your print job to the default print queue of your default file server, and the job is queued. A message appears across the bottom of your screen: "LPT1 Catch printed on *printername*."

Print data to different LPT ports

Suppose you often use CAPTURE to print from two applications: AppA and AppB. AppA cannot designate which LPT port to send print jobs to; therefore, it sends print jobs to LPT1. However, AppB has a SETUP program that allows you to designate an LPT port.

Suppose also that AppA requires a different form than AppB and that you want form A (for AppA) in Printer1 and form B (for AppB) in Printer2. Use SETUP in AppB to send your data through LPT2 to Printer2. Printer1 services Queue1 and Printer2 services Queue2.

When you capture data from AppA, type

```
CAPTURE L=1 Q=QUEUE1 FORM=FORMA <Enter>
```

When you capture data from AppB, type

```
CAPTURE L=2 Q=QUEUE2 FORM=FORMB <Enter>
```

You can add other options to these commands.

End the CAPTURE command

The data you have captured is not printed or sent to a file unless you end CAPTURE and send your data to a network printer or a file. End CAPTURE and send data by using one of the following:

- Autoendcap option
- Timeout option
- ENDCAP command

The Autoendcap option is the default setting for CAPTURE. Autoendcap sends data to the printer when (but not until) you exit an application. Autoendcap is useful if you want to save several different screens or files from the same application to the same network file. A new capture session starts automatically.

The Timeout option sends data to the printer a specified number of seconds after the application last writes to a file. Timeout is useful if you want to print from an application without exiting. After the specified amount of time, a new capture session starts automatically.

The ENDCAP command performs two functions:

- Sends data to the printer
- Ends the capture of an LPT port

To use ENDCAP effectively to send data to the printer, disable the Autoendcap and the Timeout options in CAPTURE:

```
CAPTURE NA TI=0 <Enter>
```

The data will not be sent to the printer until you enter the ENDCAP command at the DOS prompt.

Use CAPTURE in your login script

If you want CAPTURE to be activated when you log in, you can add a CAPTURE command to the system login script or to a user login script. In the login script, type

```
#CAPTURE TI=N
```

or

```
#CAPTURE A
```

You can include any other command options you want. If you include the Timeout or Autoendcap option in the login script, just press <Shift> <Print Screen> to print.

If you type a CAPTURE command at the DOS prompt, it overrides the command in your login script.

System login script

Suppose you want to include a CAPTURE command in the system login script for group ADMIN so members can use Printer0 on server MKTG. You need to know which queue is mapped to Printer0. For this example, Queue0 is mapped to Printer0. You also want a timeout of 3 seconds and no banner. Place the following in the system login script:

```
IF MEMBER OF "ADMIN" THEN BEGIN
#CAPTURE S=MKTG Q=QUEUE0 TI=3 NB
END
```

User login script

Suppose a user often prints from a non-network application by using CAPTURE. The user uses Printer1, which services Queue1. The user wants to print the file without a banner or a form feed and wants it to go to the print queue 5 seconds after the application last writes to the file. Place the following in the user login script:

```
#CAPTURE Q=QUEUE1 NB NFF TI=5
```

ENDCAP

(END CAPture)

Command Line
Utility



Why use ENDCAP?

Use ENDCAP to end the capture of one or more of your workstation's LPT ports (local parallel printing ports). You can also use ENDCAP to send data to a network printer or a file. (You will always use CAPTURE before using ENDCAP; see CAPTURE.)

Command format

ENDCAP [*option* ...]

Replace *option* with one or more of the options listed below. If you do not specify an option, ENDCAP ends the capture of LPT1.

Command options

Local=*n*

Include this option to end the capture of the specified LPT port. Replace *n* with 1, 2, or 3.

Default: Local=1

ALL

Include this option to end the capture of all LPT ports with one ENDCAP command.

Default: ALL disabled

Cancel

Include this option to end the capture of LPT1 and to discard any data without printing it.

Default: Cancel disabled

CancelLocal=*n*

Include this option to end the capture of the specified LPT port and to discard any data without printing it. Replace *n* with 1, 2, or 3.

Default: CancelLocal disabled

Cancel ALL

Include this option to end the capture of all LPT ports and to discard any data without printing it.

Default: Cancel ALL disabled

End the capture of an LPT port

The following steps explain how to capture an LPT port (in this case LPT1, the default parallel printing port) and how to end the capture of that port.

1. Type

CAPTURE <Enter>

2. You can view the status of the LPT ports and the default print settings for CAPTURE by typing

CAPTURE SH <Enter>

Information similar to the following appears:

```
LPT1: Capturing data to server SALES queue PSLASER.
      User will not be notified after the files are printed.
      Capture Defaults:Enabled      Automatic Endcap:Enabled
      Banner :LST:                   Form Feed      :Yes
      Copies :1                      Tabs           :No conversion
      Form   :0                      Timeout Count  :Disabled

LPT2: Capturing Is Not Currently Active.

LPT3: Capturing Is Not Currently Active.
```

3. To end the capture of LPT1, type

ENDCAP <Enter>

NPRINT

(Network PRINTer)

Command Line
Utility



Why use NPRINT?

Use NPRINT to print files from outside an application to a network printer. These files must be DOS text files or files that have been formatted by an application for your specific printer.

Command format

NPRINT *path* [*option* ...]

Replace *path* with a directory path leading to and including the name of the file you want to print. You can print several files by including the names of files separated by commas or by using wildcard characters. (Each NPRINT command can be no more than 128 characters long.)

Replace *option* with one or more of the options listed below.

PrintServer = <i>printserver</i>	NoBanner
Server = <i>fileserver</i>	NAME = <i>name</i>
Queue = <i>queue name</i>	Banner = <i>bannertext</i>
Job = <i>job configuration</i>	NoFormFeed
Form = <i>form</i> or <i>n</i>	FormFeed
Copies = <i>n</i>	Delete
Tabs = <i>n</i>	
NoTabs	

If you don't specify any options in the NPRINT command, your data will be printed according to the default print job configuration defined in PRINTCON. Instead of specifying options in NPRINT, you can define your preferred print options by defining a default print job configuration in PRINTCON. You then use the Job option to indicate which print job configuration you want to use. If no print job configurations are defined, NPRINT follows the defaults listed with the NPRINT options. The options are explained in the following section.

Command options

PrintServer=*printserver*

Include this option to specify which print server the data should be sent to. Replace *printserver* with the name of a print server.

Default: None

Server=*fileserver*

Include this option to indicate which file server the data should be sent to. Replace *fileserver* with the name of the file server.

Default: Your default server

Queue=*queuename*

Include this option to indicate which queue the print job should be sent to. Replace *queuename* with the name of the queue.

Default: None, unless you have created a print job configuration in PRINTCON

NPRINT

Job=*jobconfiguration*

Include this option to specify which print job configuration to use. You can define job configurations using PRINTCON. Replace *jobconfiguration* with the name of the print job configuration.

Default: None, unless the first job configuration created in PRINTCON is the default

Form=*form* or *n*

Include this option to specify which form to print your job on. Replace *form* with the name of the form, or replace *n* with the number of the form. (You must define forms in PRINTDEF before users can use this option.)

Default: None

Copies=*n*

Include this option to indicate how many copies you want to print. Replace *n* with the number of copies (1 to 255).

Default: C=1

Tabs=*n*

Include this option if your application does not have a print device driver (most applications produce printer-specific codes). Replace *n* with a number (0 to 18). The number of spaces you specify replaces all tab characters in your print job.

Default: T=8

NoTabs

Include this option if your application has a print device driver (most applications do). This option ensures that all the tabs in your print job arrive at the printer unchanged. However, the appearance of the tab character varies according to the printer you use.

Default: NoTabs disabled

NoBanner

Include this option to specify that no banner page be printed.

Default: NoBanner disabled

NAME=*name*

Include this option to specify the text that appears on the upper part of the banner page. Replace *name* with up to 12 characters.

Default: The username used to log into the fileserver where the print queue is

Banner=*bannername*

Include this option to specify the text that appears on the lower part of the banner page. Replace *bannername* with any word or phrase up to 12 characters long. You can use an underline character to represent a space between words (for example, ON_GO); however, the underline character will be printed.

Default: The name of the file you are printing

NPRINT

FormFeed

Include this option to enable form feed after your print job is printed. FormFeed enabled means the printer starts printing the next job at the top of the next sheet of paper. However, if an application automatically enables form feed at the end of a file, including form feed causes an extra blank page to be fed through.

Default: FormFeed enabled

NoFormFeed

Include this option to disable form feed at the printer.

Default: NoFormFeed disabled

Delete

Include this option to automatically erase the file after you print it.

Default: Delete disabled

nwlp
(netware line printer)

Host
Utility



Why use *nwlp*?

Use *nwlp* to print files from outside a DG/UX application to a NetWare print queue.

Command format

To print a print-ready file:

```
nwlp -s server -q print-queue [options ...] filename
```

To print input piped from a UNIX command or program:

```
unix-cmd|nwlp -s server -q print-queue [options ...]
```

Replace *server* with the name of a NetWare file server that the AViiON system can communicate with.

Replace *print-queue* with the name of a valid NetWare queue defined on the specified server. The queue can be serviced by the AViiON system's printer server, a "native" NetWare server, or a PSERVER running somewhere on the network.

Replace *option* with one or more of the following options.

-b (no banner)	-c copies
-d description	-e (no extra page)
-n banner_name	-p password
-q print_queue	-r (no conversion)
-s file_server	-u user_name

The next section explains individual command options.

Replace *filename* with the name of a print-ready file you want to print.

Command options

-b (no banner)

Include this option to prevent printing of the NetWare banner page.

Default: Banner

-c copies

Include this option to specify the number of copies of a file you want printed (from 1 to 255).

Default: 1

-d description

Include this option to add descriptive text to the top of the NetWare banner page. You can use any text for the description, including spaces; to use spaces, you must either precede each space with a backslash (\), or enclose the string in single quotation marks.

Default: There is no default description

-e (no extra page)

Include this option to prevent nwlp from feeding an extra page after printing your file.

Default: Form feed

-n banner_name

Include this option to change the default name on the NetWare banner page.

You can use any text for the banner, including spaces; to use spaces, you must either precede each space with a backslash (\), or enclose the string in single quotation marks.

Default: Your UNIX username (that is the name of the user running nwlp).

-p password

The nwlp utility normally sends a job to print under the username GUEST with no password. If the file server has no GUEST username, you can print to the file server only if you specify a NetWare username and password that is valid on the file server. If you have a valid NetWare username and password on the file server, specify them with the -u and -p options.

Default: Nothing

-q print_queue

Include this option to specify the queue where you send this print job.

Default: None

-r (no conversion)

Include this (raw) option to prevent nwlp from converting UNIX text files to DOS text files.

Default: Converts each new-line character to the DOS characters for carriage return and new-line.

nwlp

-s file_server

Include this option to specify the file server where the queue resides.

Default: None

-u user_name

The *nwlp* utility normally sends a job to print under the username GUEST with no password. If the file server has no GUEST username, you can print to the file server only if you specify a NetWare username and password that is valid on the file server. If you have a valid NetWare username and password on the file server, specify them with the *-u* and *-p* options.

Default: None

Additional information

The setup of the file server and printer server determines which printer *nwlp* uses to print your job. You can print to printers attached to the AViiON server, printers attached to "native" file servers, to VAP, NLM, or dedicated PSERVERS, or printers attached to client PCs (through a PSERVER). The *nwlp* utility does no formatting, so whatever file you print must be printer-ready for the type of printer to which you are sending it.

If *nwlp* encounters an error, it indicates possible causes of the problem. NetWare API errors are documented in the file `/usr/include/nwerrors.h` on the AViiON server.

If *nwlp* aborts before terminating normally, NetWare connections may not be released. These connections will time out in 15 minutes. If you reach the connection limit for your server, you can break the connections with the FCONSOLE client utility.

Print a UNIX file

To print a UNIX file called `new_products.1992` to the server HARLEY's queue called LASER, type

```
nwlp -s HARLEY -q LASER new_products.1992 <Enter>
```

The nwlp utility uses the NetWare user GUEST for this request.

