

IPX Discovery dialog box

The IPX Discovery dialog box allows you to configure and schedule operation of the discovery process on an IPX network. This dialog box contains the following items:

- **Disabled check box.** Click on this box to enable or disable IPX discovery. If an "x" is placed in the box, IPX discovery is disabled.
- **"Discovering Networks" information field.** During the discovery process, this field will display the network address of each subnet that is being searched or discovered.
- **"Discovering Nodes" information field.** During the discovery process, this field will display the station address of each device or node that is discovered.
- **Restart Interval (minutes) selection box.** This box is used to automatically run the discovery process at prescribed time intervals specified by the user. Note that IPX Discovery must be enabled for this field to be applicable.
- **Restart button.** The Restart button restarts the IPX network discovery process if the process is idle.
- **Ok button.** This button closes the IPX Discovery dialog box.

See Also,
[Performing an Autodiscovery Session on an IPX Network](#)

HP Download Manager Help

HP Download Manager is an application that allows a network or system administrator to initiate a firmware download over the network to a remote Hewlett-Packard network device. Using Download Manager, you can install new firmware on a device without physically replacing hardware memory modules (such as EEPROMs or flash SIMMs) in the device. This provides an easy and convenient way of upgrading or changing device features.

Before using HP Download Manager, you may need to configure several Download Manager operating parameters. Use the [HP Download Manager Configurator](#) utility.

To learn more about HP Download Manager, click on a topic below.

["Welcome to HP Download Manager" Dialog Box](#)

[Supported Devices](#)

[What You Should Know](#)

[Running Download Manager](#)

[Performing a Firmware Download](#)

[Using JetAdmin](#)

[Using Autodiscovery](#)

[Viewing the Log File](#)

Help for Download Manager Dialog Boxes:

["HP Download" Dialog Box](#)

["HP Download Specific Device" Dialog Box](#)

["HP Download Control" Dialog Box](#)

["Change Version" Dialog Box](#)

["Change SET_COMMUNITY_NAME" Dialog Box](#)

["HP Download Status" Dialog Box](#)

["Discovery Information" dialog box](#)

["IPX Discovery" dialog box](#)

["IP Discovery" dialog box](#)

["Add Network" dialog box](#)

["Add Node" dialog box](#)

Additional Download Manager Help:

Error Messages

Glossary

Performing an Autodiscovery Session on an IPX Network

To perform an Autodiscovery session on an IPX network

1. Run Autodiscovery by pressing the Autodiscovery button in the "HP Download" dialog box.

Note: If you configured Download Manager for operation on an IPX network, the discovery process should automatically start when you run Autodiscovery. If the discovery process is idle or not running, perform steps 2 through 4 below.

2. In the "Discovery Information" dialog box, click on the IPX Discovery button. The "IPX Discovery" dialog box is displayed.

3. If necessary, click on the Disabled checkbox to remove the 'x' from the checkbox. This enables and automatically starts the IPX discovery process.

When the discovery process is initiated, Autodiscovery begins searching for devices on the network. Note the following:

- The "Discovering Networks" and "Discovering Nodes" message fields identify the networks and nodes being discovered.

- In the "Discovery Information" dialog box, the IPX activity indicator light turns green when the discovery process is active. When your discovery session completes, the activity indicator turns blue (idle). Also, discovered devices will be added to the device list.

4. Click on the Restart button to restart the discovery process.

5. Click on the Ok button in the "IPX Discovery" dialog box to close the box. This does not impact the state of the discovery process.

6. If you want to discover devices on other subnets, or manually add individual devices to the list, use the Add Network or Add Node buttons in the "Discovery Information" dialog box, and repeat steps 2 through 5.

7. Click on the OK button in the "Discovery Information" dialog box to exit Autodiscovery. Before Autodiscovery terminates, you will be prompted for a file name (NTDB file with ".nti" extension) in which the discovered subnets and devices will be saved. Specify and save the file in the directory in which you installed Download Manager.

When the Autodiscovery session ends, you are returned to the "HP Download" dialog box.

8. Press the Use Autodiscovery File button and select the saved file. Download Manager will retrieve the list of discovered devices. Then proceed with the download.

See Also,

"Discovery Information" dialog box

"IPX Discovery" dialog box

"HP Download" dialog box

Change SET_COMMUNITY_NAME Dialog Box

This dialog box appears when you select one or more devices and press the Community Name button in the "HP Download Control" window. Use this dialog box to change the community name that Download Manager must use to access the selected devices.

This dialog box contains the following items:

- **Set_Community_Name field.** Use this field to enter the community name to be used with the selected device(s).
- **OK button.** This button closes the Change SET_COMMUNITY_NAME dialog box and enters the community name in the device list for the selected devices.
- **Cancel button.** This button closes the Change SET_COMMUNITY_NAME dialog box without saving changes to the selected devices.

How to Use the Change SET_COMMUNITY_NAME Dialog Box

To change the community name that Download Manager will use for a device, simply enter the new community name in the SET_COMMUNITY_NAME field and press the OK button.

To keep the existing community name, press the Cancel button.

Note: If you selected more than one device, the community name that you enter must be valid for all selected devices.

Note: The community name that Download Manager initially uses is configured through the HP Download Manager Configurator.

What You Should Know

This section provides more detailed information regarding what you should know to download firmware to a network device. This information is divided into the following topics:

- [networks and devices](#)
 - [download files](#)
 - [obtaining download files needed for the download](#)
 - [the download cycle](#)
 - [verifying the device has been updated](#)

See Also,
[Running Download Manager](#)
[Performing a Firmware Download](#)

HP Download Control Dialog Box

This dialog box controls device downloads. In general, it allows you to perform the following:

- Select target devices to download to
 - Select the version of the firmware to be downloaded
 - Initiate the download process

The "HP Download Control" dialog box includes the following items:

Number of Devices field

This field indicates the number of devices in the device list area.

Current SubNet

The Current Subnet listbox will be displayed only if you used Autodiscovery or a supported device management utility (such as HP JetAdmin) to discover devices on the network. Devices on the selected subnet will be listed in the device list area. If there are multiple subnets, you can scroll down the list of subnets and choose the subnet to display.

Device List Area

The device list area contains the devices that were automatically discovered on a selected subnet, or that were manually added. Devices listed will be identified by device name or network address. In addition, the following columns of information are provided if available:

- **Product Number:** This column will display the HP product number.
- **Current Version:** This column indicates the firmware version that currently resides on the device. (before the download).
- **Download Version.** This column indicates the firmware version to be downloaded to the device. You can change the version using the Change Version button.
- **Community Name:** This column will indicate the community name that Download Manager will use to access the device. If it is not the correct community name, you can change it using the Community Name button.

Device Network Address field

This field will appear in the "HP Download Control" dialog box only if you chose to download to specific devices. (Refer to the HP Download dialog box.) This field allows you to manually enter devices to the device list. You will need to know the complete network address of each device to be added to the list. To add a device, simply type in the network address of a device, and click on the Add button.

Buttons

The function buttons that appear in this dialog box include the following:

- Download button
 - Select All button
 - Delete button
 - Change Version button
 - Community Name button

See Also:

"Change Version" dialog box

"Change SET_COMMUNITY_NAME" dialog box

Initiating the download

Change Version Dialog Box

This dialog box allows you to change the version of firmware to be downloaded to a selected device. The dialog box contains the following items.

- **Current Device.** This field identifies the device type and model of selected devices.
 - **Current Version.** This field contains the version of the firmware that currently resides on the device.
 - **Change To.** This list box contains a listing of all firmware versions available to download to the selected device(s). If the desired firmware version is not listed, you will need to install the appropriate download file.
- **OK.** This button enables the selected firmware version to be downloaded to the device and returns to the HP Download Control dialog box.

