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4655 Great America Parkway
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Installing and Using Device Manager

Passport 8000 Series Software Release 3.7.6

NORTEL

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About this document

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*, UNIX* or Linux* 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. Do not type the brackets when entering the command. Example: If the command syntax is `ping <ip_address>`, you enter `ping 192.32.10.12`
`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 (. . .)	Indicates 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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Chapter 1
Installing Java Device Manager software

Java Device Manager (JDM) is an SNMP-based graphical user interface (GUI) tool designed to manage single devices. To use JDM (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 JDM software is provided on the software CD as a self-extracting executable file, and is also available from the Nortel Networks web site. This chapter provides instructions for installing the JDM software in a Windows*, UNIX*, or Linux* environment.

In Passport 8000 Series Software Release 3.7.6, the Java Runtime Environment (JRE) is bundled with the JDM software and does not require a separate installation.

This chapter includes the following topics:

JDM installation precautions

The following warnings apply to Device Manager on all operating environments:

- If you have other Nortel Networks switches in your network, and are running earlier versions of JDM software, you must install the newest version of JDM in order to access the switches running the latest software.

- Prior to upgrading JDM, 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.)

Note: Do not install the JDM to a directory where a previous version of Device Manager software already exists.

- The JDM and Passport 8600 software versions need to match for the correct dialog boxes and information to be shown and accessible. Please refer to the Release Notes for a complete compatibility list.
- JDM saves the IP addresses that are visited to a settings file. A JDM uninstall operation does not remove this settings file.
  - In a Windows environment, the settings file is *dm.ini*, and is created in the JDM install directory.
  - In a Unix environment, the settings file is *~/.jdm/dm.ini*.
  - In a Linux environment, the settings file is *~/.jdm/dm.ini*.
- The *dm.ini* file containing IP addresses visited from a previous JDM version is automatically used by a new JDM version installed in the same directory. You have to manually move or copy the *dm.ini* file from a previous version of JDM to a new JDM installation in a different directory.

Installing JDM on Windows

This section includes the following topics:

Windows minimum requirements

The minimum system requirements for installing JDM on Microsoft* Windows NT*, Windows 95, Windows 98, Windows 2000, or Windows XP are:

- 350 MHz or higher Pentium processor
- 256 MB DRAM
- 300 MB space on hard drive

Removing previous versions of JDM on Windows

Note: Removing previous versions of JDM is an optional process. Multiple versions of JDM can exist on one system, as long as each version is in a separate location.

If you decide to allow previous versions of JDM to remain, then you must choose a different folder to use during the installation process.

Remove existing versions of Device Manager software by using the Uninstall DM option that was created in the Windows Start menu during installation.

For example, to remove Device Manager from a Windows XP system using the default program group, choose the following option from the Windows Start menu: All Programs>Nortel Networks Device Manager>Uninstall DM.

If no program group was added to the Windows Start menu during installation, then complete the following steps to remove existing Device Manager software:

1. Navigate to the folder where the JDM software is installed.
2. Open the UninstallerData sub-folder.
3. Run the following file: *Uninstall Java Device Manager.exe*.

Note: If more than one version of Device Manager software is installed, be sure that you select the correct software to uninstall.

Installing JDM on Windows from the CD

To access the JDM software from the installation 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.

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

Continue with "Executing the JDM installation software on Windows" on page 21.

Installing JDM on Windows from the web

To obtain the JDM software from the Nortel Networks web site:

1. Go to the following URL:

   http://www.nortel.com/support
2. Select the correct software support page for your product.

   This requires four steps from the **Product Finder** page:

   a. Select the product family from the first box.

   b. Select the specific product from the second box.

   c. Select Software.

   d. Click Go.

   The software page opens.

3 Click the Java Device Manager version you want.

The **Software Detail Information** page opens.

4 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 JDM software to your system.

5 Click **Save**.

A **Save As** dialog box opens.

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

7 Click **Save** to begin the file transfer.

Once the file transfer is complete, continue with step 8.

8 Close all programs.

9 Navigate to the directory on your system where you downloaded the JDM Software.

10 Double-click the *jdm_xxxx.exe* file.

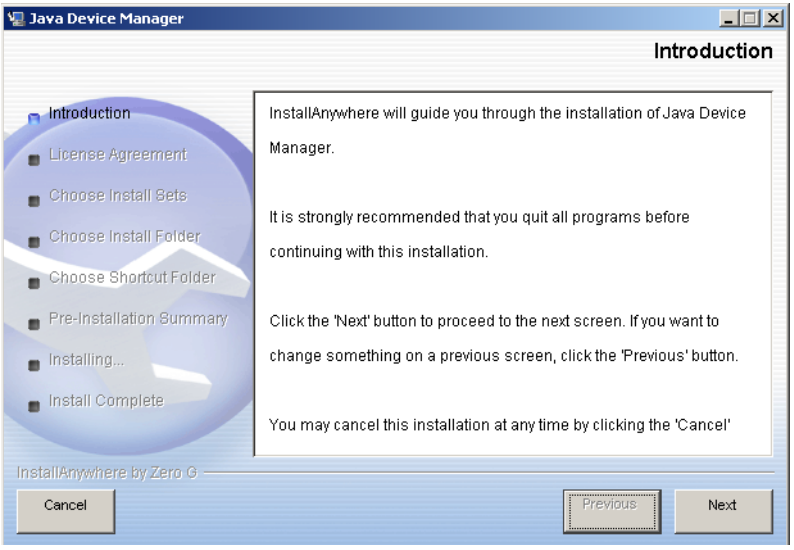
Note: In the file name, *xxxx* represents the current version of the JDM software.

Continue with Executing the JDM installation software on Windows.

Executing the JDM installation software on Windows

An install screen opens, followed by a Nortel dialog box. When the InstallAnywhere **Introduction** dialog box appears (Figure 1 on page 22), you are ready to install the JDM.

Figure 1 InstallAnywhere Introduction dialog box

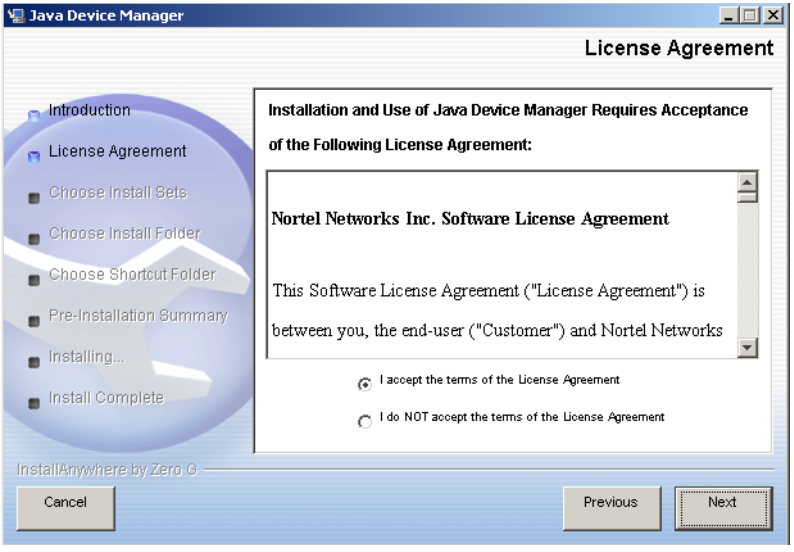


1 Click **Next** to begin the installation process.

The **License Agreement** dialog box opens.