Print specifying username and banner name

To print a file named `BILS.ACCT` to server MONEYBAGS's queue LPT, using the username brandall (with password buggy) and the banner text, "Unpaid", type

```
nwlp -s MONEYBAGS -q LPT -u brandall -p buggy  
-n 'Unpaid' BILS.ACCT <Enter>
```

Print using piped input

Suppose you want to print a directory file listing to the LPT queue on server HARLEY, as user SUPERVISOR with password \$super.pw. You can pipe to the nwlp command. Type

```
ls |nwlp -s HARLEY -q LPT -u SUPERVISOR -p $super.pw  
<Enter>
```

PCONSOLE

(Printer CONSOLE)

Menu
Utility



Why use PCONSOLE?

Use PCONSOLE to set up the print server and print queues, to control network printing, and to view information about network printing.

Available Options
Change Current File Server
Print Queue Information
Print Server Information

Change Current File Server

Use this option to attach to or log out of file servers, to select the current file server, or to change your username on the file server. For a complete list of tasks, see "Change Current File Server tasks" on page 5-29.

Print Queue Information

Use this option to complete print queue tasks, including creating queues, assigning operators and users, authorizing print servers, handling print jobs, and viewing information. For a complete list of tasks, see "Print Queue Information tasks" on page 5-31.

Print Server Information

Use this option to set up, delete, or configure print servers; attach to file servers; define and control printers; assign operators and users; and view print server information. For a complete list of tasks, see "Print Server Information tasks" on page 5-50.

Change Current File Server tasks

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Log out of additional file servers	5-29
Select the current file server	5-30
Change to a different username on additional file servers	5-30

Attach to file servers

You must be attached to a file server to perform PCONSOLE tasks for that file server.

1. Enter PCONSOLE and select “Change Current File Server” from the “Available Options” menu.

A list of the file servers you are attached to appears.

2. Press <Insert> to list the available file servers.
3. Select the appropriate file server from the “Other File Servers” list.
4. Type your username in the “User Name” entry box; then press <Enter>.
5. If the username you enter has a password, the “Password” entry box appears. Type the password and press <Enter>.

Log out of additional file servers

You cannot log out of your default file server in PCONSOLE. To log out of other file servers, complete the following steps:

1. Enter PCONSOLE and select “Change Current File Server” from the “Available Options” menu.

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2. Highlight a file server in the “File Server/User Name” list, or use <F5> to mark multiple servers; then press <Delete>.
3. Select Yes from the “Logout From Server” (or “Logout From All Marked Servers”) box.

Select the current file server

Before you can complete PCONSOLE tasks for a file server, select that file server as your current server.

1. Enter PCONSOLE and select “Change Current File Server” from the “Available Options” menu.
2. Select a file server from the “File Server/User Name” list.

To select a file server that you are not currently logged in to, press <Insert>, select the file server you want, press <Enter>, and respond to any username and password prompts.

Change to a different username on additional file servers

To access information on another file server, you can enter a username other than your own if you know the password for the other username. However, you cannot change your username on the default file server.

1. Enter PCONSOLE and select “Change Current File Server” from the “Available Options” menu.
2. Highlight the file server on which you want to specify a different username; then press <F3>.
3. Type the new username in the “New User Name” entry box and press <Enter>.

If the username has a password, the “Password” entry box appears. Type the password and press <Enter>.

Print Queue Information tasks

Create, delete, or rename queues

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Print queue operators and print queue users

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PCONSOLE

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Place a hold on a print job 5-47

View print queue information

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View a print queue's object ID 5-48

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Create print queues

Create a print queue by completing the following steps. After you create the queue, you must assign the queue to a printer. See "Assign queues to printers."

You can assign queues only to print servers that have already been created. See "Create print servers."

1. Enter **PCONSOLE** and select "Print Queue Information" from the "Available Options" menu.
2. Press <Insert> and type a name for the new queue in the "New Print Queue Name" box. Then press <Enter>.

Delete print queues

1. Enter **PCONSOLE** and select "Print Queue Information" from the "Available Options" menu.
2. Highlight the queue to be deleted in the "Print Queues" list and press <Delete>.
3. Select **Yes** in the confirmation box.

Rename print queues

When you rename a queue, you must also rename it in any CAPTURE commands in batch files, login scripts, etc.

You can rename a print queue by completing the following steps:

1. Enter PCONSOLE and select “Print Queue Information” from the “Available Options” menu.
2. Highlight the queue in the “Print Queues” list whose name you want to change; then press <F3>.
3. Use the Backspace key to delete the old name from the “Rename Print Queue To” list. Type the new name and press <Enter>.

Assign queue operators

When you create a queue using PCONSOLE, you can specify which users control the queue. The user SUPERVISOR is automatically assigned as a queue operator.

Users designated as print queue operators can edit any other user’s print queue entry information, delete any print job from the queue (even if it is in the process of being printed), and modify the queue status by changing the operator flags. Queue operators can also change the order in which print jobs are serviced.

You can assign queue operators by completing the following steps:

1. Enter PCONSOLE and select “Print Queue Information” from the “Available Options” menu.
2. Select the queue to be assigned from the “Print Queues” list.
3. Select “Queue Operators” from the “Print Queue Information” menu.

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4. Press <Insert> to display the “Queue Operator” list.
5. Highlight the users or groups you want to designate as queue operators and press <Enter>.

Use <F5> to select multiple users or groups.

Remove queue operators

You can remove queue operators from a queue as follows:

1. Enter PCONSOLE and select “Print Queue Information” from the “Available Options” menu.
2. Select the queue to be assigned from the “Print Queues” list.
3. Select “Queue Operators” from the “Print Queue Information” menu.
4. Highlight the queue operator to be deleted and press <Delete>.

Assign queue users

When you create a queue using PCONSOLE, you can specify which users can send print jobs to the queue. The group EVERYONE is automatically assigned as a queue user.

You can assign queue users by completing the following steps:

1. Enter PCONSOLE and select “Print Queue Information” from the “Available Options” menu.
2. Select the appropriate queue from the “Print Queues” list.
3. Select “Queue Users” to display the “Queue Users” list.

4. Press <Insert> to access the “Queue User” list.
5. Select the users or the groups you want to assign as queue users.

Use <F5> to select multiple users or groups.

Remove queue users

If you want to restrict those who can use a queue, remove group EVERYONE from the queue. You can remove queue users from a print queue by completing the following steps:

1. Enter PCONSOLE and select “Print Queue Information” from the “Available Options” menu.
2. Select a queue from the “Print Queues” list.
3. Select “Queue Users” from the “Print Queue Information” menu.
4. Highlight the users or groups you want to remove as users of the queue; then press <Delete>.

Use <F5> to highlight multiple users or groups.

5. Select Yes at the confirmation box.

Change operator flags

You can change the following operator flags from the current queue status menu.

Users can place entries in queue

If the queue operator sets this flag to No, users cannot submit jobs to the queue.

Servers can service entries in queue

If the queue operator sets this flag to No, the print server cannot service jobs in the queue.

New servers can attach to queue

If the queue operator sets this flag to No, additional print servers cannot attach to the queue.

1. Enter PCONSOLE and select "Print Queue Information" from the "Available Options" menu.
2. Select the queue whose operator flags you want to change from the "Print Queues" list.
3. Select "Current Queue Status" from the "Print Queue Information" menu.
4. Highlight the flag you want to change. Type "Y" for Yes or "N" for No.

Authorize a print server to service a queue

A print server takes print jobs from the queue and sends them to the printer. Before you can add a print server to a queue, you must create the print server. See "Create print servers."

Note: Assigning a print queue to a print server printer automatically authorizes the print server to service the queue.

1. Enter PCONSOLE and select "Print Queue Information" from the "Available Options" menu.
2. Select a queue from the "Print Queues" list.
3. Select "Queue Servers" from the "Print Queue Information" menu.
4. Press <Insert> to access the "Queue Servers" list.
5. Select the queue servers you want to add. Use <F5> to highlight multiple servers as queue servers.

Remove print servers from a queue

You can remove print servers by completing the following steps:

1. Enter PCONSOLE and select "Print Queue Information" from the "Available Options" menu.
2. Select a queue from the "Print Queues" list.
3. Select "Queue Servers" from the "Print Queue Information" menu.
4. Highlight the print server name in the "Queue Servers" list and press <Delete>.

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- 5. Select Yes at the confirmation box.**

View currently attached print servers

Only print servers that are attached to a queue can service that queue. (For an explanation of print servers, see "Create print servers.") To see which servers are currently attached to a queue, complete the following steps:

- 1. Enter PCONSOLE and select "Print Queue Information" from the "Available Options" menu.**
- 2. Select from the "Print Queues" list the print queue whose attached print servers you want to view.**
- 3. Select "Currently Attached Servers."**

The print server must be completely configured and running in order to be listed.

List the jobs in a queue

To see which jobs are waiting in a queue to be printed, complete the following steps:

- 1. Enter PCONSOLE and select "Print Queue Information" from the "Available Options" menu.**
- 2. Select from the "Print Queues" list the print queue whose jobs you want to view.**
- 3. Select "Current Print Job Entries" from the "Print Queue Information" menu.**

Print a file

To print a file, choose the queue you want the file sent to. Then choose the file you want to print, specifying file server, volume, and directory as necessary. Finally, define the way the job is printed by setting your own print job configurations or by choosing the PCONSOLE defaults. (See "Set print job parameters.")

Print queue operators cannot add a print job to a queue unless they are also queue users.

To send a file to a print queue, complete the following steps:

Choose the queue

1. Enter PCONSOLE and select "Print Queue Information" from the "Available Options" menu.
2. Select from the "Print Queues" list the print queue you want the print job sent to.
3. Select "Current Print Job Entries" from the "Print Queue Information" menu.
4. Press <Insert> to add a print job entry.

The "Select Directory to Print From" entry box displays your current directory path.

- To print a file contained in your current directory, press <Enter>. Go to "Choose the file" (Step 11).
- If you want to print from another directory, use the Backspace key to erase the current directory path; then type the new directory path in the entry box. Skip to Step 11.
- If you do not know the directory path, complete the following sections as needed. For example, if you know the name of the file server and the volume, type them and go to "Choose directories" below.

Choose the file server

5. Use the Backspace key to delete the contents of the "Select Directory to Print From" box.
6. Press <Insert> to display a list of the available file servers and local drives.
7. Select the file server or the local drive that contains the file you want to print.

The file server or the local drive is added to the directory path in the "Select Directory to Print From" entry box, and the "Volumes" list appears.

Choose the volume

8. Select the volume or the local directory that contains the file you want to print.

The volume is added to the "Select Directory to Print From" box, and the "Network Directories" list appears.

Choose a directory

9. Select a directory.

The directory is added to the "Select Directory" box.

10. Repeat Step 9 as many times as necessary to complete the directory path; then press <Escape>.

Choose the file**11. Press <Enter>.**

The "Available Files" list appears.

12. Select the file you want to print.

Use <F5> to select multiple files.

13. Select the print job definition you would like to use and press <Enter> at the "Print Job Configurations" window.

The "New Print Job to be Submitted" window appears. Use the arrow keys to move around the window. Change parameters if you need to.

Some of the values defined in PRINTCON are also used in PCONSOLE. They include "Number of copies," "File contents," "Tab size," "Suppress form feed," "Form," "Print banner," "Banner name," and "Banner file."

Other parameters can also be defined using PCONSOLE. They include "Description," "User Hold," "Operator Hold," "Server Sequence," "Job entry date," "Defer printing," "Target server," "Target date," and "Target time." For an explanation of the parameters you can change or set, see "Print job parameter definitions."

14. Press <Escape>.**15. Select Yes to save changes.**

The print jobs are entered into the queue.

Modify parameters for an existing print job

To modify parameters you have already set, complete the following steps:

1. Enter PCONSOLE and select "Print Queue Information" from the "Available Options" menu.
2. Select from the "Print Queues" list the print queue you want the print job sent to.
3. Select "Current Print Job Entries" from the "Print Queue Information" menu to view the contents of the queue.
4. Select a print job already in the queue.
5. Modify existing parameters.

You can modify any field in the "Print Queue Information" list that you can highlight. Use the arrow keys or the Enter key to move to the field you want to modify.

Some fields have lists from which you can choose print job configuration parameters. For example, when you are choosing the form name, press <Enter>. If you have defined multiple forms in PRINTDEF, a list appears displaying the form names from which you can choose.

6. After you have modified the print definition, press <Escape>.

Print job parameter definitions

You can change or set the following parameters:

Description

You can enter a description of the file you are printing for identification purposes. Press <Enter> to edit the field. The default is the filename.