How to Use the Change Version Dialog Box

1. In the "HP Download Control" dialog box, select a device in the device list area. When selected, the device is highlighted.
2. Click on the Change Version button. Download Manager displays the "Change Version" dialog box. Note that the current firmware version on the device is displayed in the Current Version field.
3. Click on the Change To list box. The list box displays the firmware versions of applicable download files that have been installed in the PC/Workstation (for example, A.03.15 for an Ethernet JetDirect Print Server). If the desired firmware version is not listed, you must exit Download Manager and install the desired download file.
4. Select the firmware version that you want to download to the selected device.
5. Click on the OK button. Download Manager returns to the "HP Download Control" dialog box with the new firmware version listed in the Download Version column for the selected device.

HP Download Status Dialog Box

The HP Download Status dialog box allows you to view the progress of each device download. The dialog box contains the following items:

Download Status

The dialog box contains an indicator light, a status message box, and a progress bar graphic to provide download status. If there are multiple devices to be downloaded, the Download Status will be repeated for each device in sequence.

The indicator light can be in the following states:

Gray: Off state. No download in progress

Yellow (blinking): Setting up the device for a download

Green (blinking): Download to a device is in progress

Green (solid): Download to a device is complete

Red: Error state. There was a problem on the most recent download

Device List Area

The device list area identifies the devices that are targeted for downloading. The following columns of information are provided for each device:

Status. This column provides status for the device that is being downloaded. Examples of status messages include: "In Progress", "Success", "Turn device Off/On", or "Failed".

Device Type. This column identifies each device by name or address.

Previous Version. This column indicates the firmware version that currently resides on the device (before the download).

Download Version. This column indicates the firmware version targeted to be downloaded to the device.

Buttons

The buttons that appear in this dialog box depend on the the state of the download process and the number of target devices in the device list area.

Stop button. This button is displayed and is functional if there is at least one device that remains to be downloaded after the current download completes. The Stop button will stop the download process after the current download completes, and will be replaced by the Resume button.

Resume button. This button is displayed after the Stop button stops the download process. The Resume button will restart the download process for the next device on the list, and replaced by the Stop button.

Exit button. This button exits the Download Manager utility completely.

Return to Previous Screen button. This button returns you to the HP Download Control dialog box, where you can select other devices for downloading.

HP Download Done Dialog Box

When the download completes, the HP Download Done dialog box will automatically appear to allow you to view the [download log file](#), if desired.

See Also,

["HP Download Control" dialog box](#)

["Error Messages"](#)

HP Download Dialog Box

Use this dialog box to select the method of identifying target devices. You can specify target devices manually, or through the Autodiscovery utility.

Note: This dialog box will not appear when you run Download Manager from the [HP JetAdmin](#) utility.

This dialog box contains the following items:

- **Specific Device button.** This button allows you to specify individual devices for a download. If you use this button, you will need to know the complete network address of each target device.

- **Autodiscovery button.** This button runs the Autodiscovery utility. The Autodiscovery utility automatically discovers subnetworks and the network devices on each subnetwork. The list of discovered devices is then saved to a file.

- **Use Autodiscovery File button.** This button allows you to select a saved Autodiscovery file that contains a list of discovered devices of the type that you want to download to.

Initiating the download

You initiate a download through the "HP Download Control" dialog box.

To initiate a download for one or more devices

1. In the device list, click on a device to which you want to download firmware. Download Manager highlights the device. To select multiple devices, hold down the Control key and click on multiple lines (Note: if multiple devices are selected, they must all support the same download file).
2. Click on the Download button. Download Manager displays the "Estimated Time to Download" dialog box. The "Estimated Time to Download" window provides an estimated time that the download will require, and allows you to schedule the download for a later time (if desired).
3. When the download is initiated, the "HP Download Status" dialog box is displayed. This dialog box provides an interactive downloading session and indicates the various states the download is in for the device address you selected.

See Also,

"HP Download Control" dialog box

HP Download Specific Device Dialog Box

This dialog box appears when you press the [Specific Device\(s\) button](#) in the "HP Download" dialog box. It allows you to manually enter devices that you want to download to. You will need to know the complete network address of each device to be added to the list. When you enter a device, you add it to the list of devices to be downloaded.

This dialog box contains the following items:

- **Network Address field.** This field is use to specify each network device that you want to download to. Type in the complete [network address](#) of a device and press the Add button. The device will be added to the Devices Added list box.

- **Devices Added list box.** This list box contains the devices that you have entered. You can delete a listed device by selecting it and pressing the Delete button.

- **Done button.** This button closes the dialog box and enters the specified devices into the device list of the "HP Download Control" dialog box.

- **Cancel button.** This button closes the dialog box without saving the list of devices.

See Also,

["HP Download" dialog box](#)

["HP Download Control" dialog box](#)

Download Files

A download file contains a single version of firmware or operating software that is intended for a particular type and class of device. If you intend to download new firmware/software to a device, you must install the appropriate download file into the workstation before you run Download Manager. When a download file is released, a release note or README file that describes the file features will be included. The README file will be a text file that can be displayed on the workstation or through the HP Download Manager Configurator utility.

Several points to consider regarding firmware/software and devices are:

- The device must support the version of firmware or operating software that is being downloaded.
 - In general, firmware is product specific and is not transferrable between different products.
 - Under special circumstances, older versions of the firmware can be downloaded to restore previous feature sets.
 - Download Manager uses a specific directory structure to access the download files. When installing a download file, use the Setup program provided with the file.

See Also:
[Obtaining Download Files](#)

ZTEMP NOTES

In an IP environment, the SET_COMMUNITY_NAME object must be specified during the bootp process. An entry is available in the HP UX /etc/bootp (or platform equivalent) file that informs the card of the filename where the SET_COMMUNITY_NAME is specified. This file, by default, is located in the /usr/tftpd (or platform equivalent) directory. The filename must have been specified during the bootp process.

The following procedure details how to specify the SET_COMMUNITY_NAME object for a device targeted for a firmware download when it is not "public" so Download Manager has access to the device to perform an SNMP set operation.

Using Autodiscovery

The Download Manager Autodiscovery utility automatically discovers devices on the network that you want to download to. When you use Autodiscovery to find devices, you will not need to specify individual network addresses in Download Manager -- Autodiscovery will identify devices for you. The types of devices that Autodiscovery will find depend on your device selection in the Download Manager Configurator utility.

To use Autodiscovery, perform the following steps:

1. Use the Download Manager Configurator utility to specify the type of device, the network protocol (IP or IPX), and other parameters as required. Then run Download Manager.
2. Run Autodiscovery by pressing the Autodiscovery button in the "HP Download" dialog box. When you run Autodiscovery, the "Autodiscovery Instructions" dialog box appears. Read the instructions, and press the OK button to continue. Autodiscovery then displays the "Discovery Information" dialog box from which you control Autodiscovery functions.
3. Configure and start the discovery process. For an IPX network, the discovery process will start automatically. For an IP network, the discovery process will start automatically if you've configured the subnet mask and the default gateway. (You may have to configure these parameters if this is the first IP Autodiscovery session). Refer to Autodiscovery's "Discovery Information" dialog box for more information.
4. Exit Autodiscovery by pressing the OK button in the "Discovery Information" dialog box. When you exit, you will be prompted to save the list of discovered devices in a user-specified Autodiscovery file (with file extension ".nti"). When you exit Autodiscovery, you will be returned to the "HP Download" dialog box.
5. In the "HP Download" dialog box, press the Use Autodiscovery File button. If there are multiple Autodiscovery files (with file extension ".nti"), specify the file for the devices that you want to download to. The devices will be entered into the device list area of the "HP Download Control" dialog box. (**Note:** Multiple Autodiscovery files may have been saved from previous Autodiscovery sessions. The file selected must be consistent with the type of devices configured for Download Manager operation.)

