

HP**JetDirect****Print Servers**

HP JetDirect 4000 Print Appliance

User's Guide
(J4107A)

User's Guide

HP JetDirect 4000 Print Appliance

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J4107A

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Instruction Manual Symbol. If the product is marked with this symbol, refer to the product manuals to protect the product from damage.

CAUTION: Denotes a hazard that can damage equipment or data.

Do not proceed beyond a CAUTION notice until you have understood the hazard and have taken any appropriate steps.

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Introduction

Thank you for purchasing the HP JetDirect 4000 Print Appliance. This product is a state-of-the-art device for managing and monitoring printing over a network. It has several distinct advantages over conventional network printing configurations. These advantages are discussed below.

This guide provides information about installing and operating the HP JetDirect 4000.



Note This user's guide is intended for system administrators and other persons who are familiar with Windows operating systems, web browsers, and general network operation and terminology.

The HP JetDirect 4000 is a network device designed to offload printing from general purpose servers. This can result in improved performance in both printing and file access.

In a typical network, general purpose servers manage both the printing tasks and the file/application serving.

The HP JetDirect 4000 handles the spooling and network traffic associated with printing, reducing the workload on the general purpose server.

In conventional network printing, when printing takes place at remote offices or other locations distant from the servers, the speed of printing can be degraded. A print appliance installed in a remote office can dramatically increase printing performance by

eliminating the need for print requests to travel from the remote office to the central site and back to a remote office printer.

An additional benefit is that if general purpose file/application servers go down, remote office users can still print many jobs directly, using the HP JetDirect 4000.

Operation and Management

The HP JetDirect 4000 contains a large disk drive for spooling print jobs from clients. The jobs are stored in print queues on the disk drive. The print appliance has been optimized for a maximum of 32 queues.

Clients submit print jobs in the way they normally do.

Once the HP JetDirect 4000 is configured, virtually no management tasks are required. However, system administrators can monitor print activity, manage the queues or alter the configuration of the print appliance from anywhere on the network, using the HP JetDirect 4000's web-based graphical user interface and a supported browser.

Summary of Features and Benefits

- Easy to install
- Can be managed from any supported web browser on the network
- Once installed, virtually no management required
- Supports uninterruptible power supplies (UPSs)
- Increases performance of general purpose servers
- Increases printing performance
- Reduces network traffic
- Transparent to client users
- Easy to pre-configure before shipping to a remote office

For More Information

For the latest information about the HP Jetdirect 4000 Print Appliance and other HP products, visit the HP Web site online at:

<http://www.hp.com/go/printappliance>

Installation

To install the HP JetDirect 4000, you will need to complete these steps:

1. Unpack the HP JetDirect 4000.
2. Connect the components.
3. Configure IP settings on the front panel manually or via DHCP.
4. Use the Web Interface to configure the device.
5. Back up settings.
6. Set up access from each client.

These steps are explained in detail on the following pages.

Central Site Pre-Setup

You may pre-configure the HP JetDirect 4000 at your central site and ship it to a remote office.

Simply complete steps 1-5 before shipping the print appliance to the remote site.

After the print appliance is re-connected at the remote site, a qualified person must set up each remote client workstation (step 6). Last, you can verify the configuration from the central IT site.

Drop Ship to Remote Sites

You may ship the HP JetDirect 4000 directly to a remote site. This works especially well if your network uses DHCP.

A qualified person at the remote site should complete steps 1-3. If your network uses DHCP, the print appliance will acquire its IP address. Alternately, you can ask the individual at the remote site to enter an IP address manually.

Then, complete steps 4 and 5 from your location.

A qualified person must set up each remote client workstation (step 6).

Note

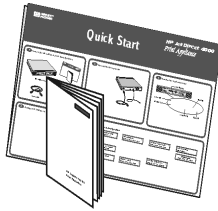
It is useful to verify the installation with a single client before configuring multiple clients.

1. Unpack the HP JetDirect 4000

The HP JetDirect 4000 carton contains the following:



**HP JetDirect 4000
Print Appliance**



**Quick
Start
Guide**

User's Guide



**Power
Cable**



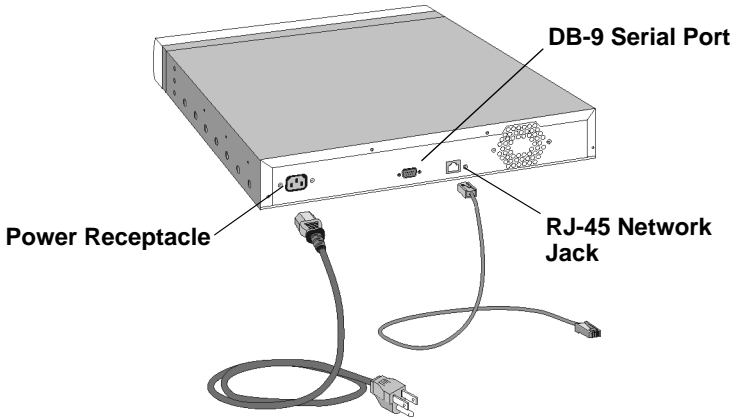
Rubber Feet



Rackmount Brackets

Unpack the carton, and make sure all parts are there and are undamaged. If any parts are missing or damaged, contact Hewlett-Packard.

2. Connect the Components



Desktop/Rack Shelf/Under-printer Installation

Caution

For under-printer installation, the HP JetDirect 4000 can support printers weighing up to **60 pounds**. Do not place heavier printers on the HP JetDirect 4000.

1. Turn the HP JetDirect 4000 print appliance so it rests on its top.
2. The HP JetDirect 4000 is shipped with a set of four self-adhesive rubber “feet” on a paper backing sheet. Remove each foot from the paper backing. Install each foot on the bottom of the HP JetDirect 4000 in the indentation provided. Press each foot firmly into place.
3. Turn the print appliance over so it rests on its rubber feet.
4. Locate the print appliance for easy access to a power source and network connection. You may locate it on any solid surface, on a rack shelf, or under a printer.

Rackmount Installation

The HP JetDirect 4000 print appliance may be rack-mounted into industry-standard instrument/computer racks. The print appliance is shipped with a pair of rack-mount brackets with screws for attaching them to the device. There are also screws for mounting the print appliance in the rack.

The HP JetDirect 4000 print appliance requires 1.5 RU (rack units) of vertical space. It does not require rails for rack mounting.

Note The rackmount installation should be performed by an experienced individual, using appropriate tools and exercising appropriate safety precautions.

1. Attach the rackmount brackets to the sides of the HP JetDirect 4000.
2. Position the print appliance in the rack.
3. Install the print appliance into the rack. Use all of the provided screws in both vertical rails of the rack.

Cable Connections

1. Connect a twisted pair network cable (not included) with an RJ-45 connector to the RJ-45 jack on the back of the print appliance.
2. Connect the other end of the network cable to a network port.
3. If you are using an APC uninterruptible power supply (UPS), connect a Simple Signaling cable (APC part # 940-0020B) from the UPS to the DB-9 serial port on the back of the HP JetDirect 4000.
4. Connect the power cable to the power receptacle on the back of the HP JetDirect 4000.

Note Make sure the air flow is not restricted around the back of the unit.

5. Connect the other end of the power cable to a power source. If you are using a UPS, connect the power cable to the UPS.
6. Power on the print appliance, by pressing the Power button on the front panel.
7. Go to the next step, “Configure IP Settings on the Front Panel”.

3. Configure IP Settings on the Front Panel

When the HP JetDirect 4000 powers on, it executes a series of self tests. Then, messages, including “Booting... Configuring... Validating... Extracting... Formatting...”, appear on the HP JetDirect 4000’s LCD display.

Automatic (DHCP) IP Configuration

After bootup, the HP JetDirect 4000 will immediately request an IP address from any DHCP (Dynamic Host Configuration Protocol) server that resides on the network. If this request is successful, you will see the following messages.

DHCP requesting IP Address...
DHCP successful 10.1.2.3
HPMC60CAF Mon Jan 10 2001

Note

If, after one minute, there has not been a successful DHCP configuration, you will be notified via the front-panel LCD display; then you will be prompted to enter the IP address information manually.

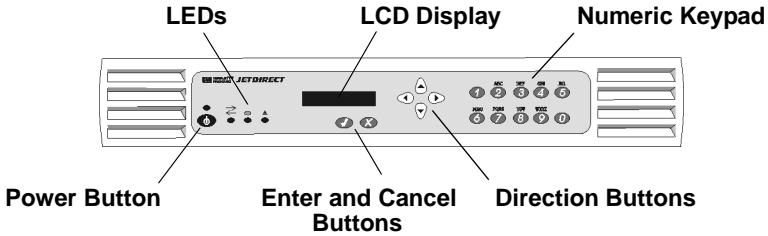
The default Print Appliance Name, based on the device’s MAC address, is displayed on the first line of the LCD.

After the initial IP address display, the IP address will continue to appear on the LCD display on the second line of the LCD as part of the HP JetDirect 4000 display cycle: date, time, IP address, version. Write down the IP address, as you will need it for further installation steps.

Manual IP Configuration

If your network does not use DHCP, use the HP JetDirect 4000's front panel to manually enter the IP address, subnet mask, and default gateway.

These instructions use the LCD Display, the Enter and Cancel buttons, the direction buttons and numeric keypad.



You will see this message on the front-panel LCD.

- | |
|--|
| DHCP requesting
IP Address... |
|--|

 After about 30 seconds, the next message will appear.
- | |
|---|
| Press ✓ to begin
Initial Setup |
|---|

 Press ✓.
- | |
|-------------------------|
| IP Config Mode ▲ |
| =Manual ▼ |
| ◀▶ |

 Press ✓.
- | |
|---------------------------|
| IP Address: ▲ |
| =010.001.002.003 ▼ |

 Use the number buttons on the front panel of the HP JetDirect 4000 to enter the IP address. Press ✓.

Do not duplicate an IP address already in use on your network.

(Note: the IP addressing shown is for illustration purposes only.)

5. Subnet Mask: ▲
=255.000.000.000 ▼ Use the number buttons on the front panel of the HP JetDirect 4000 to enter the subnet mask. Press ✓.

6. Default Gateway: ▲
=010.001.002.003 ▼ Use the number buttons on the front panel of the HP JetDirect 4000 to enter the default gateway. Press ✓.

7. Setup complete ▲
Press ✓ to apply ▼ Press ✓.

8. Restarting
Network... Wait about 10 seconds. The normal operating messages will appear on the LCD display.

HPMC60CAF
09:12AM

The first line of the display shows the default Print Appliance Name.

The second line of the display alternates between date, time, IP address, and version.

9. Go to the next installation step, “Use the Web Interface to Configure the Device”.

4. Use the Web Interface to Configure the Device

1. At a workstation, open the web browser.
2. In the “Location” field (Netscape Navigator) or “Address” field (Microsoft Internet Explorer), enter the HP JetDirect 4000’s IP address in the following format:

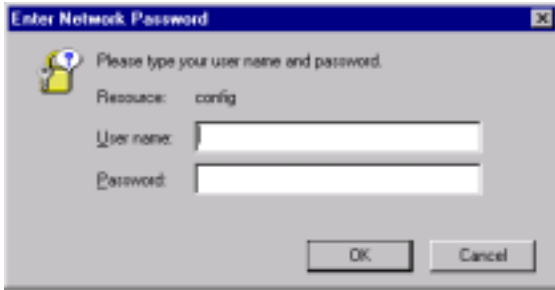
http://nnn.nnn.nnn.nnn

The IP address is the address displayed on the HP JetDirect 4000’s front panel.

