C H A P T E R 6

Device Manager

This chapter describes Cisco Device Manager and provides procedures for using it. This chapter contains the following sections:

Information About Device Manager

Device Manager provides a graphic representation of a Cisco Cisco Nexus 5000 Series switch chassis, including the installed expansions modules, the status of each port, the power supplies, and the fan assemblies.

The tables in the Fabric Manager Information pane basically correspond to the dialog boxes that appear in Device Manager. However, while Fabric Manager tables show values for one or more switches, a Device Manager dialog box shows values for a single switch. Device Manager also provides more detailed information for verifying or troubleshooting device-specific configuration than Fabric Manager.

Device Manager provides two views: Device View and Summary View. Use Summary View to monitor interfaces on the switch. Use Device View to perform switch-level configurations including the following:

- Configure zones for multiple VSANs.
- Manage ports, SAN port channels, and trunking.
- Manage SNMPv3 security access to switches.
- Manage CLI security access to the switch.
- Manage alarms, events, and notifications.
- Save and copy configuration files and software image.
- View hardware configuration.
- View chassis, module, port status, and statistics.

Launching Device Manager

You can launch Device Manager either from your desktop or from Fabric Manager.

To launch Device Manager from your desktop, double-click the **Device Manager** icon and follow the instructions described in the "Integrating Cisco Fabric Manager with Other Management Tools" section on page 2-18.

To launch Device Manager from Fabric Manager, perform one of these tasks:

- Right-click the switch you want to manage on the Fabric pane map and choose **Device Manager** from the menu that appears.

- Double-click a switch in the Fabric pane map.

- Select a switch in the Fabric pane map and choose **Tools > Device Manager**.

Using Device Manager

This section describes the Device Manager interface as shown in Figure 6-1.

Figure 6-1   Device Manager, Device Tab
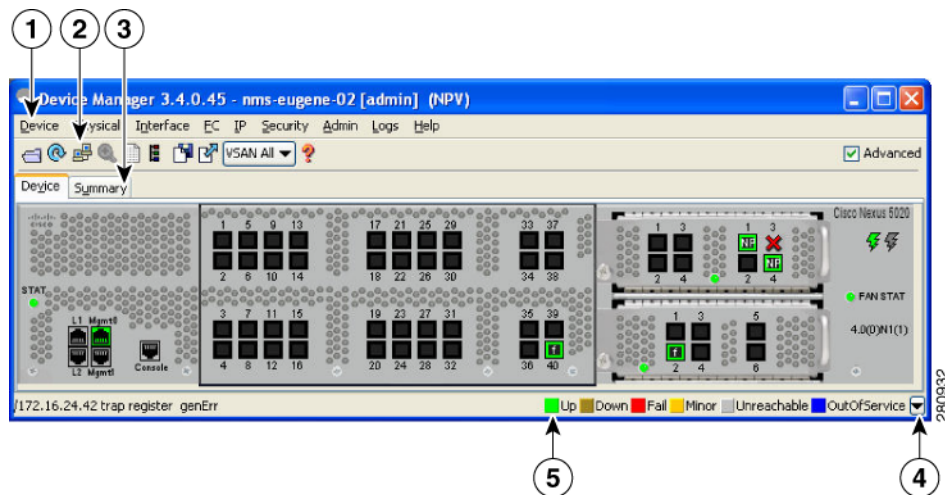
1	Menu bar	**4**	Legend
2	Toolbar	**5**	Status
3	Tabs		

Menu Bar

The menu bar at the top of the Device Manager main window provides options for managing and troubleshooting a single switch. The menu bar provides the following options:

- Device—Opens an instance of Device Manager, sets management preferences, sets the page layout, opens a Telnet/SSH session with the current switch, exports a device image, and closes the Device Manager application.

- Physical—Allows you to view and manage inventory, modules, temperature sensors, power supplies, fans, and the entire system.

- Interface—Allows you to configure and manage SAN port channels, as well as Fibre Channel and Ethernet ports. Also provides diagnostic, management and monitoring capabilities, as well as SPAN and port tracking.

- FC—Allows you to configure and manage VSAN, domain, and name server characteristics. Also provides advanced configuration capabilities.

- Security—Allows you to configure and manage FCSP, port security, SNMP security, common roles, SSH, AAA, and IP ACLs.

- Admin—Allows you to save, copy, edit, and erase the switch configuration, monitor events, manipulate flash files, manage licenses, configure NTP, use CFS, and reset the switch. Also allows you to use the **show tech support, show cores**, and **show image** commands.

- Logs—Shows the various logs: message, hardware, events, and accounting. Also allows you to configure the syslog setup.

- Help—Displays online help topics for specific dialog boxes in the Information pane.

Toolbar Icons

The Device Manager toolbar provides quick access to many Device Manager features. Once the icon is selected, a dialog box may open that allows configuration of the feature. The toolbar provides the main Device and Summary View icons as shown in Table 6-1.