2 Click **I accept the terms of the License Agreement**, as shown in Figure 2.

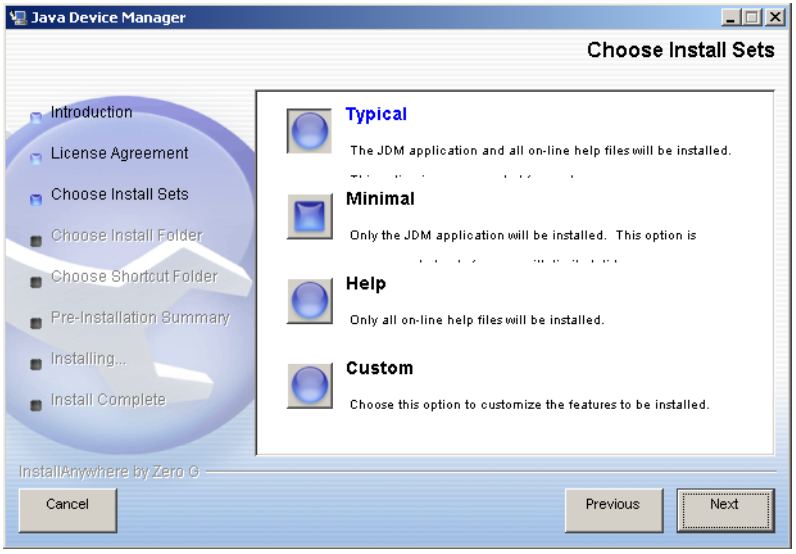
Figure 2 License Agreement dialog box



3 Click **Next**.

The **Choose Install Set** dialog box opens, as shown in Figure 3.

Figure 3 Choose Install Set dialog box



4 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.

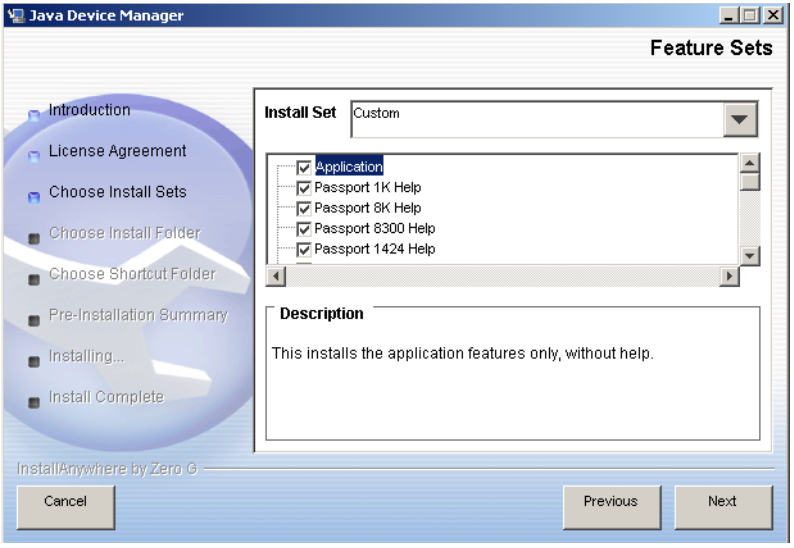
— Select **Custom** installation to customize the features prior to installation.

5 Click **Next**.

If you did not select **Custom** installation in step 4, then the **Choose Install Folder** dialog box opens. Continue with step 8 on page 25.

If you selected **Custom** installation in step 4, then the **Feature Sets** dialog box opens, as shown in Figure 4 on page 24.

Figure 4 Feature Sets dialog box

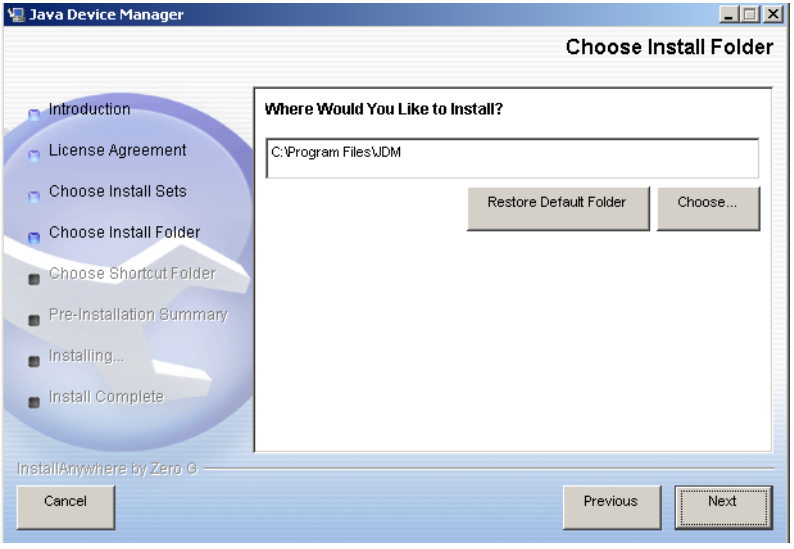


6 Select which features to install from the feature sets list.

7 Click **Next**.

The **Choose Install Folder** dialog box opens, as shown in Figure 5.

