Part No. 316341-B Rev 00
May 2003

4655 Great America Parkway
Santa Clara, CA 95054

Installing and Using Device Manager

Passport 8000 Series Software Release 3.7

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Contents

Figures

Tables

Preface

Device Manager is a graphical user interface (GUI) used to configure and manage Passport* 8000 Series switches. You install it on a management station in the network.

This guide describes how to install and start the Device Manager software on a Windows* or UNIX* platform. It also describes some common startup problems and how to troubleshoot them.

Before you begin

This guide is intended for network administrators with the following background:

- Basic knowledge of networks, Ethernet bridging, and IP and IPX routing
- Familiarity with networking concepts and terminology
- Basic knowledge of network topologies
- Experience with windowing systems or graphical user interfaces (GUIs)

Text conventions

This guide uses the following text conventions:

angle brackets (< >)	Indicate that you choose the text to enter based on the description inside the brackets. The description may list the exact text choices or may indicate the type of information needed. Do not type the brackets when entering the command. Example: If the command syntax is: `config cli more <true | false>`, you enter either: `config cli more true` or `config cli more false`. If the command syntax is: `config cli timeout <seconds>`, you might enter: `config cli timeout 30` to specify a timeout interval of 30 seconds.
`bold Courier text`	Indicates command names and options and text that you need to enter. Example: Enter **`show ip`** {**`alerts`**|**`routes`**}.
braces ({})	Indicate required elements in syntax descriptions where there is more than one option. You must choose only one of the options. Do not type the braces when entering the command. Example: If the command syntax is `show ip {alerts|routes}`, you must enter either `show ip alerts` or `show ip routes`, but not both.
brackets ([ ])	Indicate optional elements in syntax descriptions. Do not type the brackets when entering the command. Example: If the command syntax is `show ports info config [<ports>]`, you can enter either: `show ports info config <ports>` or `show ports info config`.

ellipsis points (. . .)	Indicate that you repeat the last element of the command as needed. Example: If the command syntax is `ethernet/2/1 [<parameter> <value>]...`, you enter `ethernet/2/1` and as many parameter-value pairs as needed.
italic text	Indicates new terms, book titles, and variables in command syntax descriptions. Where a variable is two or more words, the words are connected by a hyphen. Example: If the command syntax is `config bootconfig master <cpu-slot>`, *`cpu-slot`* is one variable, and you substitute one value for it.
`plain Courier text`	Indicates command syntax and system output, for example, prompts and system messages. Example: `8600# show cli`
separator (>)	Shows menu paths. Example: Edit > Chassis identifies the Chassis option on the Edit menu.
vertical line (|)	Separates choices for command keywords and arguments. Enter only one of the choices. Do not type the vertical line when entering the command. Example: If the command syntax is: `show ip {alerts | routes}`, you enter either: `show ip alerts` or `show ip routes`, but not both.

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From the Technical Support page, you can open a Customer Service Request online or find the telephone number for the nearest Technical Solutions Center. If you are not connected to the Internet, you can call 1-800-4NORTEL (1-800-466-7835) to learn the telephone number for the nearest Technical Solutions Center.

An Express Routing Code (ERC) is available for many Nortel Networks products and services. When you use an ERC, your call is routed to a technical support person who specializes in supporting that product or service. To locate an ERC for your product or service, go to the http://www.nortelnetworks.com/help/contact/erc/index.html URL.

Chapter 1
Installing Device Manager software

Java Device Manager (JDM) is an SNMP-based graphical user interface (GUI) tool designed to manage single devices. To use Java Device Manager (also referred to in this manual as Device Manager), you must have network connectivity to a management station running JDM in one of the supported environments.

The Device Manager software is provided on the software CD as a self-extracting executable file. Device Manager is also available from the Nortel Networks Web site. This chapter provides instructions for installing the Device Manager software in a Windows* or UNIX* environment.

In Passport 8000 Series Switch Software Release 3.7, the Java Runtime Environment (JRE) is bundled with the Device Manager software and therefore, does not require a separate installation.

This chapter includes the following topics:

JDM installation notes

The following installation notes apply to both Windows and UNIX:

- If you have other Nortel Networks switches in your network, and are running earlier versions of Device Manager software, you must install the newest version of Device Manager in order to access the switches running the latest software.
- Prior to upgrading Device Manager, either uninstall your previous version of the Device Manager software, or install the new software to a different directory. (You can have multiple versions of Device Manager stored on your PC or UNIX machine, provided that each version is stored in a separate directory).

  In a windows environment, a dm.ini file is created in the JDM install directory to save those IP addresses visited in JDM. In a Unix environment, a ~/.jdm/dm.ini file is created to save those IP addresses visited in JDM. A JDM unistall operation does not remove this file. If you wish, you can move or copy these files from a previous version of JDM to a new JDM installation.

Installing Device Manager on Windows

This section includes the following topics:

Windows minimum requirements

The minimum system requirements for installing Device Manager on Microsoft* Windows NT*, Windows 95, Windows 98, Windows 2000, and Windows XP are:

- 350 MHz or higher Pentium processor
- 256 MB DRAM
- 300 MB space on hard drive
- Download Time: Windows XP - 5 min; Solaris - 10 min
- Installation Time: Windows XP - 17 min; Solaris - 5 min

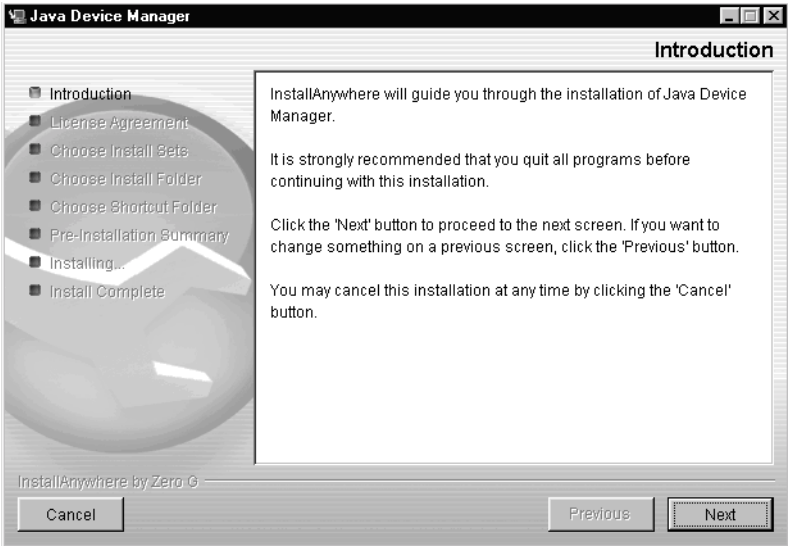
Installing JDM on Windows from the CD

1. Close all programs.
2. Insert the software CD into your CD-ROM drive.
3. From the Windows Start menu, choose Run.

   The Run dialog box opens.
4. Use Browse to navigate to the drive where the CD-ROM is located.
5. On the CD-ROM drive, locate the \Windows\Device Manager subdirectory.
6. Double-click the jdm_xxxx.exe file.

   An install screen opens, followed by a Nortel dialog box. Then, the Introduction dialog box appears (Figure 1).

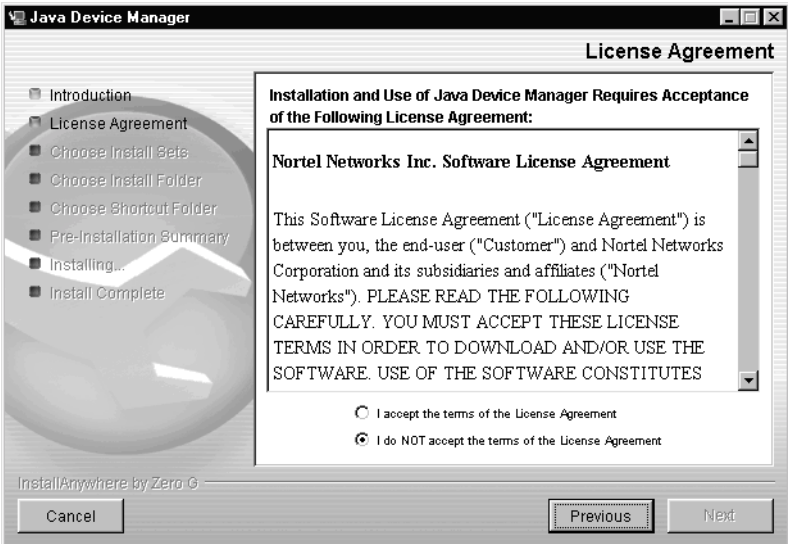
Figure 1 Introduction dialog box



7. Click Next to continue the installation process.

   The License Agreement dialog box opens (Figure 2).