User Hold

You can put your print job on hold. If you do, the file is not printed until you remove the hold. The "User Hold" parameter can be changed by either the owner of the print job (the person who submitted it) or a print queue operator. Type "Y" for Yes to place a hold on the job; type "N" for No to remove the "User Hold" parameter.

Operator Hold

The "Operator Hold" parameter can be changed only by a print queue operator. If the "Operator Hold" parameter is set to Yes, the job is not printed until the operator resets the parameter to No.

Server Sequence

If you are a print queue operator, you can change the "Server Sequence" parameter. The service sequence is the position of the print job in the print queue. Print queue operators can place a high-priority job in the first position in the queue and rearrange the order of print jobs (with 1 being the next job to print).

Number of copies

You can choose the number of copies you want printed.

File contents

You can choose either "Text" or "Byte stream." Choose "Text" when you want tabs to be expanded (see "Tab size" below). Choose "Byte stream" if you are printing a file created with an

PCONSOLE

application, and you want the application to use its formatting commands to print the document. Also choose "Byte stream" for graphics files.

Tab size

If you chose "Text" (from the "File contents" menu), use the "Tab size" field to specify the number of spaces you want the tabs in your file set to.

Suppress form feed

If you want the printer to advance to the top of the next page after your print job, set this parameter to No. If you don't want the printer to advance to the top of the next page, set it to Yes.

Some applications have a form feed at the end of the file, so adding another causes an extra blank page to be fed through the printer.

Defer printing

If you want the job to be printed as soon as possible, set this parameter to No. If you want to print the job later, set it to Yes. If it is set to Yes, you can enter a target date and time for printing. (See "Target date" and "Target time" in this list of parameters.)

Target server

You can specify which print servers will print jobs in the queue. Specify "(Any Server)" if it doesn't matter which print server prints the job.

Form

You can choose the form number or form name you want the job printed on. (Form names are defined in PRINTDEF.)

Print banner

If you want a banner page printed before the file, set this parameter to Yes. If not, set it to No.

Banner name

If you choose to print a banner page, you can enter text up to 12 characters long in the "Banner name" box. It is printed in the first large print area of the banner. Your username is the default.

Banner file

If you choose to print a banner page, enter any text you want in the "Banner file" box. It is printed in the second large print area of the banner. Your filename is the default.

Target date

Enter the date you want your job printed on. (You can set this option only if "Defer printing" is set to Yes.)

Target time

Set the time at which you want your job printed. (You can set this option only if "Defer printing" is set to Yes.)

The job entry date and time, print job number, file size, and client name cannot be changed.

Delete a print job

You can cancel a print job by deleting it from the print queue (even after the job has started printing). You can delete a print job only if you are the owner of the job or if you are a print queue operator.

To delete a print job, complete the following steps:

1. Enter **PCONSOLE** and select **“Print Queue Information”** from the **“Available Options”** menu.
2. Select the print queue whose entries you want to view from the **“Print Queues”** list.
3. Select **“Current Print Job Entries.”**
4. Highlight the print job entry and press **<Delete>**.

Use **<F5>** to select multiple jobs.
5. Select **Yes** at the confirmation box.

Change the order of print jobs

To change the order of print jobs, the print queue operator must change the **“Server Sequence”** number. (See **“Server Sequence.”**)

1. Enter **PCONSOLE** and select **“Print Queue Information”** from the **“Available Options”** menu.
2. Select from the **“Print Queues”** list the print queue containing the file whose order in the queue you want to change.
3. Select **“Current Print Job Entries”** from the **“Print Queue Information”** menu.

4. Select the print job entry you want to move.
5. Highlight the “Service Sequence” parameter in the “Print Queue Entry Information” menu.

Type “1” to move the entry to the top of the queue, or type the number of the position you want to place the print job entry in. Press <Escape> twice.

The queue contents appear, and the print job entry is in the position you specified.

Place a hold on a print job

Print queue operators can put an “Operator Hold” on a file. The file is not printed until the operator removes the hold. Similarly, users can place a “User Hold” on a file, and the file is not printed until the user or the print queue operator removes the hold.

1. Enter PCONSOLE and select “Print Queue Information” from the “Available Options” menu.
2. Select the print queue in which the print job entry is located.
3. Select “Current Print Job Entries” from the “Print Queue Information” menu

The contents of the queue appear.

4. Select the print job entry whose printing you want to put on hold.
5. Highlight the “Operator Hold” or “User Hold” field in the “Print Queue Entry Information” menu . Type “Y” for Yes and press <Enter>.

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6. Press <Escape>.

If the job is not in the queue, the confirmation box appears. If the job is already in the queue, any changes you make are implemented without confirmation.

7. Select Yes to save your changes.

The status field now displays "Held."

View print queue status

You can view the number of entries in a queue and the number of print servers attached to the queue. If you are a print queue operator, you can also change the operator flags.

1. Enter PCONSOLE and select "Print Queue Information" from the "Available Options" menu.
2. Select the print queue whose status you want to view from the "Print Queues" list.
3. Select "Current Queue Status".

View the number of entries in the queue, the number of servers attached to the queue, and the operator flag information.

View a print queue's object ID

A print queue's object ID is a number that distinguishes the queue from all other objects (print servers, file servers, other print queues, and so on).

1. Enter PCONSOLE and select "Print Queue Information" from the "Available Options" menu.

A list of the defined print queues appears.

2. Select the print queue whose ID number you want to view from the “Print Queues” list.
3. Select “Print Queue ID” to view the “Print Queue ID” inset.

View the print queue servers

The print queue servers that are allowed to service a selected queue are listed in the “Print Queue Servers” inset. Not all these servers can service the queue, however. A print server cannot service a queue it is not attached to. (See “Authorize a print server to service a queue.”)

To see the print servers to which a queue is attached, complete the following steps:

1. Enter PCONSOLE and select “Print Queue Information” from the “Available Options” menu.

The “Print Queues” list appears.

2. Select the print queue whose print servers you want to view.
3. Select “Queue Servers” from the “Print Queue Information” menu.

The “Queue Servers” list appears.

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Create print servers

A print server takes the print jobs from the queue and sends them to the printer. If the print server is servicing queues on multiple file servers, you must create a print server account on each file server.

To create a print server, complete the following steps:

1. **Enter PCONSOLE and select “Print Server Information” from the “Available Options” menu.**

The “Print Servers” menu appears.

2. **Press <Insert>.**

The “New Print Server Name” entry box appears.

3. **Type the print server name you want and press <Enter>.**

The new name is added to the menu.

Delete print servers

To delete a print server, complete the following steps:

1. **Enter PCONSOLE and select “Print Server Information” from the “Available Options” menu.**

The “Print Servers” menu appears.

2. **Highlight the print server name you want to delete and press <Delete>.**

The “Delete Print Server” confirmation box appears.

3. **Select Yes to delete the print server name.**

Rename print servers

To rename a print server, complete the following steps:

1. Enter PCONSOLE and select "Print Server Information" from the "Available Options" menu.

The "Print Servers" menu appears.

2. Press <F3> to rename the print server.

The "Rename Print Server To" entry box appears.

3. Type the name you want and press <Enter>.

Select the password for the print server

You can choose whether or not to require a password to bring up the print server. If the print server is servicing queues on multiple file servers, select a password for each file server. To assign or change the password, complete the following steps:

1. Enter PCONSOLE and select "Print Server Information" from the "Available Options" menu.
2. Select the print server whose password you want to select or change.
3. Select "Change Password" from the "Print Server Information" menu.
4. Type the new password in the "Enter New Password" entry box and press <Enter>.
5. Retype the password in the "Retype New Password" entry box and press <Enter>.

Assign the print server's full name

You can assign a print server's full name by completing the following steps. If the print server is servicing queues on multiple file servers, select a full name for each file server.

1. Enter PCONSOLE and select "Print Server Information" from the "Available Options" menu.
2. Select the print server whose full name you want to view from the "Print Servers" list.
3. Select "Full Name" from the "Print Server Information" list.
4. Add, delete, or change the name in the "Full Name" entry box and press <Enter>.

Attach a print server to a file server

You can assign a print server to a file server by completing the following steps. The attachment will not take effect, however, until the print server is brought down and restarted.

1. Enter PCONSOLE and select "Print Server Information" from the "Available Options" menu.
2. Select a print server from the "Print Servers" list.
3. Select "Print Server Configuration" from the "Print Server Information" list.
4. Select "File Servers To Be Serviced" from the "Print Server Configuration" menu.
5. Press <Insert> at the "File Servers To Be Serviced" list to view the available file servers and select a file server from the "Available File Servers" list.

View the print server's object ID

The print server's object ID is a number that distinguishes the print server from all other objects (file servers, printers, print queues, and so on).

1. Enter PCONSOLE and select "Print Server Information" from the "Available Options" menu.

The "Print Servers" list appears.

2. Select the print server whose object ID you want to view.

The "Print Server Information" list appears.

3. Select "Print Server ID."

View print server information

Follow these steps to view print server information, including version, type, serial number, and current status. You can also view the number of printers and the queue service modes.

1. Enter PCONSOLE and select "Print Server Information" from the "Available Options" menu.
2. Select a print server from the "Print Servers" list.
3. Select "Print Server Status/Control" from the "Print Server Information" menu.
4. Select "Server Info" from the "Print Server Status and Control" menu.

Bring down a print server

To bring down the print server, complete the following steps:

1. Enter PCONSOLE and select "Print Server Information" from the "Available Options" menu.

2. Select a print server from the "Print Servers" list.
3. Select "Print Server Status/Control" from the "Print Server Information" menu.
4. Select "Server Info" from the "Print Server Status and Control" menu.
5. Press <Enter> at the "Print Server Info/Status" box.
6. Select "Down" to bring down the server at once.

Select "Going down after current jobs" to bring down the server after current jobs are printed.

Add printers to the print server

A print server can contain up to 16 printers. Since you can have up to 4 print servers, NetWare for AViiON Systems can support up to a total of 64 printers.

To assign printers to a print server, complete the following steps:

1. Enter PCONSOLE and select "Print Server Information" from the "Available Options" menu.
2. Select a print server from the "Print Servers" list.
3. Select "Print Server Configuration" from the "Print Server Information" list.
4. Select "Printer Configuration" from the "Print Server Configuration" menu.
5. Select a "Not Installed" printer from the "Configured Printers" list.
6. Type a name for the printer or leave the default name.

7. Select the "Type" field; then press <Enter>.
8. Select the type of printer you want from the "Printer types" list.
9. Change other parameters as needed; then press <Escape>. Select Yes from the "Save Changes" box.

Printer configuration parameters

Of the following configuration parameters, only Name and Type have significance for AViiON printers. The remaining parameters apply only to non-AViiON printers.

Name

You can assign a name to a printer. The name you assign appears on the print server console.

Type

You must select one of the following types of printer connections (if the printer is attached to the AViiON system, you must select remote):

- Local Parallel/Serial. A local printer is connected to the DOS print server.
- Remote Parallel/Serial. A remote printer is connected to a workstation on the network. You must run RPRINTER to use a remote printer (see RPRINTER).
- Remote Other/Unknown. This option provides the print server information about the printer when you run *rprinter*. This allows you to set up a printing slot for a remote printer without specifying which port the printer is attached to.

NOTE

Choose the **Remote Other/Unknown** option for DG/UX-based printers.

- Defined elsewhere. Use this designation when you are defining printers on multiple file servers. You do not need to enter all the printer information on each file server. Enter the connection information on the file server where you originally installed the print server and then select "Defined elsewhere" on all subsequent file servers.

Interrupts

Interrupts are used to signal the processor of some event that needs attention. Most devices in the computer are configured to use a particular interrupt. You should have recorded the interrupts your printing ports use on the Printing Worksheet.

- If you will use a non-AViiON remote printer, you must select an interrupt.
- If you are using built-in printing ports, check the documentation that came with your computer for the printing port interrupt.
- If you cannot change the configuration of your printing port, or if you have used all available interrupts, you can use the "polled" designation. Polled printing does not use interrupts and may be a slower method of sending data to the printer.
- If you use interrupts, you need to select a value for the IRQ.

IRQ

If you choose to use interrupts, you must enter a value that corresponds with your hardware setting. Enter a value between 3 and 7 inclusive that does not conflict with any other settings you have made.