Figure 5 Choose Install Folder dialog box



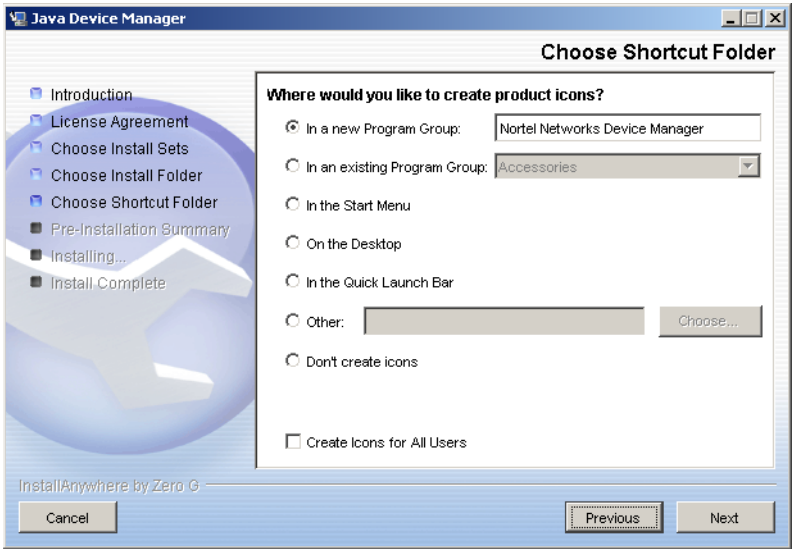
8 Click **Restore Default Folder** to use the default location for JDM, or click **Choose...** to select a different storage path.

Note: If Device Manager is already installed on your computer, you must choose a storage path that does not conflict with the already existing version.

9 Click **Next**.

The **Choose Shortcut Folder** dialog box opens, as shown in Figure 6.

Figure 6 Choose Shortcut Folder dialog box



10 Select the desired shortcut path from the list provided.

11 Click **Next**.

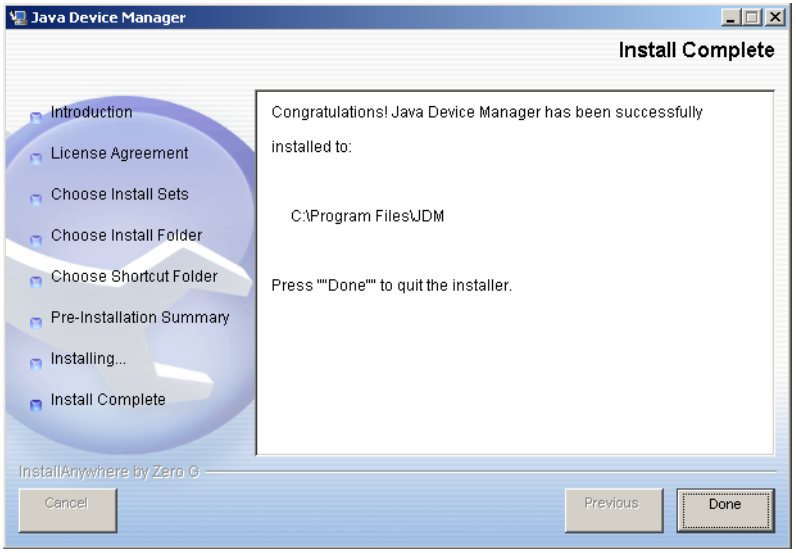
The **Pre-Installation Summary** dialog box opens. A summary of the choices you have made is displayed for confirmation.

12 Verify the folder, shortcut, and disk space required to install the software. If necessary, click **Previous** to return to the appropriate dialog box and make changes.

13 Click **Install**.

The installation process begins. When the installation is complete, the **Install Complete** dialog box opens, as shown in Figure 7 on page 26.

Figure 7 Install Complete dialog box



14 Click **Done** to exit the installation.

JDM is now installed on your machine. For instructions on starting the Device Manager software, see Chapter 2, “Starting Device Manager,” on page 35.

Installing JDM on UNIX or Linux

Note: JDM 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 is used with this JDM only, and does not affect other Java applications on the same system.

Note: 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.

Note: UNIX and Linux systems are case-sensitive. Use lower-case to specify file names, and check to ensure that directories are entered correctly.

This section includes the following topics:

Unix minimum requirements

There are two UNIX platforms supported for JDM, and one Linux platform:

- a UNIX SPARC* workstation running the Sun* Solaris* 2.7.x (or higher)
- an HP* workstation running the HP-UX* 11.x operating system (or higher)
- a PC running Linux Kernel 2.2 operating system (or higher)

The minimum system requirements for installing JDM on any Unix or Linux platform are:

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

Installing JDM on Linux from the CD

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

1. Close all programs.
2. Insert the software CD into your CD-ROM drive.
3. Navigate to the Linux/JDM subdirectory on the software CD.
4. Run the *jdm_xxxx_linux.sh* file.

   Continue with "Executing the JDM installation software on UNIX or Linux" on page 31.

Installing JDM on Solaris from the CD

To install the JDM software to a Solaris environment from the CD:

1. Close all programs.
2. Insert the software CD into your CD-ROM drive.

3 Navigate to the Solaris/JDM subdirectory on the software CD.

4 Run the *dm_xxxx_solaris_sparc.sh* file.

Continue with "Executing the JDM installation software on UNIX or Linux" on page 31.

Installing JDM on HP-UX from the CD

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

1 Close all programs.

2 Insert the software CD into your CD-ROM drive.

3 Navigate to the HP-UX/JDM subdirectory on the software CD.

4 Run the *jdm_xxxx_hpux_pa-risc.sh* file.

Continue with "Executing the JDM installation software on UNIX or Linux" on page 31.

Installing JDM on UNIX or Linux from the web

To install the JDM software to a UNIX (Solaris or HP-UX) environment from the web:

1 Go to the following URL:

http://www.nortel.com/support

2 Select the correct software support page for your product.

This requires four steps from the **Product Finder** page:

a Select the product family from the first box.

b Select the specific product from the second box.

c Select Software.

d Click Go.

The software page opens.

3 Click the Java Device Manager version you want.

The **Software Detail Information** page opens.

4 Click the appropriate JDM file for you operating environment.

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

5 Click **Save**.

A **Save As** dialog box opens.

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

7 Click **Save** to begin the file transfer.

Once the file transfer is complete, continue with step 8.

8 Close all programs.

9 Navigate to the directory on your system where you loaded the JDM software.

10 Make the installation file executable.

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`

For the Linux environment, make the file executable by entering:
`chmod a+x jdm_xxxx_linux.sh`

11 Run the installation file.

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.