See Also,

[Performing an Autodiscovery Session on an IPX Network](#)

[Performing an Autodiscovery Session on an IP Network](#)

["Discovery Information" dialog box](#)

["HP Download" dialog box](#)

["HP Download Control" dialog box](#)

Understanding the Download Cycle

Each download can be divided into several different phases. They are:

- preliminary phase: obtaining the installation and firmware files
 - second phase: setting up the device to receive firmware
 - third phase: initiating a download
 - fourth phase: completing a download
 - final phase: performing tasks after the download

Preliminary Phase: Obtaining the Download File

In the preliminary phase, you need to obtain any download files that you will use to download to a device targeted for a firmware upgrade. You can obtain download files for HP JetDirect Print Servers from three different locations. They are:

- CompuServe
 - the HP Internet-FTP Library Service/World-Wide Web Site
 - the HP BBS

Second Phase: Setting Up the Device to Receive Firmware

In the second phase of the download, verify your device is set up so it can respond to the downloading process over the network. To set up the device targeted for a download, perform the following tasks or checklist of actions:

- make sure your device is connected to the network
- make sure your device is turned on
- make sure your device is in good working order (for example, the device is not reporting an error or a paper jam)

Third Phase: Initiating a Download

In the third phase of the download, use Download Manager to transfer the new firmware version to the network device. While performing this task, Download Manager tells the device where to find the new firmware file. The device then initiates the download.

Fourth Phase: Completing a Download

In the fourth phase of the download you verify that firmware was successfully updated on the device. Downloads can fail for several reasons. To check for errors in a download, perform the following tasks:

- From the "Download Status" dialog box, look in the Status column. If the column contains a FAILED message, the download was not successful.
- Go to the download log file and read the status of the download.

Final Phase: Performing Tasks After the Download

In the final phase of the download, you perform post-download tasks that enable your device to operate with the updated firmware. In most cases, no action is required. For some JetDirect print servers, you must turn the device off and on to activate the firmware. These devices will continue to run the old firmware version until you perform this task.

Networks and Devices

Before you begin to download firmware to a device, you should know the following information:

- the network protocol configured on the workstation and devices. The network protocol can be either IP or IPX.
 - the complete network address of the device that you want to download to.
 - the subnetworks that contain the devices targeted for downloads.
 - the version of the firmware you want to download to a device.

Community Name

A community name is a password encoded in SNMP (Simple Network Management Protocol) requests to network devices. It allows a Download Manager request to access or change information on a device by matching the community name configured on the device. A community name is typically set up on a device during device installation and configuration. Some devices can use a bootstrap protocol (BOOTP) to automatically retrieve their community name from a network server when the device is turned on. Finally, some devices can be configured with a community name from a network management application. If a community name on a device has not been configured, a default community name is assumed.

Download Manager uses SNMP requests to communicate with target devices. **For Download Manager to access a device, it must encode its requests with the community name configured on the device.**

Subnet Mask

A subnet mask is a bit pattern that, when applied to an IP address, defines which portion of the IP address is the network and subnetwork address, and which portion is the device address. It is written in the format d.d.d.d, where each "d" is a decimal number between 0 and 255 (for example, 255.255.248.0). Using subnet masks, devices that are physically connected on an IP network can be logically separated on different subnets. All devices assigned to a specific subnet must have the same subnet mask.

Network Address

A network address for a device uniquely identifies each device on a network. The complete network address of a device is specified as follows:

- On an IP network, the device network address uses the IP dot notation format: d.d.d.d where d is a decimal number from 1 to 254 (for example, 15.6.109.77). You will also need to know the subnet mask, which is used to define the portion of the address that pertains to the network (or subnetwork), and the portion that pertains to the device.

- On an IPX network, the device network address uses the "network number:station address" format as follows: NETWORK_NUMBER:STATION_ADDRESS (for example, EE00001A:08000968365E).

You may need to consult your network administrator for the network portion of a device's network address.

Glossary

A

[Activity indicators](#)
[Add Network button](#)
[Add Node button](#)
[Autodiscovery](#)
[Autodiscovery button](#)

B

[Bridge](#)

C

[Change SET_COMMUNITY_NAME dialog box](#)
[Change Version button](#)
[Community Name](#)
[Community Name button](#)
[Current Subnet listbox](#)
[Current Version column](#)

D

[Delete button](#)
[Device List](#)
[Download](#)
[Download Version column](#)

F

[Firmware](#)

H

[Hub](#)

I

[Images](#)
[IP Discovery button](#)
[IPX Discovery button](#)

J

[JetDirect Print Servers](#)

N

Network Address

Number of Devices field

P

Power Cycle

Product Number column

R

Resume button

Router

S

Save Info button

Specific Device(s) button

Stop button

U

Use Autodiscovery File button

X

XIO cards

HP Bridge

A type of network device used to connect network segments. Use the Download Manager Configurator to configure Download Manager operation for bridges.

Use Autodiscovery File button

This button allows you to select a saved Autodiscovery file containing the devices discovered by the Autodiscovery utility. The devices are automatically entered in the device list area in the HP Download Control dialog box.

Current Version column

A column that appears in the HP Download Control dialog box that indicates the firmware version that is currently running on the device.

Device List

A region in several dialog boxes that includes information about devices targeted for a firmware download. Information in device lists include device name or address, product or model number, current firmware version, and the download version.

Running Download Manager

HP Download Manager can be run as a standalone application, or may be launched from a supported management utility (such as [HP JetAdmin](#)).

If you run HP Download Manager as a standalone application, the first Download Manager window displayed will be the Welcome to HP Download Manager dialog box.

If you run HP Download Manager from HP JetAdmin, the first Download Manager window displayed will be the "HP Download Control" dialog box.

See Also:

["Welcome to HP Download Manager" dialog box](#)

["HP Download Control" dialog box](#)

Download

Refers to the process of transferring firmware or operating software over the network from a workstation to a selected device.

Using JetAdmin

You can run Download Manager from [HP JetAdmin](#).

To run Download Manager from HP JetAdmin

1. Run HP JetAdmin. JetAdmin displays the HP JetDirect Administration Utility dialog box. This box displays a device list that contains the JetDirect Print Server devices discovered.
2. From the JetAdmin File menu, select the JetDirect Firmware Upgrade option. JetAdmin displays the JetDirect Downloader Location dialog box.
3. If necessary, locate the HPDWNLD.EXE file by browsing directories. If you installed Download Manager in the default location, HPDWNLD.EXE will be in the HPDWNLD directory.
4. Select HPDWNLD.EXE and click on the OK button.
5. Download Manager runs and displays the HP Download Control dialog box, and lists the devices from JetAdmin by subnet. Display the list of devices in other subnets by selecting a different subnet in the Current Subnet field.

If you properly installed the download files that contain new firmware versions, you can perform a download to selected devices.

Note: To return to the JetAdmin utility, click on the Cancel button.

See Also:

["HP Download Control" dialog box](#)

Firmware

Programs loaded in a device's memory modules that controls the network device. Network devices typically consist of hardware and operating programs. Firmware refers to the programs running on the network device.

HP Hub

A network device type that serves as a repeater to network nodes and other hubs. Use HP Download Manager Configurator to configure Download Manager operation with HP hubs.