Buffer size in K:

The buffer size is the amount of memory in a printer's buffer. The amount must be between 1 and 20 inclusive. We recommend that you use the default setting of 3KB.

PCONSOLE

Starting form

Forms (or types of paper used in printing) are defined in PRINTDEF and are assigned a number between 0 and 255. The starting form is the default.

Queue service mode

You can specify how your printer will handle various kinds of forms. You can choose from four service modes:

- Change forms as needed. The printer prints all print jobs in the order they are received, regardless of the form.
- Minimize form changes across queues. The printer prints jobs in the highest priority queue that requires the mounted form. It then searches other queues (in order of priority) for print jobs that require the mounted form.
- Minimize form changes within queues. The printer prints jobs that require the mounted form first.
- Service only currently mounted form. The printer prints only jobs that require the mounted form, beginning with the highest priority queue.

The remaining parameters have to do only with printers that use a serial connection. Be sure to check your printer documentation for specific information regarding these parameters.

Baud rate

Baud rate is the rate at which data travels across the cable or wire. The higher the baud rate for a serial printer, the faster the transmission of data.

Data bits

Data bits specifies the number of bits used to form a character. Choose a value between 5 and 8 inclusive.

Stop bits

A stop bit indicates the end of a character. You can choose a value of 1, 1.5, or 2.

Parity

Parity is a method of error checking. The most common parity values are odd, even, or none.

X-ON/X-OFF

X-ON/X-OFF is one of many methods used to prevent the sending system from transmitting data faster than the receiving system can accept the information. You can use X-ON/X-OFF if your printer supports it.

Remove printers from the print server

You can remove printers from the list of those serviced by a print server.

1. Enter PCONSOLE and select "Print Server Information" from the "Available Options" menu.
2. Select a print server from the "Print Servers" list.
3. Select "Print Server Configuration" from the "Print Server Information" list.
4. Select "Printer Configuration" from the "Print Server Configuration" menu.
5. Highlight the printer in the "Configured Printers" list and press <Delete>.

Use <F5> to select multiple printers.

6. Select Yes from the "Delete Printer" box.

Change printer configuration

The printer configuration tells the print server what kind of printer you are using. You can modify the printer configuration by completing the following steps. The changes will not take effect, however, until you bring down and restart the print server.

1. Enter PCONSOLE and select "Print Server Information" from the "Available Options" menu.
2. Select a print server from the "Print Servers" list.
3. Select "Print Server Configuration" from the "Print Server Information" menu.
4. Select "Printer Configuration" from the "Print Server Configuration" menu.
5. Select a printer from the "Configured Printers" list.
6. Change the printer configuration:
 - Change the printer name by typing a new name and pressing <Enter>.
 - Press <Enter> at the "Type:" space to view the "Printer types" list. Select the appropriate printer type.

Use the arrow keys to highlight other entry spaces and change parameters as needed. See "Printer configuration parameters" for more information.
7. Press <Escape> until the "Save Changes" box appears; then select Yes to save your changes.

Set notify list for printers

You can select users or groups to be notified if a problem occurs with a print job. If the print server is servicing queues on multiple file servers, you must set a notify list for each file server.

1. Enter PCONSOLE and select "Print Server Information" from the "Available Options" menu.
2. Select a print server from the "Print Servers" list.
3. Select "Print Server Configuration" from the "Print Server Information" list.
4. Select "Notify List for Printer" from the "Print Server Configuration" menu.
5. Select a printer from the "Defined Printers" list.
6. Press <Insert> at the notification box to view a list of notification candidates.
7. Select a user or a group from the "Notify Candidates" list.
8. Set the "First" and "Next" intervals in the "Notify Intervals" box; then press <Escape> until the confirmation box appears. (The Interval units are in seconds.)
9. Select Yes at the "Save Changes" box.

Assign print server operators

Print server operators can perform tasks that regular users cannot. If the print server is servicing queues on multiple file servers, you can assign print server operators on each file server. Assign users or groups as print server operators by completing the following steps:

1. Enter PCONSOLE and select “Print Server Information” from the “Available Options” menu.
2. Select a print server from the “Print Servers” list.
3. Select “Print Server Operators” from the “Print Server Information” menu.
4. Press <Insert> when the “Print Server Operators” list appears.
5. Select a user or group name from the “Print Server Operator Candidates” list to assign that user or group as a print server operator.

Remove print server operators

To remove users or groups from the list of print server operators, complete the following steps:

1. Enter PCONSOLE and select “Print Server Information” from the “Available Options” menu.
2. Select a print server from the “Print Servers” list.
3. Select “Print Server Operators” from the “Print Server Information” menu.

4. Highlight a user or group name in the "Print Server Operators" list; then press <Delete>.
5. Select Yes from the "Delete Print Server Operator" box.

List printers and queues serviced by a print server

To check which printers and queues are attached to a print server, complete the following steps:

1. Enter PCONSOLE and select "Print Server Information" from the "Available Options" menu.
2. Select the print server you want to check from the "Print Servers" list.
3. Select "Print Server Status/Control" from the "Print Server Information" menu.
4. Select "Queues Serviced by Printer" from the "Print Server Status and Control" menu. The "Active Printers" list appears, displaying all printers attached to the print server.
5. Select a printer to see which (if any) queues it is servicing.

Assign print server users

You can assign users or groups as print server users by completing the following steps. If a print server is servicing queues on multiple file servers, you must assign print server users on each file server.

1. Enter PCONSOLE and select "Print Server Information" from the "Available Options" menu.
2. Select a server from the "Print Servers" list.

PCONSOLE

- 3. Select "Print Server Users" from the "Print Server Information" menu.**
- 4. Press <Insert> at the "Server Users" box.**
- 5. Select a user or a group from the "Print Server User Candidates" list.**

Remove print server users

You can remove users or groups from the list of print server users by completing the following steps:

- 1. Enter PCONSOLE and select "Print Server Information" from the "Available Options" menu.**
- 2. Select a server from the "Print Servers" list.**
- 3. Select "Print Server Users" from the "Print Server Information" menu.**
- 4. Highlight a user or a group in the "Server Users" list; then press <Delete>.**
- 5. Select Yes from the "Delete Print Server User" box.**

Remove queues from printers

To remove a queue from the list of those serviced by a particular printer, complete the following steps:

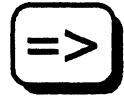
- 1. Enter PCONSOLE and select "Print Server Information" from the "Available Options" menu.**
- 2. Select a print server from the "Print Servers" list.**

3. Select "Print Server Configuration" from the "Print Server Information" menu.
4. Select "Queues Serviced by Printer" from the "Print Server Configuration" menu.
5. Select a printer from the "Defined Printers" list.
6. Highlight the appropriate file server and queue in the "File Server/Queue/Priority" list, and press <Delete>.
7. Select Yes from the "Delete Queue From Service List" box.

pmonitor

(print monitor)

Host
Utility



Why use *pmonitor*?

Use *pmonitor* to see the status of print servers and network printers.

Command format

```
pmonitor [-u username [-p password]] [-h] printserver
```

Replace *printserver* with the name of the print server.

Use the options as explained below:

- u attach as user *username*. If you attach to the print server as SUPERVISOR, you see more detailed information.
- p supply the *password* for the *username*, if required.
- h shows a help screen listing the options.

Screen output

A screen similar to the following appears, listing the status of printer slots 0 through 7. Press the spacebar to toggle between the status screens for printers 0 through 7 and printers 8 through 15. Type **q** to escape out.

Novell NetWare Print Server V1.21 Server ENG-PRINT Running	
0: Printer 0 Waiting for job	4: Not installed
1: Printer 1 Not connected	5: Not installed
2: Not installed	6: Not installed
3: Not installed	7: Not installed

PRINTCON

(PRINT job CONfiguration)

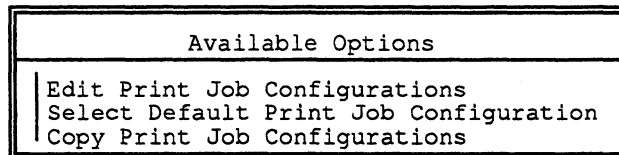
Menu
Utility



Why use PRINTCON?

Use PRINTCON to define your preferred print options and to set them up as your standard configuration. In other words, PRINTCON serves as a database for printing with CAPTURE, NPRINT, and PCONSOLE.

The printing tasks are organized according to PRINTCON's "Available Options" menu.



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Copy Print Job Configurations

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If you never use CAPTURE, NPRINT, or PCONSOLE, you do not need PRINTCON. If, however, your application is not designed for network printing, you may want to use PRINTCON to set up some general types of print formats.

PRINTCON creates a file, PRINTCON.DAT, in each user's MAIL ID directory. Since users have Write and Create rights in their ID directory, they can create and modify their own print jobs.

As SUPERVISOR, you can create a configuration (stored in the SUPERVISOR MAIL ID directory) and copy it to other users. Or, you can copy the print job configuration of one user to any other user on the network. When you copy a configuration, however, you will overwrite (without being prompted) the print job configurations created by the user.

If you use PRINTCON, you should use PRINTDEF first to set up a database of printer definitions. PRINTDEF defines which printers and forms are available on your file server.

You can use PRINTDEF to define your own codes and to select other fonts. See PRINTDEF for more details about the NetWare-supplied printer definition files.

Create a print job configuration

Network users can set up their own configurations. The first configuration you create becomes your default. When you define other configurations, you can decide which configuration will be your default (see "Select the default print job configuration").

The default configuration will be used if you don't specify any options when using CAPTURE, NPRINT, or PCONSOLE. You can, however, override the default configuration by specifying a different job configuration when using CAPTURE, NPRINT, or PCONSOLE.

To create a print job configuration, complete the following steps:

- 1. Enter PRINTCON and select "Edit Print Job Configurations" from the "Available Options" menu.**

PRINTCON

2. Press <Insert> from the "Print Job Configurations" list.
3. Type the name (up to 31 characters) of the configuration you want to create in the "Enter New Name" entry box and press <Enter>.
4. Use the arrow keys to highlight the item you want to modify in the "Edit Print Job Configuration" form.

Make the change by typing a new value and pressing <Enter> or by selecting an item from the menu provided.

The configuration parameters are explained following Step 6.

5. Once you have set up your configuration, press <Escape>.
6. In the "Save Changes" confirmation box, select Yes.

Print job configuration parameters

The following parameters can be set or changed.

Number of copies

Type a number from 1 to 255.
Default: 1

File contents

Press <Enter> to see your two choices: "Text" and "Byte stream."

Choose "Text" when you want tabs to be converted to spaces (see Tab size below). (Choose "Text" to print ASCII text.)

Choose "Byte stream" if you are printing from within an application and you want the application to handle the formatting commands. If you will be downloading fonts on a laser printer, choose "Byte stream."

Default: Byte stream

Tab size

This parameter applies only if you choose "Text" as the "File contents" setting. Type a number from 1 to 18. The number of spaces you specify replaces all tab characters in your print job. If "File contents" is set to "Byte stream," this field is blank.

Default: 8

Suppress form feed

Type "Y" for Yes or "N" for No.

Choose No if you want the printer to advance to the top of the next page after your print job.

Choose Yes if you don't want the printer to advance to the top of the next page. Some applications already have a form feed at the end of the file, so setting this parameter causes an extra blank page to be fed through.

Default: No

Notify when done

Type "Y" for Yes or "N" for No. Choose Yes if you want to be notified that your data has been printed. A message appears across the bottom of your screen:

Jobname printed on Printername.

Default: No notification

Form name

Press <Enter> to see a menu of forms you can choose from. You define forms in the PRINTDEF database and describe the form (type of paper) your document will be printed on.

If no forms have been defined in PRINTDEF, you can't change the form name. Form names are tied to the file server they were created on. If you change the file server option, you may have to change this option as well.

PRINTCON

Print banner

Answer "Y" for Yes or "N" for No. Choose Yes if you want a banner to be printed before the file is printed.

Default: Yes

Name

If you print a banner, you can specify the text that appears on the upper part of the banner page. You can use the default banner name, or you can type any text, up to 12 characters long.

Default: Your username

Banner name

If you print a banner, you can specify the text that appears on the lower part of the banner page. You can use the default banner name, or you can type any text, up to 12 characters long.

Default: Name of file you are printing

Local printer

This parameter is used only with CAPTURE. You can specify which local parallel printer port (LPT1, LPT2, or LPT3) you want the command to affect.