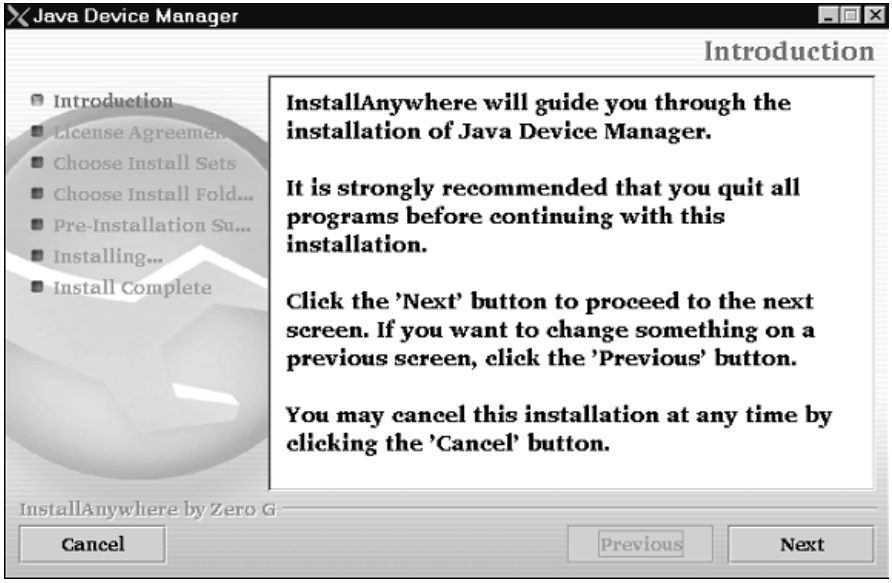
For the Linux environment, run the *jdm_xxxx_linux.sh* file.

Continue with "Executing the JDM installation software on UNIX or Linux" on page 31.

Executing the JDM installation software on UNIX or Linux

An install screen opens, followed by a Nortel dialog box. When the InstallAnywhere **Introduction** dialog box appears (Figure 8), you are ready to complete the JDM installation.

Figure 8 InstallAnywhere Introduction dialog box



1 Click **Next** to continue the installation process.

The **License Agreement** dialog box opens.

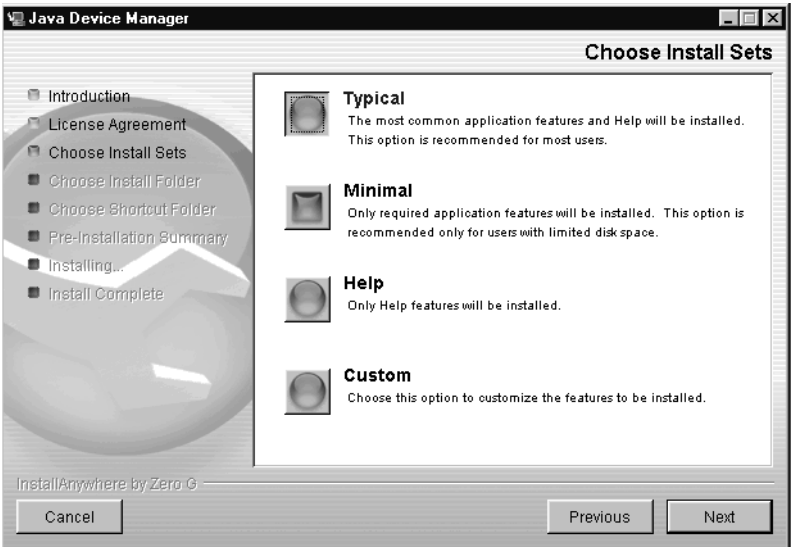
2 Click **I accept the terms of the License Agreement**, as shown in Figure 9 on page 32.

Figure 9 License Agreement dialog box

3 Click **Next**.

The **Choose Install Set** dialog box opens, as shown in Figure 10.

Figure 10 Choose Install Set dialog box



4 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.

5 Click **Next**.

If you did not select **Custom** installation in step 4, then the **Choose Install Folder** dialog box opens. Continue with step 8 on page 34.

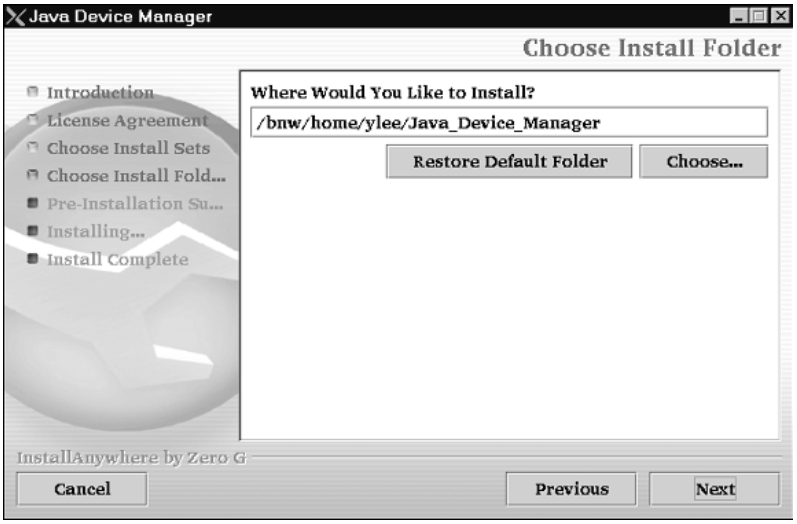
If you selected **Custom** installation in step 4, then the **Feature Sets** dialog box opens.

6 Select which features to install from the feature sets list.

7 Click **Next**.

The **Choose Install Folder** dialog box opens, as shown in Figure 11.

Figure 11 Choose Install Folder dialog box



8 Click **Restore Default Folder** to use the default location for JDM, or click **Choose...** to select a storage path.

Note: If Device Manager is already installed on your computer, you must choose a storage path that does not conflict with the already existing version.

9 Click **Next**.

The **Pre-Installation Summary** dialog box opens.

10 Verify the folder and disk space required to install the software. If necessary, click **Previous** to return to the appropriate dialog box and make changes.

11 Click **Install**.

The installation process begins.

When the installation is complete, the **Install Complete** dialog box opens, as shown in Figure 12.

Figure 12 Install Complete dialog box

12 Click **Done** to exit the installation.

JDM is now installed on your machine. For instructions on starting the Device Manager software, see Chapter 2, “Starting Device Manager,” on page 35.

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. Refer to *Getting Started* (320095-A) for further instructions.

Starting Device Manager using Windows and UNIX

To start Device Manager, do one of the following:

- In the Windows* environment, choose All Programs > Nortel Networks Device Manager > DM from the Windows Start menu.
- 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 13 on page 36.

Figure 13 Abbreviated Device Manager window

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.

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. Choose **Device > Properties** from the initial **Device Manager** window menu bar.

   The **Device Manager Properties** dialog box (Figure 14 on page 37) opens. Table 1 on page 37 describes the fields available to be edited.