Figure 2 License Agreement dialog box

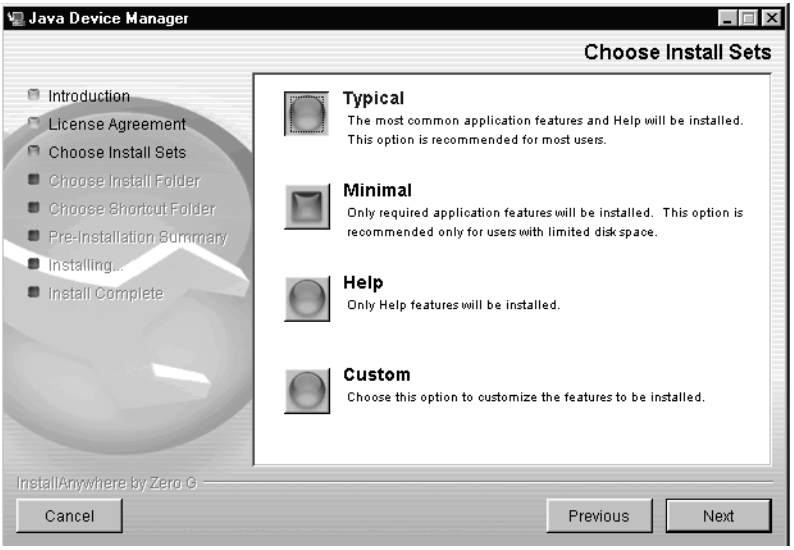


8 Click I accept the terms of the license agreement as shown in Figure 2.

9 Click Next.

The Choose Install Set dialog box opens (Figure 3).

Figure 3 Choose Install Set dialog box



10 Do *one* of the following:

— Select Typical installation to install the common set features, as well as online help.

— Select Minimal installation to select minimal features to install (recommended for those with limited disk space)

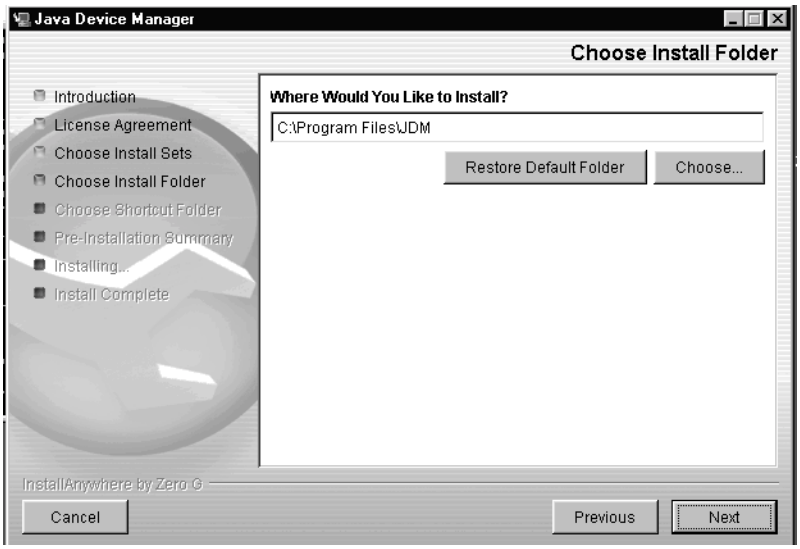
— Select Help to install only the online help.

— Select Custom installation to customize the features prior to installation.

11 Click Next.

The Choose Install Folder dialog box opens (Figure 4).

Figure 4 Choose Install Folder dialog box

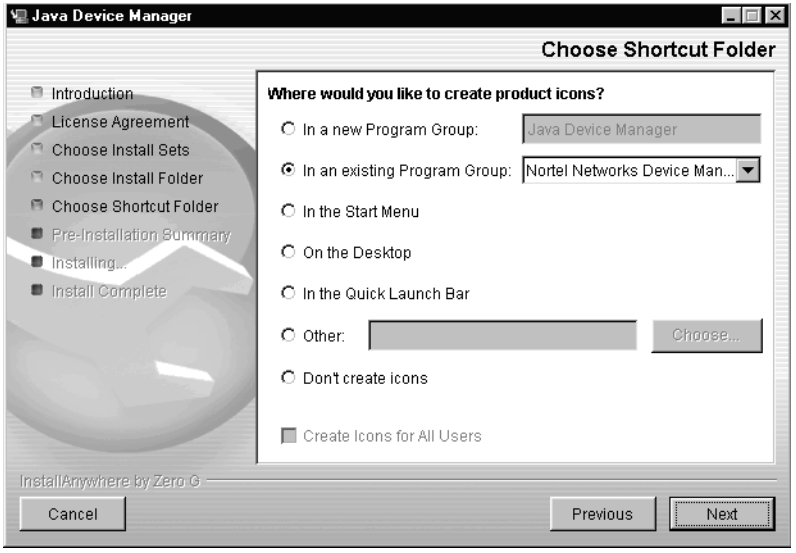


12 Click Restore Default Folder or click Choose to select the storage path.

13 Click Next.

The Choose Shortcut Folder dialog box opens (Figure 5).

Figure 5 Choose Shortcut Folder dialog box

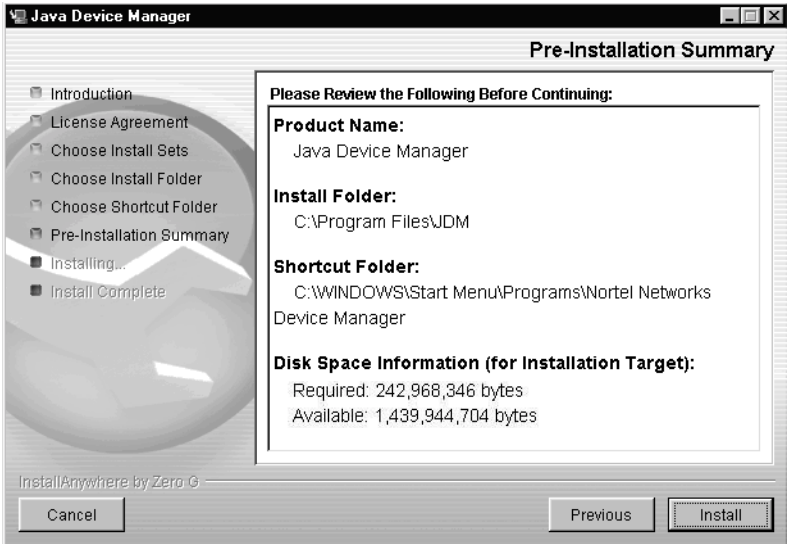


14 Select a shortcut path, if desired.

15 Click Next.

The Pre-Installation Summary dialog box opens (Figure 5).

Figure 6 Pre-installation Summary dialog box

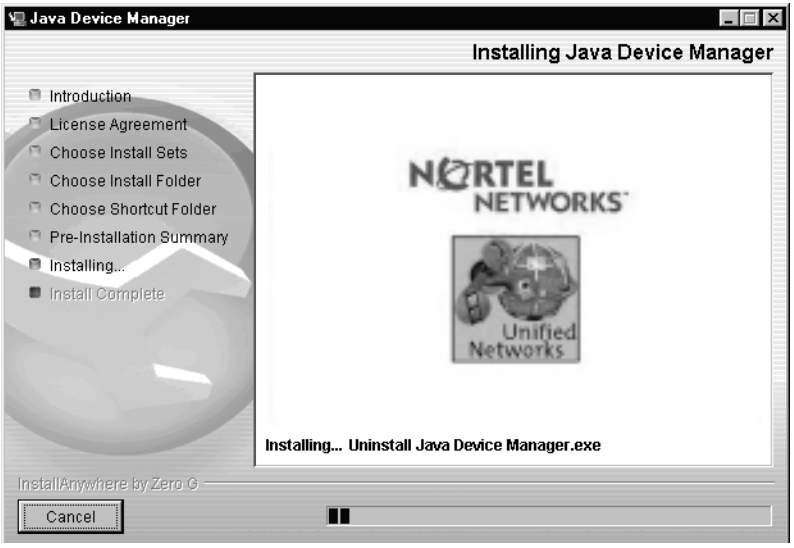


16 Verify the folder, shortcut, and disk space required to install the software. Use the Previous button to return to the appropriate dialog box to make changes.

17 Click Install.

The installation process begins (Figure 7).

Figure 7 Installing Java Device Manager dialog box



When the installation is complete, the Install Complete dialog box opens (Figure 8).

Figure 8 Install Complete dialog box

18 Click Done to exit the installation.

Device Manager is now completely installed on your machine. For instructions on starting the Device Manager software, see Chapter 2.