Number of Devices field

A field in the HP Download Control dialog box that indicates the number of devices listed in the device list area for downloading.

Product Number column

A column in the HP Download Control dialog box that displays the product number of a device listed in the device list area.

Resume button

This button is in the HP Download Status dialog box and appears you press the Stop button when downloading to multiple devices. The Resume button restarts a firmware download.

HP Router

A network device type that interconnects LANs. Use the Download Manager Configurator utility to configure Download Manager operation with routers.

Specific Devices button

This button is in the HP Download dialog box and enables you to target specific devices for a firmware download. If you select this button, you will need to manually enter devices by typing in their complete network address.

Stop button

This button is in the HP Download Status dialog box and halts the download after the current download completes. This button will not be selectable if there are no additional downloads after the current download..

Download Version column

A column in the "HP Download Status" and "HP Download Control" dialog boxes that indicates the firmware version to be downloaded to the network device.

Discovery Information dialog box

The Discovery Information dialog box is the main window for Download Manager's Autodiscovery utility. This dialog box is displayed when you run Autodiscovery.

IPX Networks If you run Autodiscovery and have configured Download Manager for IPX-network operation, the discovery process will automatically begin. In addition, you can restart the discovery process from the "IPX Discovery" dialog box, which is displayed when you press the [IPX Discovery button](#).

IP Networks If you run Autodiscovery and have configured Download Manager for IP-network operation, the discovery process will begin if a valid [subnet mask](#) and [default gateway](#) have been configured. The subnet mask and default gateway are configured in the "IP Discovery" dialog box, which is displayed when you press the [IP Discovery button](#). In addition, you can restart the discovery process from the "IP Discovery" dialog box.

Note: By default, Autodiscovery will search the [local subnetwork](#). You can add other subnets by using the [Add Network](#) button.

The Discovery Information dialog box contains the following items:

- **Networks list box.** This box lists the subnets that will be searched for the desired device type. A subnetwork address is used to identify each subnet. After the discovery process completes, you can select (highlight) a subnet to display the devices discovered on that subnet.

- **Device list box.** This box lists the devices discovered for a selected subnetwork. Devices are identified by station address, type of device, and "system description" information available from the device.

- **Network and Node counters.** An information box identifies the number of subnets searched and the number of devices discovered of all types.

- **Activity indicators.** [Activity indicators](#) are provided to provide visual feedback on the progress of an IP or IPX discovery process.

- **IPX Discovery button.** The [IPX Discovery button](#) displays the "IPX Discovery" dialog box to configure and run the discovery process on an IPX network.

- **IP Discovery button.** The [IP Discovery button](#) displays the "IP Discovery" dialog box to configure and run the discovery process on an IP network.

- **Add Network button.** The [Add Network button](#) allows you to add other subnetworks to the discovery process. When a subnetwork is added, it will be listed in the Networks list box (described above).

- **Add Node button.** The [Add Node button](#) allows you to add individual devices to the device list. To add a device, you must supply a valid [network address](#) for the device.

- **OK button.** The OK button will prompt you for a file name in which to save the discovered subnets and devices. The file must have a file name extension ".nti", and must be saved to the directory in which you installed Download Manager.

See Also,

[Performing an Autodiscovery Session on an IPX Network](#)

[Performing an Autodiscovery Session on an IP Network](#)

["IPX Discovery" dialog box](#)

["IP Discovery" dialog box](#)

["Add Network" dialog box](#)

["Add Node" dialog box](#)

Add Node dialog box

The Add Node dialog box allows you to manually add a device to the list of devices discovered on a subnetwork. The Add Node dialog box contains the following items:

- **Node Address entry box.** This box allows you to specify the complete network address of a device to be added.
- **OK button.** This button closes the Add Network dialog box, and adds the specified device into the list of discovered devices.
- **Cancel button.** This button closes the "Add Node" dialog box without adding a device to the device list.

Note: To remove nodes that you have manually added, you must exit Autodiscovery and restart Download Manager.

See Also,
"Device Information" dialog box

Images

Device-specific firmware that controls the network device. In this program, a firmware image is associated with a download file that contains a single copy of the firmware used by a network device.

Autodiscovery

A utility used in Download Manager for discovering and generating a list of Hewlett-Packard network devices that have valid IP or IPX addresses. Such devices include:

- HP Hubs
 - HP Bridges
 - HP Routers
 - HP JetDirect Print Servers

Devices discovered through Autodiscovery are saved to a file. This file is used by Download Manager to identify potential target devices for a download.

Local Subnetwork

A subnetwork is a LAN that does not go beyond routers. A local subnetwork is the LAN that the Download Manager workstation is directly connected to.

Welcome to HP Download Manager

The "Welcome to HP Download Manager" dialog box specifies information that you may need to run Download Manager.

Note: This dialog box will not appear when you run Download Manager from the HP JetAdmin utility.

- **Address of device(s)** You will need to be able to identify each target device by its complete network address. The complete network address for a device can be determined through a device discovery utility (such as Autodiscovery or JetAdmin), or from the network administrator.

- **Download file** A download file contains the device firmware or operating software that will be downloaded to a target device. A download file can only be downloaded to a particular device (or type of device). For example, you cannot download an HP JetDirect Print Server file to an HP hub. Each download file that may be downloaded to a device must be installed in the computer that is running Download Manager.

- **System Requirements** The system requirements description box will contain network and computer information needed to run Download Manager.

See Also:

[Download Files](#)

[Obtaining Download Files](#)

All the devices must be the same.

When This Message Appears: This message appears when you select multiple, but dissimilar, devices in the device list area of the HP Download Control dialog box and click on the [Change Version button](#).

The Problem: In the HP Download Control dialog box, you can specify the firmware version that you intend to download to each listed device. You can specify the new firmware version for multiple devices at the same time if they are of the same type and model. However, if dissimilar devices are selected, the firmware version may not be downloadable to one or more of the devices, and Download Manager will detect an error.

Corrective Action: In the device list area, select devices that are of the same type and model. then click on the Change Version button without error.

C2059A/B/C/D/E/F/S/T

Obsolete HP JetDirect Print Server interface cards for current printers and plotters. These interface cards cannot be upgraded.

- C2059A: Ethernet/IEEE 802.3 (BNC/AUI) for Novell NetWare networks
- C2059C: Token Ring (IEEE 802.5) for Novell NetWare networks
- C2059B: IEEE 802.3 (BNC/AUI) for Microsoft LAN Manager networks
- C2059D: Token Ring (IEEE 802.5) for Microsoft LAN Manager networks
- C2059E: Ethernet/IEEE 802.3 (BNC/AUI) for Apple EtherTalk networks
- C2059F: for Apple LocalTalk networks
- C2059S: Ethernet/IEEE 802.3 (RJ-45) for UNIX networks
- C2059T: Ethernet/IEEE 802.3 (BNC/AUI) for UNIX networks

Download button

This button initiates the download session for one or more devices selected in the device list area.

Add button

This button enables you to add a device to the device list after you enter the device's network address in the associated field.

Change Version button

This button is located in the "HP Download Control" dialog box. To use this button, one or more devices of the same type and model must be highlighted. When you press this button, the Change Version dialog box will be displayed. The "Change Version" dialog box allows you to specify the firmware version that will be downloaded to the selected device. If you change the firmware version, the new version will be listed as the Download Version in the "HP Download Control" dialog box.