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

3. Click **OK**.

Figure 14 Properties dialog box

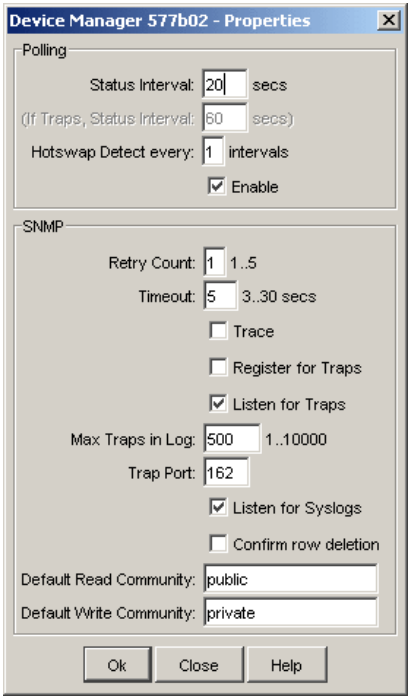


Table 1 Properties dialog box fields (Page 1 of 2)

Area	Field	Description
Polling	Status Interval	Interval at which statistics and status information are gathered (default is 20 seconds).
	(IfTraps, Status Interval)	Interval (in seconds) at which statistics and status information are gathered when the Register for Traps box is checked. The default is 300.
	Hotswap Detect every	The interval at which Device Manager polls for module hot swap module information. The default is 60 seconds.
	Enable	Enables (true) or disables (false) periodic polling of the device for updated status. If polling is disabled, then the chassis status is only updated when you click **Device>Refresh Status** or **Device>Rediscover Device**.

Table 1 Properties dialog box fields (Page 2 of 2)

Area	Field	Description
SNMP	Retry Count	The number of times that Device Manager sends the same polling request if a response is not returned.
	Timeout	Length of each retry of each polling waiting period. When you access the device through a slow link, you can increase the timeout interval and then change the Retransmission Strategy to superlinear.
	Trace	The trace field is used to enable and disable SNMP tracing. When Trace is selected, SNMP protocol data units (PDUs) are displayed in the Device>Log dialog box.
	Register for Traps	When selected (enabled), Device Manager automatically registers to receive traps when it is launched against a device. **Note:** For release 3.7.6, the Register for Traps field is not valid. Refer to "Using the trap log" on page 63 for details.
	Listen for Traps	When selected (enabled), Device Manager listens for traps from the device.
	Max Traps in Log	The specified number of traps that may exist in the trap log. The default is 500.
	Trap Port	Specifies the UDP port number that Device Manager will use to listen for SNMP traps. The default is 162.
	Listen for Syslogs	When selected (enabled), Device Manager listens for syslogs from the device.
	Confirm row deletion	When selected (enabled), Device Manager displays a dialog box for confirmation before deleting a system table row.
	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, which provides 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.

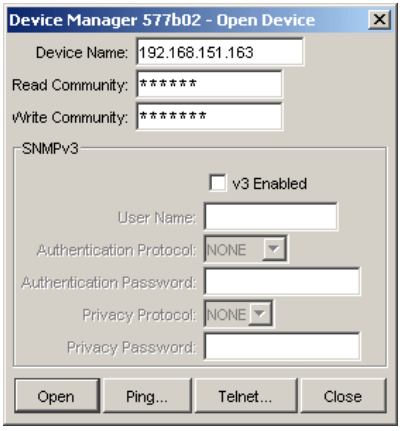
Note: For information about connecting to the switch using SNMPv3, refer to *Configuring and Managing Security* (314724-C).

To open a device:

1 Choose **Device > Open** from the abbreviated **Device Manager** window menu bar. Or, click the **Open Device** button from the Device Manager toolbar.

The **Open Device** dialog box opens (Figure 15).

Figure 15 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 **Read Community** and **Write Community** strings.

4 Click **Ping...** to check if the switch is reachable, or click **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 (Figure 16 on page 41), showing a picture that represents the physical features of the device. Table 2 on page 42 describes the **Open Device** dialog box fields.

Note: For information about connecting to the switch using SNMPv3, refer to *Configuring and Managing Security* (314724-C).

Figure 16 Device Manager window showing an 8000 Series switch with SDM module in slot 3

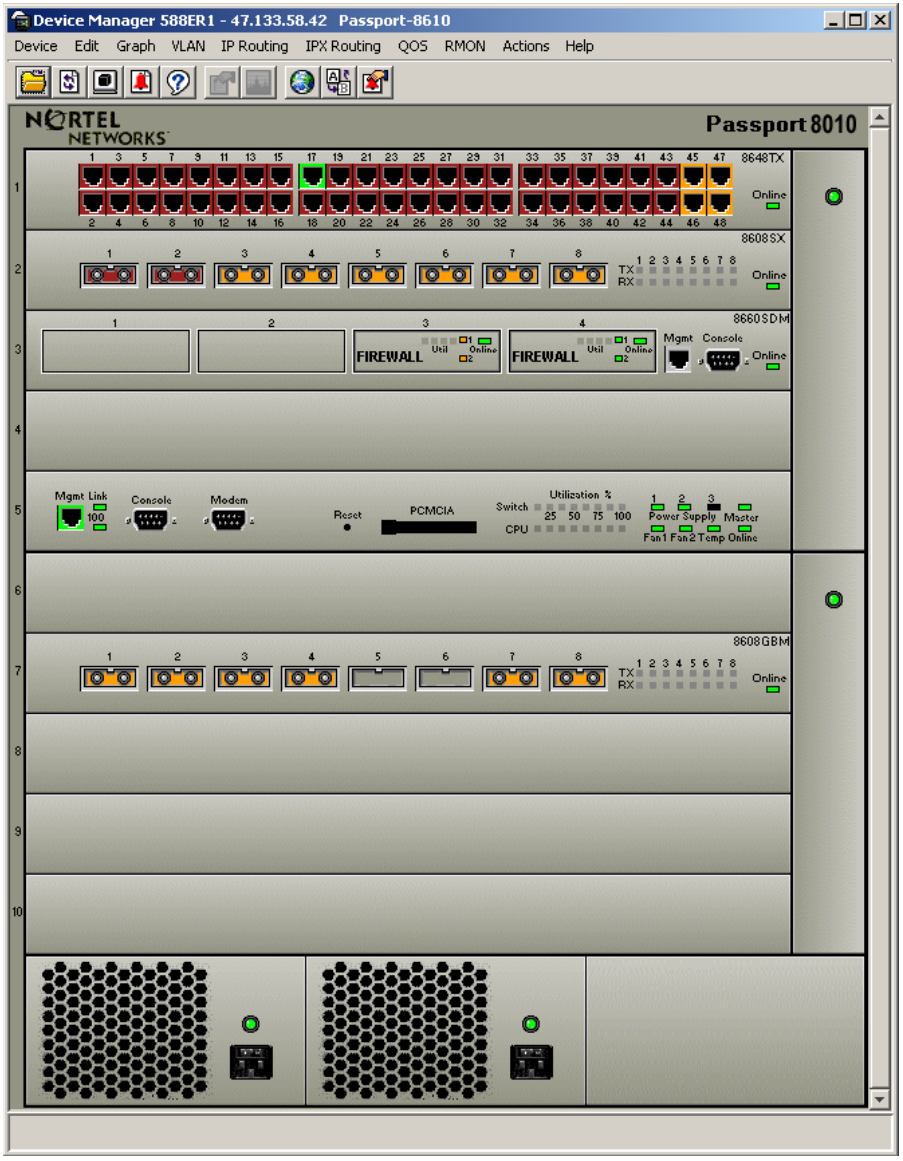


Table 2 Open Device dialog box fields

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.
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 the Device Manager **Open Last** option to view and/or select from a list of available devices.