Default: LPT1

Auto endcap

This parameter is used only with CAPTURE. Type "Y" for Yes or "N" for No.

Choose Yes if you want the captured data to be printed when you exit an application or when the application closes the print device.

Choose No if you don't want the captured data to be printed until you enable timeout or you run ENDCAP.

Default: Yes

Enable timeout

This parameter is used only with CAPTURE. Type "Y" for Yes or "N" for No.

Choose Yes if you want the captured data to be sent to the queue after the number of seconds you define as the "Timeout count" has elapsed since receiving data.

Choose No if you want the captured data to be sent to the queue when you run ENDCAP.

Default: No

Timeout count

If you enable timeout, you can type a number from 1 to 1,000. The number represents how many seconds elapse between the time the print job stops sending data and the data is actually sent to the queue. If you will be printing documents that require extensive calculation, such as graphics, set this number above 20.

Default: 5

File server

Press <Enter> to see a list of the file servers you can use. Select the file server you want to print from. If no forms have been defined for the server you choose, you must choose another server. Changing the file server may require changing the print queue, form names, and device modes.

Print queue

Press <Enter> to see a list of the print queues you can use. Select the print queue on the file server to which the print job should be sent.

Print server

Press <Enter> to see a list of the print servers that are authorized to service jobs in the print queue you chose. Select the print server you want to use. CAPTURE does not support print server names.

PRINTCON

Device

Press <Enter> to see a list of the print devices defined in PRINTDEF (printers and plotters) you can use. Select the device on which you want to print. (The device should match the queue you chose.)

Mode

Press <Enter> to see a list of the modes for the print device you chose. A mode, defined in PRINTDEF, is a special type of printing, such as 15 characters per inch (compressed mode). Select the mode you want to use.

Delete a print job configuration

- 1. Enter PRINTCON and select “Edit Print Job Configurations” from the “Available Options” menu.**
- 2. Delete the configuration from the “Print Job Configurations” list.**

You cannot delete the default configuration. (See “Select the default print job configuration.”)

- 3. Select Yes in the “Delete Current Print Job Configuration” confirmation box.**

Rename a print job configuration

- 1. Enter PRINTCON and select “Edit Print Job Configurations” from the “Available Options” menu.**
- 2. Highlight the configuration you want to rename in the “Print Job Configurations” list, and press <F3>.**
- 3. Type the new name in the “Change Name To” entry box, and press <Enter>.**

Edit a print job configuration

1. Enter PRINTCON and select “Edit Print Job Configurations” from the “Available Options” menu.
2. Select the configuration you want to edit from the “Print Job Configurations” list.
3. Use the arrow keys to highlight the item you want to edit in the “Edit Print Job Configuration” table; then make the change by typing a new value and pressing <Enter> or by selecting an item from the list provided.

For more information on configuration parameters, see “Print job configuration parameters.”

4. When you are ready to save the changes you have made, press <Escape>.
5. Select Yes in the “Save Changes” confirmation box.

Select the default print job configuration

The first configuration you create becomes your default. When you create other configurations, you can select which will be your default.

The default configuration you choose determines the default settings for files you print with PCONSOLE, NPRINT, and CAPTURE. However, if you specify any options when using NPRINT or CAPTURE to print, the options will override the default settings in PRINTCON.

1. Enter PRINTCON and select “Select Default Print Job Configuration” from the “Available Options” menu.
2. Select the configuration you want to be the default from the “Select Default Print Job Configuration” list.

The word *default* appears in the right column of the “Select Print Job Configurations” list, indicating your new default configuration.

Copy print job configurations from one user to another

As network supervisor or workgroup manager, you can copy print job configurations from one network user to another. Each user has a print job configuration file that stores any print job configurations created by or for that user.

You cannot copy a single job configuration at a time; you must copy the whole file. When you copy one user's print job configuration file to another user, the copied file overwrites the target user's existing file.

Since users can create their own print job configurations, you should check with them before copying over their existing files.

If you have made any changes to the job configurations, exit PRINTCON to save the changes before copying the definitions to another user.

To copy a print job configuration, complete the following steps:

1. **Enter PRINTCON and select "Copy Print Job Configurations" from the "Available Options" menu.**
2. **Type the name of the user whose configuration file you want to copy in the "Source User" entry box, and press <Enter>.**
3. **In the "Target User" entry box, type the name of the user whose configuration file you want to create or replace, and press <Enter>.**

The file is copied. The target user now has a copy of all the source user's configurations.

PRINTDEF

(PRINTer DEFINition)

Menu
Utility

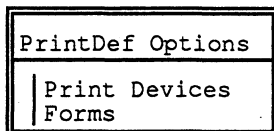


Why use PRINTDEF?

Use PRINTDEF to set up a database of printer definitions. You can define a device driver for network printers, plotters, and other devices, and define the forms (types of paper) the devices will use.

The information defined in PRINTDEF is then used by PRINTCON. NPRINT, CAPTURE, and PCONSOLE can use the device driver via PRINTCON.

Network users can use PRINTDEF to view the device functions, modes, and forms that you set up. The tasks are organized according to the "PrintDef Options" menu.



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Copy print device definitions provided with NetWare

To use any of the NetWare print device definitions, copy them from the SYS:PUBLIC\PDF directory to the PRINTDEF database for your file server. The print device definitions are files that have a .PDF extension. The files are listed in "NetWare print device definitions."

To copy any of the NetWare definitions, log in as SUPERVISOR and complete the following steps:

1. Enter PRINTDEF and select "Print Devices" from the "PrintDef Options" menu.
2. Select "Import Print Device" from the "Print Device Options" menu.
3. If you are not in the SYS:PUBLIC directory, use the Backspace key to erase the current directory name; then type SYS:PUBLIC and press <Enter>.

4. **Select the .PDF file you want to add to your database from the “Available .PDFs” list.**

If you try to copy a file that has the same name as an existing print device definition, the “New Device Name” entry box appears, prompting you to rename the new print device definition. Type the revised name and press <Enter>.

The new print device definition is added to the print definition database. You are returned to the “Print Device Options” menu.

5. **To save the database with the new print device definition, press <Escape> twice.**
6. **Select Yes in the “Exit PrintDef” confirmation box. Then select “Save Data Base, then EXIT.”**

NetWare print device definitions

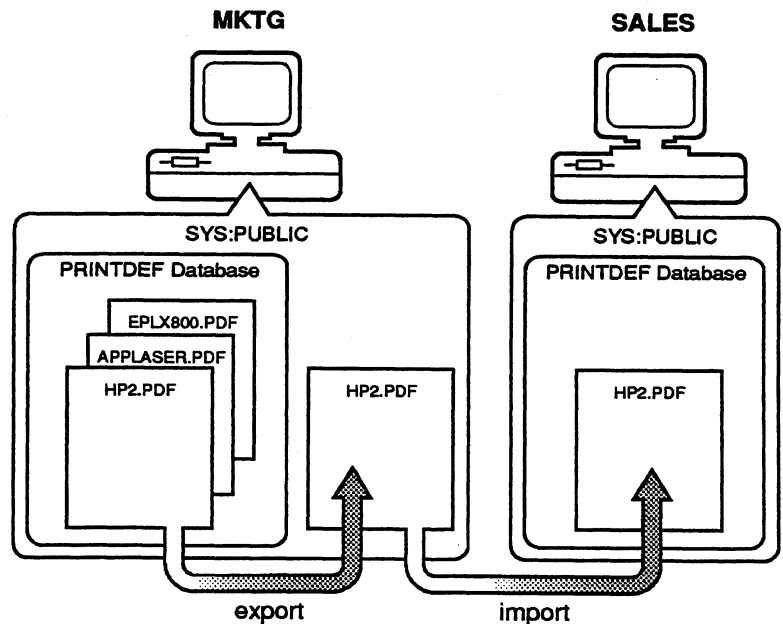
Filename	Printer name
APPIMAGE.PDF	Apple Imagewriter II
APPLASER.PDF	Apple Laserwriter II/Plus
CIT120D.PDF	Citizen 120-D
CIT20.PDF	Citizen 20
CIT224.PDF	Citizen 224
CITOH310.PDF	Citoh 310/315
CITOH600.PDF	Citoh 600
DIAB630.PDF	Diablo 630
EPEX80.PDF	Epson FX80/FX100
EPEX800.PDF	Epson EX-800
EPEX86.PDF	Epson FX86e/FX286e
EPLD2500.PDF	Epson LD-2500
EPLQ800.PDF	Epson LQ-800/LQ-1000
EPLX80.PDF	Epson LX-80
EPLX800.PDF	Epson LX-800
HP2.PDF	Hewlett-Packard LaserJet II/IID
HP2PS.PDF	Hewlett-Packard LaserJet PostScript Cartridge
HP3.PDF	Hewlett-Packard LaserJet III/IIID
HP3SIPCL.PDF	Hewlett-Packard LaserJet IIISi-PCL
HP3SIPS.PDF	Hewlett-Packard LaserJet IIISi-PostScript
IBM4201.PDF	IBM ProPrinter 4201
IBMPRO2.PDF	IBM ProPrinter II/XL
NEC2050.PDF	NEC Spinwriter 2050/3050
NEC8810.PDF	NEC Spinwriter 8810/8830
NECP6.PDF	NEC Pinwriter P-6
OKI192.PDF	Okidata Microline192/193
OKI290.PDF	Okidata 290
OKI390.PDF	Okidata 390
OKILASER.PDF	Okidata Laserline 6
PAN1080.PDF	Panasonic 1080/1080i
PAN1091.PDF	Panasonic 1091/1091i
STAR1000.PDF	Star NX-1000
STAR10X.PDF	Star Gemini 10X
TOSHHP321.PDF	Toshiba P321

Copy print device definitions from another file server

If you want to use another file server's printer, you must first export the print device definition from the original server's NET\$PRN.DAT file into a .PDF (Print Definition) file. You can then import the .PDF file to your server's NET\$PRN.DAT file (located in SYS:PUBLIC). You can copy only one device definition at a time. You must have SUPERVISOR privileges on both file servers (or the supervisor of the other server will need to help you).

The figure below illustrates the steps in copying a print device definition. The example shows how to copy the HP LaserJet print device definition from file server MKTG to file server SALES. First, export the HPLASER.PDF file from the database on MKTG to the SYS:PUBLIC directory on SALES. Then import the HPLASER.PDF file from the SYS:PUBLIC directory on MKTG to the PRINTDEF database on SALES.

Copying print device definitions



PRINTDEF

Export print device definitions

You can export a device definition to your current directory, to another directory on the current file server, or to a directory on another file server. Decide where you want to export the device definition, and complete one of the following sections:

Export to current directory

1. Enter PRINTDEF and select "Print Devices" from the "PrintDef Options" menu.
2. Select "Export Print Device" from the "Print Device Options" menu.
3. Select the device definition you want to copy to another file server from the "Defined Print Devices" list.

Your current directory is listed in the "Destination Directory" entry box.

4. Press <Enter>.
5. Type the name you want to give the file in the "Export File Name" entry box, and press <Enter>.

The name can be up to eight characters long but cannot include an extension. You will probably want to use the name of the print device so the file is easily recognizable (for example, HP_LASER).

The file is created with a .PDF extension and is placed in the specified directory.

6. Press <Escape> to return to the "Print Device Options" menu.

Export to another directory

You can also export the .PDF to another directory on the current file server. We suggest putting the file in SYS:PUBLIC\PDF of the current file server so the supervisor of another file server can log in as GUEST and have sufficient rights to import the file.

1. Enter PRINTDEF and select "Print Devices" from the "PrintDef Options" menu.
2. Select "Export Print Device" from the "Print Device Options" menu.
3. Select the device definition you want to copy to another directory from the "Defined Print Devices" list.

If you want to use your current directory, skip to Step 7.

4. Use the Backspace key to erase the current directory listed in the "Destination Directory" entry box.
5. Press <Insert> to see a list of directories on the current file server. Select the directory path you want.
6. When you have selected the complete directory path, press <Escape>; then press <Enter>.
7. Type the name you want to give the file in the "Export File Name" entry box, and press <Enter>.

The name can be up to eight characters long but cannot include an extension. You will probably want to use the name of the print device so the file is easily recognizable (for example, HP_LASER).

The file is created with a .PDF extension and is placed in the specified directory.