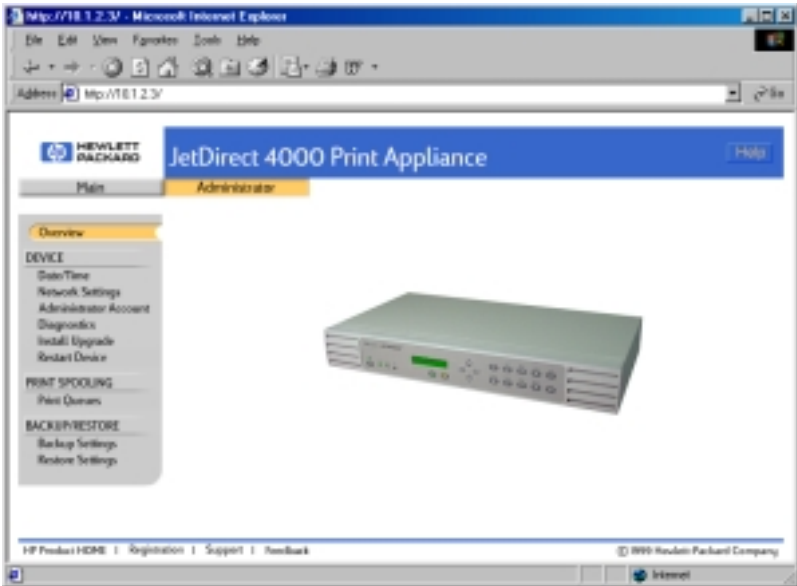


3. Click Administration.

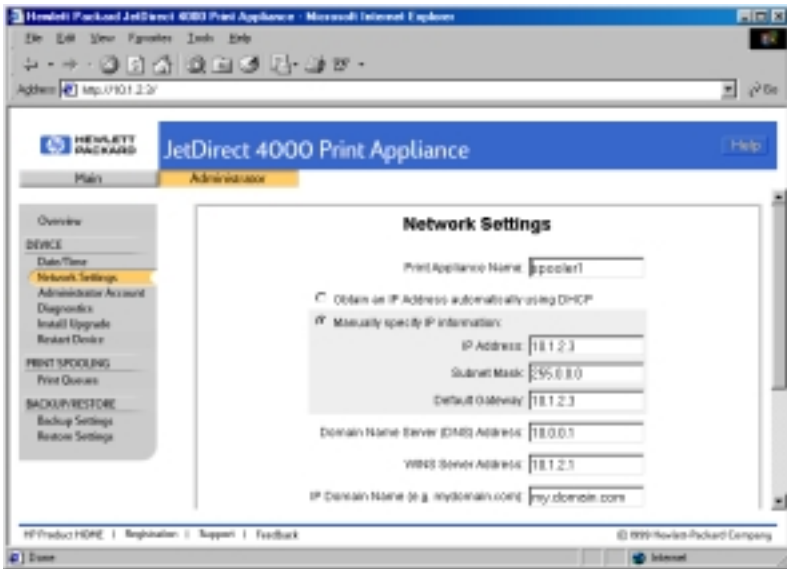
Note Click **Help** in the banner or on any screen to go to online help.



4. Log in, using “admin” as both user name and password.
5. Complete the registration screens.
6. Click **Network Settings**.



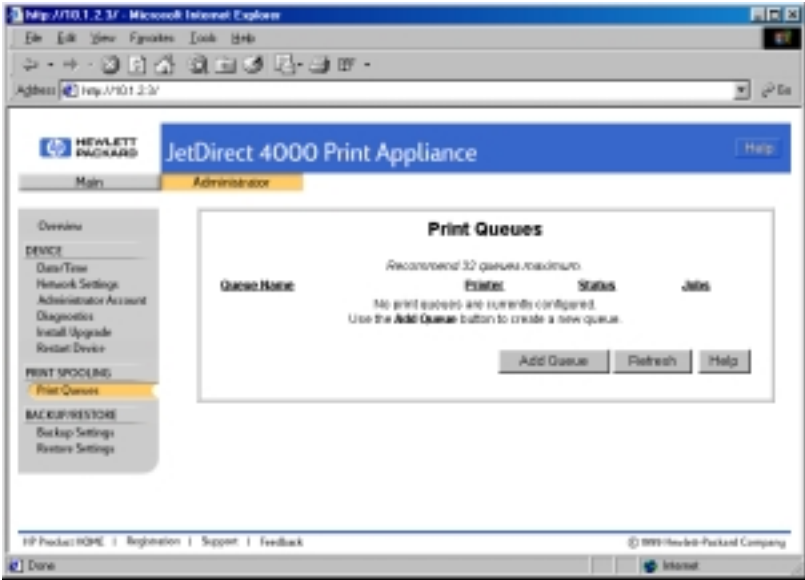
7. Enter network settings.



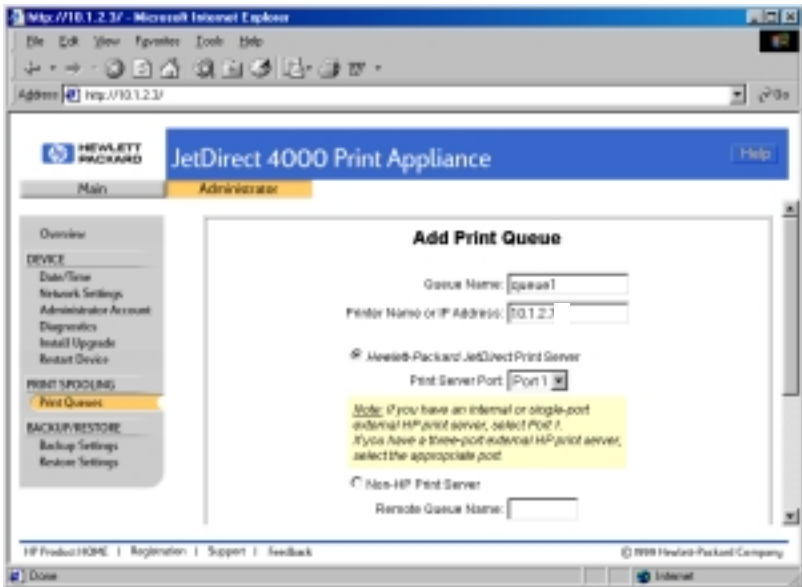
Note Checking “Enable shared drive to store printer device drivers” will create a space for managing printer drivers. See chapter 3, “Network Settings”.

8. Click **Apply**.

9. Click **Print Queues**.



10. Click **Add Queue**.



11. Enter queue information. Click **OK**.

Add as many queues as you want for the HP JetDirect 4000.

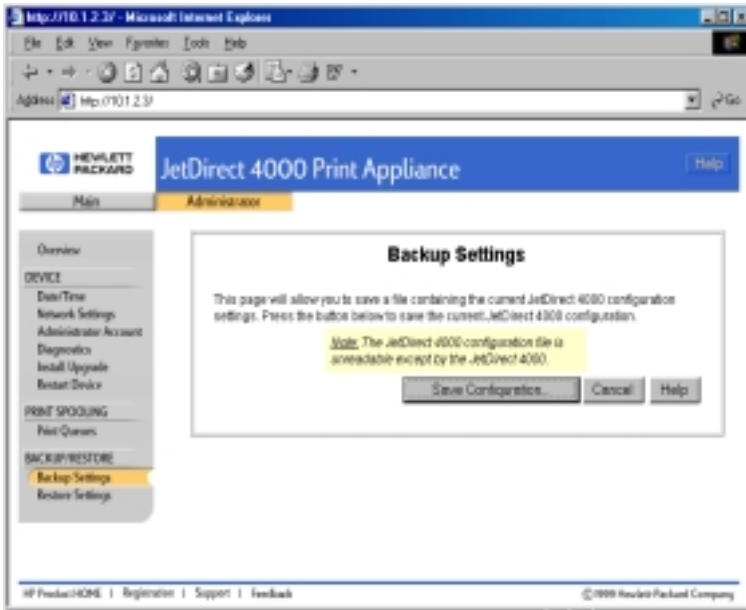
However, the device works best with 32 or fewer queues.

To easily add more print queues, check the “Add another print queue” check box, and click **OK**.

Note For detailed information about web interface operations, see Chapter 4 of this manual.

12. Go to the next installation step, “Back Up Settings”.

5. Back Up Settings



Use this page to save a copy of the HP JetDirect configuration parameters. Configuration parameters include network settings and print queue information.

Saving the configuration makes it easy to restore the configuration parameters if the HP JetDirect 4000 must be replaced or if its configuration values are accidentally changed or lost.

1. Click **Backup Settings**.
2. At the next screen, select **Save Configuration**.
3. Choose a filename, drive, and directory.
4. Click **Save**. The saved configuration is in binary format and cannot be edited using a text editor.

Or, click **Cancel** to return to the Backup Settings page without saving the configuration.

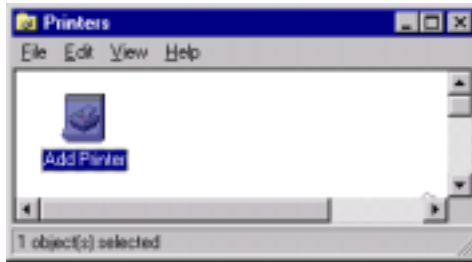
5. Go to the next installation step, “Set Up Access From Each Client”.

6. Set Up Access from Each Client

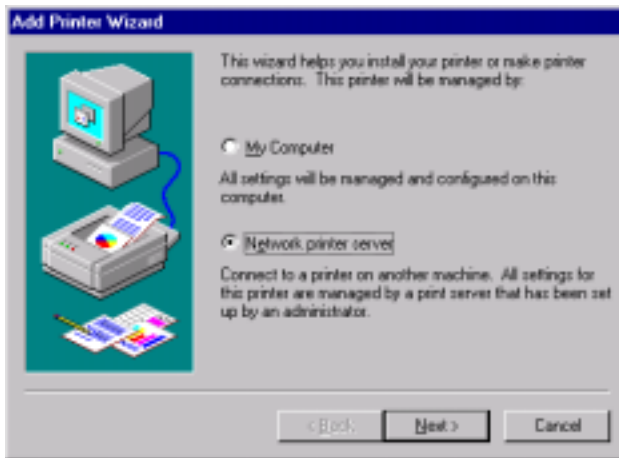
Note Hewlett-Packard suggests you verify installation with one client before configuring more clients. This will confirm operation. It is easier to troubleshoot settings on one client than many.

During setup, you may need the Windows CD or the driver disk from the printer manufacturer.

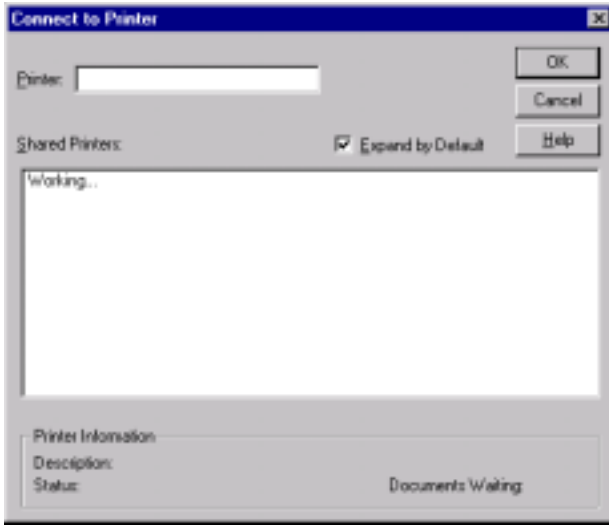
1. Be sure the HP JetDirect 4000 is installed, queues set up, and the printers turned on. Be sure the client workstation is connected to the network.
2. At the client workstation, select **Start** from the task bar. Select **Setup** and **Printers**.



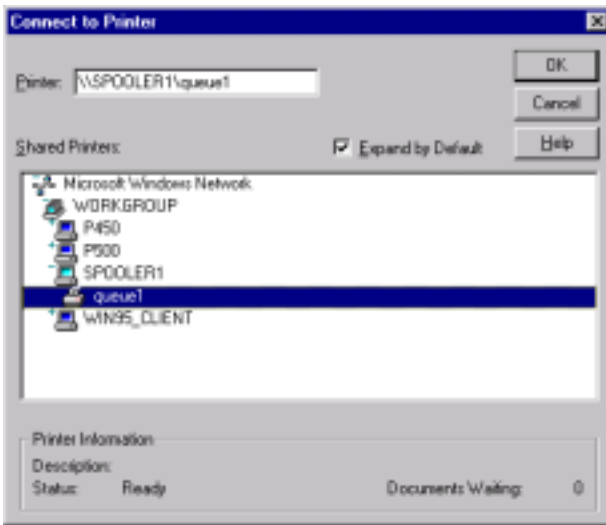
3. Double click **Add Printer**.