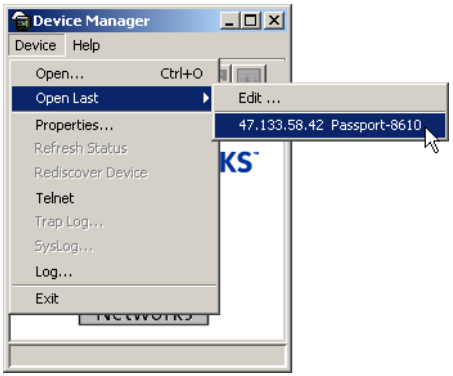
To open a previously opened device:

1 Choose **Device > Open Last** from the abbreviated **Device Manager** window menu bar

A pull-down list appears (Figure 17 on page 43), 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 are not recorded in the Open List.

Figure 17 Open Last option



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

Note: 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 66, for information about how to troubleshoot the problem.

Chapter 3
Understanding the Device Manager window

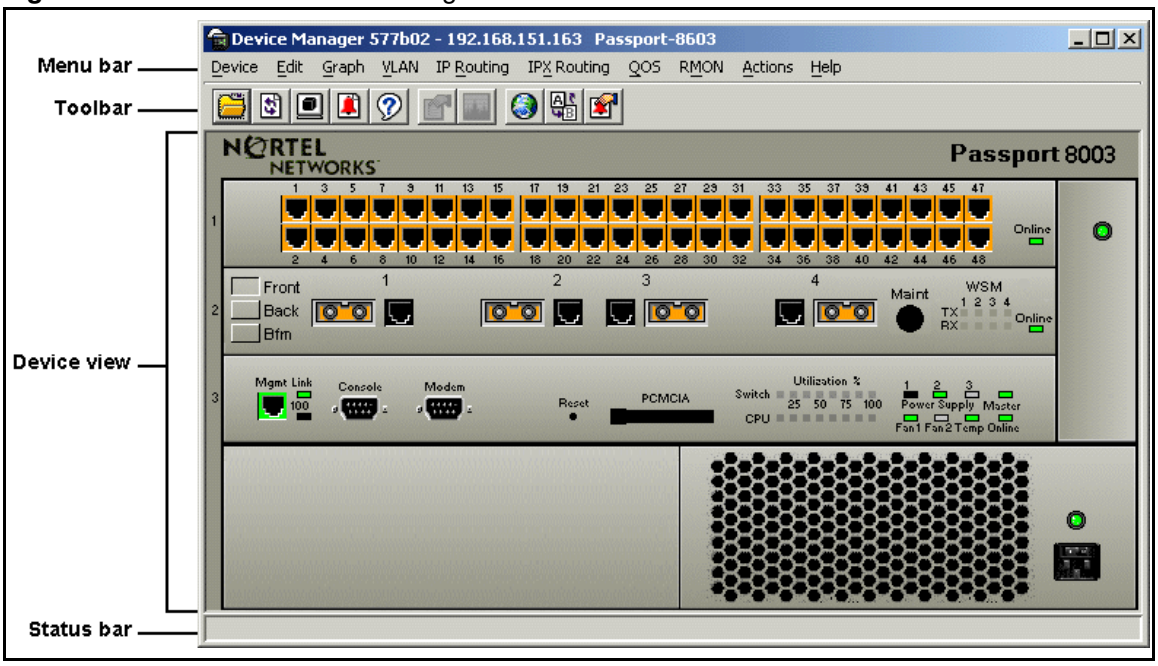
This chapter describes the various parts of the Device Manager window, as well accessing online help, in the following topics:

Parts of the Device Manager window

The Device Manager window, as shown in Figure 18 on page 46, consists of the following parts:

- Menu bar– used to access command menus
- Toolbar– used for quick access to common commands
- Device view– used to a graphical representation of the device status
- Status bar – used to display error messages and other information

Figure 18 Parts of the Device Manager window



Using the menu bar

Note: Menu items related to the WSM and SDM cards are activated only when chassis contains the required card, and the card is selected.

The menu bar on the Device Manager window (Figure 19) provides menus with commands that let you monitor a device. Table 3 on page 47 describes the menu bar fields.

Figure 19 Menu bar

Table 3 Device Manager menu bar description

Menu	Description
Device	The **Device** menu is used to open a new device using either the **Open...** or **Open Last** menu items. Other uses for the **Device** menu include: • Adjust polling and SNMP properties for the open device. • Refresh or rediscover the status of an open device. • Connect to the open device using Telnet. • Open and view the Trap Log, SysLog, or general Log information.
Edit	The **Edit** menu lets you view parameters for the chassis or for the currently selected object. The selected object may be a card, fan, MDA, port, power supply or any other object in the device. Other common uses for the **Edit** menu include: • Checking and updating security settings for the device. • Running diagnostic tests. • Changing the configuration of the file system, ATM, NTP, service delivery, and SNMP v3 settings for the device. Some items under the **Edit** menu (such as **ATM**) are only useful only if the chassis contains the appropriate card.
Graph	The **Graph** menu lets you view Device Manager statistics and produce graphs of the chassis, WSM card (where applicable), or port statistics.
VLAN	The **VLAN** menu lets you view information about VLANs, spanning tree groups (STGs), MultiLink Trunks/LACP, MAC Learning, SVLAN, SMLT, and Global MAC Filtering.
IP Routing	The **IP Routing** menu lets you set up IP routing functions for the switch, including: OSPF, RIP, VRRP, BGP, RSMLT, Multicast, IGMP, DVMRP, PIM, PGM, DHCP, 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.
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.