8. Press <Escape> to return to the "Print Device Options" menu.

PRINTDEF

Export to another file server

If you want to export the file to another file server, you must have Write and Create rights on the other file server, or you will be unable to copy the file.

1. Enter PRINTDEF and select "Print Devices" from the "PrintDef Options" menu.
2. Select "Export Print Device" from the "Print Device Options" menu.
3. Select the device definition you want to copy to another file server from the "Defined Print Devices" list.
4. Use the Backspace key to erase the complete directory path listed in the "Destination Directory" entry box.
5. Press <Insert> twice to see a list of attached file servers.
6. Select the file server to which you want to export the file.
7. If you are not already attached to the destination file server, a box appears, prompting you for your login name and password. Type your username and press <Enter>; then type your password and press <Enter>.
8. Select a file server from the "File Server/Local Drives" list. Do not select a local drive that doesn't exist.
9. A box appears listing the volumes of the destination file server. Select the volume and continue selecting directories to complete the desired path.
10. When you have selected the complete directory path, press <Escape>; then press <Enter>.

11. **Type the name you want to give the file in the “Export File Name” box; then press <Enter>.**

The name can be up to eight characters long but cannot include an extension. You will probably want to use the name of the print device so the file is easily recognizable (for example, HP_LASER).

The file is created with a .PDF extension and is placed in the specified directory.

12. **Press <Escape> to return to the “Print Device Options” menu.**

Import print device definitions

If you created your own .PDF files, you must import them into the PRINTDEF database file, NET\$PRN.DEF, on the desired file server. You can also import files created on other file servers.

You can import .PDF files to your current directory, to another directory, or to an attached file server. Decide where you want to import the file, and complete one of the following sections:

Import from the current directory

1. **Enter PRINTDEF and select “Print Devices” from the “PrintDef Options” menu.**
2. **Select “Import Print Device” from the “Print Device Options” menu.**

The “Source Directory” entry box displays your current directory.

3. **Press <Enter>.**
4. **Select the .PDF file you want to add to your database from the “Available .PDFs” list.**

If the supervisor of another file server exported the file, you will need to get the filename from that supervisor.

PRINTDEF

If you try to import a file that has the same name as an existing print device definition, the "New Device Name" box appears, prompting you to rename the new print device definition. Type the revised name and press <Enter>.

The new print device definition is added to the print definition database. You return to the "Print Device Options" menu.

5. **To save the database with the new print device definition, press <Escape> twice.**

6. **Select Yes in the "Exit PrintDef" confirmation box; then select "Save Data Base, then EXIT."**

Import from another directory

If the .PDF file is located in another directory on your current file server, complete the following steps:

1. **Enter PRINTDEF and select "Print Devices" from the "PrintDef Options" menu.**

2. **Select "Import Print Device" from the "Print Device Options" menu.**

The "Source Directory" entry box displays your current directory.

3. **Use the Backspace key to erase the current directory.**

4. **Press <Insert> to see a list of available directories.**

5. **Select the name of the directory from which you want to copy the .PDF (Print Definition) file.**

6. **Select the .PDF file you want to add to your database from the “Available .PDFs” list. If the supervisor of another file server exported the file, you should get the filename from that supervisor.**

If you try to import a file that has the same name as an existing print device definition, the “New Device Name” box appears, prompting you to rename the new print device definition. Type the revised name and press <Enter>.

The new print device definition is added to the print definition database. You return to the “Print Device Options” menu.

7. **To save the database with the new print device definition, press <Escape> twice.**
8. **Select Yes in the “Exit PrintDef” confirmation box; then select “Save Data Base, then EXIT.”**

Import from an attached file server

If the .PDF is located on another file server, complete the following steps:

1. **Enter PRINTDEF and select “Print Devices” from the “PrintDef Options” menu.**
2. **Select “Import Print Device” from the “Print Device Options” menu.**

The “Source Directory” entry box displays your current directory.

If the file has been placed in the SYS:PUBLIC directory, you should have sufficient rights (Read, File Scan) in that directory.

3. **Use the Backspace key to erase the complete directory path.**

4. **Press <Insert> to see a list of attached file servers.**

If the .PDF file is located on a file server to which you are not currently attached, press <Insert> again. Select the server you want to attach to from the "Other File Servers" list. A box appears, prompting you for your login name and password. Enter your login name and password.

5. **Select the file server from which you want to import the file.**
6. **A box appears, listing the volumes of the source file server. Select the one you want.**
7. **Select the appropriate directory from the list of available directories.**
8. **When you have selected the complete directory path, press <Escape>; then press <Enter>.**
9. **Select the .PDF file to add to your database from the "Available .PDFs" list.**

If the supervisor of another file server has exported the file, you should get the filename from that supervisor.

If you try to import a file that has the same name as an existing print device definition, the "New Device Name" entry box appears, prompting you to rename the new print device definition. Type in the revised name and press <Enter>.

The new print device definition is added to the print definition database. You return to the "Print Device Options" menu.

10. **To save the database with the new print device definition, press <Escape> twice.**
11. **Select Yes from the "Exit PrintDef" confirmation box; then select "Save Data Base, then EXIT."**

Define print device functions

If your print devices (printers, plotters, and so forth) are not included among the definitions provided with NetWare (see "NetWare print device definitions"), you need to define your own print device functions and print device modes for each device you will use.

Print functions (also referred to as escape sequences or printer commands) give instructions to the printer. You can add the sequences and commands for your printer into the PRINTDEF database. To do this, you need the technical reference manual that came with your printer.

As a network supervisor, you can define a printer's functions by completing the following steps:

1. Enter PRINTDEF and select "Print Devices" from the "PrintDef Options" menu.
2. Select "Edit Print Devices" from the "Print Device Options" menu.
3. Press <Insert> from the "Defined Print Devices" list.
4. Type the name of the print device in the "New Device Name" entry box; then press <Enter>.

The name should be recognizable to users (for example, a brand name such as IBM ProPrinter), and it cannot be more than 32 characters long.

The name of the print device you just typed is highlighted.

5. Press <Enter>.
6. Select "Device Functions" from the "Edit Device Options" menu.

The "Device Functions" list appears. (The name of your print device replaces *device*.)

7. Enter the escape sequences or printer commands for the specified printer as explained in the next section.

PRINTDEF

The documentation that came with the printer probably has a chapter or section explaining printer commands. Consult that documentation. You can press <F1> for Help as well.

8. Press <Insert>.

This allows you to add a new print function.

9. Type a name to identify the printer command in the "Function Definition Form" entry box; then press <Enter>.

Example: You are defining the HP LaserJet, and you want to include the print function for resetting the printer. Type

Reset <Enter>

The "Escape Sequence" option is highlighted.

10. Type in the actual escape sequence supplied by the device documentation; then press <Enter>.

When you enter the escape sequences, you must type each character, including the angle brackets < >. The escape sequence must be entered in a manner that NetWare recognizes. Press <F1> for Help.

Example: To enter the HP LaserJet print function for reset, you would type

<ESC>E <Enter>

11. Press <Escape> and then <Enter> to save the new escape sequence and to insert it into the "Functions" list.

When you enter the print functions, be sure to include the reset escape sequence.

12. Repeat Steps 1 through 11 for each function or escape sequence you want to enter.

13. If you want to edit any of the device functions, use the Backspace key to erase the current Information and type in the new name or escape sequence; then press <Escape>; then press <Enter> to save the modified function.
14. After you have entered all the device functions, press <Escape> to return to the "Edit Device Options" menu.

Because NetWare can place the functions only at the beginning or end of a print job, the best functions to use are those that affect the entire document (such as Condensed or Landscape).

Define print device modes

After you define the functions for a print device, you can combine these functions into modes. A mode is a sequence of print functions that tells the printer how to print a particular job.

For example, you could create a Final Print Out mode for the HP LaserJet that would include the functions for 10 cpi, Emphasized printing, and Near-letter quality printing.

As a network supervisor, you must determine what your printing needs are; then define the modes by completing the following steps:

15. Select "Device Modes" from the "Edit Device Options" menu.

The "(Re-initialize)" mode appears in the "*your printer* Modes" entry box. (*Your printer* is replaced with the name of the printer you have selected.)

The "(Re-initialize)" mode contains the functions that are appended to the end of a print job. It is the only mode that does this.

16. To set up the "(Re-Initialize mode)," press <Enter>.

PRINTDEF

17. Press <Insert> to see a list of all defined functions for one print device. Select the function or escape sequence for resetting the printer.

Most print devices have a single escape sequence for reset.

Example: To define the Re-initialize mode for the HP LaserJet, select the following escape sequence:

Reset <ESC>e

If your printer does not have a single reset function, you must enter all your printer's "Cancel" functions into the Re-initialize mode. Mark multiple functions by highlighting each and pressing <F5>.

Create additional print device modes

After you have entered the Re-initialize mode functions, you can create additional modes depending on your printing needs.

1. Press <Insert> in the "*your printer Modes*" list.

Your printer is replaced by whatever printer you are defining, for example, HP LaserJet Modes.

2. Type the name of the mode you want to create (for example, Final Printout) in the "New Mode Name" entry box, and press <Enter>.

3. Enter the functions for that particular mode in the "*New Mode Name Functions*" list.

New Mode Name is replaced by the name of the mode you are defining.

The order of the functions in the functions list may be important to the printer. Normally, any function you add is placed at the end of the list. However, you can insert a new function anywhere in the "*New Mode Name Functions*" list by highlighting the function preceding the line where you want the new function added; then press <F5>. Now insert the new functions by completing Steps 4 and 5.

4. Press <Insert> to see the list of all defined functions for that print device.

5. Use <F5> to mark the functions you want to include in the new mode.

The functions you choose appear in the "New Mode Name Functions" list.

Example: If you want to create a Final Printout mode for the HP LaserJet and you want to include 10 cpi, Emphasized printing, and Near-letter quality printing, highlight and mark each of these options; then press <Enter>.

When you have completed the "Functions" list, press <Escape> to return to the "Modes" list.

6. To delete a function from the modes list, highlight that function and press <Delete>

7. Repeat Steps 1 through 5 for each mode or combination of functions you want to create.

8. When you are finished entering modes for one print device, press <Escape> to return to the "Defined Print Devices" list.

9. To exit PRINTDEF after you have finished defining all print modes, press <Escape> until you come to the "PrintDef Options" menu. Select "Exit Options;" then select "Save Data Base, then EXIT."

List the defined print devices on your network

1. Enter PRINTDEF.

2. Select "Print Devices" from the "PrintDef Options" menu.

A list of the defined print devices appears. If the "Defined Print Devices" list is empty, none has been defined.

PRINTDEF

View device functions

A device function is a string of control code characters that controls a printing characteristic.

To view the functions for a defined print device, complete the following steps:

1. **Enter PRINTDEF and select “Print Devices” from the “PrintDef Options” menu.**
2. **Select the print device whose device functions you want to view from the “Print Device Options” menu.**
3. **Select “Device Functions” from the “Edit Device Options” menu.**

The functions and corresponding escape sequences that have been defined for the selected print device appear.

If the escape sequence for a function is too long to be displayed in the “Printer Functions” list (longer than 32 characters), select that escape sequence and press <Enter>. The escape sequence appears in the “Escape Sequence or Function” entry box.

View escape sequences

To view the escape sequences, complete the following steps:

1. **Enter PRINTDEF and select “Print Devices” from the “PrintDef Options” menu.**
2. **Select the print device that contains the functions you want to view from the “Print Device Options” menu.**
3. **Select “Device Modes” from the “Edit Device Options” menu.**

A list of the modes that have been defined for the selected print device appears.

4. **Select the mode whose functions you want to view.**

The mode's functions are listed.

5. **Select a function whose escape sequence you want to view.**

View device modes

If one or more print devices have been defined, you can view their associated device modes by following these steps:

1. **Enter PRINTDEF and select "Print Devices" from the "PrintDef Options" menu.**
2. **Select the print device whose defined modes you want to view from the "Print Device Options" menu.**
3. **Select "Device Modes" from the "Edit Device Options" menu.**

The modes that have been defined for the selected print device appear.

Define print forms

Print forms are the type of paper you will print on. The print forms you define will be used as you set up print job configurations. For example, you might want some jobs to be printed on letter-size sheets of paper and others on green-bar continuous-feed paper.

The print server recognizes forms by name and number. If you send a print request that requires a specific form, the print server does not print the job until that form is mounted in the printer.

