Device Manager

This chapter contains descriptions of, and instructions for using, the Cisco MDS 9000 Device Manager. This chapter contains the following sections:

- Device Manager Overview, page 4-1
- Device Manager Features, page 4-1
- Launching Device Manager, page 4-2
- Using Device Manager, page 4-3
- Setting Device Manager Preferences, page 4-8

Device Manager Overview

Device Manager provides a graphic representation of a Cisco MDS 9000 Family switch chassis, including the installed switching modules, the supervisor modules, the status of each port within each module, 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. Also, Device Manager provides more detailed information for verifying or troubleshooting device-specific configuration than what is available from Fabric Manager.

Device Manager Features

Device Manager provides two views: Device View and Summary View. You can use Summary View to monitor all of the interfaces on the switch. You can use the Device View to perform any switch-level configuration task including the following:

- Manage ports, PortChannels, and trunking.
- Manage SNMPv3 security access to switches.
- Manage CLI security access to switch.
- Manage alarms, events, and notifications.
Launching Device Manager

You can launch Device Manager in two ways.

To launch Device Manager from your desktop, double-click the Device Manager icon and follow the instructions described in the "Launching the Management Software" section on page 1-10.

To launch Device Manager from Fabric Manager, follow these steps:

- **Step 1** Right-click the switch you want to manage on the Fabric Manager Fabric pane and click Device Manager from the pop-up menu that appears.
- **Step 2** Double-click a switch in the Fabric Manager Fabric pane.
- **Step 3** Select a switch in the Fabric Manager Map pane and choose Tools > Device Manager.
Using Device Manager

This section describes the Device Manager interface, as shown in Figure 4-1.

Figure 4-1  Device Manager, Device Tab

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Menu bar</td>
</tr>
<tr>
<td>2</td>
<td>Toolbar</td>
</tr>
<tr>
<td>3</td>
<td>Tabs</td>
</tr>
<tr>
<td>4</td>
<td>Legend</td>
</tr>
<tr>
<td>5</td>
<td>Status</td>
</tr>
<tr>
<td>6</td>
<td>Supervisor modules</td>
</tr>
<tr>
<td>7</td>
<td>Switching or services modules</td>
</tr>
</tbody>
</table>
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, 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 PortChannels, as well as Fibre Channel, Ethernet, iSCSI, and FICON 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.
- **FICON**—Allows you to configure and manage FICON VSANs, configure RLIR ERL information, and swap selected FICON ports.
- **IP**—Allows you to configure and manage the following types of information: FCIP, iSCSI, iSNS, routes, VRRP, and CDP.
- **Security**—Allows you to configure and manage FC-SP, port security, iSCSI 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 enables you to use the `show tech support`, `show cores`, and `show image` commands.
- **Logs**—Shows the various logs: message, hardware, events, and accounting. Also displays FICON link incidents, and 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 4-1.

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Open Device" /></td>
<td>Opens the Device Manager view for another switch, with the option to open this view in a separate window.</td>
</tr>
<tr>
<td><img src="image" alt="Refresh Display" /></td>
<td>Communicates with the switch and displays the information in the Device Manager view.</td>
</tr>
<tr>
<td><img src="image" alt="Command Line Interface" /></td>
<td>Opens a separate CLI command window to the switch.</td>
</tr>
</tbody>
</table>
Table 4-1  Device Manager Main Toolbar (continued)

<table>
<thead>
<tr>
<th>Icon</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Configure Selected" /></td>
<td>Opens a configuration dialog box for the selected component (line card or port).</td>
</tr>
<tr>
<td><img src="image" alt="SysLog" /></td>
<td>Opens a window that lists the latest system messages that occurred on the switch.</td>
</tr>
<tr>
<td><img src="image" alt="Threshold Manager" /></td>
<td>Opens the Threshold Manager dialog box that provides statistical monitoring and event reporting for the switch.</td>
</tr>
<tr>
<td><img src="image" alt="VSANs" /></td>
<td>Opens the VSAN dialog box that provides VSAN configuration for the switch.</td>
</tr>
<tr>
<td><img src="image" alt="SNMP Users and Roles" /></td>
<td>Opens the SNMP configuration dialog box for SNMP users and roles.</td>
</tr>
<tr>
<td><img src="image" alt="Save Configuration" /></td>
<td>Saves the current running configuration to the startup configuration.</td>
</tr>
<tr>
<td><img src="image" alt="Copy" /></td>
<td>Copies configuration file between server and switch.</td>
</tr>
<tr>
<td><img src="image" alt="Toggle FICON/Interface Port Labels" /></td>
<td>Toggles the FICON and interface port labels.</td>
</tr>
<tr>
<td><img src="image" alt="Help" /></td>
<td>Accesses online help for Device Manager.</td>
</tr>
</tbody>
</table>

### 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 3-9 for descriptions of these icons.

### Tabs

Click the **Device** tab on the Device Manager main window to see a graphical representation of the switch chassis and components.

Click the **Summary** tab on the Device Manager main window to see a summary of 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** button.
Using Device Manager

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 port status, as follows:

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.

Labels
- X—Link Failure
- E—ISL
- TE—Multi-VSAN ISL
- F—Host/Storage
- FL—F Loop
- I— iSCSI
Send documentation comments to mdsfeedback-doc@cisco.com.

- SD—Span Destination
- CH—Channel
- CU—Control Unit

Note
For a detailed table describing the legend, see the “There is a red/orange/dotted line through the switch. What’s wrong?” section on page 36-14.

Supervisor and Switching Modules

In the Device View, you can right-click on an object and get information on it, or configure it. If you right-click on 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 on 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. Then click Enable or Disable from the pop-up menu.

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 PortChannels using Device Manager, click PortChannels from the Interface menu. For detailed instructions, see Chapter 17, “PortChannel Configuration.” You can also use Fabric Manager to conveniently create a PortChannel.

Note
To create a PortChannel, 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 on a device or table.

From Device View:
- Device—Right-click a system, module, or power supply to bring up a menu that gives you the option to configure or reset 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, disable, set beacon mode, or perform diagnostics on the port.
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 popup 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.

**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.