HP Download Manager Configurator

The HP Download Manager Configurator is a utility for setting selected operating parameters used by HP Download Manager. The operating parameters include the following:

- Device Type (HP JetDirect Print Servers, Hubs, Bridges, Routers)
 - Network Protocol (IP or IPX)
 - PC/Workstation LAN Adapters (Single or Multiple)
 - Autodiscovery (Disabled or Enabled)
 - Community Names
- SNMP Timeout
 - SNMP Number of retries

In addition, you can display the download files that are installed in the workstation. For more information, run the Download Manager Configurator and refer to Configurator's Online Help.

Autodiscovery button

This button initiates the Autodiscovery utility. You use Autodiscovery to discover the type of network device that you want to download to, and save the list of discovered devices (and their network address) to a file (.nti). After you exit from Autodiscovery, you then select the Use Autodiscovery File button to select the file for use by Download Manager.

Status column

The status column in the "Download Status" dialog box indicates the state of the download for each device. Status can be "In PROGRESS", "SUCCESS", "TURN PRINTER OFF/ON" or "FAILED".

Supported Devices

Download Manager can upgrade the following types of Hewlett-Packard devices:

[HP JetDirect Print Servers](#)

[HP Hubs](#)

[HP Routers](#)

[HP Bridges](#)

Note: You can use Download Manager with only one type of device at a time. To configure the type of device, use the [HP Download Manager Configurator](#) utility.

Note: Some devices may require that you turn the device off and then on again to enable the new downloaded firmware.

Performing a Firmware Download

To perform a download

1. Obtain the download file that contains the desired firmware version for the target device(s).
2. Install the download file into the Download Manager PC/workstation.
3. Run the HP Download Manager program. You can run the program as a standalone application, or from a compatible management application (such as HP JetAdmin for JetDirect Print Servers on an IPX network).
 - If you run HP Download Manager as a standalone application, you can either specify individual devices by their network addresses, or you can use Autodiscovery to discover devices for you.
 - If you run HP Download Manager from a management application, such as HP JetAdmin, the devices will be automatically discovered and passed to Download Manager.
4. Select the target devices and the desired firmware versions to be downloaded.
5. Perform the download.
6. Check the [download log file](#) for additional status.

See Also

[Download Files](#)

["HP Download Control" dialog box](#)

[Initiating the download](#)

Add Network button

A button in Autodiscovery's "Discovery Information" dialog box that displays the Add Network dialog box. The Add Network dialog box allows you to add subnetworks to the list of networks to be searched for the devices that you want to download to.

Select All button

This button selects and highlights all devices in the device list area.

Add Node button

A button in Autodiscovery's "Discovery Information" dialog box that displays the Add Node dialog box. The Add Node dialog box allows you to add a device to the device list in the "Discovery Information" dialog box. You will need to know the complete network address for the device that you want to add.

Change SET_COMMUNITY_NAME dialog box

The Change SET_COMMUNITY_NAME dialog box allows you to specify a community name so that access to devices that require a particular community name can be accomplished.

Obtaining Download Files

Download Files for HP JetDirect Print Servers

You can obtain firmware upgrade files for JetDirect Print Servers from the bulletin board in one of three ways:

- using CompuServe
 - using the HP Internet-FTP Library Service/World-Wide Web Site
 - using the HP BBS

For more information on using these HP Electronic Support Services, use the HP FIRST fax-back service at (800) 333-1917, and refer to document 9020.

To use Download Manager, you must retrieve the following files:

- the self-extracting Download Manager installation file, HPDLINST.EXE.
- the self-extracting firmware upgrade files (compressed) that you need.

The names of the self-extracting firmware upgrade files depend on what firmware version you need. This depends on the particular JetDirect Print Server product that you wish to upgrade. For example, to upgrade an Ethernet JetDirect Print Server from firmware version A.03.06 to A.03.15, you need the self-extracting firmware upgrade file A0315.EXE. For available update file names, use the HP FIRST fax-back service at (800) 333-1917, and refer to document 7394.

To access CompuServe to obtain both the HPDLINST.EXE and the device firmware files

1. Make sure you are a CompuServe member. To obtain membership information, call (800) 524-3388, and ask for representative #51.
2. Type GO HPPER to display the HP Peripherals Forum, a session that provides bulletin board information groups for Hewlett-Packard.
3. Select the desired firmware upgrade file (for example, A0315.EXE for internal Ethernet JetDirect Print Servers).

To access the HP Internet-FTP Service/World-Wide Web Site, to obtain both the HPDLINST.EXE and firmware upgrade files

1. Set the following values for your Internet session:
 - Internet IP Address: 192.6.71.2
 - Alias: ftp-boi.external.hp.com
 - Name: anonymous
 - Password: <enter your email address>
 - World-Wide Web URL - http://www.hp.com/home/html
2. Select the desired firmware upgrade files (for example, A0315.EXE).

To access the HP BBS to obtain both the HPDLINST.EXE and device firmware files

1. Set the following values for your HP bulletin board session:

- Baud Rate: 14,400
 - Parity: N
 - Data Bits: 8
 - Stop Bits: 1

2. Go to the Network Printer Library (1J).

3. Select the desired firmware upgrade files (for example, A0315.EXE).

See Also,
[Download Files](#)

Verifying a Download

To verify that you successfully downloaded the firmware to a target device, look in the Status column for the device in the device list area of the "Download Status" dialog box. If the column displays SUCCESS (or TURN PRINTER OFF/ON for JetDirect print servers), your download was successful. If the column displays FAILED, your download was unsuccessful.

To detect why a download failed

- make sure your devices are connected to the network
- make sure your devices are turned on (no disconnected powercords, etc.)
 - make sure your network is active
 - make sure your LAN does not have excessive traffic
 - make sure you have selected proper firmware for the device

Index

B

[Bridge selection](#)

C

[Change Version button](#)

[Current Subnet listbox](#)

[Current Version column](#)

D

[Device List](#)

[Download dialog box](#)

[Download Specific Device dialog box](#)

[downloading](#)

F

[firmware](#)

H

[Hub](#)

I

[Images](#)

N

[Number of Devices column](#)

P

[Power Cycle](#)

[Product Number column](#)

R

[Resume button](#)

S

[Specific Device\(s\) button](#)

Stop button
Subnet

U

Upgrade Version column

V

Verifying a download

IPX Discovery button

A button in Autodiscovery's "Discovery Information" dialog box that displays the "IPX Discovery" dialog box. The "IPX Discovery" dialog box allows you to do the following:

- enable or disable the IP network discovery process
 - restart the IP network discovery process
 - configure the discovery process to restart at repeated time intervals

Viewing the Download Log File

A download log file is created each time a download is initiated. It will contain information on each download attempted in the current session, including:

- whether a download succeeded or failed
 - errors recorded during the download
 - specific data about devices

The download log file is a text file and will be of the form DLddhhmm.LOG, where dd is the day of the month(1-31), hh is the hour of the day (0 - 24), mm is the minute in the hour (0-59).

For example, DL161145.LOG indicates the log file was created on the 16th day of the month and at 11:45.

The log file of the current download session can be displayed from the HP Download Done dialog box, which appears after the current download session completes. You can also view log files using a simple text editor--refer to the directory in which you installed Download Manager for the desired log file.

Look at the following areas of the file.

- device updated
- new version of firmware
 - previous version of firmware
 - time of update
 - status of download

Note: The download status field may display different strings to indicate a successful download, depending on the device you targeted for a download. If the targeted device is a hub, bridge, or router, the field displays SUCCESS. If the targeted device is a JetDirect Print Server, the field may display TURN PRINTER OFF/ON, depending on the particular JetDirect product.

Example: A sample log file for a successful download to a JetDirect Print Server is shown here.