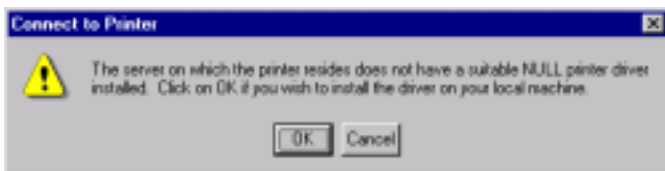
4. Select **Network printer server**. Click **Next**.



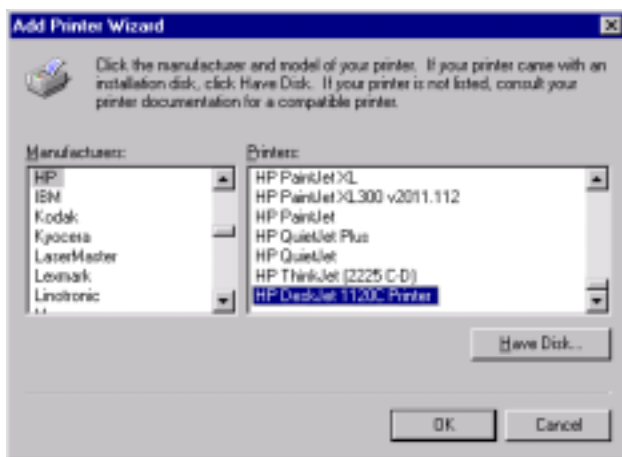
After a few seconds, the network will appear.



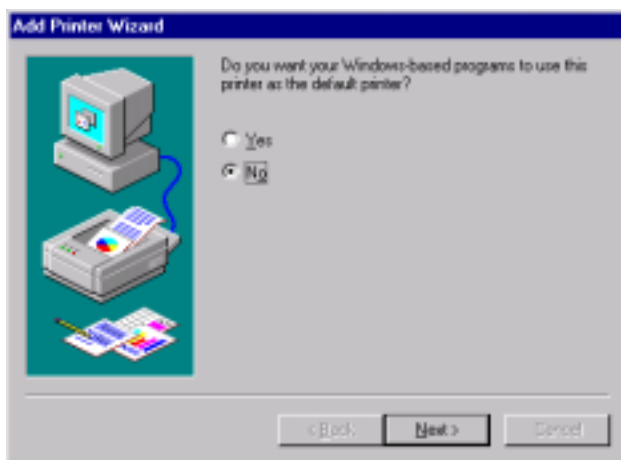
5. Enter the Universal Naming Convention (UNC) path directly (for example "\\spooler1\queue1"). See Microsoft documentation for more information about UNC. Or, locate and select the print queue you established earlier. Click **OK**.



6. Click **OK**.



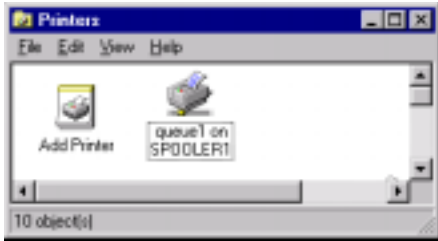
7. Select a driver and click **OK**. If necessary, insert the printer manufacturer's driver disk and click **Have Disk**.



8. Select **Yes** or **No**. Click **Next**.



9. Click **Finish**.



The installation is complete, and the client user will be able to print from the client workstation.

You should now register your HP JetDirect 4000 Print Appliance. When you do, you will receive:

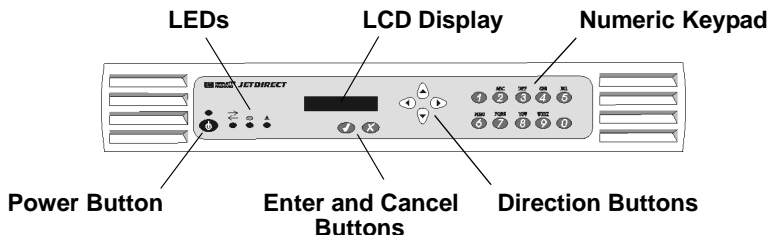
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Front Panel

The HP JetDirect 4000's front panel has the following components:



These components are described in the following sections.

Power Button

Press the Power button to power up the HP JetDirect 4000. A bootup process begins. When the device is powered on, the Power On LED is lit.

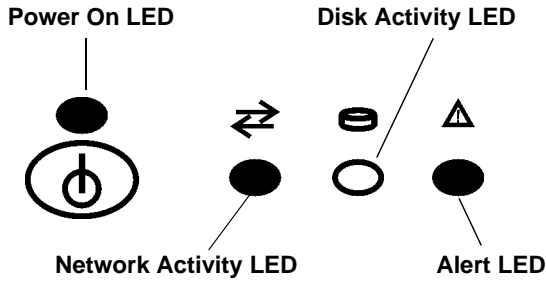
Press the Power button again to power down the print appliance. The print appliance performs an orderly shutdown.

Note The print appliance continues to draw some power even if it is switched off.

If print jobs are printing when you power up the print appliance, the print jobs will not be completed.

Jobs in the print queues waiting to be printed will resume printing when the print appliance is fully booted.

LEDs



Power On LED
(green)

When lit, the device is powered on.

Network Activity LED
(green)

Lit intermittently when data is arriving at the HP JetDirect 4000, or when data is being sent to the printers. At other times, it is OFF.

Disk Activity LED
(green)

Lit intermittently when disk I/O is taking place. At other times, it is OFF.

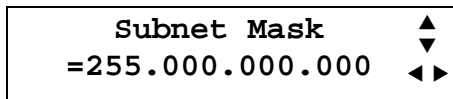
Alert LED
(amber)

Lit during power up and bootup. This process lasts several minutes.

At other times, the Alert LED is lit when the HP JetDirect is not working correctly. Check the Troubleshooting chapter of this manual to analyze and correct the problem.

LCD Display

The LCD display has two rows, each containing 16 characters and spaces. It is used to display the status of the HP Jet Direct 4000 and to display configuration information you enter at the front panel.



Choice Indicators

- ▲ When these symbols appear in the LCD display, you can use the Up and Down direction buttons to scroll through a menu. The Up direction button will take you back, and the Down direction button will take you forward.
- ◀▶ When these symbols appear in the LCD display, you have a choice of options. Press the Left or Right direction buttons on the front panel to toggle through the choices.





Cursor

- █ When the cursor appears, move it (using the Left or Right direction buttons on the front panel) to the position where you wish to enter a value. If you are changing just part of a field, you do not need to re-key the entire field. Just move the cursor on the value you want to change.

Enter and Cancel buttons

- ✓ **Enter.** Press this button to accept the information just entered.
- ✗ **Cancel.** Press this button to cancel information just entered or end an operation.

Direction Buttons

-  **Up.** Press this button to return to the previous menu item or step of a procedure. If Enter hasn't been pressed, any changes made will be canceled.
-  **Down.** Press this button to advance to the next menu item or step of a procedure.
-  **Left.** When there is a choice of options (as indicated in the LCD display), press this button to toggle backward through the choices.
-  **Right.** When there is a choice of options (as indicated in the LCD display), press this button to toggle forward through the choices.

Numeric Keypad

The numeric keypad has buttons for the numbers 0-9. Above the keys are letters of the alphabet, like the keypad on a telephone.

Use the numeric keypad to enter numeric values, such as IP address, subnet mask, etc., when configuring the HP JetDirect 4000. The letters above the keys can be useful as a mnemonic aid when you are entering the device's password.

Making Entries

Use the Left and Right Direction Buttons on the front panel to position the cursor (█) in the LCD entry field. Enter numbers from the keypad. When the entry is complete, press the Enter (✓) Button.

Front Panel Operations

Messages at Power-On

When you power on the HP JetDirect 4000, it executes a series of self tests. It then displays a series of messages, including "Booting... Configuring... Validating... Extracting... Formatting..." etc.

Messages During Normal Operations

When the startup process is complete, the HP JetDirect 4000 displays a repeating series of normal operating messages.

<p>HPMC60CAF 09:12AM</p>

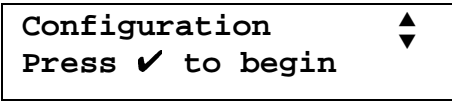
The first line of the display shows the Print Appliance Name, entered from the web interface during configuration. If you do not enter a Print Appliance Name via the web interface, the line displays a name based on the device's MAC address.

The second line of the display shows date, time, IP address, and firmware version in a repeating sequence.

Starting Front Panel Operation

There are two front panel operations: Configuration and Password.

Press **✓** once to begin front panel operations.



If you press **✓** again, you will go to the Change Configuration function. If you press **▼**, you will go to the Change Password function.

Configuration

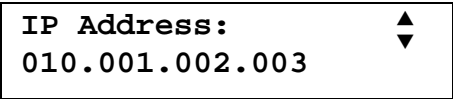


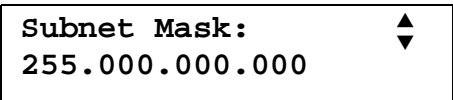
The IP Config Mode screen has three options.

- The display shows Manual mode. Press the left or right direction buttons (**◀** or **▶**) to toggle between DHCP and manual modes.
- Press **✕** to cancel the operation and go to the main display.
- Press **▼** to continue the configuration process. Pressing **✓** has no effect.

Manual Mode

If you toggle to Manual mode, you will see this display:

- A rectangular box representing the front panel display. The text inside reads "IP Address:" on the top line and "010.001.002.003" on the bottom line. To the right of the text are two vertical arrow icons: an upward-pointing triangle above a downward-pointing triangle.

Use the number buttons on the front panel of the HP JetDirect 4000 to enter the IP address. Press **▼**.
- A rectangular box representing the front panel display. The text inside reads "Subnet Mask:" on the top line and "255.000.000.000" on the bottom line. To the right of the text are two vertical arrow icons: an upward-pointing triangle above a downward-pointing triangle.

Use the number buttons on the front panel of the HP JetDirect 4000 to enter the subnet mask. Press **▼**.

3.

Default Gateway: 010.001.002.003	▲ ▼
-------------------------------------	--------

 Use the numbers on the front panel of the HP JetDirect 4000 to enter the default gateway. Press ▼.

4.

Exit config Press ✓ to exit	▲ ▼
--------------------------------	--------

 Press ✓.

5.

✓ Apply changes ✗ Cancel changes	▲ ▼
-------------------------------------	--------

 Press ✓.

6.

Restarting Network...

 After a moment, you will return to the display of normal operating messages.

DHCP Mode

After you toggle to DHCP, you will see this display:

1.

IP Config Mode DHCP	▲ ▼ ◀▶
------------------------	--------------

 Press ✓. The “=” will appear in the display.

2.

IP Config Mode =DHCP	▲ ▼ ◀▶
-------------------------	--------------

 Press ▼ several times. You will move through the IP Address, Subnet Mask and Default Gateway screens. You will then see this display.

3.

Exit config Press ✓ to exit	▲ ▼
--------------------------------	--------

 Press ✓.

4.

✓ Apply changes ✗ Cancel changes	▲ ▼
-------------------------------------	--------

 Press ✓.

5. Restarting
Network... After a moment, you will return to the display of normal operating messages.

Change Password

The HP JetDirect 4000 ships with no front panel password. You may want to supply the device with a password to prevent unauthorized configuration changes.

Note that this password limits access to front panel functions. After you set a password, you will need to enter it before performing future configuration tasks at the LCD front panel.

The front panel password is not the same as the password used for management of the HP JetDirect 4000 using the web interface.

1. Change Password ▲
Press ✓ to begin ▼ Press ✓.
2. New Password
█ Enter a new password and press ✓.
3. Retype Password
█ Retype the new password and press ✓.
4. Password set The front panel displays this message briefly and then shows the following message:
5. Change Password ▲
Press ✓ to begin ▼ Press ✕ to end the operation and the device will return to the display of normal operating messages.

Or, if you just wait, it will return to the display of normal operating messages.

Resetting to Factory Defaults

Once you configure your HP JetDirect 4000, the configuration settings are retained in memory unless you manually reset them to factory defaults.

This procedure will reset the HP JetDirect 4000 to its factory defaults. All configuration information will be lost, including network settings, queues, and any firmware upgrades. The administrator account name and password will be reset to factory defaults.

1. Make sure queues are empty and no printing activity is taking place.
2. Press the Power button on the HP JetDirect 4000's front panel to power it down.

Caution Do not simply pull the plug! You may lose data if you do.