Installing JDM in a Windows environment from the Web

To obtain the Device Manager software from the Nortel Networks Web site:

1. Go to the following URL:

   http://www.nortelnetworks.com/support

2. Click on the product for which you want JDM.

   A page opens that displays all versions of that product line.

3. Click Software under the specific product you are working with.

   The software page opens.

4. Click the Java Device Manager version you want.

   The Software Detail Information page opens.

5. Click JDM for PC (95/98/NT/2000/XP)

   A File Download dialog box opens that asks you to either run this program from its current location or to download the Device Manager software to your system.

6. Choose the directory to which you want to download the software. The software download is a self-extracting .exe file.

Note: In the file name, *xxxx* represents the current version of the Device Manager software.

7. Close all programs.

8. Navigate to the directory on your system where you downloaded the Device Manager Software.

9. Double-click the jdm_xxxx.exe file.

   An install screen opens, followed by a Nortel dialog box. Then, the Introduction dialog box appears. Go to Figure 1 on page 21 and complete steps 7 through 18.

Installing Device Manager on UNIX

Note: Java Device Manager installation procedures are now standardized across all platforms. In addition, the required Java Runtime Environment (JRE) (version 1.4.1) is now part of the JDM installation package and does not require a separate installation. The bundled JRE will be used with this JDM only and should not affect other JAVA applications on the same system. Please note for Solaris and HP-UX, certain OS patches are required for JDM/JRE to function properly. Please consult SUN or HP to install the appropriate OS patches before launching JDM.

This section includes the following topics:

Installing [Product Name (long)] in a Unix environment

The minimum system requirements for installing Device Manager in a UNIX SPARC* workstation running the Sun* Solaris* 2.7.x (or higher) operating system are as follows:

- 4 MB available in a temporary directory
- 300 MB free in the directory where you want to install the Device Manager software
- 128 MB DRAM

The minimum system requirements for installing Device Manager on an HP* workstation running the HP-UX* 11.x or above operating system are as follows:

- 4 MB available in a temporary directory
- 300 MB free in the directory where you want to install the Device Manager software
- 128 MB DRAM

Installing the Device Manager software in a UNIX environment includes:

1 Uninstalling the previous version of Device Manager

2 Installing the Device Manager software.

Installing JDM on Solaris from the CD

To install the Device Manager software to a Solaris environment from the CD:

1. Navigate to the Solaris/JDM subdirectory on the software CD.
2. Refer to steps 4 to 14 in "Executing the JDM installation software on UNIX" on page 34 for the remaining instructions on how to install the Device Manager software in a UNIX (Solaris or HP-UX) environment.

Installing JDM on HP-UX from the CD

Note: The CD that supports the 5.6.2 version of Java Device Manager is in ISO9660 format and does not support Rock Ridge extensions. On a HP-UX CD ROM system you may see all of the directories and files in uppercase followed by a revision number. For example, you may see the executable as "jdm_xxxx_hpux_pa-risc.sh" where xxxx is the release version, and the file name is case sensitive.

To install the Device Manager software to a HP-UX environment from the CD follow these steps with the exact syntax:

1. Navigate to the HP-UX/JDM subdirectory on the software CD.
2. Refer to steps 4 to 14 in "Executing the JDM installation software on UNIX" on page 34 for the remaining instructions on how to install the Device Manager software in a UNIX (Solaris or HP-UX) environment.

Installing JDM on UNIX from the Web

To install the Device Manager software to a UNIX (Solaris or HP-UX) environment from the Web:

1. Go to the following URL:

   http://www.nortelnetworks.com/support

2. Click on the product for which you want JDM.

   A page opens that displays all versions of that product line.

3. Click Software under the specific product you are working with.

   The software page opens.

4. Click the Java Device Manager version you want.

   The Software Detail Information page opens.

5. Click JDM for Unix-Solaris, HP-UX.

   A File Download dialog box opens that asks you to either run this program from its current location or to download the Device Manager software to your system.

6. Choose a directory to which you want to download the software.

7. See "Executing the JDM installation software on UNIX" on page 34 for the remaining instructions on how to install the Device Manager software in a UNIX (Solaris or HP-UX) environment.

Note: After you launch Device Manager on a Solaris workstation, if several warning messages are displayed, do the following two things:

- Add the following to your .cshrc file:

  `setenv XKEYSYMDB $HOME/ .XKeysymDB`

- Make sure there is a .XKeysymbDB file in your home directory.

Executing the JDM installation software on UNIX

To execute the JDM installation software in a UNIX environment:

1. Close all programs.
2. Navigate to the directory on your system where you loaded the Device Manager software.
3. For the Solaris environment, make the file executable by entering:

   `chmod a+x dm_xxxx_solaris_sparc.sh`

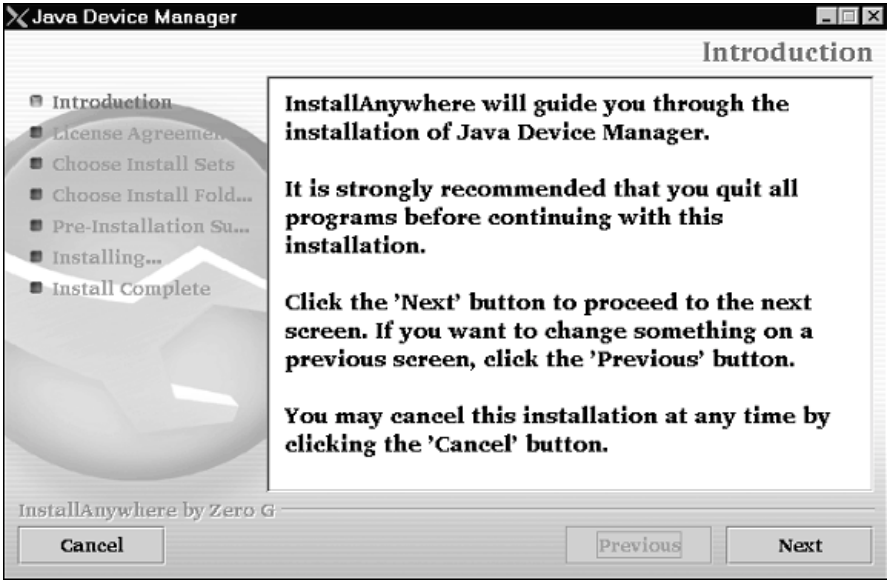
   For the HP-UX environment, make the file executable by entering:

   `chmod a+x jdm_xxxx_hpux_pa-risc.sh`
4. For the Solaris environment, run the `dm_xxxx_solaris_sparc.sh` file.

   For the HP-UX environment, run the `jdm_xxxx_hpux_pa-risc.sh` file.

   An install screen, followed by a Nortel dialog box opens. Then, the Introduction dialog box appears (Figure 9).

Figure 9 InstallAnywhere Introduction dialog box



5. Click Next to continue the installation process.

   The License Agreement dialog box opens (Figure 10).

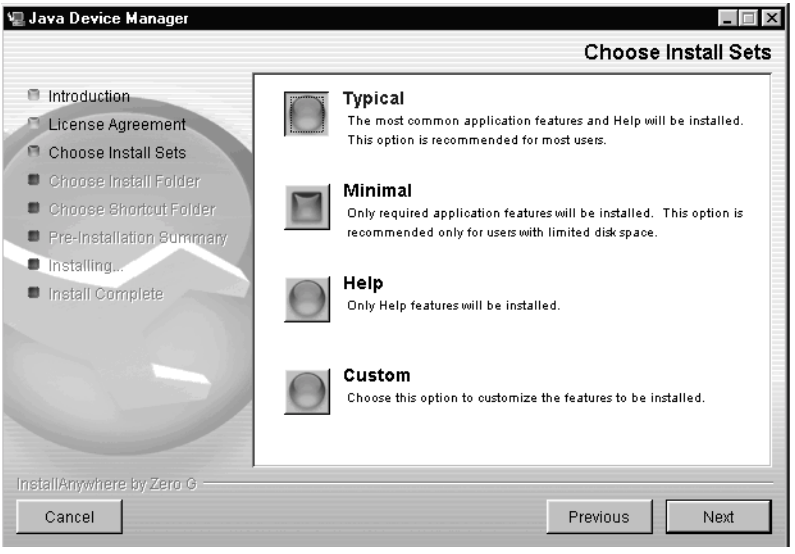
Figure 10 License Agreement dialog box

6 Click I accept the terms of the license agreement as shown in Figure 10.

7 Click Next.

The Choose Install Set dialog box opens (Figure 11).

Figure 11 Choose Install Set dialog box



8 Do *one* of the following:

— Select Typical installation to install the common set features, as well as online help.

— Select Minimal installation to select minimal features to install (recommended for those with limited disk space).