DL281556.LOG

Log file for the download on: Wednesday, September 28, 1994 at 15:56

```
Download started 15:56
TURN PRINTER OFF/ON   LJ4_TINA   A.03.06   A.03.03
Download ended 15:59
```

See Also,
[Error Messages](#)

HP JetAdmin

HP JetAdmin is a configuration and management utility for HP JetDirect Print Server devices on an IPX network. To access HP Download Manager from JetAdmin, use the File Menu in JetAdmin and select "JetDirect Firmware Upgrade". Then run HPDWNLD.EXE.

Community Name button

This button appears in the "HP Download Control" dialog box and allows you to change the community name associated with one or more selected devices.

Delete button

In the "HP Download Control" dialog box, use the Delete button to remove device(s) from the device list area as follows:

1. Select one or more devices that you want to remove from the device list area.
2. Click on the Delete button. The selected devices will no longer be listed..

To remove additional devices, repeat the procedure.

Default Gateway

The default gateway is typically the nearest router to your system. The default gateway is also referred to as the Primary Default Router. You must specify the IP address of the default gateway to run Autodiscovery on an IP network. If there are no routers on your network, use the IP address of your workstation. If a default gateway IP address is not specified, the default IP address is 0.0.0.0 (which is not valid).

HP JetDirect Print Servers

HP interface products installed on printers and plotters for direct connections to a network. Use HP Download Manager Configurator to configure Download Manager operation with JetDirect Print Servers.

(24013) Createlfc failed

Cause: There is a problem in allocating memory used to store Autodiscovery information.

Remedy: Verify that your system is set up to provide sufficient memory. (For example, you can check a 386 Enhanced Mode Windows 3.1 system for the amount of virtual memory available.) Refer to your system documentation to set up system memory.

If you determine that memory allocations are sufficient, then there may be an internal system problem. For help, contact your HP authorized support representative.

Error Messages

The following error messages may appear during the execution of the program:

- **Download Manager Error Messages**
 - **Autodiscovery Error Messages**

Download Manager Error Messages:

All the devices must be the same

At least one device network address must be entered

At least one downloadable device must be selected

Must select at least one device

Need to turn device off and on

TFTP Timeout

User terminated the download operation

Autodiscovery Error Messages:

(20008) Invalid network address

(24001) Unable to create network object in discovery database

(24002) No such network exists in the discovery database

(24003) You must specify or select a network

(24004) Invalid IP or IPX address

(24005) Enter a valid IP or IPX address

(24006) The network for this device is not in the discovery database. Use the Add Network window to add the network.

(24009) Invalid subnet mask

(24010) Invalid address for default gateway

(24012) CreateNode failed

(24013) Createlfc failed

(24014) Discovery could not initialize IPX communication

(24015) Could not find node in NTDB

(24016) Discovery could not open the IPX socket

(24019) Discovery could not initialize IPX communication

(24020) Unable to get memory for IPX communication

(24021) IP networking is not running, therefore no IP communication will be performed

(24022) IPX networking is not running, therefore no IPX communication will be performed

(24023) No networking is available, therefore Discovery is terminating

(24024) The network transport startup failed

(24025) NWIPXSPX.DLL could not be found; therefore IPX networking is not available

(24026) Invalid NWIPXSPX.DLL; therefore the IPX network is not available

(24027) Unsupported version of the Discovery Database file; rediscovery is required

(24068) IP restart interval must be between 15 and 1440

(24069) IPX restart interval must be between 15 and 1440

(24103) Network already exists in Discovery Database

TFTP Timeout

When This Message Appears: This message occurs when a response to a TFTP (Trivial File Transfer Protocol) request between the Download Manager workstation and a device is not received.

The Problem: Download Manager uses TFTP (Trivial File Transfer Protocol) to transfer files from the Download Manager workstation to devices. If a response to a TFTP request is not received within a specified period of time, a timeout occurs.

Corrective Action: TFTP Timeout is a configurable parameter in the HP Download Manager Configurator utility. You can try increasing the TFTP Timeout value to allow more time before a timeout occurs. Otherwise, you should verify network connections and communications between the Download Manager workstation and the device. In addition, you should check for device failures.

Need to turn device off and on

When This Message Appears: This message is displayed when the device must be turned off and then on to enable the new firmware.

The Problem: The device cannot support new features in the updated firmware without power cycling the device.

Corrective Action: Power cycle the target device. For HP JetDirect Print Servers that are internal adapter cards, the printer or plotter be power cycled. For HP JetDirect External (EX) Print Servers, you must power cycle the external module.

Power Cycle

A power cycle means to turn power to a device off and then back on again. To enable new firmware or operating software on some devices, a power cycle may be required.

User terminated the download operation

When This Message Appears: Download Manager displays this message when the user halts a download session. The download currently in progress will attempt to complete, but downloads to additional devices will not occur.

The Problem: Download Manager has received an indication that the program has been interrupted.

Corrective Action: Either exit Download Manager, or reinitiate the download process. If you restart the download process, wait a few minutes before attempting the download to ensure the previous download has completed or failed.

At least one device network address must be entered

When This Message Appears: This message appears after you have clicked on the Done button in the HP Download Specific Device dialog box if you have not added a device address in the device list area.

The Problem: This message indicates that you cannot proceed with the program until a valid device address has been added to the device list area.

Corrective Action: Type in the complete network address of a device in the Network Address field, then click on the Add button. Download Manager displays the device address in the device list area. Continue to add as many valid device addresses as desired. When you are finished adding devices to the device list, area, you may click on the Done button without error.

At least one downloadable device must be selected

When This Message Appears: This message appears after you have clicked on the Download button in the HP Download Control dialog box with no devices selected in the device list area.

The Problem: This message indicates that you have initiated a download (that is, you have clicked on the Download button), but have not selected one or more target devices in the device list area, or the list is empty.

Corrective Action: You must add devices to the list area and select one or more devices before clicking on the Download button. If you chose to download to specific devices, you can add a device by typing in its complete network address in the appropriate field and pressing the Add button. If you used an automated device discovery tool, such as Autodiscovery or JetAdmin, you may need to rerun the discovery tool, and then select the appropriate subnet in the HP Download Control dialog box.

Must select at least one device

When This Message Appears: This message appears after you have clicked on the Change Version or Community Name buttons in the HP Download Control dialog box without first selecting one or more devices in the device list area.

The Problem: This message indicates that you have initiated a download (that is, you have clicked on the Change Version button or the Community Name button), but have not selected one or more target devices in the device list area, or the list is empty.

Corrective Action: You must add devices to the list area and select one or more devices before clicking on the Change Version or Community Name buttons. If you had chosen to download to specific devices, you can add a device by typing in its complete network address in the appropriate field and pressing the Add button. If you used an automated device discovery tool, such as Autodiscovery or JetAdmin, you may need to rerun the discovery tool, and then select the appropriate subnet in the HP Download Control dialog box.

IP Discovery button

A button in Autodiscovery's "Discovery Information" dialog box that displays the "IP Discovery" dialog box. The "IP Discovery" dialog box allows you to do the following:

- specify the default gateway and subnet mask for the Download Manager workstation
 - enable or disable the IP network discovery process
 - restart the IP network discovery process
 - configure the discovery process to restart at repeated time intervals

Current SubNet listbox

The Current SubNet listbox appears in the "HP Download Control" dialog box when a supported device discovery utility, such as Autodiscovery or JetAdmin, is used. These utilities identify devices by subnet. If there are multiple subnets, they will be listed in the listbox. Devices associated with the currently selected subnet will be displayed in the device list area.,

HP JetDirect Print Servers

HP JetDirect network interface cards and external modules provide supported printers and plotters with direct LAN connectivity.