3. Once the HP JetDirect 4000 has been powered down, power it up by pressing the Power button again.
4. During the boot sequence, when the LCD display reads **Configuring...** press the Down direction button. The display should read:

Reset defaults?
✓ =yes, ✗ =no

5. Press ✓ to reset the HP JetDirect 4000 to its factory defaults. Press ✗ to continue the boot process and retain all current configuration information. The HP JetDirect 4000 will then finish its bootup.

Resetting...
(factory)

During bootup, the above message will be displayed if ✓ was pressed.

Web Interface

The HP JetDirect 4000 contains an embedded web server. The web server allows you to manage the HP JetDirect 4000's configuration and review the status of the device and print jobs from your web browser.

You can access the web server through any supported web browser on an intranet.

Supported Web Browsers

The following web browsers are supported:

- Netscape Navigator 4.01 or greater
- Microsoft Internet Explorer 4.0 with update version SP1

For the latest list of supported web browsers, visit the HP Customer Care web site (www.hp.com/support/printappliance).

Accessing the Web Interface

Open your web browser.

In the "Location" field (Netscape Navigator) or "Address" field (Microsoft Internet Explorer), enter the HP JetDirect 4000's IP address, as displayed on the HP JetDirect 4000's front panel LCD display. Example:

`http://10.1.2.3`

Alternatively, you can enter the HP JetDirect 4000's DNS name (if your DNS server has been configured with the correct name entry).

The HP JetDirect 4000 web interface will display. Make selections and enter information as you would with any other web application.



The screen contains three buttons: **Main**, **Administrator**, and **Help**.

There are links in the bottom left-hand corner to **HP Product HOME**, **Registration**, **Support**, and **Feedback** which require Internet connectivity.

Online Help

To use online help, click **Help**. The help table of contents appears.



Click on the links to go to the different help topics.

Click **Back**, **Index**, or **Forward** to navigate the help system.

Click **Close** to exit online help.

Individual screens in the web interface also have a help button. When you click **Help** in a particular screen, you will go to a help screen for that topic.

Administrator Functions

Click **Administrator** for access to HP JetDirect 4000 administrator functions.



The default User name is “admin”. The default Password is “admin”.

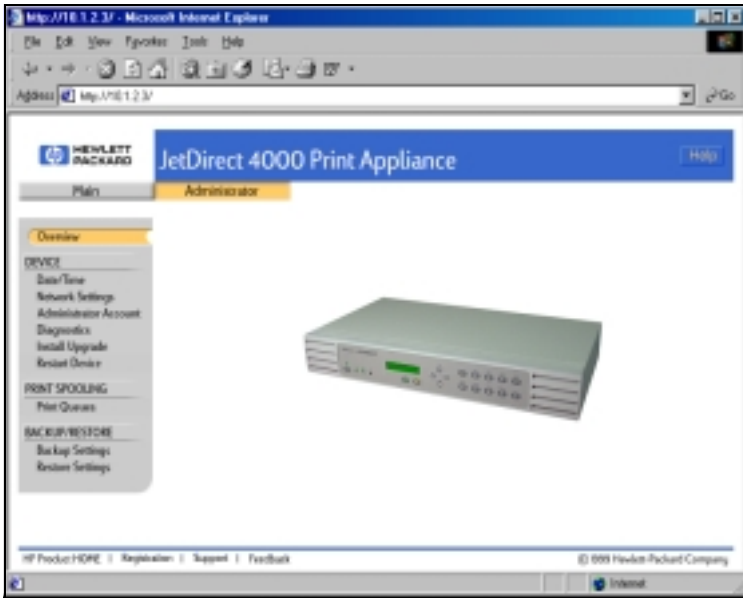
You can change the User name and Password by selecting “Administrator Account” from the administrator functions.

If you check the check box on this screen, the browser will remember your password for future logins.

Enter User name and Password. Click **OK** to continue.

Note

If you forget your user name and/or password, you can reset the HP JetDirect 4000 to its factory defaults. This action will restore the default User name and Password. “Resetting to Factory Defaults” on page 3-8.

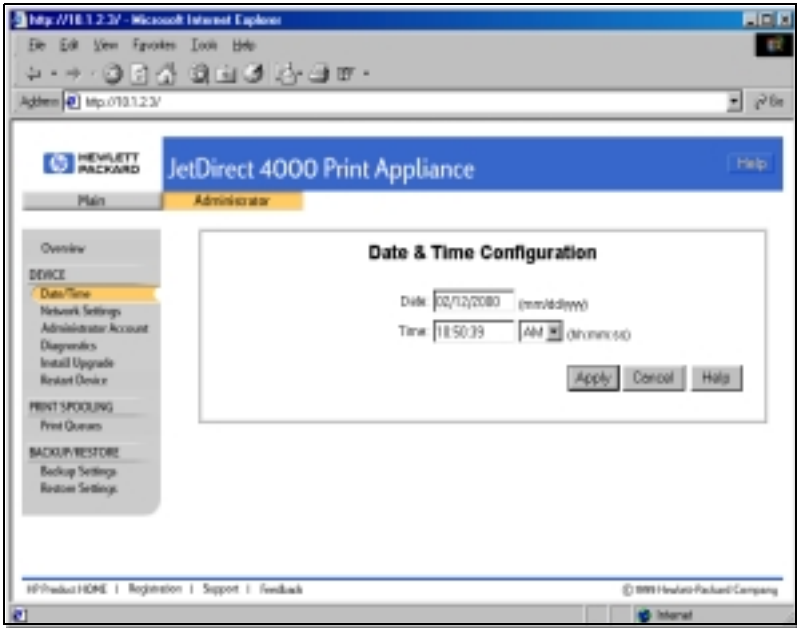


The Administrator screen provides access to all HP JetDirect 4000 management and monitoring functions.

These functions are described in the following sections.

Date/Time

Use this page to set the HP JetDirect 4000's date and time.



Date Enter the date in the format mm/dd/yyyy. You must specify the complete year. You may omit leading zeroes. Examples: “1/1/1999” and “12/25/2001”.

Time Enter the time in the format hh:mm:ss. The seconds and leading zeroes may be omitted. Examples: “5:35” and “12:00:00”.

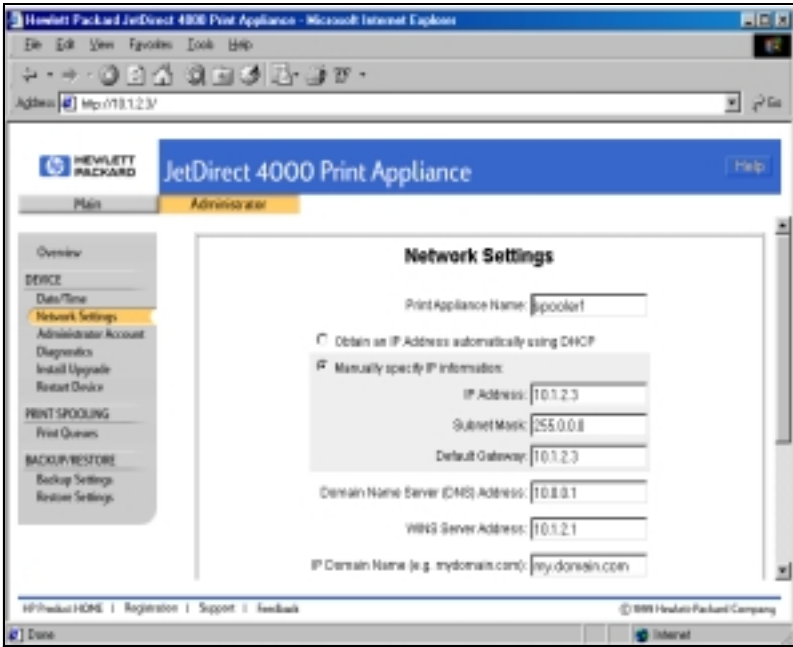
AM/PM Use the pull-down box to select AM or PM. The 24-hour time format is not supported.

Note Daylight savings time adjustments are not automatic. It is necessary to manually change the time using this page during daylight savings time shifts.

Click **Cancel** to keep the time and date at their previous values. Click **Apply** to set the date and time.

Network Settings

Use this page to establish the HP JetDirect 4000's network settings.



Print Appliance Name

Enter a name for the HP JetDirect 4000. This is the name that will appear on each client workstation's Network Neighborhood. If your network uses DNS to identify network resources, this name should match the DNS name. Otherwise, any name will do. The name may contain up to 12 alphanumeric characters. It may also contain underscore symbols (“_”). Once you make a change here, it will appear on the HP JetDirect 4000's front panel LCD display

Obtain an IP Address automatically using DHCP

Select this option for the print appliance to be automatically configured using DHCP. Ensure that a valid DHCP server and address leases are available. If you choose DHCP, the IP Address, Subnet Mask, and Default Gateway will be automatically configured. All configuration information received

from the DHCP server will appear inside the shaded area of the Network Settings page on the browser. All settings outside this shaded area must be set manually.

Manually Specify IP Information

Select this option to manually specify the IP address information for this print appliance. Each field must be entered manually.

IP Address

Enter an IP address without leading zeroes. Example: "10.1.2.3".

Subnet Mask

Enter a subnet mask. Example: "255.0.0.0".

Default Gateway

Enter the IP address of the default gateway used to access other networks or subnets. This enables the print appliance to communicate with devices (such as printers and PCs) on different subnets. If a gateway is not available or you do not know the gateway's address, enter the same IP address used for the HP JetDirect 4000, or leave this field blank.

Domain Name Server (DNS) Address

The DNS server enables you to specify network resources (such as PCs and printers) by their friendly names instead of their IP addresses. In order to use this functionality, you must specify the DNS server by its IP address, not by its friendly name. Once the DNS server is specified, you may then use friendly names across other configuration areas of the HP JetDirect 4000 (such as the queue configuration screen). If your network does not have a DNS server, leave this field blank.

WINS Server Address

Similar to the concept of a DNS server, a WINS server enables network resources such as the HP JetDirect 4000 to be browsable across subnets, using Network Neighborhood. Enter the IP address of the WINS server.

If your network does not have a WINS server configured, leave this field blank. Without a WINS server configured, Windows 9x clients may be unable to print to an HP JetDirect 4000 located on a different subnet.

Note The WINS Server Address must be manually entered. It will not be automatically configured via DHCP, and the IP address rather than the network name must be used.

IP Domain Name

The IP domain name that the HP JetDirect 4000 belongs to. Domain refers to a set of devices on a network that has been assigned a group name. The domain name must match standard naming conventions. The name must be alphanumeric. It may also contain underscore symbols (“_”) or dashes (“-”). Example: “mycompany.com”.

If your network does not have an IP domain name, enter “defaultdomain” instead.

NT Domain or Workgroup

Specify the Windows domain or workgroup this HP JetDirect 4000 belongs to. The HP JetDirect 4000 will appear under this name in Network Neighborhood. Although the print appliance is not able to authenticate users in a Microsoft Windows domain, it is able to identify itself as a resource in that domain.

Enable shared drive to store printer device drivers

Check the checkbox to create a folder on the print appliance for printer drivers. When created, it appears in Network Neighborhood as a folder under the Print Appliance Name.

The print driver share folder is a convenient place for you to store print drivers for later downloading to client workstations. The administrator has read-write access to the folder (called “@drivers”, while others have read-only access to the folder (which appears to them as “drivers”).

When installing a printer driver at a client workstation, you may find it convenient to click **Have disk** and find the driver in the HP JetDirect 4000 printer driver folder.

If you restore the print appliance to its factory defaults, the shared driver folder will be erased. The Save/Restore Configuration option in the web interface does not save data contained in the driver folder. However, you can save data in the folder to another device using common file management tools.