Using the toolbar

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

Table 4 Toolbar buttons (Page 1 of 2)

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...** **Edit > SDM Mgmt 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 (Page 2 of 2)

	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

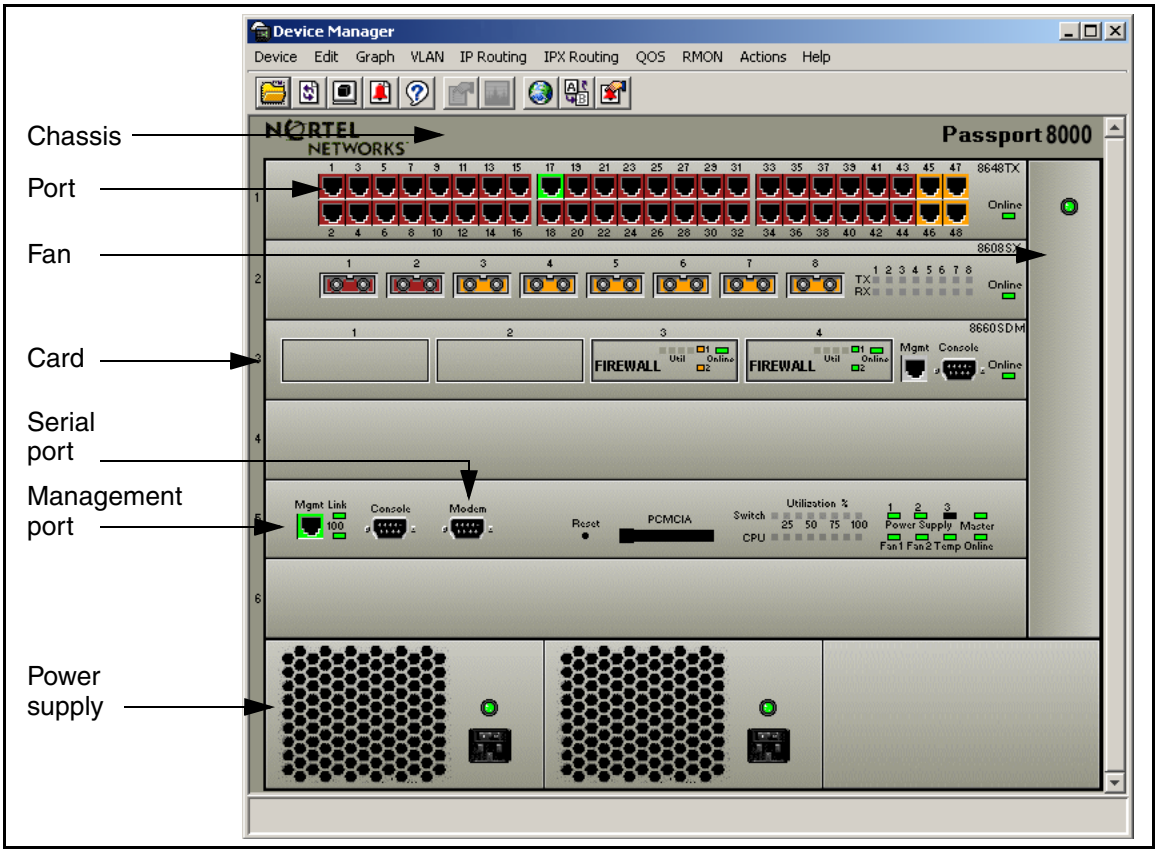
The device view allows you to determine at a glance the operating status of the various modules and ports in your hardware configuration. You can also use the device view to perform management tasks on specific objects.

Selecting objects

In the device view (Figure 20 on page 50), 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 20 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.
- 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 21), select the chassis and right click.

Figure 21 Chassis shortcut menu

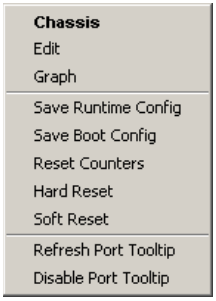


Table 6 describes the chassis shortcut menu options.

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 22), select one or more ports and right click.

Figure 22 Port shortcut menus

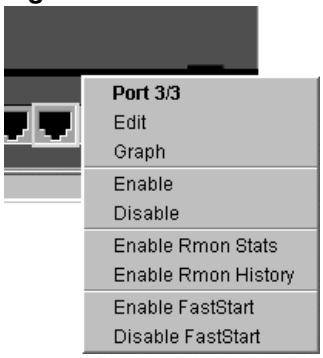


Table 7 describes the I/O port shortcut menu options.

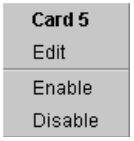
Table 7 Port shortcut menu options

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. This field 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 **Edit** on the shortcut menu to open the Edit Card dialog box.

To display the card shortcut menu (Figure 23), select a card and right click. This shortcut menu is context sensitive, and is based on which type of card is currently selected.

Figure 23 Card shortcut menu (I/O module)



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 parameter in a field with preset values:

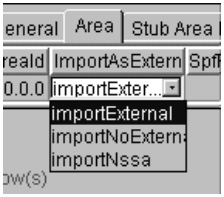
1 Click the field that you want to edit.

The possible choices for that parameter are displayed (Figure 24 on page 54).

2 Click a new value from the list.

3 Click **Apply**.

Figure 24 Parameter selection menu



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 button (Page 1 of 2)

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 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.

Table 8 Device Manager button (Page 2 of 2) (continued)

Button	Description
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.
- Choose **Edit** from the shortcut menu for a chassis, card, port, or any other object. The edit dialog box opens for that object.
- Double-click an object. The edit dialog box opens for that object.
- Choose **Edit > Selected All** from the Device Manager menu bar. 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**.

Deselecting objects

If you want to deselect an object from a pop-up window, first hold [Ctrl] and then click on the object that you want to deselect (for example, a VLAN ID that has been added to an ACL).

Using 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. To avoid this problem, use arrow keys to select menu items 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>.zip* In this case, use the platform and version of the current device. For example, for passport version 3.7.6 release, the platform is “accelar2k” and version is “v376”. The file would then be: *<jdm installed directory>/help/accelar2k/v376.zip* After you unzip the file, *help.html* is the main page for the on-line help.

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

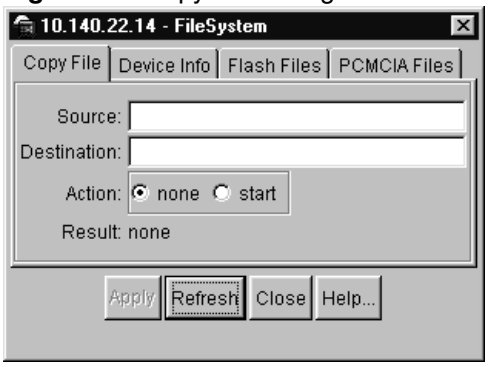
Copying files

To copy a file:

1 Choose **Edit > File System** from the menu bar.

The **File System** dialog box opens with the **Copy File** tab displayed (Figure 25 on page 60).