Note Early HP JetDirect products do not support upgrades by HP Download Manager. Recent products contain a SIMM (Single In-line Memory Module) socket that may, or may not, have a flash SIMM installed---to be upgraded by Download Manager, a flash SIMM must be installed. Download Manager will identify JetDirect Print Servers that cannot be upgraded or that do not have a flash SIMM installed. Refer to the table below.

Not Supported by
Download Manager

Flash SIMM Required

C2071A/B/C/D/E/F/S/T
33416B
C2059A/B/C/D/E/F/S/T
J2341A

J2337A
J2338A
J2339A
J2340A
J2371A
J2372A
J2373A
J2382A/B
J2383A/B

XIO Cards

HP JetDirect Print Servers for LaserJet II, IID, III, IIID Printers. These interface cards cannot be upgraded.

HP Hubs

You can use Download Manager to upgrade the SNMP device agents on HP EtherTwist and HP AdvanceStack families of hubs.

NOTE HP Download Manager supports upgrades to SNMP-based HP hubs only. Some HP AdvanceStack hubs may not contain SNMP modules--these hubs cannot be upgraded using Download Manager.

NOTE HP Download Manager does not support the HP 28688A EtherTwist Hub Plus (12-port)

HP Routers

You can use HP Download Manager to upgrade the operating software on the HP AdvanceStack family of routers.

HP Bridges

You can use HP Download Manager to upgrade the SNMP device agents on HP bridge products.

NOTE HP 28881A 10:10 LAN Bridge LB cannot be upgraded.

Download Log File

A download log file is created each time a download is initiated. It will contain information on each download attempted in the current session.

The download log file is a text file and will be of the form DLddhhmm.LOG, where dd is the day of the month(1 - 31), hh is the hour of the day (0 - 24), and mm is the minute in the hour (0 - 59). For example, DL161145.LOG indicates the log file was created on the 16th day of the month and at 11:45.

The log file of the current download session can be displayed from the "HP Download Done" dialog box, which automatically appears after the current download session completes. You can also view log files using a simple text editor--log files are located in the directory in which you installed Download Manager.

HP J2337A

Ethernet/IEEE 802.3 (BNC/RJ-45) for Novell NetWare networks. Superseded by [J2372A](#).

J2372A

Ethernet/IEEE 802.3 (BNC/RJ-45) for multiprotocol networks.

J2338A

IEEE 802.3 (BNC/RJ-45) for Microsoft LAN Manager networks. Superseded by [J2372A](#).

J2339A

Ethernet/IEEE 802.3 (BNC/RJ-45) for Apple EtherTalk networks. Superseded by [J2372A](#).

J2340A

Ethernet/IEEE 802.3 (BNC/RJ-45) for UNIX networks. Superseded by [J2372A](#).

J2341A

HP JetDirect LocalTalk (DIN 8) card for Apple LocalTalk networks. Download Manager does not support this card.

Activity Indicators

Indicator lights near the bottom of Autodiscovery's "Discovery Information" dialog box that display the status of IP and IPX network discovery processes. The indicators can be in the following states:

- Gray: the discovery process is disabled.
 - Dark Green: the discovery process is awaiting a response from a device.
 - Light (Bright) Green: the discovery process is active, such as sending a request.
- Blue: the discovery process is idle, awaiting to perform another discovery.

J2371A

Ethernet/IEEE 802.3 (RJ-45) for multiprotocol networks.

J2373A

IEEE 802.5 (Token Ring) for multiprotocol networks.

J2382A/B

HP JetDirect External (EX) Print Servers for Ethernet/IEEE 802.3 (BNC/RJ-45) networks. HP J2382A is for Novell netWare networks. HP J2382B supercedes HP J2382A and provides multiprotocol support.

J2383A/B

HP JetDirect External (EX) Print Servers for IEEE 802.5 (Token Ring) networks. HP J2383A is for Novell NetWare networks. HP J2383B supercedes HP J2383A and provides multiprotocol support.

Performing an Autodiscovery Session on an IP Network

To perform an Autodiscovery session on an IP network

1. Run Autodiscovery by pressing the Autodiscovery button in the "HP Download" dialog box.

Note: If you configured Download Manager for operation on an IP network, the discovery process will automatically start if a subnet mask and a default gateway have been previously configured. To configure a subnet mask and default gateway, and restart the discovery process, perform steps 2 through 5 below.

2. In the "Discovery Information" dialog box, click on the IP Discovery button. The "IP Discovery" dialog box is displayed.

3. Enter the IP address of the default gateway and the subnet mask. Click on the Save Info button to save your entries.

4. If necessary, click on the Disabled checkbox to remove the 'x' from the checkbox. This enables the discovery process. If the IP address of the default gateway and the subnet mask have been specified, the discovery process will start automatically.

When the discovery process is initiated, Autodiscovery begins searching for devices on the network. Note the following:

- The "Reading from" and "New Node" message fields identify the networks and nodes being discovered.

- In the "Discovery Information" dialog box, the IP activity indicator light turns green when the discovery process is active. When your discovery session completes, the activity indicator turns blue (idle). Also, discovered devices will be added to the device list.

5. Click on the Restart button to start or restart the discovery process.

6. Click on the Ok button in the "IP Discovery" dialog box to close the box. The state of the discovery process will not be affected.

7. If you want to discover devices on other subnets, or manually add individual devices to the list, use the Add Network or Add Node buttons in the "Discovery Information" dialog box and repeat steps 2 through 6.

8. Click on the OK button in the "Discovery Information" dialog box to exit Autodiscovery. Before Autodiscovery terminates, you will be prompted for a file name (NTDB file with ".nti" extension) in which the discovered subnets and devices will be saved. Specify and save the file in the directory in which you installed Download Manager.

When the Autodiscovery session ends, you are returned to the "HP Download" dialog box.

9. Press the Use Autodiscovery File button and select the saved file. Download Manager will retrieve the list of discovered devices. Then proceed with the download.

See Also,
"Discovery Information" dialog box

"IP Discovery" dialog box
"HP Download" dialog box

Save Info button

This button is in the IP Discovery dialog box of Download Manager's Autodiscovery utility. It is used to save the IP Discovery settings, including the subnet mask and default gateway.

IP Discovery dialog box

The IP Discovery dialog box allows you to configure and schedule operation of the discovery process on an IP network. This dialog box contains the following items:

- **Disabled check box.** Click on this box to enable or disable IP discovery. If an "x" is placed in the box, IP discovery is disabled.
- **Reading From information field.** During the discovery process, this field will display the IP address of the device that is being used to identify subnets and other devices.
- **New Node information field.** During the discovery process, this field will display the station address of each device or node that is discovered.
- **Restart Interval (minutes) selection box.** This box is used to automatically run the discovery process at prescribed time intervals specified by the user. Note that IP Discovery must be enabled for this field to be applicable.
- **Default Gateway entry box.** A default gateway must be specified for Autodiscovery operation. A valid IP address must be entered.
- **Subnet Mask entry box.** A valid subnet mask must be specified for Autodiscovery operation.
- **Ok button.** This button saves the IP parameter entries and closes the "IP Discovery" dialog box.
- **Cancel button.** This button closes the "IP Discovery" dialog box without saving entries.
- **Save Info button.** The Save Info button saves the IP parameter entries without closing the IP Discovery dialog box.
- **Restart button.** The Restart button restarts the IP network discovery process if the process is idle.

See Also,
[Performing an Autodiscovery Session on an IP Network](#)

Add Network dialog box

The Add Network dialog box allows you to add a subnetwork to the list of networks that will be searched during the device discovery process. When you initially run Autodiscovery, only the local subnet will be identified and searched. To search other discovered subnets, you must add them to the list.