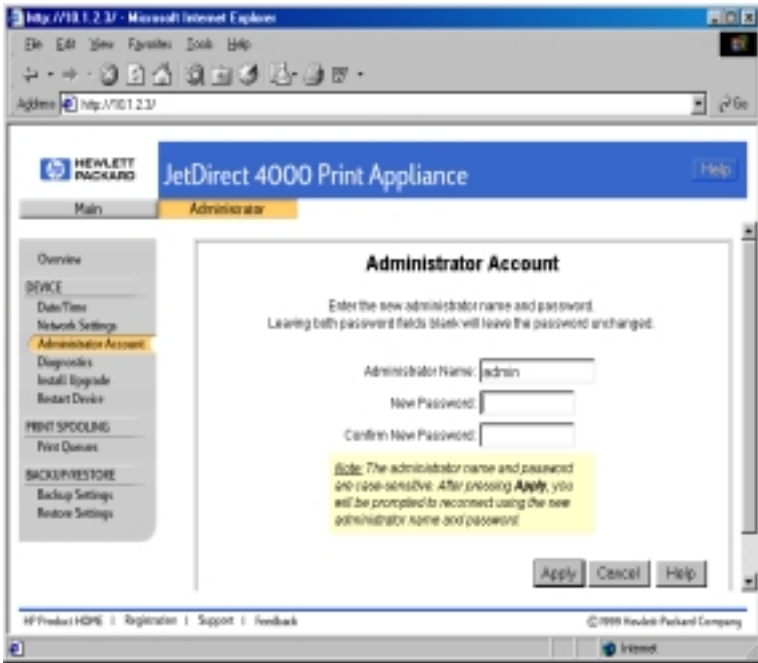
Click **Apply** to set the network settings. Click **Cancel** to keep the network settings at their previous values.

Administrator Account

Use this screen to change the administrator account name and password that allows administrative access to the HP JetDirect 4000.

Standard user privileges are limited to print access, which does not require web access. Administrative privileges grant permissions to change the configuration of the HP JetDirect 4000 using the web interface.

This name and password is not related to the HP JetDirect's front panel password.



Administrator Name

Enter the new administrator account name. The name may contain up to 12 alphanumeric characters. The default name is “admin”. The administrator account name is case sensitive.

New Password

Enter the new password. The password may contain up to 12 alphanumeric characters. The default password is “admin”. The password is case sensitive.

Note The HP JetDirect 4000 requires a password. Leaving the password blank does not create a blank password, but rather retains the previous password.

Confirm New Password

Enter the new administrator password again to confirm.

Click **Apply** to change the administrator account name and password to their new values.

Once the administrator account name and password have been changed, the current browser session is no longer authenticated. You will be prompted to re-connect, using the new administrator account name and password.

Caution If you forget the password, the only way to recover is to reset the HP JetDirect 4000 to factory defaults.

After you reset to factory defaults, all configuration information will be lost, including network settings, queues, and any recent firmware upgrades.

After a reset to factory defaults, you will need to restore the last firmware upgrade and restore the network settings. These procedures are described in this chapter.

To reset to factory defaults, see “Resetting to Factory Defaults” on page 3-8.

Configuration Summary (Diagnostics)

Use this page to view a summary of configuration parameters for the HP JetDirect 4000. You may print this page by using your browser's print function.

General

Model Name	HP JetDirect 4000 Print Appliance.
Model Number	Model number of the print appliance.
Current Software Revision	Current version of firmware running on this HP JetDirect 4000.
Original (Factory) Software Revision	Version of firmware that was shipped with this HP JetDirect 4000. Upon a reset to factory defaults, the HP JetDirect 4000 will revert to this version of firmware.
BIOS Version	Version of the device's BIOS.
Manufacturing Date Code	Manufacturing information for use by the factory.
Serial Number	Serial number of this unit, if any.
Operating System Restored	Date and time of last restore.
Data Area Restored	Date and time of last restore.
Spool Area Restored	Date and time of last restore.

Network Configuration

IP Configuration Mode	How this unit was configured (Manual or DHCP).
IP Address	IP address of this HP JetDirect 4000.
Subnet mask	IP subnet mask of this HP JetDirect 4000.
Default gateway	Default gateway of this HP JetDirect 4000.
DNS address	IP address of the DNS server.
WINS address	IP address of the WINS server.

Print Appliance Host Name	Name of this HP JetDirect 4000. This name should be entered in the DNS table, if available.
IP Domain Name	IP domain this HP JetDirect 4000 belongs to.
NT Domain or Workgroup	Microsoft domain or workgroup this HP JetDirect 4000 is on.
Administrator Name	Administrative account name for this HP JetDirect 4000.

Print Queues

This section lists the print queues currently configured on this unit and the IP addresses of the printers servicing the queues.

Network Statistics

MAC Address	Unique network hardware address for this HP JetDirect 4000.
Total Packets Received	Total number of network packets this unit has received.
Total Packets Transmitted	Total number of network packets this unit has transmitted.
Bad Packets Received	Total number of improperly formatted network packets received. A large number of bad packets may indicate network problems.
Received Packets Dropped	Number of packets dropped because the receive buffer is full.
Framing Errors Received	Number of improperly formatted frames received.
Transmit Packet Errors	Total number of errors that occurred while attempting to transmit.
Transmit Packet Dropped	Number of packets dropped while attempting to transmit because the receive buffer is full.
Transmit Packet Overruns	Number of packets dropped while attempting to transmit because the receive buffer is full.

Transmit Collisions

Number of attempted transmit packets dropped because of excessive collisions.

SNMP

System contact

SNMP-configured system contact name.

System location

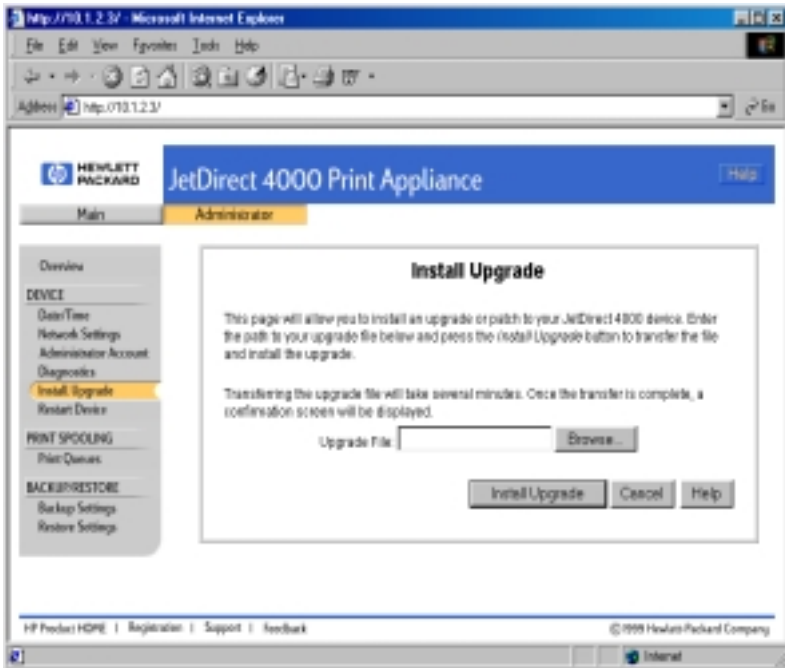
SNMP-configured system location.

Click **Refresh** to update the information on the screen.

Click **Cancel** to return the overview.

Install Upgrade

Use this page to upgrade the firmware on the HP JetDirect 4000. You can download the latest firmware image from the HP web site. See “Firmware Upgrades” on page C-4.



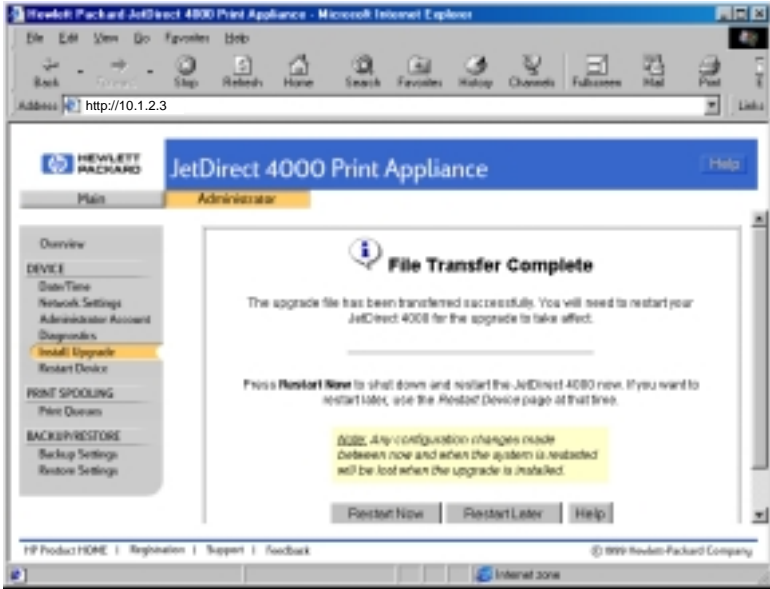
1. Using the Backup Settings feature (page 4-21), save the current configuration of the HP JetDirect 4000.

Caution

This information should be automatically saved on the HP JetDirect 4000, but if a catastrophic event occurs during the upgrade (for example, a power failure), it is possible that the configuration may be lost. This step is precautionary.

2. Download the firmware image from the HP support web site.
3. Save the new firmware image on a local hard drive.
4. On this page, type the complete path to the firmware image on the local hard drive (Example: “c:\temp\upgrade.hp”) or click **Browse** to find the firmware image saved on your hard drive.

5. Click **Install Upgrade** to upload the file to the HP JetDirect 4000.



6. You should restart the print appliance immediately.

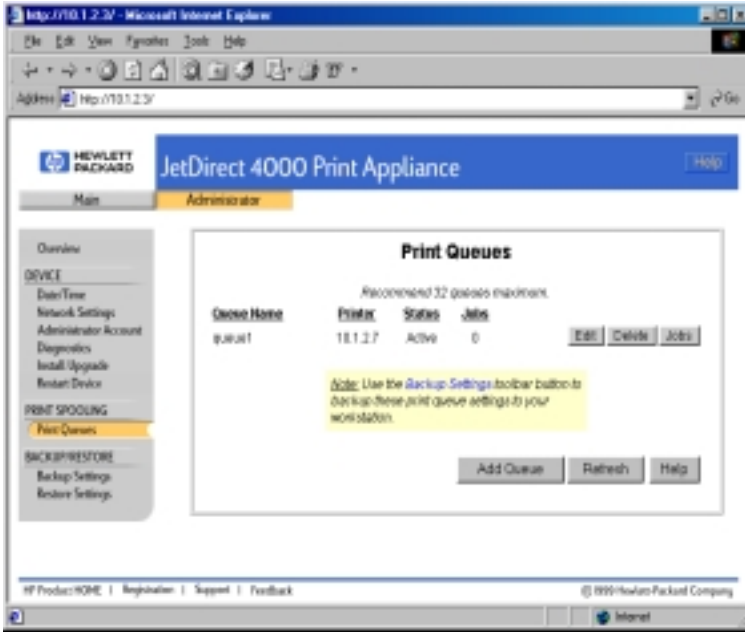
The restart process will take several minutes. During this time, ensure that power is not removed from the HP JetDirect 4000. On the LCD display, a series of messages will appear, including “Shutdown in progress... Booting... Configuring... Verifying... Validating... Uncompressing... Extracting...” etc.

The HP JetDirect 4000's front panel LCD screen will then go to its standard display.

7. When the print appliance is up and running, re-enter the network address if necessary. Generally, if no errors occur during the upgrade process, this is not necessary. All configuration information is retained.

Print Queues

This page displays all of the print queues configured on the HP JetDirect 4000. It shows each queue's status, the number of print jobs in it, and the printer to which the jobs will be sent.



Queue Name, Printer, Status, Jobs

The name of each queue, each printer's IP address, the status of each queue (active or paused), and the number of jobs in the queue (printing or to be printed).

Edit

Click **Edit** to change the properties of an existing print queue.

Delete

Click **Delete** to delete a queue and all jobs in the queue.

Jobs

Click **Jobs** to view, delete, or pause individual jobs in the queue.