Table 6-1   Device Manager Main Toolbar

Icon		Description
	Open Device	Opens the Device Manager view for another switch, with the option to open this view in a separate window.
	Refresh Display	Communicates with the switch and displays the information in the Device Manager view.
	Command-Line Interface	Opens a separate CLI command window to the switch.
	Configure Selected	Opens a configuration dialog box for the selected component (line card or port).
	SysLog	Opens a window that lists the latest system messages that occurred on the switch.

Table 6-1   Device Manager Main Toolbar (continued)

Icon		Description
	VSANs	Opens the VSAN dialog box that provides VSAN configuration for the switch.
	Save Configuration	Saves the current running configuration to the startup configuration.
	Copy	Copies configuration file between server and switch
	Toggle FICON/Interface Port Labels	Toggles the FICON and interface port labels.
VSAN All ▼	Select VSAN	Filters the port display to show only those ports belonging to the selected VSAN.
	Help	Accesses online help for Device Manager.

Dialog Boxes

If a toolbar icon is selected, a dialog box may open that allows configuration of the selected feature. The dialog box may include table manipulation icons. See the "Information Pane" section on page 5-11 for descriptions of these icons.

Tabs

Tabs provide the following functions:

- Device—Provides a graphical representation of the switch chassis and components.

- Summary—Displays active interfaces on a single switch, as well as Fibre Channel and IP neighbor devices. The Summary View also displays port speed, link utilization, and other traffic statistics. There are two buttons in the upper left corner of the Summary View tab used to monitor traffic. To monitor traffic for selected objects, click the **Monitor Selected Interface Traffic Util%** button. To display detailed statistics for selected objects, click the **Monitor Selected Interface Traffic Details** button. You can set the poll interval, the type or Rx/Tx display, and the thresholds.

Legend

The legend at the bottom right of the Device Manager indicates the following port status:

- Colors
    - Green—The port is up.

- – Brown—The port is administratively down.
- – Red—The port is down or has failed.
- – Amber—The port has a minor fault condition.
- – Gray—The port is unreachable.
- – Blue—The port is out of service.
- • Labels
  - – X—Link failure
  - – E—ISL
  - – TE—Multi-VSAN ISL
  - – F—Host/storage
  - – FL—F loop
  - – I— iSCSI
  - – SD—SPAN destination
  - – CH—Channel
  - – CU—Control unit
  - – NP - Proxy N port (NPV mode)
  - – f—virtual Fibre Channel interface is present
  - – e—virtual Ethernet interface is present

Supervisor and Switching Modules

In the Device View, you can right-click an object and get information on it, or configure it. If you right-click a module, the menu shows the module number and gives you the option to configure or reset the module. If you right-click on a port, the menu shows the port number and gives you the option to configure, monitor, enable/disable, set beacon mode, or perform diagnostics on the port.

Tip   You can select multiple ports in Device Manager and apply options to all the selected ports at one time. Either select the ports by clicking the mouse and dragging it around them, or hold down the **Control** key and click each port.

To enable or disable a port, right-click the port and click **Enable** or **Disable** from the pop-up menu. To enable or disable multiple ports, drag the mouse to select the ports and then right-click the selected ports. Click **Enable** or **Disable** from the pop-up menu.

Note   In Device Manager, Enable and Disable are available only for Fibre Channel ports (and not Ethernet ports).

To manage trunking on one or more ports, right-click the ports and click **Configure**. In the dialog box that appears, right-click the current value in the Trunk column and click **nonTrunk**, **trunk**, or **auto** from the pull-down list.

To create SAN port channels using Device Manager, click **PortChannels** from the Interface menu. For detailed instructions, see Chapter 14, "Configuring SAN Port Channels." You can also use Fabric Manager to conveniently create a SAN port channel.

> **Note** To create a SAN port channel, all the ports on both ends of the link must have the same port speed, trunking type, and administrative state.

Context Menus

Context menus are available in both Device Manager views by right-clicking a device or table.

Device View menus:

- Device—Right-click a system, module, or power supply to bring up a menu that gives you the option to configure the device.

- Port— Right-click a port to bring up a menu that shows you the number of the port you have clicked, and to give you the option to configure, monitor, enable, or disable the port.

> **Note** Context menus for Ethernet ports configure and monitor the physical Ethernet port in addition to any virtual interfaces that exist on the physical Ethernet.

Summary View menus:

- Table— Right-click the table header to show a list of which columns to display in that table: Interface, Description, VSANs, Mode, Connected To, Speed (Gb), Rx, Tx, Errors, Discards, and Log. Click the Description field to bring up the appropriate configuration dialog box for the port type.

Using the Quick Configuration Tool

Device Manager provides a tool for configuring the Ethernet interfaces on the switch. The Quick Configuration Tool allows you to select one of the following configurations for each Ethernet interface:

- Eth Only—Configures the physical Ethernet without any virtual interfaces.
- vEth Only—Configures the physical Ethernet to have an associated VIG with a virtual Ethernet interface.
- vFC Only—Configures the physical Ethernet to have an associated VIG with a virtual Fibre Channel interface.
- vEth + vFC—Configures the physical Ethernet to have an associated VIG with a virtual Ethernet interface and a virtual Fibre Channel interface.