As a network supervisor, you can define print forms by following these steps:

1. **Enter PRINTDEF and select "Forms" from the "PrintDef Options" menu.**

A list of the forms that have been defined for printing appears.

PRINTDEF

2. Press <Insert>.

3. Type the name of the new form you want to define in the “Forms Definition Form” entry box; then press <Enter>.

The first character of the form name must be alphabetic, and the form name cannot exceed 12 characters. Examples of form names include `White_8x11`, `Continuous`, `Checks`, `Green_Bar`, and `Standard`.

4. Type the number you want to assign to the form and press <Enter>.

You will probably want to assign the most commonly used form as form 0, since 0 is the default form. Form numbers must fall between 0 and 255.

5. Type the length of the form in lines per page and press <Enter>.

The number must fall between 1 and 255. This number is for your reference only. Use a number that makes sense to you. For example, if your printer is set to 6 lines per inch and your paper measures 8.5 by 11 inches, you might select 66.

6. Type the width of the form in characters per line and press <Enter>.

The number must fall between 1 and 999. This number is for your reference only. Use a number that makes sense to you. For example, if your printer is set to 10 characters per inch and your paper measures 8.5 by 11 inches, you might select 85.

7. To save changes, press <Escape>; then select Yes in the “Save Changes” confirmation box.

The new form is listed in the “Forms” list.

8. Repeat Steps 2 through 7 for each form you want to define.

9. If you need to edit a form, highlight it in the “Forms” list and press <Enter>.

Follow Steps 3 through 7 to make any necessary changes.

10. To delete a form from the "Forms" list, highlight that form and press <Delete>; then press <Enter> to confirm your decision to delete the form.
11. To exit PRINTDEF after you have defined forms, press <Escape> twice and then <Enter> to access the "Exit Options" menu; then select "Save Data Base, then EXIT."

View a list of forms

To see which forms have been defined for your print devices, complete the following steps:

1. Enter PRINTDEF.
2. Select "Forms" from the "PrintDef Options" menu.

A list of the forms that have been defined for printing appears.

View form definitions

To see what parameters have been set for a specified form, complete the following steps:

1. Enter PRINTDEF.
2. Select "Forms" from the "PrintDef Options" menu.

A list of the forms that have been defined for printing appears.

3. Select the form whose definition you want to view.

The "Forms Definition Form" appears. It contains the form's name, the number you assigned to it, and the form's length and width. Forms can be referred to by their number or name; however, it is usually easier to remember a form by a descriptive name rather than by an arbitrary number.

PSC

(Print Server Command)

Command Line
Utility



Why use PSC?

Print server operators can use PSC to quickly control print servers and network printers. (They can use PCONSOLE to perform most of the same tasks.)

Network users can use PSC to see the status of print servers and network printers.

Command format

PSC [PS=*printserver*] [P=*printernumber*] *flaglist*

Replace *printserver* with the name of the print server.

Replace *printernumber* with the number of the printer. Printer numbers are defined in PCONSOLE when you set up the configuration files for the print server.

To set defaults for the print server name and the printer number, see "Set printer defaults."

Replace *flaglist* with one of the flags listed below. Print server operators can use any of the flags. Network users can use only the STATus flag.

STATus	FormFeed
PAUse	MOunt Form= <i>n</i>
ABort	PRIVate
STOp [<i>Keep</i>]	SHared
STARt	CancelDown
MArk [<i>character</i>]	

The flags are explained in the next section.

Command options

STATus

Include this flag to see the status of one or all of the printers installed on the specified print server. If you specify a printer number, you see the status of that printer only.

If you do not include a printer number ($P=n$), you see the status of all printers installed on the specified print server. However, if you have set a default printer number using the DOS SET command (see "Set defaults in DOS environment"), you need to type $P=all$ to see the status of all printers.

Following are the possible status messages:

Waiting for job	Mark/Form feed
Mount form n	Not connected
Printing job	Not installed
Paused	In private mode
Ready to go down	Off line
Stopped	Out of paper

"Not connected" means a configuration file for a remote printer exists but has not been connected to the print server. "In private mode" means a remote printer is not available for use on the network because it is being used as a local printer for a workstation.

You see "Off line" and "Out of paper" when the accompanying status message is either "Printing job" or "Mark/Form feed".

PAUse

Include this flag to stop the printer temporarily.

PSC

ABort

Include this flag to stop printing the current job. The job is deleted from the queue and the printer continues with the next job.

STOp [Keep]

Include this flag to stop the printer. To resubmit the current print job at the top of the queue, include *Keep*; otherwise, the job is deleted from the queue. Use the *START* flag to restart the printer.

START

Include this flag to restart a stopped or paused printer.

MArk [*character*]

Include this flag to see what line the form is on. The printer prints a line of whatever character you indicate so that you can see which line the printer will start printing on. If the printer is printing a job, it cannot mark the form.

Default character: *

FormFeed

Include this flag to advance the printer to the top of the next page. The printer must be paused or stopped to do a form feed.

MOunt Form=*n*

Include this flag to tell the print server that you have mounted a new form on the printer. Replace *n* with the form number. (You can define forms in *PRINTDEF*.)

PRivate

Include this flag if you don't want other network users to print on the specified remote printer. This flag removes the remote printer from the list of network printers used by the print server and changes the remote printer to a local printer. You may need to adjust your applications accordingly.

SHared

Include this flag to remove the PRivate flag so that other network users can print on the specified remote printer. Including this flag makes the remote printer available to the print server. You may need to adjust your applications accordingly.

CancelDown

Include this flag if you selected the "Going down after current jobs" option in PCONSOLE and want to cancel that command before the print server goes down. You don't need to specify a printer number ($P=n$) with this flag.

Set printer defaults

Set defaults in DOS environment

You can use the DOS SET (Set Environment) command to set a default printer number and print server name for the PSC command. You can use the SET PSC command at the DOS prompt, or you can include it in your login script. You can also override the default settings (see "Change settings temporarily").

To set defaults at the DOS prompt, type

```
SET PSC=PSprintserver Pprinternumber <Enter>
```

To include defaults in your login script, insert the following line:

```
SET PSC="PSprintserver Pprinternumber"
```

Then, when you use the PSC command, you need to type only

```
PSC flaglist <Enter>
```

Replace *flaglist* with one of the flags listed in the previous section.

Set defaults in login script

Suppose you always use print server MOZART and Printer0. Insert the following in your login script:

```
SET PSC="PSMOZART P0"
```

Suppose you then want to stop the printer. Type

```
PSC STO <Enter>
```


Change settings temporarily

Suppose print server MOZART and Printer0 are the default parameters set up in your login script. However, you want to see the status of Printer1 on print server LIGHT. Type

```
PSC PS=LIGHT P=1 STAT <Enter>
```

If you type another PSC command without printer number and print server settings, your default parameters (print server MOZART and Printer0) will be used.

Control print servers and network printers

PSC provides a way to control print servers and network printers in DOS (rather than using PCONSOLE). The task you perform with PSC depends on which flag you include. See "Command options."

View the status of a printer

Suppose you want to see why your job isn't printing. Your job is on Printer2 (named Pub) on print server CORP. Type

```
PSC PS=CORP P=2 STAT <Enter>
```

Information similar to the following appears:

```
Printer 2: Pub  
Printing job  
Out of paper
```

To view the status of all printers installed on print server CORP, replace "2" in the previous command with "all."

Abort a print job

Suppose you want to stop printing the current print job and resubmit it at the bottom of the queue. You are using Printer3 on print server PUBLIC. Type

```
PSC PS=PUBLIC P=3 AB K <Enter>
```

PSC

Mount a new form

Suppose you have just changed the form in Printer6 on print server LEGAL. To notify the print server of the change to form 1, type

```
PSC PS=LEGAL P=6 MO F=1 <Enter>
```

Make a remote printer private

Suppose you don't want other network users to print on the printer attached to your workstation. Your printer is Printer5 on print server SERVICE. Type

```
PSC PS=SERVICE P=5 PRI <Enter>
```

The PRiVate flag removes the remote printer from the list of network printers used by the print server and changes the remote printer to a local printer. You may need to adjust your applications accordingly.

Cancel a DOWN command

Suppose you selected the "Going down after current jobs" option in PCONSOLE for print server MKTG. You decide to cancel that command before the print server goes down. Rather than going back into PCONSOLE, you can use PSC with the CancelDown flag. You don't need to specify a printer number. Type

```
PSC PS=MKTG CD <Enter>
```

pserver (print server)

Host
Process



Why use *pserver*?

Use *pserver* to start the print server on a NetWare for AViiON Systems file server and to establish print services for the network. You can do this most easily through *sconsole*.

The AViiON print server can support up to 16 printers and can service queues on up to 8 file servers. Since you can have up to 4 print servers, NetWare for AViiON Systems can support up to a total of 64 printers.

Command format

```
pserver [-s fileserver [-p password]] [-u printserver] [options]
```

where

-s <i>fileserver</i>	specifies file server name
-p <i>password</i>	specifies the password to use for login
-u <i>printserver</i>	specifies the print server name

You can also specify *fileserver*, *password*, and *printserver* as arguments (*fileserver/printserver/password*).

Options are:

-e <i>errorfile</i>	write errors to <i>errorfile</i>
-i <i>inputfile</i>	get input from <i>inputfile</i>
-o <i>outputfile</i>	write output to <i>outputfile</i>
-h	display a help message

Before you start the print server, you must set up a print server account and configuration files using PCONSOLE. For more information, see "Print Server Installation."

Start/stop print server and remote printer processes

You can use PCONSOLE to reconfigure your print environment. Each time changes are made, you must terminate the *pserver* and *rprinter* processes. Follow these steps:

To start print server and remote printer processes:

1. Log in to the AViiON system as root.
2. Change to the `/usr/bin/netware` directory.
3. Type the following:

```
./sconsole <Enter>
```

4. Access the Administration Menu.
5. Access the Startup/Shutdown NetWare Menu.
6. Access the Start Print Server screen.

Enter "Y" to start the print server, then the primary file server name, print server name, and the server login password. The print server name is case-sensitive and must match the print server name specified in PCONSOLE.

7. Access the Start Remote Printer screen.

Enter "Y" to start the remote printer.

8. Exit *sconsole*.

NOTE

To start additional print servers correctly, you must edit the file *psinit* in the */usr/bin/netware* directory. The file contains information on what you need to change. After you edit this file, all print servers start automatically when NetWare Services start.

To stop print server and remote printer processes:

1. Log In to the AVIIION system as root.
2. Change to the */usr/bin/netware* directory.
3. Type the following:
`./sconsole <Enter>`
4. Access the Administration Menu.
5. Access the Startup/Shutdown NetWare Menu.
6. Access the Stop Remote Printer screen.

Enter "Y" to shutdown the remote printer.

7. Access the Shutdown Print Server screen.

Enter "Y" to shutdown the print server, then the print server name. The print server name is case-sensitive and must match the print server name specified in PCONSOLE.

8. Exit *sconsole*.

PSERVER

(Print SERVER)

DOS
Executable



Why use PSERVER?

Use PSERVER to load a print server on a dedicated workstation.

The print server can support up to 16 printers and can service queues on up to 8 file servers.

Command format

```
pserver [fileserver] printserver
```

Run the print server on a dedicated workstation

Before you run the print server, you must set up a print server account using PCONSOLE. See "Print Server Installation."

To run a print server, you must have access to the following files:

```
IBM$RUN.OVL  
PSERVER.EXE  
SYS$ERR.DAT  
SYS$HELP.DAT  
SYS$MESSG.DAT
```

You must also increase the SPX connections in the SHELL.CFG file on the dedicated workstation. Include the following line:

```
SPX connections = 60
```

Suppose you have created the print server ENG-PRINT and have defined two printers to be serviced. Printer0 is attached to the print server. Printer1 is configured but is not currently connected.

Access the print server files by logging in to the file server or by inserting a diskette with the print server files into drive A:. Type

```
pserver eng-print <Enter>
```

A screen similar to the following appears, listing the status of printer slots 0 through 7. Press the spacebar to toggle between the status screens for printers 0 through 7 and printers 8 through 15.

Novell NetWare Print Server V1.21 Server ENG-PRINT Running	
0: Printer 0 Waiting for job	4: Not installed
1: Printer 1 Not connected	5: Not installed
2: Not installed	6: Not installed
3: Not installed	7: Not installed

Use PCONSOLE to bring down a print server on a dedicated workstation. See "Bring down a print server" for more information.

pslist (print server list)

Host
Utility



Why use *pslist*?