Add Queue

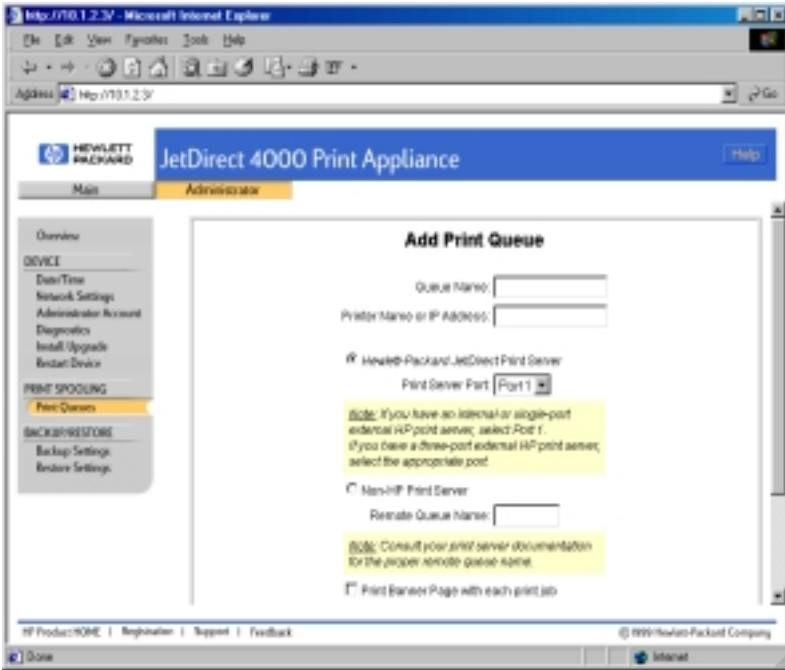
Click **Add Queue** to bring up the queue creation screen.

Refresh

Click **Refresh** to update the information on the screen. The information on the screen is not automatically updated.

Add Print Queue

Use this page to create new print queues. There is no limit to the number of queues you can create. However, printing performance may degrade if there are many heavy-use queues on the appliance. The recommended maximum number of queues on a single HP JetDirect 4000 is 32.



Queue Name

The name of the queue. This name will be displayed in Network Neighborhood as an available queue configured on the HP JetDirect 4000. The name must be alphanumeric. It may also contain underscore symbols (“_”) or dashes (“-”).

Printer Name or IP Address

The name or IP address of the printer that will be servicing the print jobs in this queue. This may be the network printer’s DNS name or the network printer’s IP address. In order to use the DNS name, a DNS server address must be configured on the HP

JetDirect 4000 in the Network Settings screen. The name must be alphanumeric. It may also contain underscore symbols (“_”) or dashes (“-”).

Hewlett-Packard JetDirect Print Server

Select this option if the target print server is an HP JetDirect print server.

Print Server Port

Some external print servers support more than one printer (for example, the HP JetDirect 500X). For these cases, choose which port the printer is connected to. For the following cases choose Port 1.

- Target print server has an internal print server
- Target print server has an external single-port print server
- Target printer is attached to port 1 of a multi-port print server

Non-HP Print Server

Select this option if the target print server is not an HP JetDirect print server. Many print servers will work well with the default selection of Hewlett-Packard JetDirect Print Server and Port 1 selected as the print server port. If, however, your print jobs do not appear on the printer, select Non-HP Print Server and specify the remote queue name recommended by your print server manufacturer.

Remote Queue Name

Refer to the lpr or UNIX printing section of your print server manual. Enter the remote queue name as specified.

Print Banner Page with each job

Select this option to insert a banner page at the beginning of each print job.

Add another print queue

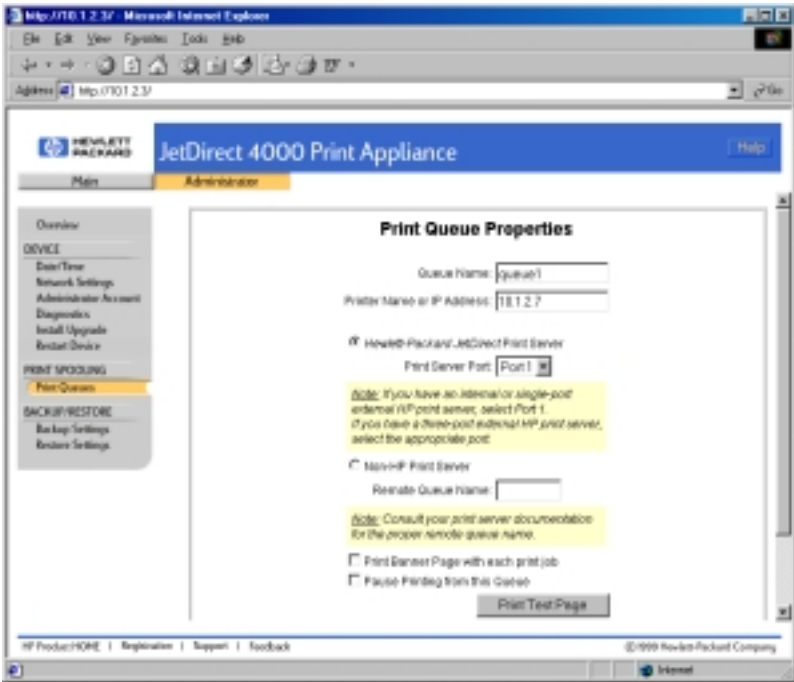
Select this option to create more print queues without having to return to the previous Print Queues summary screen. After adding the last queue, click **Cancel** to return to the Print Queues summary screen.

Click **OK** to add the new print queue.

Click **Cancel** to return to the print queues screen without creating the new queue.

Print Queue Properties (Edit Queue)

This page appears when you click a queue's **Edit** button on the Print Queues page. Use this page to display the properties of a selected print queue and to modify them. Use this page to pause and resume printing from the print queue.



Pause Printing from this Queue

Check the “Pause Printing from this Queue” check box to pause printing to pause printing from this queue.

To resume printing from a queue, un-check the “Pause Printing from this Queue” check box.

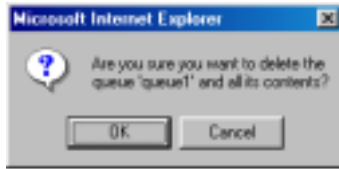
Make other changes to properties as described in the Add Queues section.

Click **OK** to save the changes to the print queue.

Click **Cancel** to return to the Print Queues summary page without modifying the selected print queue.

Delete Queue

This message appears when you click a queue's **Delete** button on the Print Queues page. This function will delete a selected print queue and all the jobs currently in that queue.



Click **OK** to delete the selected print queue.

Click **Cancel** to return to the Print Queues summary page without deleting the selected print queue.

Jobs (View Jobs)

This page appears when you click a queue's **Jobs** button on the Print Queues page. Use this page to view the jobs currently in a selected print queue.

Print Jobs - queuename

The name of the selected queue appears in the title area of the page.

File Name

The name of the file (print job) in the queue.

User

The name of the client user who submitted the print job to the queue.

Size

The size of the print job, expressed in bytes.

Status

The status of the print job in the queue. ("Printing" or "Queued").

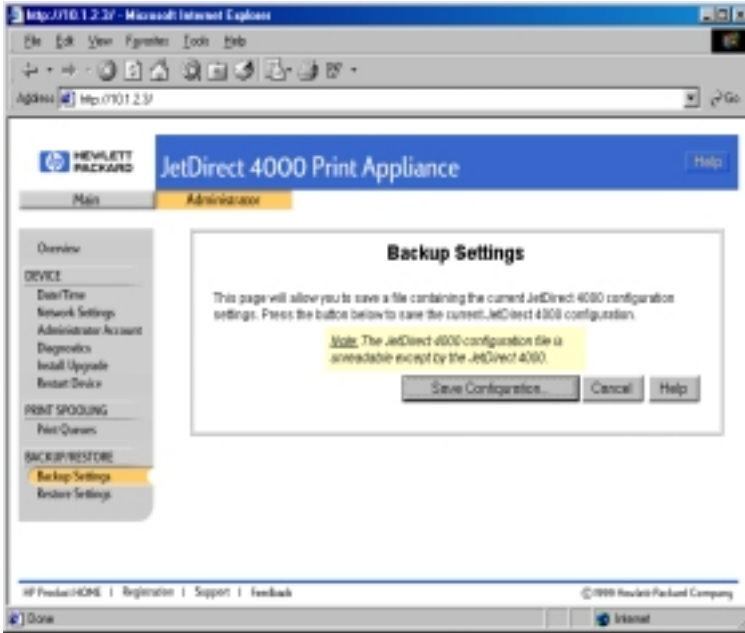
Click **OK** to return to the Print Queues summary page.

Click **Refresh** to update the information on the page. The information on the screen is not automatically updated.

Back Up Settings

Use this page to save the HP JetDirect 4000's configuration parameters. Configuration parameters include network settings and print queue information.

Saving the configuration parameters makes it easy to restore the configuration parameters if the print appliance must be replaced or if its configuration values are accidentally changed or lost.



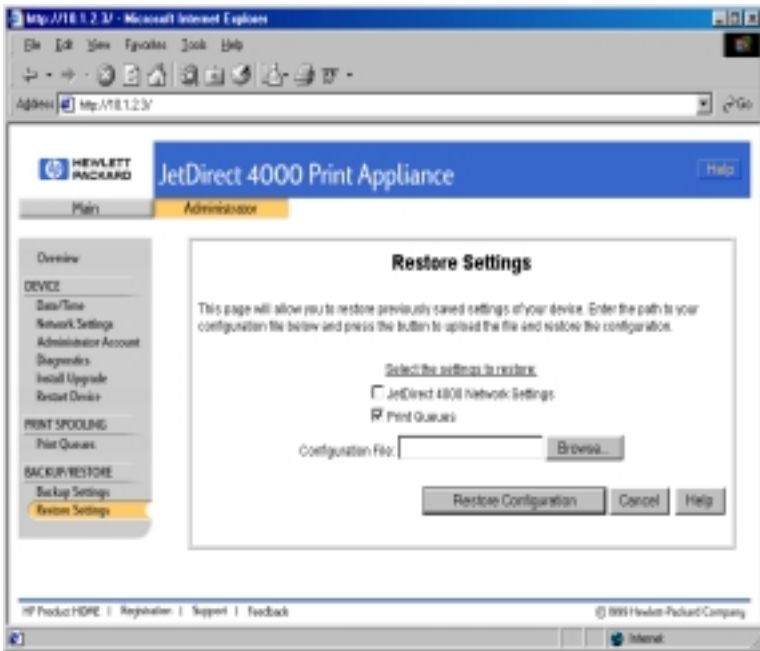
1. Click **Save Configuration** to begin the save process. A File Download window will appear.
2. At the next screen, select **Save this file to disk** and click **OK**. A Save As dialog box appears.
3. Choose a file name, drive, and directory to hold the saved configuration.
4. Click **Save**. The saved configuration is in binary format and cannot be edited using a text editor.

Or, click **Cancel** to return to the Backup Settings page without saving the configuration.

Restore Settings

Use this page to restore a previously saved file of HP JetDirect 4000 configuration parameters. The configuration parameters include network settings and print queue information.

You can restore a previously saved copy of the configuration parameters to a replacement HP JetDirect 4000 or one in which configuration values have accidentally been changed or lost.



1. Select which settings you want to restore. Select **JetDirect 4000 Network Settings** and/or **Print Queues**.

JetDirect 4000 Network Settings restores all HP JetDirect 4000 address and name information. **Print Queues** restore all queue definitions.

For settings that are not selected, current settings will be retained.

2. Enter the full path and file name of the saved configuration. You may type the path into the **Configuration File** field, or click **Browse...** to locate and select the file.
3. Click **Restore Configuration** to begin the restore process.

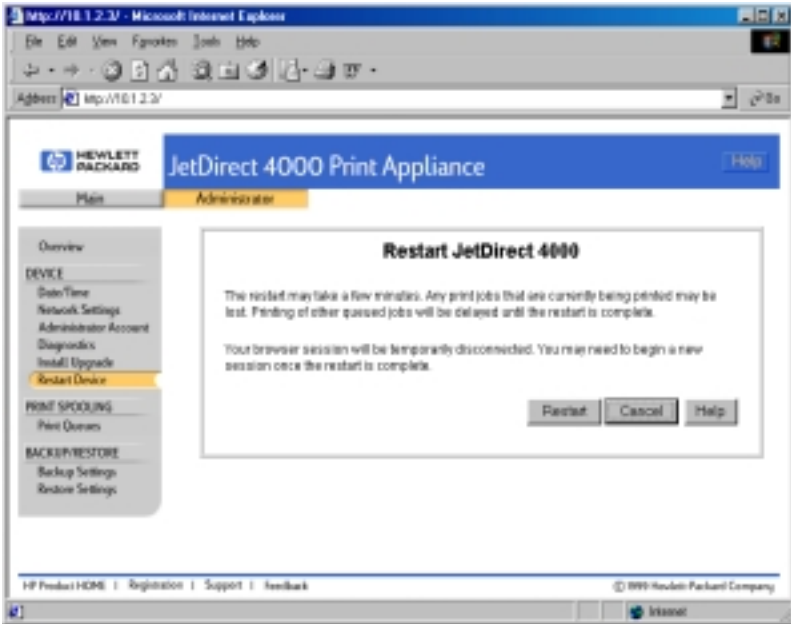
Or, click **Cancel** to return to the Restore Settings page without restoring the configurations.