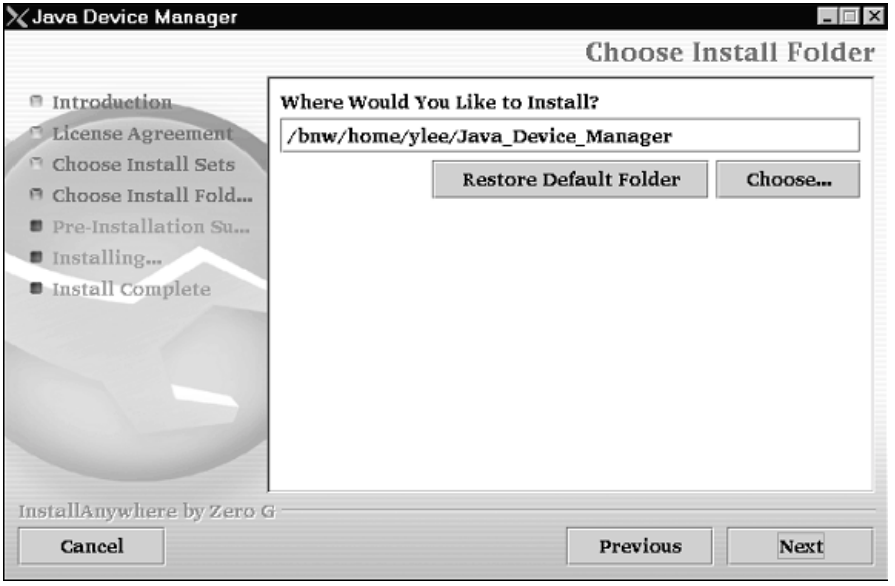
— Select Help to install only the online help.

— Select Custom installation to customize the features prior to installation.

9 Click Next.

The Choose Install Folder dialog box opens (Figure 12).

Figure 12 Choose Install Folder dialog box

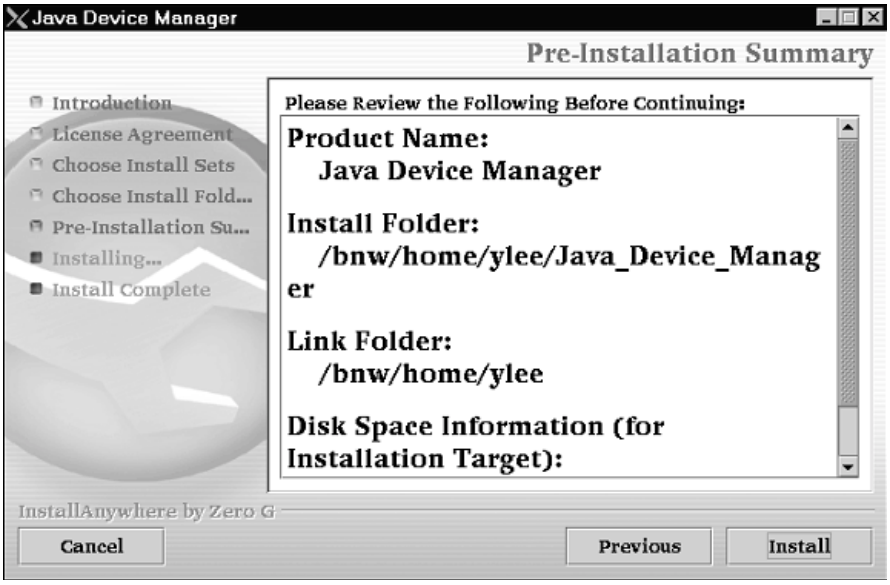


10 Click Restore Default Folder or click Choose to select the storage path.

11 Click Next.

The Pre-Installation Summary dialog box opens (Figure 13).

Figure 13 Pre-installation Summary dialog box



12 Verify the folder and disk space required to install the software. Use the Previous button to return to the appropriate dialog box to make changes.

13 Click Install.

The installation process begins (Figure 14).

Figure 14 Installing Java Device Manager dialog box

When the installation is complete, the Install Complete dialog box opens (Figure 15).

Figure 15 Install Complete dialog box

14 Click Done to exit the installation.

Device Manager is now completely installed on your machine.

Chapter 2
Starting Device Manager

This chapter describes the basic procedures for starting the Device Manager software, which includes the following topics:

Note: Before you can manage a switch using Device Manager, you must set an IP address for the switch using the CLI (see *Getting Started* for instructions).

Starting Device Manager using Windows and UNIX

To start Device Manager:

➔ Do one of the following:

- In the Windows* environment, from the Windows Start menu, choose Programs > Java Device Manager > DM.
- In a UNIX* environment, verify that the Device Manager installation directory is in your search path; then type:

  ```
  JDM
  ```

An abbreviated Device Manager window opens, as shown in Figure 16.

Note: On startup, Device Manager performs a DNS lookup for the machine on which it is running. If the DNS lookup is slow or fails, a timeout message appears.

Figure 16 Abbreviated Device Manager window

Replicating editable fields in Device Manager

You can replicate all editable table cells by doing the following:

1. Single-click the cell.

   The cell will highlight. (Note: A double-click makes the cell editor available. The cell editor includes directly updating the value, opening an option item list or opening a dialog. If required, update the cell prior to highlighting it to be copied.)

2. Click the Copy icon.
3. Highlight the cell(s) in which you want the data copied.
4. Click the Paste icon.

   The content in the first cell is replicated into the highlighted cell(s).

5. Click Apply to set the change or click the Arrow icon to reset the change.

Setting the Device Manager properties

Device Manager uses the Simple Network Management Protocol (SNMP) to configure and manage 8000 Series switches. You can use the Device Manager Properties dialog box to configure important communication parameters such as the polling interval, timeout, and retry count. You can set these parameters at any time before or after you open a device.

To set the Device Manager properties:

1. From the initial Device Manager window menu bar, choose Device > Properties.

   The Device Manager Properties dialog box (Figure 17) opens.

2. Select properties you want to change and set their values.

3. Click OK.

Figure 17 Properties dialog box

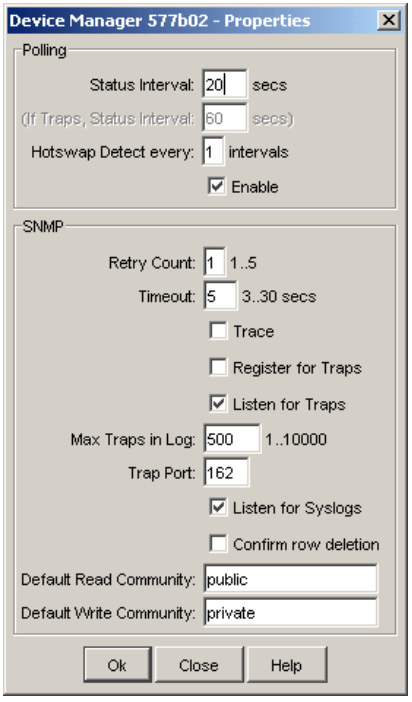


Table 1 describes the Properties dialog box fields.

Table 1 Properties dialog box fields

Field	Description
Status Interval	Interval at which statistics and status information are gathered (default is 20 seconds).
(IfTraps, Status Interval)	If the Register for Traps box is checked, interval, in seconds, at which statistics and status information are gathered.
Hotswap Detect every	Enter a number for the number of intervals at which Device Manager will check for module hot swaps.
Enable	If checked, Device Manager will poll the switch according to the settings listed above the Enable box.
Retry Count	If Device Manager cannot transmit polling information at startup, the number of times Device Manager retransmits polling information.
Timeout	Length of each retry of each polling waiting period. When accessing the device through a slow link, you may want to increase the timeout interval and then change the Retransmission Strategy to superlinear.
Trace	If checked, you have the ability to perform trace routes.
Register for Traps	If checked, Device Manager will register a trap.
Listen for Traps	If checked, Device Manager will listen for a trap.
Max Traps in Log	The specified number of traps that may exist in the trap log. The default is 500.
Trap Port	The number of the port that trap messages will be captured on. The default is 162.
Listen for Syslogs	If checked, Device Manager will listen for syslogs.
Confirm row deletion	If checked, Device Manager will send a message when a system table row was deleted.
Default Read Community	Displays the default Read Community type. You can edit this field by highlighting the current value and typing over it.
Default Write Community	Displays the default Write Community type. You can edit this field by highlighting the current value and typing over it.