Use *pslist* to see the currently running print servers and network addresses.

Command format

```
pslist [-h] [-o output_file]
```

where

-h displays a help screen

-o *output_file* writes the print server names to *output_file*. Screen output information similar to the following appears:

Print Server Name	Network.Node.Socket	Hops
CANON	00003070.000000000001.8060	3
CITOH	COEDBABE.000000000001.8060	4
ENG-PRINT	FADEF2F2.00001B020566.8060	4
JOHN	FADE2200.00001B045E16.8060	4
MKTG_PSERVER	00100554.000000000001.8060	5
PS0	01010101.00001B30BA62.8060	4

Total of 7 print servers found.

rprinter

(remote printer)

Host
Process



Why use rprinter?

For convenience, we recommend that you use *sconsole* to use a remote printer attached to the AViiON system. Using *rprinter* directly only allows you to change the detail of messages displayed. The *rprinter* and *pserver* processes allow NetWare to use a DG/UX printer.

Command format

```
rprinter [-d [newdv]]
```

The *-d* must be accompanied by at least one of the five parameters *n*, *e*, *w*, *d*, or *v*. The default is *new*.

n=normal
e=error
w=warning
d=debug
v=verbose

Start/stop print server and remote printer processes

Use *sconsole* to start and stop the print server and remote printer processes. The *rprinter* process constantly monitors a control file created and changed in *sconsole*. This file is called *RPCControl* and is placed in the */etc/netware* directory. It tells *rprinter* which printers and printer slots to connect. The *rprinter* process requires a one-to-one relationship between multiple print server printer slots and printers on the AViiON system. To remove a print server, delete it from the *RPCControl* file using *sconsole*. For more information on the control files, see *System Administration*.

rprinter

You can use PCONSOLE, *pmonitor*, PSC, or *pulist* to monitor the status of the print server.

To start print server and remote printer processes:

1. Log in to the AVIIION system as root.
2. Change to the `/usr/bin/netware` directory.
3. Type the following:

```
./sconsole <Enter>
```

4. Access the Administration Menu.
5. Access the Startup/Shutdown NetWare Menu.
6. Access the Start Print Server screen.

Enter "Y" to start the print server, then the primary file server name, print server name (case-sensitive; it must match the name specified in PCONSOLE), and the server login password.

7. Access the Start Remote Printer screen.

Enter "Y" to start the remote printer.

8. Exit *sconsole*.

NOTE

To start additional print servers correctly, you must edit the file *psinit* in the `/usr/bin/netware` directory. The file contains information on what you need to change. After you edit this file, all print servers start automatically when NetWare Services start.

To stop print server and remote printer processes:

1. Log in to the AViiON system as root.

2. Change to the `/usr/bin/netware` directory.

3. Type the following:

```
./sconsole <Enter>
```

4. Access the Administration Menu.

5. Access the Startup/Shutdown NetWare Menu.

6. Access the Stop Remote Printer screen.

Enter "Y" to shutdown the remote printer.

7. Access the Shutdown Print Server screen.

Enter "Y" to shutdown the print server, then the print server name. The print server name is case-sensitive and must match the print server name specified in PCONSOLE.

8. Exit *sconsole*.

RPRINTER

(Remote PRINTER)

DOS
Executable



Why use RPRINTER?

Use RPRINTER to connect or disconnect a remote workstation printer. A remote printer can be attached to any workstation that is attached to the same network or internetwork as the print server.

RPRINTER is a terminate-and-stay-resident (TSR) program. It is loaded into a workstation's memory and runs in the background until it is removed or until the workstation is rebooted. The TSR remains active when you bring down any server.

Command format

RPRINTER [*printserver printernumber*] [*option*]

Replace *option* with -r or -s.

You can run RPRINTER as a command line or as a menu program. If you type RPRINTER without any options, you can select the print server and the printer number from a menu. Both methods are documented in the following sections.

To run the remote printer software, you must have access to the following files:

IBM\$RUN.OVL
RPRINTER.EXE
RPRINTER.HLP
SYS\$HELP.DAT
SYS\$MESSG.DAT
SYS\$ERR.DAT

These files are copied into SYS:PUBLIC during installation. For more information, see "Print Server Installation."

Command options

The **-r** option disconnects the remote printer from the print server.

The **-s** option displays the status of the RPRINTER program. (To view the status of the print server or printer, use PCONSOLE. If you are using *pserver* or PSERVER, you can view the printer status at the file server console.)

If you are using an extended or expanded memory shell, don't remove RPRINTER with the **-r** option. Reboot the machine to remove RPRINTER.

You do not need to be logged in to the file server to run RPRINTER; however, you must have the NetWare shell loaded.

Before you can connect a remote printer, you must use PCONSOLE to

- Define the remote printer
- Assign a queue to be serviced by the remote printer

As part of defining the printer in PCONSOLE, you must specify if the remote printer is connected to a parallel or a serial port. If you want to specify the port type in RPRINTER rather than in PCONSOLE, use the "Remote Unknown" designation.

For more information on defining printers and mapping queues, see "Print Server Installation."

Connect remote printer to print server (menu)

RPRINTER includes a short menu program you can use to select a print server and a remote print number. Complete the following steps:

1. Enter RPRINTER. Select the print server you want to use.
2. Select a printer number based on the printer name.

Connect remote printer to print server (command line)

Suppose you have a parallel printer attached to LPT1 on Jack's workstation and want to use it as a network printer connected to print server MICKEY.

When you set up the configuration files for print server MICKEY, you define Printer2 as a remote printer.

To connect the printer at Jack's workstation to print server MICKEY, type

```
RPRINTER MICKEY 2 <Enter>
```

The message ***** Remote printer now installed ***** appears.

The remote printer software has been loaded, and the printer functions like any other network printer. You can insert RPRINTER into the AUTOEXEC.BAT file of the workstation being used as a remote printer. Then RPRINTER loads automatically each time you boot the workstation.

Disconnect a remote printer from a print server

Suppose you want to disconnect Printer2 from print server MINNIE. Type

```
RPRINTER MINNIE 2 -r <Enter>
```

The message ***** Remote printer now deinstalled ***** appears.

The remote printing software is removed from memory.

Use a network printer as a local printer

If you have a remote printer connected to your workstation, you can prevent other users from using it as a network printer. Use the private flag with PSC to reserve your printer for your use only.

To assign private status to remote Printer3 attached to print server MICKEY, type

```
PSC PS=MICKEY P=3 PRIVATE <Enter>
```

To remove the private status and return the printer for network use, type

```
PSC PS=MICKEY P=3 SHARED <Enter>
```

End of Chapter

Troubleshooting

This section describes some of the more common problems you may encounter with printing on your network. It is not intended to be exhaustive. If you need more help, contact your local Data General service representative.

General suggestions

Many printing problems can be traced back to incorrect or incomplete print server installations. It's always wise to verify the installation configurations first.

Some of the common causes of printing problems are incomplete installations, conflicting interrupts (IRQ settings), and faulty hardware.

Print queues occasionally become corrupted. If all other troubleshooting solutions fail, delete the print queues and print servers, and redo them.

Problems, causes, and solutions

Print jobs go to the queue, but don't get sent to the printer

Possible causes

- The print server/print queue configuration is incorrect.
- The hardware (card, cable, port) is not working properly.
- The interrupts are configured incorrectly.
- The printer is cabled incorrectly.
- A printer definition is needed for that particular printer.

- The SHELL.CFG file on a workstation using RPRINTER has LOCAL PRINTERS=0.
- The printer is offline, jammed, or out of paper.
- A remote printer is set to "Private."
- No RPRINTERS have connected to the print server.

Possible solutions

- Verify all the print server/print queue installation information in PCONSOLE.
- Re-examine all your hardware connections. Some LPT ports that are part of a monitor board seem to have problems, so you might try LPT2 or a system board port.
- If the printer is serial and is configured to use interrupts, it may be configured for IRQ 7. If so, the interrupt must be changed for COM ports. Use IRQ 4 for COM 1 and IRQ 3 for COM 2.
- Re-examine the printer cabling. The message in the print server screen should say "Waiting for job."
- Verify that a printer definition file exists for your printer.
- If you are using a remote printer, examine the SHELL.CFG file on the workstation attached to the printer. If the SHELL.CFG file includes the line LOCAL PRINTERS=0, you should either remove the line or change it to include the appropriate numeric value.
- Inspect the printer for messages.
- Examine the settings on the remote printer.
- Try printing to the printer with UNIX commands such as *lp*.
- Refer to *Managing the DG/UX™ System* for troubleshooting information for DG/UX printers.

Print jobs go to the printer but print very slowly or print unknown characters

Possible causes

- The printer configuration needs to be changed.
- The hardware (card, cable, port) is not working properly. For instance, some printer ports do not generate interrupts.
- If the printer is a remote printer, the workstation it is attached to may not run the RPRINTER program effectively.

Possible solutions

- If the printer is local and is configured to use interrupts, switch to not using interrupts. Switching frequently resolves this problem, even when no hardware conflict is apparent.
- Re-examine all your hardware connections. Some LPT ports that are part of a monitor board have problems. Try LPT2 or a system board port.
- If you're using a remote printer attached to a workstation using RPRINTER, try another machine for the workstation. Some work more effectively than others with RPRINTER.

Message on print server screen indicates that printer is out of paper or offline when it is neither

Possible causes

- The hardware is not working properly.

Possible solutions

- Inspect all your cable, card, and port connections. You probably have some faulty hardware, and you need to isolate it.

You are prompted for a print server password when you haven't assigned one

Possible causes

- PSERVER or *pserver* was loaded without specifying the print server name.
- When *pserver* or PSERVER was loaded, the print server name was typed incorrectly.
- The print server or the print queues are corrupted.
- A file server has been added to the "File Servers to be serviced" list in the Print Server Configuration, but the print server has not been defined on the new file server.

Possible solutions

- Reboot and specify the print server name when loading PSERVER.
- Reboot and type the print server name correctly when loading the print server.
- Verify all the print queue/print server information in PCONSOLE. If it appears to be complete and correct, the server or queue configuration may be corrupted. In this case, delete the print server and queue, and redo them.
- Define the print server on the new file server.

End of Appendix

Memory Requirements

Print server on an AViiON file server

The AViiON system uses virtual memory, so there are no specific restrictions. See the NetWare Services Release Notice for overall system memory requirements.

Dedicated workstation print server

The dedicated workstation print server, including the NetWare shell and DOS, requires 256KB of memory. Add 10KB for each printer you are using. These figures vary depending on buffer size, queues per printer, and notify objects per printer.

Remote printer on a workstation

The remote printer requires 9KB of memory. This figure includes all the buffer space needed to run the printer.

The remote print TSR stays active when you bring down the file server.

Remote printer on an AViiON file server

The AViiON system uses virtual memory, so there are no specific restrictions. See the NetWare Services Release Notice for overall system memory requirements.

End of Appendix

Printing Worksheet Print server name _____

Data parameters for serial printers

Printer	Baud rate	Word length	Stop bits	Parity	Xon/Xoff

Workstation running as a dedicated print server

Printer	Name	Location	Port	Control Mode	Queues serviced (up to 8 file servers)
0				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
1				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
2				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
3				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
4				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
5				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
6				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
7				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
8				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
9				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
10				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
11				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
12				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
13				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
14				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
15				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	

Running on file server or router

Printer	Name	Location	Port	Control Mode	Queue name
0				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
1				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
2				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
3				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
4				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
5				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
6				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
7				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
8				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
9				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
10				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
11				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
12				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
13				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
14				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
15				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
16				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
17				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
18				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
19				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
20				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
21				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
22				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
23				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
24				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	

Printer	Name	Location	Port	Control Mode	Queue name
25				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
26				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
27				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
28				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
29				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
30				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
31				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
32				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
33				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
34				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
35				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
36				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
37				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
38				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
39				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
40				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
41				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
42				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
43				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
44				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
45				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
46				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
47				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
48				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
49				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
50				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
51				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	

Printer	Name	Location	Port	Control Mode	Queue name
52				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
53				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
54				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
55				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
56				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
57				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
58				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
59				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
60				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
61				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
62				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
63				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	
64				<input type="checkbox"/> Polled <input type="checkbox"/> Interrupt (IRQ)___	

End of Appendix

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