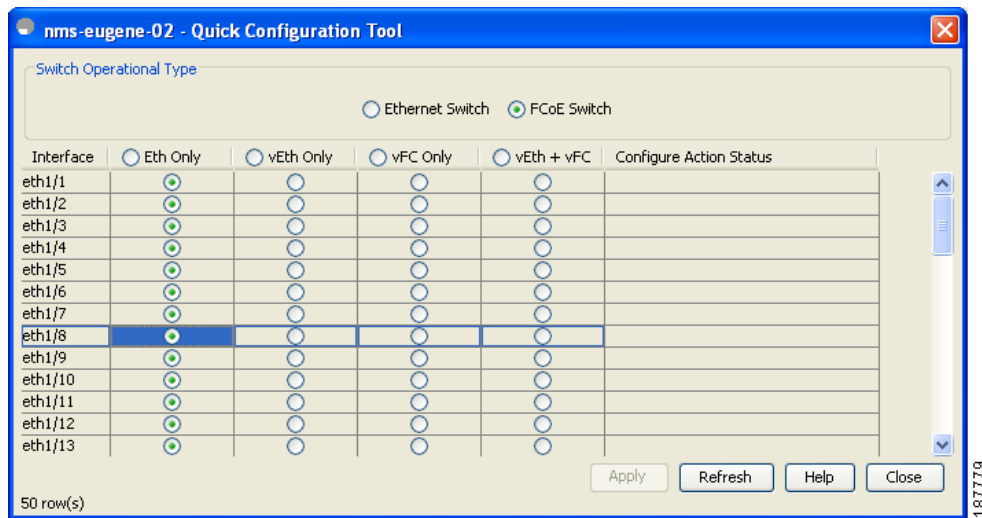To configure the Ethernet interfaces using the Quick Configuration Tool, perform this task:

Step 1 In the tools menu, choose Quick Config Wizard.

You see the Quick Configuration Tool window as shown in Figure 6-2.

Figure 6-2   Quick Configuration Tool

Step 2   In the Switch Operational Type pane, click the **Ethernet Switch** radio button if you are configuring the switch as a pure Ethernet switch. Click the **FCoE Switch** radio button if you are configuring the switch as an I/O consolidation switch (with Fibre Channel and FCoE interfaces).

Step 3   (Optional) Click the button in the column header to set all of the interfaces to the value in the selected column.

Step 4   For each row, click the radio button for the configuration you want to apply to this interface.

Step 5   Click the **Apply** button to apply the configuration changes.

The Configure Action Status field displays the current status of the requested configuration change.

Step 6   (Optional) Click the **Refresh** button to clear the Configure Action Status field. Device Manager then updates the field with the latest status from the switch.

Setting Device Manager Preferences

To set your preferences for the behavior of the Device Manager application, choose **Device > Preferences** from the Device menu. You can set the following preferences:

- Retry Requests x Time(s) After x sec Timeout—Allows you to set the retry request values. The default settings are 1 time after a 5-second timeout.

- Enable Status Polling Every x secs—Allows you to set the status polling value. The default setting is enabled (checked) with a time of 40 seconds.

- Trace SNMP Packets in Message Log—Allows you to set whether Device Manager traces SNMP packets and logs the trace. The default setting is disabled (unchecked).

- Register for Events After Open, Listen on Port 1163—Allows you to register this switch so that events are logged once you open Device Manager. The default setting is enabled (checked).

- Confirm Deletion—Displays a pop-up confirmation when you delete part of your configuration using Device Manager. The default setting is enabled (checked).

- Show WorldWideName (WWN) Vendor—Displays the world wide name vendor name in any table or listing displayed by Device Manager. If **Prepend** is checked, the name is displayed in front of the IP address of the switch. If **Replace** is checked, the name is displayed instead of the IP address. The default setting is enabled (checked) with the **Prepend** option.

- Show Timestamps as Date/Time—Displays timestamps in the date/time format. If this preference is not checked, timestamps are displayed as elapsed time. The default setting is enabled (checked).

- Telnet Path—Sets the path for the telnet.exe file on your system. The default is telnet.exe, but you need to browse for the correct location.

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Note   If you browse for a path or enter a path and you have a space in the pathname (for example, c:\program files\telnet.exe, then the path will not work. To get the path to work, manually place quotes around it (for example, "c:\program files\telnet.exe").

- Use Secure Shell Instead of Telnet—Specifies whether to use SSH or Telnet when using the CLI to communicate with the switch. If enabled, you must specify the path to your SSH application. The default setting is disabled.

- CLI Session Timeout x secs (0= disable)—Specifies the timeout interval for a CLI session. Enter 0 to disable (no timeout value). The default setting is 30 seconds.

- Show Tooltips in Physical View—Determines whether tooltips are displayed in Physical (Device) View. The default setting is enabled (checked).

- Label Physical View Ports With:—Specifies the type of label to assign to the ports when you are in Physical (Device) View. The options are FICON and Interface. The default setting is Interface.

- Export Table—Specifies the type of file that is created when you export a table using Device Manager. The options are Tab-Delimited or XML. The default setting is Tab-Delimited.