Figure 25 Copy File dialog box



2 Specify the file to be copied in the **Source** text box, using one of the following forms:

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

3 Specify the location where you intend the file to be copied in the **Destination** text box, using one of the following 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 Select the **start** option from the **Action** field.

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:

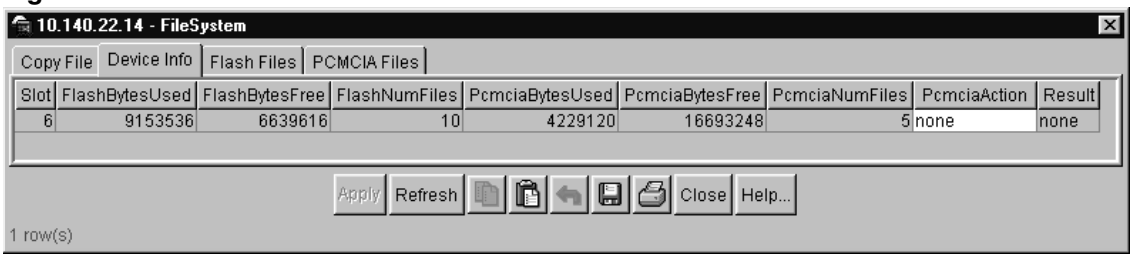
1 Choose **Edit > File System** from the menu bar.

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

2 Click the **Device Info** tab.

The **Device Info** tab opens (Figure 26).

Figure 26 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

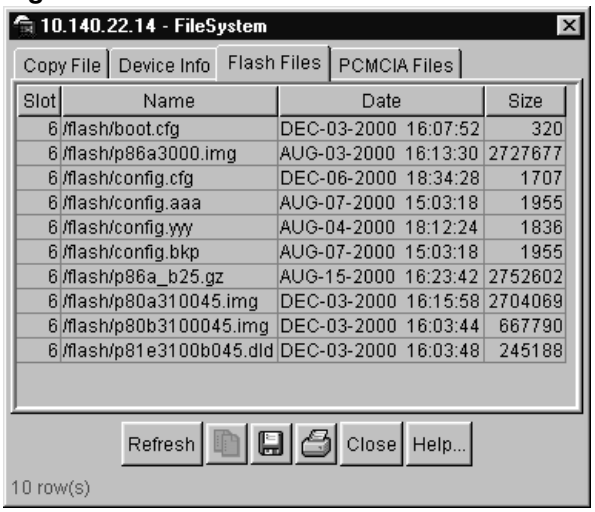
To view the names and sizes of switch files:

1 Choose **Edit > File System** from the menu bar.

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

2 Click the **Flash Files** tab (Figure 27 on page 62).

Figure 27 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

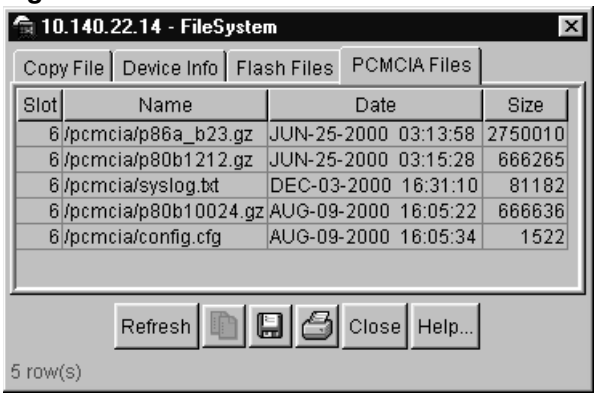
To view the names and sizes of switch files:

1 Choose **Edit > File System** from the menu bar.

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

2 Click the **PCMCIA Files** tab (Figure 28 on page 63).

Figure 28 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 Passport 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 36 for more information.) The default number of trap log entries is 500.

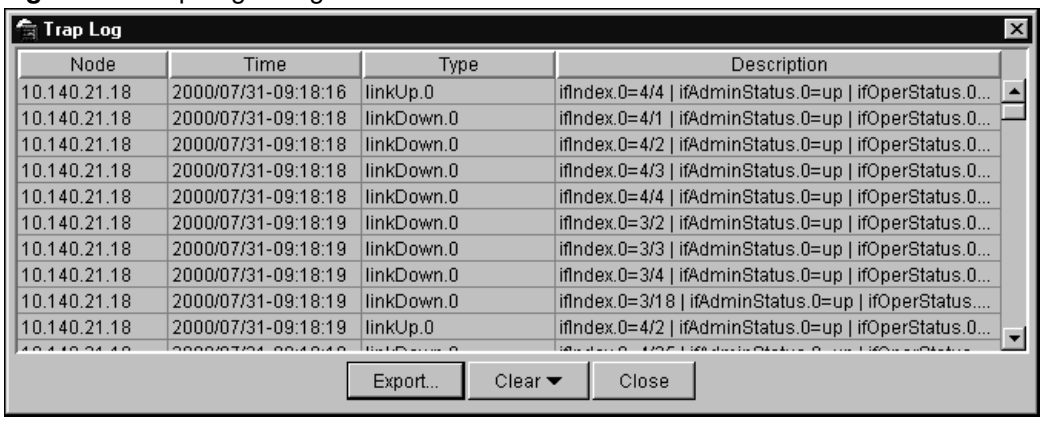
To view the trap log, do one of the following:

- On the toolbar, click the **Trap Log** button.

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

The **Trap Log** dialog box opens (Figure 29 on page 64).

Figure 29 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.

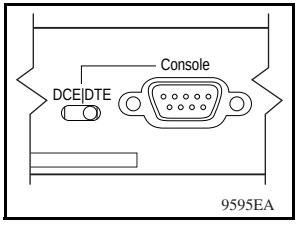
Appendix A
Troubleshooting Device Manager

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 30).

Figure 30 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 36.

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 39.

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?

Appendix B
List of terms

This chapter provides a list of common acronyms used throughout the *Installing and Using Device Manager* guide.:

BootP	Bootstrap Protocol
CLI	Command Line Interface
DTE	Data Terminal Equipment
DCE	Data Circuit-terminating Equipment
FTP	File Transfer Protocol
IP	Internet Protocol
ISDN	Integrated Services Digital Network
JDM	Java Device Manager
MAC	media access control
MAU	media access unit
MDI-X	medium dependent interface crossover
NBMA	nonbroadcast multi-access
NNCLI	Nortel Networks Command Line Interface
OSPF	Open Shortest Path First
PCMCIA	Personal Computer Memory Card International Association
PPP	Point-to-Point Protocol
SDM	Service Delivery Module
SNMP	Simple Network Management Protocol
TCP/IP	Transmission Control Protocol/Internet Protocol
TELNET	Network Virtual Terminal Protocol

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