Opening a device

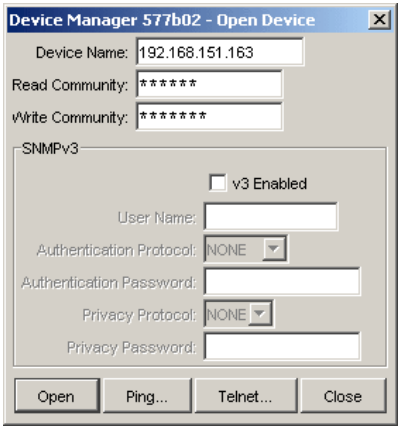
Opening a device displays the device view, a picture of the device. Before you can display the device view, you must enter community strings that determine the access level granted to the device.

To open a device:

1 From the abbreviated Device Manager window menu bar, choose Device > Open. Or, from the Device Manager toolbar, click the open device button.

The Open Device dialog box opens (Figure 18).

Figure 18 Open Device dialog box



2 Identify the device by typing the DNS name or IP address of the device in the Device Name field.

3 Type the proper community strings in the Read Community and Write Community fields.

Note: To gain read/write/all access to a device in Device Manager, you must enter the read/write/all community string for both the Read Community and Write Community strings.

4 Click Ping to check if the switch is reachable, or Telnet to initiate a Telnet session.

5 Click Open.

Device Manager automatically determines what version of software the selected device is running. The Device Manager window opens, showing a picture of the device (Figure 19) that represents the physical features of the device.

Note: For information about connecting to the switch using SNMPv3, refer to *Configuring and Managing Security.*

Figure 19 Device Manager window showing an 8000 Series switch

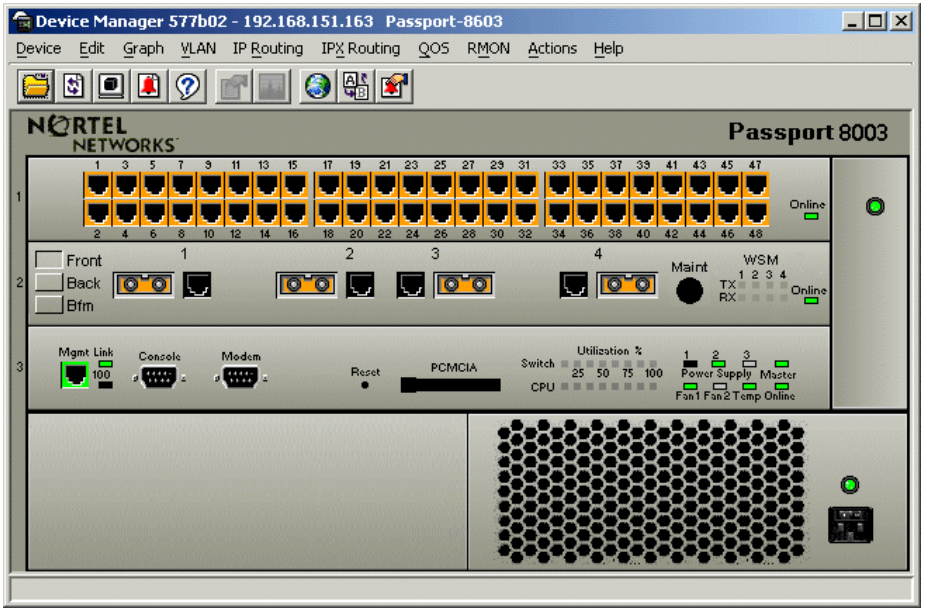


Table 2 describes the Open Device dialog box fields.

Table 2 Open Device dialog box fields

Field	Description
Device Name	Identifies the DNS name or IP address of the device.
Read Community	Indicates the length of the read community password string.
Write Community	Indicates the length of the write community password string.

Table 2 Open Device dialog box fields (continued)

Field	Description
v3 Enabled	Enables (checked) or disables (not checked) SNMP version 3.
User Name	Indicates the user's security name. If v3 Enabled is checked, this name appears in the Edit > SnmpV3 tables.
Authentication Protocol	Indicates the selected authentication protocol: NONE, MD5 or SHA-96.
Authentication Password	Indicates the length of the authentication password string.
Privacy Protocol	Indicates the selected privacy protocol: NONE or DES.
Privacy Password	Indicates the length of the privacy password string.

Opening a device using the Open Last option

You can use Device Manager's Open Last option to view and/or select from a list of available devices.

To open a previously opened device:

1. From the abbreviated Device Manager window menu bar, choose Device > Open Last.

   A pull-down menu appears, listing the devices that were previously opened. The open last list displays up to 144 devices at a time. Additional devices may be viewed by selecting Device List 2, Device List 3, and so forth. Devices opened with SNMP v3 is not recorded in the Open List list.

2. Choose the IP address/system name of the device that you want to open. The Open Device dialog box for that device opens.

To delete devices from the Open Last Device List, choose Device > Open Last > Edit. The Devices dialog box opens. Highlight the device that you want to remove from the list and click Delete.

If you are not able to open a device in Device Manager, see "Switch fails to open in Device Manager" on page 81, for information about how to troubleshoot the problem.

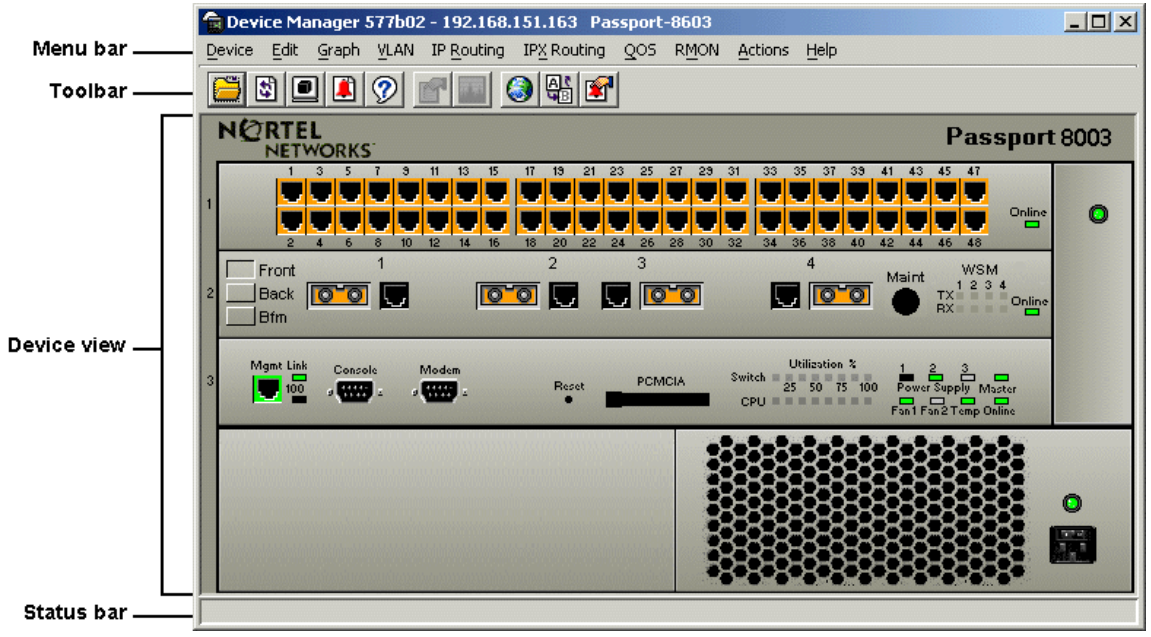
Chapter 3
Understanding the Device Manager window

The Device Manager window has the following four parts (Figure 20):

- Menu bar
- Tool bar
- Device view
- Status bar

Figure 20 displays the parts of the Device Manager Window.

Figure 20 Parts of the Device Manager window



Using the menu bar

The menu bar on the Device Manager window (Figure 21) provides menus with commands that let you monitor a device.

Figure 21 Menu bar

Table 3 describes the menu bar fields.

Table 3 Device Manager menu bar description

Menu	Description
Device	The Device menu lets you open a device, refresh the device view, and set polling and SNMP properties.This menu also allows you to open and view the Trap Log, SysLog, and Log. It also allows you to Telnet to currently opened device.
Edit	The Edit menu lets you view parameters for the chassis or for selected objects. The object can be a card, fan, MDA, port, power supply or any other object. This menu also lets you set security parameters, run diagnostic tests, and select all objects in the device. This menu also include FileSystem, NTP, SNMP v3 related configurations. ATM menu is useful only if the chassis contains ATM card.
Graph	The Graph menu lets you view Device Manager statistics and produce graphs of the chassis or port statistics.
VLAN	The VLAN menu lets you view information about VLANs, spanning tree groups (STGs), MultiLink Trunks/LACP, MAC Learning, SMLT, SVLAN, and Global MAC Filtering.
IP Routing	The IP Routing menu lets you set up IP routing functions for the switch, including OSPF, RIP, VRRP, Multicast, IGMP, DVMRP, DHCP, BGP, RSMLT, PIM, PGM, UDP forwarding, filters, and policies.
IPX Routing	The IPX Routing menu lets you set up IPX routing functions, including RIP, SAP, RSMLT, and policies.
QOS	The QOS menu lets you set up and view QoS filters and profiles.
RMON	The RMON menu lets you set up RMON alarms and view the alarm log and history log. This menu also allows you to enable or disable RMON history or statistics on all ports.