4. Click **OK**.

Restart JetDirect 4000

Use this page to reboot the HP JetDirect 4000.



The restart process will take from 3 to 6 minutes. During this time, the HP JetDirect 4000 will not be available and the connection to this browser session may be lost.

Any print jobs actively being spooled from client users to the print appliance will probably be lost and must be reprinted.

Any print jobs currently spooled on the print appliance will be retained.

Any print jobs currently being de-spoiled from the print appliance to the printers may be restarted (automatically) once the HP JetDirect 4000 is up and running again.

Click **Restart** to begin the reboot process.

Click **Cancel** to return to the overview screen.

Frequently Asked Questions

- 1. How do I pre-configure the HP JetDirect 4000 for use at a remote site?**

Establish the front panel settings, establish the device's network settings using the web interface, and back up the configuration (Steps 1 through 5 in Chapter 2). Then send the HP JetDirect 4000 to the remote office to be connected. Printer drivers will need to be added to client PCs at the remote office.

- 2. Is there a maximum size print job I can send to the HP JetDirect 4000?**

The HP JetDirect 4000 can process print jobs up to a maximum size of 2GB.

- 3. How does the HP JetDirect 4000 work with my existing print spooling strategy?**

It can offload printing tasks from servers and localize print traffic at remote sites. For details, see Chapter 1, "Introduction", page 1-1.

- 4. Where do the printer drivers reside?**

The drivers reside on the client workstations. They must be loaded on any PC from which printing is done. The HP JetDirect 4000 will not automatically download a print driver; you are responsible for print driver installation. This can be done by following the prompts in the Windows Add Printer Wizard to install the driver.

- 5. What happens if there is a power outage?**

After a power outage the HP JetDirect 4000 will automatically recover and rebuild its settings as necessary. (See questions 7 and 8 below.) To reduce the chance of data loss, the HP JetDirect 4000 can be connected to a UPS. (See questions 9 and 10 below.)

- 6. What happens if I power down the HP JetDirect 4000?**

The HP JetDirect 4000 will not be available on the network. Any print jobs that were not printed will automatically resume when the HP JetDirect 4000 is powered up again.

7. What happens if I unplug the HP JetDirect 4000 while it is booting?

This could initially cause corruption of the data on the HP JetDirect 4000 hard disk. However, the HP JetDirect 4000 is designed to make internal data loss unlikely, since the corrupted data will be automatically corrected during its next uninterrupted bootup.

8. What happens if I unplug the HP JetDirect 4000 while it is processing a print job?

A similar corruption can occur as in the preceding situation. In addition, the print jobs that were in process of printing can become corrupted as well. Spooled print jobs that had not yet begun printing will not be lost. There is no guarantee about the integrity of print jobs in the process of being submitted to the HP JetDirect 4000 at the time the power was removed.

(Note that unplugging is not the same situation as powering down the HP JetDirect 4000 with the Power button, which is a more orderly shut down.)

9. How do I connect an uninterruptible power supply (UPS)?

The print appliance supports APC UPSs in the Simple Signaling mode with a Simple Signaling cable. Connect the UPS cable to the connector labeled UPS on the back of the print appliance.

10. How does an uninterruptible power supply (UPS) work with the HP JetDirect 4000 Print Appliance when the power fails?

The DB9 cable enables the UPS to signal the print appliance to perform an orderly shutdown in the event of a power failure. During an orderly shutdown, processes are closed and data is saved. No configuration is necessary to enable UPS support, other than simply connecting the DB-9 cable.

11. Can I use Web JetAdmin to manage my HP JetDirect 4000?

No. However, Web JetAdmin will be able to discover a configured HP JetDirect 4000 and allow you to launch the embedded web server from the Web JetAdmin interface.

12. Can the HP JetDirect 4000 accept print jobs from UNIX clients'?

Printing from UNIX is not supported.

13. Can I print from Macintosh clients on my network?

Printing from Macintosh computers is not supported.

14. Can I print over my network using Novell as the network OS?

Yes. If the MS client is loaded and the IP address is properly configured on the client and printer, then you may use the HP. However, the HP JetDirect 4000 will not appear as a Bindery object or as an NDS object on the NetWare server.

15. We use proxies on our networks. Can the HP JetDirect 4000 be used?

Yes. Web browsers used to interface with the HP JetDirect 4000 may be easily configured to support this. For details, see your web browser's online help.

16. Does the print appliance support bootp or rarp?

No. But the HP JetDirect 4000 does support DHCP.

17. Can the print appliance be configured via TELNET?

No. The configuration methods are DHCP, front panel, and web browser.

18. What is inside the HP JetDirect 4000 Print Appliance?

The print appliance is a PC running LINUX with a 266 MHz processor, 4+ GB hard drive, and 64 MB RAM.

19. What is the limit on the number of jobs that can be spooled?

The number of jobs is limited by the disk space available on the print appliance.

20. How are print jobs sent to the print appliance?

Clients send print jobs via SMB to the print appliance. SMB stands for Server Message Block and it is the normal Microsoft networking protocol.

21. How are print jobs sent from the print appliance to the printer?

The HP JetDirect 4000 uses LPD to send the print job to the printer.

22. Is the print appliance compatible with non-HP print servers?

Yes. Any print server that supports LPD should work with the print appliance. You may have to know the proper LPD remote queue name for the print server. Many print servers will work without specifying a remote queue name (use the default HP PRINT SERVER setting); however, some require a special string in order to work. The LPD remote queue name can be obtained from the print server vendor.

23. What kind of security does the print appliance employ?

The HP JetDirect 4000 has a front panel password to prevent unauthorized front panel configuration. It also has a web password required to configure the device or manage print queues.

The print appliance is not compatible with NT domain security. You can configure the NT domain name on the print appliance, and it will appear in that domain in Network Neighborhood, but there will be no user or group authentication. Any user on the domain will be able to print to queues on the print appliance.

24. Why do I have to load a print driver on every client when I use the HP JetDirect 4000 Print Appliance and I didn't with my NT print server?

Windows NT has a feature called point and print that will download many print drivers from the NT print server to the client automatically when a printer is configured on the client.

The HP JetDirect 4000 does not have this feature. When a printer is configured on the client, you will be notified that "The server on which the printer resides does not have a suitable NULL printer driver installed. Click on OK if you wish to install the driver on your local machine."

You must select an appropriate print driver from the printer installation dialog box or another source like a network drive or the disk supplied with the printer.

25. My DHCP server automatically assigned an IP address to a new printer I've added to the network. Where do I find that address?

You can either print out a printer test page, or access the DHCP server to display the scope of Active Leases.

Troubleshooting


If you encounter any problems while installing or operating the HP JetDirect 4000 Print Appliance, here are some suggestions for solving them.

First, generally identify the type of problem you are experiencing from among these categories, and see the relevant Table:

- Hardware Setup Problems..... page 6-1
- Web Interface Configuration Problems..... page 6-2
- Web Interface Operation Problems page 6-2
- Client Setup Problems page 6-3
- Printing Problems page 6-4
- Indicator Lights..... page 6-5

If you are still unable to resolve the problem, see the Getting Help section (page 6-6) to find out how you can receive further assistance.

Hardware Problems

Condition	Possible Cause/Solution
The HP JetDirect 4000 does not power up.	Bad power cable or AC outlet. Replace cable and/or verify that the outlet is working properly.
I select DHCP and initialization continues. However, "DHCP No Reply, Press  to continue" appears on the LCD display.	The RJ-45 network cables are not connected. Securely connect the network cables. A DHCP server could not be found on the network. Verify DHCP server configuration.
The Power On LED is lit, but the Network LED does not light.	The RJ-45 network cables are not connected. Securely connect the network cables. The cable may be faulty. See if another device can communicate on the network using the same cable.
The Power On LED is lit, but the alert LED is lit.	The HP JetDirect 4000 is not fully booted. Wait for the bootup process to complete. A critical defect has been detected. Power cycle the unit to see if this corrects the problem.

Condition	Possible Cause/Solution
I can't locate the HP JetDirect 4000 on the network.	<p>The RJ-45 network cables are not connected. Securely connect the network cables.</p> <p>A network hub has lost AC power. Re-establish AC power to the hub.</p> <p>The HP JetDirect 4000 is not powered up. Power up the print appliance on and let it boot up.</p> <p>(Also see Client Setup Problems below for alternative causes/solutions.)</p>

Web Interface Configuration Problems

Condition	Possible Cause/Solution
I can't print a test page.	<p>Incorrect printer IP address or DNS name. Verify or correct the IP address.</p> <p>Duplicate HP JetDirect 4000 IP address. Verify or correct the IP address.</p> <p>Printer is offline or not present on the network. Verify network connectivity and place printer online.</p>
I get browser errors when trying to access the HP JetDirect 4000.	<p>You may be using a browser that is not supported or has known limitations.</p> <p>See Chapter 4, "Supported Web Browsers", page 4-1.</p>

Web Interface Operation Problems

Condition	Possible Cause/Solution
We had a power outage. What do I need to do to recover?	<p>Jobs which were printing or being submitted during the outage may need to be sent again from the client PC, once the print appliance is normally powered up again.</p> <p>Jobs which were spooled but not yet printing should require no action, as they will print once the HP JetDirect 4000 is powered up again.</p> <p>If print operations do not appear normal (new jobs do not spool correctly) after the outage, then power off and then power up the HP JetDirect 4000.</p>

Condition	Possible Cause/Solution
I have added a new printer to the network. What changes must I make to the HP JetDirect 4000?	You must add a new queue with the printer's IP address or DNS name in order to spool to the new printer. See chapter 4, "Print Queues", page 4-16.

Client Setup Problems

Condition	Possible Cause/Solution
I can't locate the print queue from the client.	<p>The client is on a different subnet than the HP JetDirect 4000. Verify that WINS is configured correctly in "Network Settings".</p> <p>The Network Neighborhood browser has not yet updated. Try accessing the print appliance by selecting Start from the task bar, and select Find and Computer.</p>
When connected to a printer that has been configured for an HP JetDirect 4000, I get the message, "The server on which the printer resides does not have a suitable NULL printer driver installed. Click OK if you wish to install the driver on your local machine".	Click OK , and continue following the prompts to perform the normal client printer driver installation.
I can't locate the HP JetDirect 4000 on the network.	<p>Network Neighborhood has not had enough time to automatically update. This may take up to 30 minutes. An alternative method is to select the Windows Start button from the task bar, select Find and Computer, and enter the name or IP address of the HP JetDirect 4000.</p> <p>You can also use the UNC path directly and avoid browsing delays. (for example \\spooler1\queue1).</p> <p>Try accessing the print appliance with your browser's proxy server not enabled.</p> <p>(Also see Hardware Setup Problems above for alternative causes/solutions.)</p>

Printing Problems

Condition	Possible Cause/Solution
I can't print from a client to the intended printer, although I have done so previously.	The selected queue may be paused. Unpause the print queue. See Chapter 4, "Print Queues", page 4-16.
I have not been able to print from any client to the intended printer.	The IP address or queue name may not be correctly configured for the desired printer. See Chapter 4, "Network Settings", page 4-6.
A printer had to be taken off the network for repair, and it was replaced by one having a different IP address. Print jobs reach the queue but never print.	First, pause the print queue and then resume it. If that is unsuccessful, delete the print queue and then add the queue again. When you add the queue, be sure you have entered the new printer IP address, and performed Add Printer on client machines.
The print appliance is set up to use DHCP. When I powered it off and then powered it back up again, DHCP reassigned it to a different IP address than it had previously. Now the clients can no longer print. How can I avoid this?	Use a WINS server along with DHCP, so that when the print appliance powers up it will always be reassigned the same IP address. If you are not using WINS, you may alternatively set the print appliance IP address manually and have the DHCP administrator select an IP Address Pool range which excludes the print appliance address. Or, have the DHCP administrator supply the print appliance with an "infinite lease" duration for its assigned IP address.
I changed the print queue name and now the clients cannot print.	You must use the Windows Add Printer wizard at the clients and enter or browse to the new queue name. You should also delete the client's old printer driver which referred to the previous queue name.