The Add Network dialog box contains the following items:

- **Managed Networks list box.** This box identifies the subnetworks that will be actively searched during the device discovery process. The subnets are identified by the network address.
- **Add Network entry box.** This box allows you to specify a subnetwork that may not have been detected, and to add that subnet to the list of managed networks. You must manually enter a valid subnet address.
- **Unmanaged Networks list box.** This box identifies other subnetworks that have been detected, but have not been added to the Managed Networks list. You can select (highlight) a subnet and press the Add button to add the network to the Managed Networks list.
- **Add button.** This button adds a selected subnetwork from the Unmanaged Networks list box, and adds it to the Managed Networks list box.
- **OK button.** This button closes the Add Network dialog box, and enters the subnetworks in the Managed Networks list box into the Discovery Information Networks list box.

Note: To remove added subnetworks from the Managed Networks list box, you must exit Autodiscovery and restart Download Manager.

See Also,
["Device Information" dialog box](#)

(24001) Unable to create network object in discovery database.

Cause: There is a problem in allocating memory used to store Autodiscovery information.

Remedy: Verify that your system is set up to provide sufficient memory. (For example, you can check a 386 Enhanced Mode Windows 3.1 system for the amount of virtual memory available.) Refer to your system documentation to set up system memory.

If you determine that memory allocations are sufficient, then there may be an internal system problem. For help, contact your HP authorized support representative.

(24002) No such network exists in the discovery database

Cause: An attempt was made to access or delete a network which does not exist in the discovery database.

Remedy: Select a network that exists in the discovery database.

(24003) You must specify or select a network

Cause: An attempt was made to add a network to the discovery database, but either a network was not selected, or a network was not specified in the Add Network entry box.

Remedy: Either select (highlight) a network from the list of unmanaged networks, or type in a valid network address in the Add Network entry box.

(24004) Invalid IP or IPX address

Cause: An invalid IP subnet address or IPX network number was entered.

Remedy: Enter a valid IP subnet address or IPX network number. For more information, you may need to consult your network administrator.

See Also,
network address
subnet mask

(24009) Invalid subnet mask

Cause: An invalid subnet mask was entered.

Remedy: Enter a valid subnet mask. For help, you may need to contact your network administrator.

(24005) Enter a valid IP or IPX address

Cause: You pressed the OK button without entering an IP or IPX address of a device to be added to the discovery database.

Remedy: Enter the complete network address of a device before pressing the OK button, or press the Cancel button to close the dialog box.

(24006) The network for this device is not in the discovery database. Use the Add Network window to add the network.

Cause: An attempt was made to add a device for which there is no network specified in the discovery database. For example, an attempt to add the IP device 15.29.32.143, where the subnet mask is 255.255.248.0, would add the device to the network 15.29.32.0. If that network (15.29.32.0) did not exist in the discovery database, the device would not be added.

Remedy: Verify that the network for the device you are attempting to add exists in the discovery database. If not, use the Add Network button in the "Discovery Information" dialog box to add the network.

See Also,
"Discovery Information" dialog box

(24010) Invalid address for default gateway

Cause: An invalid default gateway address was entered.

Remedy: A default gateway must be specified for Autodiscovery operation. Enter a valid IP network address for the default gateway device.

(24012) CreateNode failed

Cause: There is a problem in allocating memory used to store Autodiscovery information.

Remedy: Verify that your system is set up to provide sufficient memory. (For example, you can check a 386 Enhanced Mode Windows 3.1 system for the amount of virtual memory available.) Refer to your system documentation to set up system memory.

If you determine that memory allocations are sufficient, then there may be an internal system problem. For help, contact your HP authorized support representative.

(20008) Invalid network address

Cause: You entered an invalid IP or IPX network address.

Remedy: Enter a valid network address.

(24014) Discovery could not initialize IPX communication

Cause: Discovery could not initialize communication with the IPX subsystem.

Remedy: Check the installation and configuration of your IPX interface and subsystem. Verify that IPX is correctly installed and that client services have been configured.

(24015) Could not find node in NTDB

Cause: The discovery process was trying to update a device in the discovery database, but the device could not be found.

Remedy: This error indication should not occur. If it does, the problem should be transitory and should not affect operation. If the error indication persists, an internal system problem may be indicated. For help, contact your HP authorized support representative.

(24016) Discovery could not open the IPX socket

Cause: A Discovery IPX call to the OpenSocket API returned a failure.

Remedy: Check the installation and configuration of your IPX interface and subsystem. Verify that IPX is correctly installed and that client services have been configured. For help, you may need to contact your network administrator.

(24019) Discovery could not initialize IPX communication

Cause: The initialization of the IPX subsystem failed.

Remedy: Check the installation and configuration of your IPX interface and subsystem. Verify that IPX is correctly installed and that client services have been configured.

(24020) Unable to get memory for IPX communication

Cause: This error indicates that there is a problem in allocating low (DOS) memory for performing IPX communication. This memory comes from the portion of system memory located below the 1Mbyte boundary.

Remedy: Make sure that your system is configured with enough low memory. Terminate other windows applications which are running, or try to free up lower memory by removing TSRs (terminate and stay resident programs) or other applications that load before Windows is invoked.

(24021) IP networking is not running, therefore no IP communication will be performed

Cause: An attempt was made to run Autodiscovery using IP communications, but the IP networking subsystem is either not running or not available.

Remedy: Make sure that the IP networking subsystem is installed correctly and running before you run Autodiscovery.

(24022) IPX networking is not running, therefore no IPX communication will be performed

Cause: An attempt was made to run Autodiscovery using IPX communications, but the IPX networking subsystem is either not running or not available.

Remedy: Make sure that IPX networking subsystem is installed correctly and running before you run Autodiscovery.

(24023) No networking is available, therefore Discovery is terminating

Cause: Discovery has detected that there are no networking subsystems available for use, therefore it is terminating.

Remedy: Make sure that the desired networking subsystem(s) are installed and running before running Autodiscovery.

(24024) The network transport startup failed

Cause: The startup of the SNMP network transport protocols failed. The network stacks may not be operating properly or installed correctly.

Remedy: Try reinstalling your network software and this product. If SNMP is still not functional, there may be an internal error. For help, contact your network administrator or an HP authorized service representative.

(24025) NWIPXSPX.DLL could not be found; therefore IPX networking is not available

Cause: NWIPXSPX.DLL (dynamic link library for IPX/SPX services) could not be found.

Remedy: Make sure that the IPX subsystem and its client services are installed correctly on your system.

(24026) Invalid NWIPXSPX.DLL; therefore the IPX network is not available

Cause: Discovery detected that some of the APIs required within NWIPXSPX.DLL are incorrect or missing. This indicates an invalid or corrupt version of this file.

Remedy: Make sure that the IPX subsystem and its client services are installed correctly on your system.

(24027) Unsupported version of the Discovery Database file; rediscovery is required

Cause: The saved version of the discovery database is obsolete.

Remedy: Use Autodiscovery to rediscover the network.

(24068) IP restart interval must be between 15 and 1440

Cause: You entered a restart time interval value that is not allowed.

Remedy: Enter a valid restart interval. A valid restart interval can be from 15 to 1440 minutes.

(24069) IPX restart interval must be between 15 and 1440

Cause: You entered a restart time interval value that is not allowed.

Remedy: Enter a valid restart interval. A valid restart interval can be from 15 to 1440 minutes.

(24103) Network already exists in Discovery Database

Cause: An attempt was made to add a network to a discovery database that already contains the specified network.

Remedy: You cannot add a network that already exists in the discovery database. Enter or select a different network.