Table 3 Device Manager menu bar description

Menu	Description
Actions	The Actions menu provides quick access to selected actions without going through other menus and submenus. Use this menu to open the Web management interface, to save runtime configurations, to save boot configurations, or to get PCAP file.
Help	The Help menu lets you view online Help topics for Device Manager. This menu also provides a legend for the port colors in the device view.

Note: All WSM related menus are activated only when chassis contains WSM card, and the WSM card is selected.

Using the toolbar

The toolbar buttons provide quick access to commonly used commands and some additional actions (Table 4).

Table 4 Toolbar buttons

Button	Name	Description	Menu equivalent
	Open Device	Opens a device.	Device > Open
	Refresh Device Status	Refreshes the device view information.	Device > Refresh Status
	Telnet	Opens a Telnet session.	Device > Telnet
	Trap Log	Opens the trap log.	Device > Trap Log
	Help	Opens online Help in a Web browser window.	Help > Device Manager Basics>Passport and BayStack Families
	Edit Selected	Displays configuration data windows for the selected chassis object.	Edit > Chassis Edit > Card Edit > Fan Edit > MDA Edit > Mgmt Port Edit > Port Edit > Power Supply Edit > Serial Port
	Graph Selected	Opens statistics and graphing windows.	Graph > Chassis Graph > Port
	Open Device's Home Page	Opens the Web management interface home page.	Actions > Open Home Page

Table 4 Toolbar buttons (continued)

	Save Runtime Config	Saves the current run-time configuration.	Actions > Save Runtime Config
	Alarm Manager	Opens the RMON Alarm Manager window.	Rmon > Alarm Manager

Using the Device view

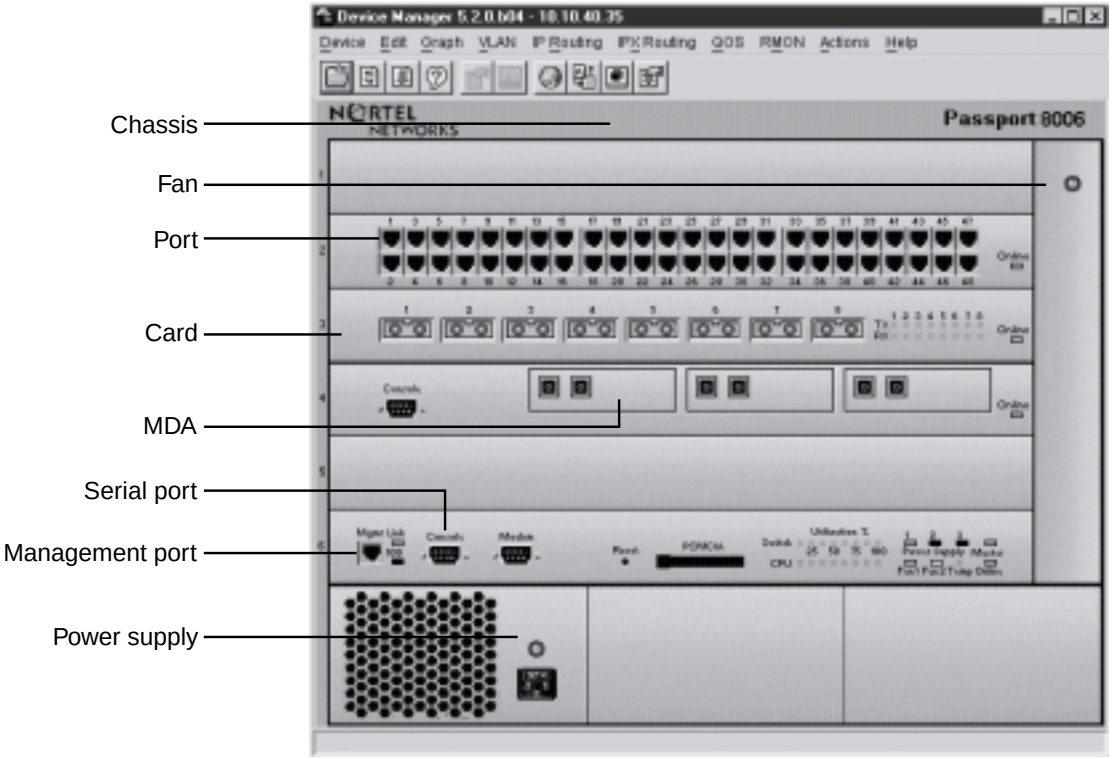
The device view allows you to determine at a glance the operating status of the various modules and ports in your hardware configuration. You can also use the device view to perform management tasks on specific objects.

Selecting objects

In the device view (Figure 22), you can select the following types of objects:

- The entire chassis
- A card (module) or multiple cards
- A port or multiple ports
- A power supply
- A fan
- An MDA
- A management port
- A serial port

Figure 22 Objects in an 8000 Series switch device view



To select a single object, click the edge of the object. The object is outlined in yellow, indicating that it is selected. Subsequent activities in Device Manager refer to the selected object.

To select multiple objects of the same type (such as ports or modules), use *one* of the following actions:

- For a block of contiguous ports or modules, drag to select the group of objects.

  or

- For multiple ports or modules anywhere in the switch chassis, [Ctrl]-click the objects anywhere in the device view.

The general rule for selecting multiple physical objects (fans, power supplies, MDAs, modules, ports, etc.) is that the selected objects must belong to the same category/family or have some kind of parent/child relationship. For example, when a 10/100TX port is the base of all ports, and a 10/100TX port is selected first, then all other port can also be selected.

However, if a different type of port is selected first, for example a Gig port on a Passport 8632TXE module, and then you attempt to select a port under a different category, for example, an 8672ATM port or a 8683POS port, etc., Device Manager will not allow you to select that port. To work around this issue in the example provided, you would first select the 10/100TX port (the most common basic port), and then select other type of ports (for example, a Gig port).

Interpreting the status of LEDs and ports

The conventions on the device view are similar to the actual switch appearance. Module LEDs are in one of three states: on, off, or blinking. For a full description of what each state means, refer to the documentation that came with the module.

The ports on the device view are color coded to provide at-a-glance port status. Table 5 shows the status assigned to each color.

Table 5 Device Manager port color codes

Color	Description
Green	Port is up and operating.
Red	Port has been manually disabled.
Orange	Port has no link.
Light Blue	Port is in standby mode.
Dark Blue	Port is being tested.
Grey	Port is not reachable by Device Manager.
Pink	Port has a loopback connector connected to it.

In addition, the Help menu provides a legend that identifies the port colors and their meanings.

Using shortcut menus

Objects in the device view such as the chassis, ports, and cards have shortcut menus. These menus provide a faster path for editing objects and applying changes; however, you can access the same options through the menu bar or the toolbar.

To display the chassis shortcut menu (Figure 23), select the chassis and right click.

Figure 23 Chassis shortcut menu

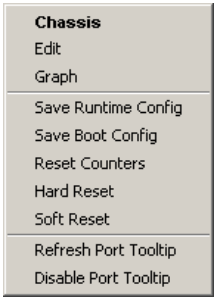


Table 6 describes the chassis shortcut menu options.

Table 6 Chassis shortcut menu options

Option	Description
Edit	Edit chassis parameters.
Graph	Graph chassis statistics.
Save Runtime Config	Save any changes made as a run-time configuration.
Save Boot Config	Save any changes made as a boot configuration.
Reset Counters	Reset all the statistics counters for the switch.
Hard Reset	Perform a hard reset of the switch.
Soft Reset	Perform a soft reset of the switch.
Refresh Port Tooltip	Refresh the port tooltip data of the switch. The port tooltip data contains: Slot/Port, PortName, and PortOperSpeed.
Disable Port Tooltip	Disable the port tooltip function of the switch.

To display the port shortcut menu (Figure 24), select one or more ports and right click.

Figure 24 Port shortcut menus

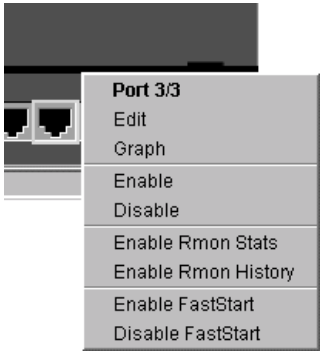


Table 7 describes the I/O port shortcut menu options.