Indicator Lights

There are four indicator lights (LEDs) on the front of the HP JetDirect 4000 Print Appliance.

LED Normal Conditions

- Power** The Power LED should be ON when power is supplied to the HP JetDirect 4000 Print Appliance.
- Network** The Network LED should BLINK when there is network activity between the HP JetDirect 4000 and other network devices.
- Disk** The Disk LED should BLINK when there is disk activity on the print appliance.
- Alert** The Alert LED should BLINK or be ON during initial boot, but should turn OFF after bootstrap is complete.
If the Alert LED is ON during normal operations, there is a fault with the print appliance.

LED Problem Conditions

Condition	Possible Cause/Solution
Power LED is not lit.	Power failure. Restore AC power. Bad power cord or power cord unplugged. Verify and replace cord.
Network LED never blinks.	Network connection is bad. Verify network cable connections, replace cable.
Alert LED remains lit after bootstrap is completed.	Critical failure is detected. Note the message on LCD front panel. Power cycle the unit. Contact HP.

Getting Help

If the solutions described in this chapter don't work, contact HP.

HP Customer Care Online

For online answers to questions about the HP JetDirect 4000 Print Appliance, go to:

<http://www.hp.com/support/printappliance>

HP Customer Care Forum

To participate in a user forum discussing ideas and suggestions for using the HP JetDirect 4000 Print Appliance, go to:

<http://www.hp.com/go/forums>

Select "Network Printing Support Forum". Then select "HP JetDirect Print Appliance".

HP Customer Care by Phone

For assistance by telephone in the USA, call (208) 323-2551 (6am-6pm, M-F, MST).

For assistance by telephone outside the USA, use one of the telephone numbers listed under "*HP Customer Care Numbers*" on page C-4.

Or, to obtain a current global list of support telephone numbers and services, you can go to:

http://www.hp.com/support/support_assistance

Specifications

Physical

Dimensions	441 mm W x 63 mm H x 323 mm D (17.4" W x 2.5" H x 12.7" D)
Weight	4.6 Kg (10.1 Lb)
Network Connection	RJ-45
Serial Port	DB-9. Supports all APC® uninterruptible power supplies

Environmental

Temperature	+5° to +40° C (41° to 104° F) operating -40° to +70° C (-40° to 158° F) non-operating
Relative Humidity (%)	80% at 40° C

Power

Power	120/240 VAC 50/60 Hz
Power consumption	100-127 VAC – 1.0 A 200-240 VAC – .75 A
Power Connection	IEC-320
Power Cable	Standard IEC-320 female; terminated by male plug appropriate for country of use

Regulatory Statements

FCC Statement (USA)

General Information. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Pursuant to Part 15.21 of the FCC Rules, any changes or modifications to this equipment not expressly approved by the Hewlett-Packard Company may cause interference and void the FCC authorization to operate this equipment.

The Federal Communications Commission has prepared a booklet titled *Interference Handbook* (1986), which may be helpful to you. This booklet (stock number 004-000-004505-7) may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against interference in a *commercial* environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause interference to radio communications.

Installing this equipment in an FCC Level B product results in an FCC Level A Composite System (as defined in the FCC Rules and Regulations) when attached to an Ethernet (IEEE 802.3/802.3u) or Token Ring (IEEE 802.5) network.

European Community

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

Electromagnetic Emissions

FCC part 15 Class A (U.S.A.), ICES-003 (Canada), CISPR-22/EN55022 Class A, AS/NZS 3548 (Australia/New Zealand).

Note: For EU compliance, see the Declaration of Conformity.

Safety

Products comply with:

IEC 950: (1991)+A1,A2,A3,A4/EN60950 (1992)+A1,A2,A3,A4

UL 1950

CSA 950

Australia



This equipment complies with Australian EMC requirements.

Canada

This equipment complies with Canadian EMC Class-A requirements.

Declaration of Conformity

The Declaration of Conformity complies with ISO/IEC Guide 22 and EN45014. It identifies the product, the manufacturer's name and address, and the applicable specifications that are recognized in the European Community.

DECLARATION OF CONFORMITY
according to ISO/IEC Guide 22 and EN45014

Manufacturer's Name: Hewlett-Packard Company

Manufacturer's Address: 8000 Foothills Blvd.
Roseville, CA 95747-5677
U.S.A.

declares that the product:

Product Name: HP Jetdirect 4000 Print Appliance

Model Number: J4107A

conforms to the following Product Specifications:

Safety: EN60950 (1992) +A1,A2,A3,A4,AII / IEC 950 (1991) +A1,A2,A3,A4
EN60825-1 (1994) / IEC 825-1 (1993), Class 1
GB 4943 (1995)

EMC: EN 55022 (1994) +A1,A2 / CISPR-22 (1993) +A1,A2 Class A
GB 9254 (1988)
EN 61000-3-2
EN 61000-3-3
EN 55024 (1998)
IEC 61000-4-2 (1995); EN 61000-4-2 (1995)
IEC 61000-4-3 (1995); EN 61000-4-3 (1996)
IEC 61000-4-4 (1995); EN 61000-4-4 (1995)
IEC 61000-4-5 (1995); EN 61000-4-5 (1995)
IEC 61000-4-6 (1996); EN 61000-4-6 (1996)
IEC 61000-4-8 (1993); EN 61000-4-8 (1993)
IEC 61000-4-11 (1994); EN 61000-4-11 (1994)

Supplementary Information:

The product herewith complies with the requirements of the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC and carries the CE marking accordingly. Shielded cables are recommended to meet the above specifications.

Tested with Hewlett-Packard Co. products only.

Roseville, November 23, 1999



Grant Marten, Product Regulations Manager

European Contact: Your local Hewlett-Packard Sales and Service Office or Hewlett-Packard GmbH, Department TRE,
Herrenberger Strasse 130, D-71034 Böblingen (FAX: +49-7031-14-3143).

Warranty Service and Customer Care

HEWLETT-PACKARD LIMITED WARRANTY STATEMENT

HP JetDirect 4000 Print Appliance (J4107A)

To get information on service in or outside of the USA, access the following URL:

http://www.hp.com/support/support_assistance

1. HP warrants to you, the end-user customer, that HP hardware, accessories and supplies will be free from defects in materials and workmanship after the date of purchase, for the period of one (1) year. If HP receives notice of such defects during the warranty period, HP will, at its option, either repair or replace products that prove to be defective. Replacement products may be either new or equivalent in performance to new.
2. HP warrants to you that HP software will not fail to execute its programming instructions after the date of purchase, for a period of NINETY (90) DAYS, due to defects in material and workmanship when properly installed and used. If HP receives notice of such defects during the NINETY (90) day period, HP will replace software that does not execute its programming instructions due to such defects.
3. You are responsible for restoring any configuration or data. In no event will HP or its affiliates, subcontractors or suppliers be liable for any of the following: damages for loss of data, or software restoration; damages relating to Customer's procurement of substitute products or services (i.e., "cost of cover"); or incidental, special or consequential damages (including downtime costs or lost profits).
4. The remedies in this exhibit and HP's terms and conditions of sale and service are customer's sole and exclusive remedies.
5. HP does not warrant that the operation of HP products will be uninterrupted or error free. If HP is unable, within a reasonable time, to repair or replace any product to a condition as warranted, you will be entitled to a refund of the purchase price upon prompt return of the product.
6. HP products may contain remanufactured parts equivalent to new in performance or may have been subject to incidental use.

7. Warranty does not apply to defects resulting from (a) improper or inadequate maintenance or calibration, (b) software, interfacing, parts or supplies not supplied by HP, (c) unauthorized modification or misuse, (d) operation outside of the published environmental specifications for the product, or (e) improper site preparation or maintenance.

8. TO THE EXTENT ALLOWED BY LOCAL LAW, THE ABOVE WARRANTIES ARE EXCLUSIVE AND NO OTHER WARRANTY OR CONDITION, WHETHER WRITTEN OR ORAL, IS EXPRESSED OR IMPLIED AND HP SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY, SATISFACTORY QUALITY, AND FITNESS FOR A PARTICULAR PURPOSE. Some countries, states or provinces do not allow limitations on the duration of an implied warranty, so the above limitation or exclusion might not apply to you. This warranty gives you specific legal rights and you might also have other rights that vary from country to country, state to state, or province to province.

9. HP will be liable for damage to tangible property per incident up to the greater of \$300,000 or the actual amount paid for the product that is the subject of the claim, and for damages for bodily injury or death, to the extent that all such damages are determined by a court of competent jurisdiction to have been directly caused by a defective HP product.

10. TO THE EXTENT ALLOWED BY LOCAL LAW, THE REMEDIES IN THIS WARRANTY STATEMENT ARE YOUR SOLE AND EXCLUSIVE REMEDIES. EXCEPT AS INDICATED ABOVE, IN NO EVENT WILL HP OR ITS SUPPLIERS BE LIABLE FOR LOSS OF DATA OR FOR DIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFIT OR DATA), OR OTHER DAMAGE, WHETHER BASED IN CONTRACT, TORT, OR OTHERWISE. Some countries, states or provinces do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

THE WARRANTY TERMS CONTAINED IN THIS STATEMENT, EXCEPT TO THE EXTENT LAWFULLY PERMITTED, DO NOT EXCLUDE, RESTRICT OR MODIFY AND ARE IN ADDITION TO THE MANDATORY STATUTORY RIGHTS APPLICABLE TO THE SALE OF THIS PRODUCT TO YOU.

Your Authorized Dealer

If you encounter difficulty, begin by contacting the person who sold you the HP JetDirect print server to you. Your HP Authorized Dealer will be familiar with your requirements and can provide assistance.

During the warranty period, HP will replace the unit at no charge provided the defective unit is returned. You may return the unit to your HP Authorized Dealer or your local HP Sales and Service Office representative. *Be sure to include a copy of your purchase receipt.* For warranty service on HP JetDirect products, call the HP Customer Care Center. When calling, please have the following information ready:

- HP JetDirect product you are calling about (HP JetDirect 4000 Print Appliance)
- Model number of the product (J4107A)
- Serial number of the product
- Complete description of the problem
- Proof of purchase of your product
- Your shipping address

The HP Customer Care representative will help you with troubleshooting, and advise you on warranty service.

Service Billing (Out of Warranty)

When ordering a replacement unit for out-of-warranty service, you may be charged a repair cost. See your HP Authorized Dealer or your local HP Sales and Service Office representative. Or, you can call HP at (800) 227-8164 (USA only).

Service Outside the USA

Customers outside the USA should contact their HP Authorized Dealer or HP Sales and Service Office to obtain information on prices, exchange unit availability and instructions.

Hewlett-Packard Year 2000 Warranty

Subject to all of the terms and limitations of the HP Limited Warranty Statement provided with this HP Product, HP warrants that this HP Product will be able to accurately process date data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000, including leap year calculations, when used in accordance with the Product documentation provided by HP (including any instructions for installing patches or upgrades), provided that all other products (e.g. hardware, software, firmware) used in combination with such HP Product(s) properly exchange date data with it. The duration of the Year 2000 warranty extends through January 31, 2001.

Firmware Upgrades

Hewlett-Packard offers downloadable firmware upgrades for the HP JetDirect 4000 Print Appliance. The firmware upgrades are available on the World Wide Web, by FTP, and on disk. Current information about drivers, software versions, and flash images are available through the following means:

Customer Care Electronic Support Services	
World Wide Web	Access HP's Customer Care Center online at: http://www.hp.com/support/printappliance
HP Software and Accessories Distribution Center	Order drivers and upgrades for HP printers by calling the HP Software and Accessories Distribution Center at (661) 257-5565 (USA only).
FTP Site	Download printer drivers and upgrades from HP's anonymous FTP site at: ftp.hp.com/pub/networking/software

HP Customer Care Numbers

Netherlands	+ 31 (0)20 606 8751
United Kingdom	+ 44 (0)171 512 52 02
USA	208 323 2551
For all other countries, contact your reseller.	

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