Table 7 Port shortcut menu options

Option	Description
Edit	Display edit port menu.
Graph	Graph port statistics.
Graph POS	Displays on POS ports only.
Enable	Administratively bring a port up.
Disable	Administratively shut down a port.
Enable Rmon Stats	Enable Rmon statistics logging on this port or ports. Does not display on ATM or POS ports.
Enable Rmon History	Enable Rmon history logging on this port or ports. This field does not display on ATM or POS ports.
Enable FastStart	Enable FastStart spanning tree operation on this port or ports. This field does not display on ATM ports.
Disable FastStart	Disable FastStart spanning tree operation on this port or ports. This field does not display on ATM ports.

The card shortcut menu provides a quick way to view the card's parameters. When the selected card is an I/O module, you can click on the Edit option on the shortcut menu to open the Edit Card dialog box.

To display the card shortcut menu (Figure 25), select a card and right click.

Figure 25 Card shortcut menu (I/O module)

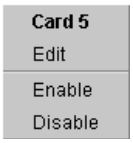


Figure 25 is an example, this popup menu is context sensitive base on the what kind of card is selected.

Using the status bar

At the bottom of the Device Manager window is the status bar. This area displays error and informational messages from the software application. These messages are not related to the device being managed.

Using Device Manager dialog boxes

Many Device Manager dialog boxes contain editable fields that allow you to enter parameter values, and many of the parameters have predetermined possible values. For example, a port may be set to be enabled or disabled. Other parameter values are ranges of user-determined values. For example, the value for a system contact will be a name you enter in the SysContact field.

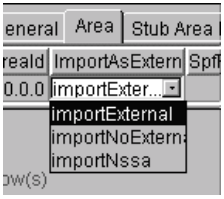
Editable fields in Device Manager dialog boxes are displayed in white.

To change the value in a field:

1 Click the field.

The possible choices for that parameter are displayed (Figure 26).

Figure 26 Parameter selection menu



2 Click a new value from the list.

3 Click Apply.

For fields that do not have preset values, click the field and type the value.

When you enter values for IP addresses, MAC addresses, or time, follow these guidelines:

- Enter an IP address in decimal format:

  `<xxx>.<xxx>.<xxx>.<xxx>`
- Enter a MAC address in hexadecimal format:

  `xx:xx:xx:xx:xx:xx`
- Time is a value based on the delta from the switch boot-up time.

Using the buttons in Device Manager dialog boxes

Table 8 describes buttons that appear in Device Manager dialog boxes and tabs. Not all buttons appear in all dialog boxes.

Table 8 Device Manager buttons

Button	Description
Apply	Applies the changes you have entered in fields on a tab or dialog box. The button is grayed out until you change a parameter. Changes are displayed as **bold** text or numbers.
Insert	Opens a dialog box to create a new entry for a table; then from the dialog box, inserts the new entry in the table.
Delete	Deletes a selected entry.
Refresh	Refreshes the information in the window. Every time you click on Refresh, new information is polled from the switch and displayed.
Close	Closes the tab or dialog box and disregards any changes you have made to fields.
Help	Opens context-sensitive online Help.
Resize Columns	Resizes table columns to fit the data in them.
Stop	Stops the current action (polling).
Copy	Will copy selected items to your computer's memory clipboard.
Paste	Will paste the contents of your computer's clipboard.
Reset changes	Resets any configuration values you have changed back to their original value.
Export data	Allows you to copy data to external media.
Print Table	Prints the contents of any table that is displayed.
Graph	Graphs selected data.
Export (on Graph dialog boxes)	Saves the current table in ASCII format in a file you specify. The table contains tabs, that allows you to import this file into a text editor or spreadsheet for further analysis.
Print (on Graph dialog boxes)	Prints the current table.

Editing objects

You can edit objects and values from Device Manager in the following ways:

- Select an object; from the Device Manager toolbar, click Edit Selected. The edit dialog box opens for that object.
- From the shortcut menu for a chassis, card, port, or any other object, choose Edit. The edit dialog box opens for that object.
- Double-click an object. The edit dialog box opens for that object.
- From the Device Manager menu bar, choose Edit > Selected All. Then choose an object type from the list.

When you change values in a field, you can see fields that have been changed but not applied. Click Apply to apply the changes to the device.

Most tabs and dialog boxes contain a Refresh button. After you apply changes to fields, click Refresh to display the new information in the tab or dialog box. In Windows and UNIX environments, the changed value is displayed in **bold.**

Note: To make changes in the running configuration, click Apply. Changes are not applied to Device Manager until you click Apply. To make the changes permanent, from the Device Manager menu bar, click Actions > Save Runtime Config.

Online help

Online help in Device Manager is context-sensitive. You use a Web browser to display online help. The Web browser should launch automatically when you click help. To display online help correctly, Nortel Networks recommends using the following Web browsers:

- Microsoft Internet Explorer 5.0 or later
- Netscape Navigator 4.7 or later

In a Unix environment, for Device Manager (or Optivity Switch Manager) to launch a Netscape browser properly, the shell in which Device Manager was launched must have a Netscape browser in its path.

In a Solaris environment, Device Manager may not open a Netscape window when you click a Help button. To work around this issue, first launch Netscape manually; then the Help system properly opens in the Netscape browser window.

The Help menu may behave erratically after you view the “About Device Manager” selection. If the edge of the Help menu extends beyond the device view window, you may not be able to select Legend using the cursor. The workaround for this problem is to use the arrow keys to select from this menu, or to widen the device view window, so that the Help menu is displayed in entirety on top of the device view.

If, for some reason, the Web browser does not launch, the location of the Help files are the default install directories listed in Table 9.

Table 9 Help file locations

Help files	Default path
Device Manager	*jdm installed directory/help/pp8k_basics/dmhelp.html*
Device specific help	*jdm installed directory/help/platform/version/help.html, where platform/version is the platform/version of current device. For example, for passport v370 release, the platform is “accelar2k” and version is “v370”.*

Chapter 4
Managing the system

This chapter describes how to manage the switch system using the Device Manager software, and includes the following topics:

Working with files

The File System tabs allow you to copy files and to verify the files currently stored in onboard flash memory and on an installed PCMCIA card. These tabs allow you to perform the following tasks:

- Copy a file
- Check the amount of memory used and the number of files stored in onboard flash memory and an installed PCMCIA card
- Verify the name, size, and storage date of each file present in onboard flash memory and PCMCIA memory

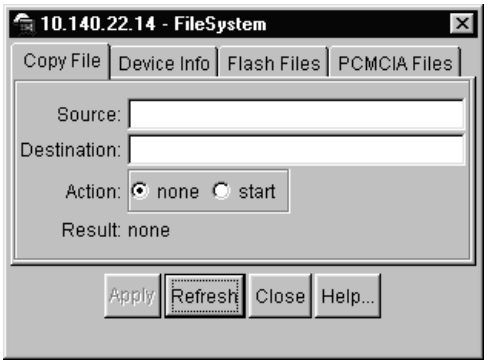
Copying files

To copy a file:

1 From the menu bar, choose Edit > File System.

The File System dialog box opens with the Copy File tab displayed (Figure 27).

Figure 27 Copy File dialog box



2 In the Source text box, specify the file to be copied in one of these forms:

- /flash/filename
- /pcmcia/filename
- ipaddress:/home/user/filename

3 In the Destination text box, specify the location where you intend the file to be copied in one of these forms:

- /flash/filename
- /pcmcia/filename
- ipaddress:/home/user/filename

For example, to copy a configuration file to a remote TFTP server, the Destination text box might read:

10.10.40.20:/home/joe/config.cfg

and the Source text box might read:

/flash/config.cfg

4 In the Action field, click start.

5 Click Apply to start copying the files.

The results of the action appears in the Result field.

Checking flash memory use

To check use of the flash memory in the switch:

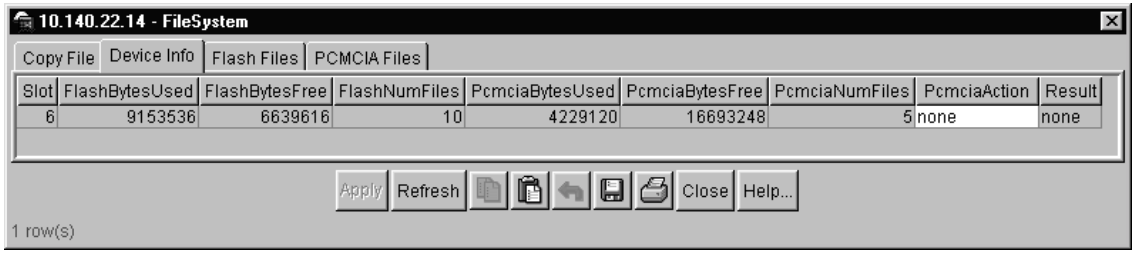
1. From the menu bar, choose Edit > File System.

   The File System dialog box opens with the Copy File tab displayed.

2. Click the Device Info tab.

   The Device Info tab opens (Figure 28).

Figure 28 Device Info tab



The Device Info tab shows the amount of memory used and available for both onboard flash memory and an installed PCMCIA card, as well as the number of files in each location. The Action field allows you to reset the PCMCIA card.

Viewing file names on the Flash

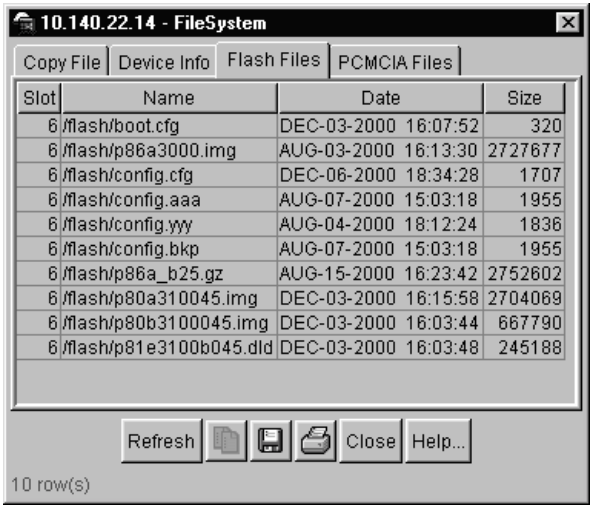
To view the names and sizes of switch files:

1. From the menu bar, choose Edit > File System.

   The File System dialog box opens with the Copy File tab displayed.

2. Click the Flash Files tab (Figure 29).

Figure 29 Flash Files tab



These tabs list the name, modification date, and size of each switch file in the onboard flash memory. The slot number indicates the chassis location of the referenced CPU/switch fabric module.

Viewing file names on the PCMCIA

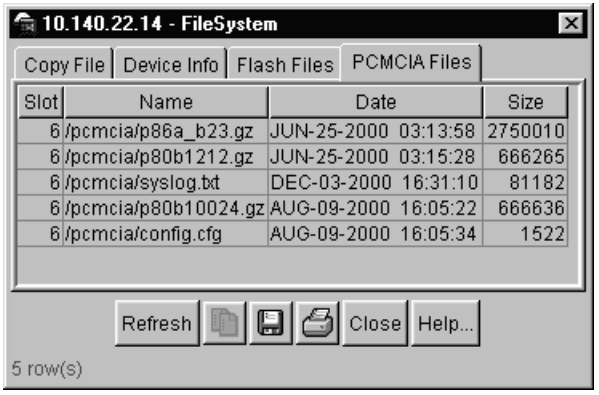
To view the names and sizes of switch files:

1 From the menu bar, choose Edit > File System.

The File System dialog box opens with the Copy File tab displayed.

2 Click the PCMCIA Files tab (Figure 30).

Figure 30 PCMCIA Files tab



These tabs list the name, modification date, and size of each switch file in the PCMCIA card. The slot number indicates the chassis location of the referenced CPU/switch fabric module.

Using the trap log

You can configure an 8000 Series switch to send out SNMP generic traps. When Device Manager is running, any traps received are recorded in the trap log. You set the maximum number of entries in the trap log using the Properties dialog box. (See “Setting the Device Manager properties” on page 44). The default number of trap log entries is 500.

To view the trap log:

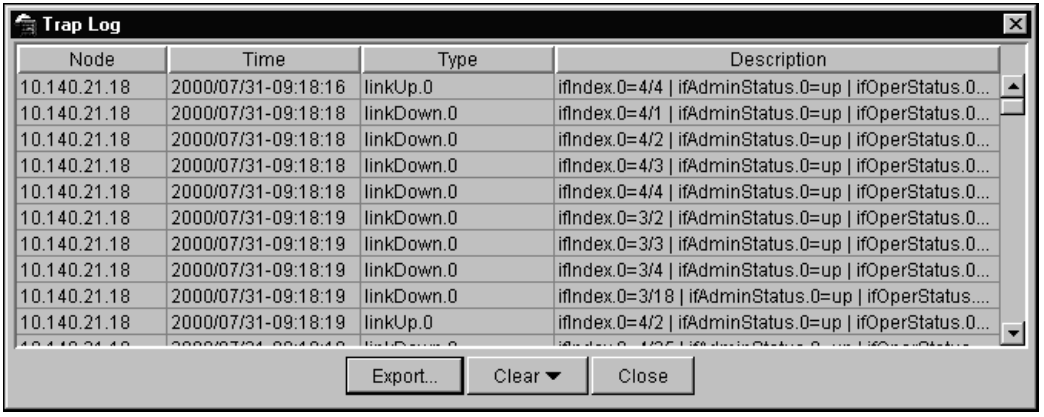
➔ Do one of the following:

- On the toolbar, click the Trap Log button.

- From the menu bar, choose Device > Trap Log.

The Trap Log dialog box opens (Figure 31).

Figure 31 Trap Log dialog box



Note: When you operate Device Manager from a UNIX platform, you must be logged in as root in order to receive traps.

On Windows platform, only the first JDM application can open trap log.

On UNIX platform, only the root user can open trap log.

By default, traps are sent in SNMP V2c format. However, if you are using an older network management system (NMS), one that supports only SNMP V1 traps (HP OpenView), you can select that the traps be sent in V1 format.

In this release, the register for traps option is not valid. When enabled, It will not register the PC in the switch's trap receiver table. Create entries in the Edit->SnmpV3->Target Table and Edit->SnmpV3->Notify Table to get traps from the switch.

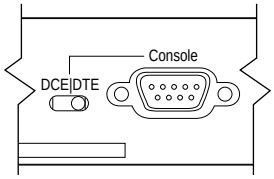
Appendix A
Troubleshooting Device Manager

This appendix contains information about problems that may occur while you are operating the switch, and includes the following topics:

Login prompt fails to appear from the Console port

If you have connected a terminal to the Console port and fail to get a login prompt, the port may have an incorrect DCE/DTE setting. Try moving the DCE/DTE switch from its current setting to the other position (Figure 32).

Figure 32 DCE/DTE switch



If the console screen still fails to show a prompt, use Device Manager to check the port settings.

To check the Console port settings:

1. In the Device View, select the Console port.
2. From the Device Manager menu bar, choose Edit > Port.
3. Check to see that the port settings are:
   - 9600 baud
   - 8 data bits
   - 1 stop bit
   - No parity

   If necessary, change the port settings to match those in this list.

Switch fails to open in Device Manager

If a switch does not open, Device Manager displays a timeout message. Timeouts can occur in slower networks and indicate that you need to increase your retransmission retries and timeout interval. For information about setting these values, refer to "Setting the Device Manager properties" on page 44.

If increasing the retransmission retries and timeout interval does not solve the problem, in the Open Device dialog box, make sure that you entered the correct read and write community information. For instructions on entering community strings, see "Opening a device" on page 46.

If the switch cannot be reached through IP (the management station cannot communicate with the switch), verify the following:

- Is the switch connected to the network?
- Is the switch turned on?
- Does the switch have an incorrect IP address?
- Is the incorrect IP address specified in the Open Device field in Device Manager?
- Is the network misconfigured?

If you are using SNMPv3, verify the following:

- Is the encryption module correctly loaded on the switch?
- Is the user login and password correct?
- Is the authentication protocol and password correct?
- Is the privacy protocol and password correct?

Exception error displayed while launching Java application launcher

Device Manager uses the default settings of the Java application launcher when it is launched. These default fits most operations, but in large configurations you may need to increase the default heap size setting in the Java application launcher from 64MB to 128MB (-Xmx128m) to avoid display issues or error messages, for example,

```
java.lang.OutOfMemoryError.
```

Example in a Windows environment:

a Close Device Manager.

b Change the shortcut as follows:

```
"C:\Program Files\JavaSoft\JRE\1.3.1\bin\javaw.exe" -Xmx128m
-cp
dm_40.jar;1k_40.jar;2k_40.jar;om8k_40.jar;bs_40.jar;falcon_4
0.jar;jcch art450k.jar;sfc.jar
com.baynetworks.fswitch.dm.DM.
```

Example in a Solaris environment:

a Close Device Manager.

b Change the shortcut as follows:

```
$java_cmd -Xmx128m -cp
1k_40.jar:2k_40.jar:om8k_40.jar:bs_40.jar:falcon_40.jar:jcch
art450K.jar
:sfc.jar:dm_40.jar com.baynetworks.fswitch.dm.DM $*.
```

Index

G

H

I

L

M

O

P

Q

R

S

T

U

V

W