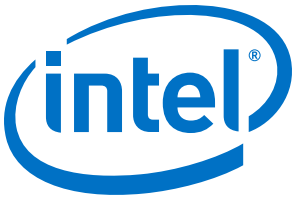


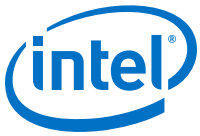
Intel® Omni-Path Fabric Switches

GUI User Guide

Rev. 5.0

December 2016

Order No.: H76457-5.0



Revision History

For the latest documentation, go to http://www.intel.com/omnipath/SwitchPublications.

Date	Revision	Description
December 2016	5.0	Updates to this document include: • Added Cluster Configurator for Intel® Omni-Path Fabric to Preface. • Updated Viewing Port Statistics. • Updated Viewing the Filter Status.
August 2016	4.0	Document has been updated as follows: • Restructured document as follows: — Split out new chapters with task-oriented sections from the Introduction: Getting Started, Using Toolbar Commands, and Accessing Chassis Component Information. — Split out Director Class Switch information from Edge Switch information for clarity, where needed. — Removed Management Module Menu section. • Moved View the Log and Purge the Log under Logging. • Moved Selecting the Boot Image under Maintenance. • Moved Accessing the Subnet Manager Control Window under Subnet Manager. • Added new section for Updating the Certificate. • Added section for Configuring the Syslog Server.
May 2016	3.0	Document has been updated as follows: • Added new graphic for Intel® OP Director Class Switch 100 Series 24-port. • Added note in the respective sections that you can access the Subnet Manager Config File from both the Maintenance and Config File Admin menus.
February 2016	2.0	Document has been updated as follows: • Added menus and information for Intel® OP Director Class Switch 100 Series. • Removed option from Maintenance menu: Post Diagnostics button. • Removed options from Config File Admin menu: Administer, Host Upload/Download, Trap Control.
November 2015	1.0	Document has been updated.

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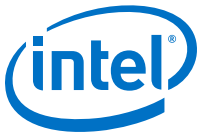


Figures

Tables

Preface

This manual is part of the documentation set for the Intel® Omni-Path Fabric (Intel® OP Fabric), which is an end-to-end solution consisting of Intel® Omni-Path Host Fabric Interfaces (HFIs), Intel® Omni-Path switches, and fabric management and development tools.

The Intel® OP Fabric delivers a platform for the next generation of High-Performance Computing (HPC) systems that is designed to cost-effectively meet the scale, density, and reliability requirements of large-scale HPC clusters.

Both the Intel® OP Fabric and standard InfiniBand* are able to send Internet Protocol (IP) traffic over the fabric, or *IPoFabric*. In this document, however, it is referred to as *IP over IB* or *IPoIB*. From a software point of view, IPoFabric and IPoIB behave the same way and, in fact, use the same `ib_ipoib` driver to send IP traffic over the ib0 and/or ib1 ports.

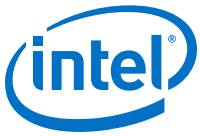
Intended Audience

The intended audience for the Intel® Omni-Path (Intel® OP) document set is network administrators and other qualified personnel.

Documentation Set

The complete end user publications set for the Intel® Omni-Path product includes the following items.

- Hardware Documents:
  - *Intel® Omni-Path Fabric Switches Hardware Installation Guide*
  - *Intel® Omni-Path Fabric Switches GUI User Guide*
  - *Intel® Omni-Path Fabric Switches Command Line Interface Reference Guide*
  - *Intel® Omni-Path Edge Switch Platform Configuration Reference Guide*
  - *Intel® Omni-Path Fabric Managed Switches Release Notes*
  - *Intel® Omni-Path Fabric Externally-Managed Switches Release Notes*
  - *Intel® Omni-Path Host Fabric Interface Installation Guide*
- Software Documents:
  - *Intel® Omni-Path Fabric Software Installation Guide*
  - *Intel® Omni-Path Fabric Suite Fabric Manager User Guide*
  - *Intel® Omni-Path Fabric Suite FastFabric User Guide*
  - *Intel® Omni-Path Fabric Host Software User Guide*
  - *Intel® Omni-Path Fabric Suite Fabric Manager GUI Online Help*
  - *Intel® Omni-Path Fabric Suite Fabric Manager GUI User Guide*



- *Intel® Omni-Path Fabric Suite FastFabric Command Line Interface Reference Guide*
- *Intel® Performance Scaled Messaging 2 (PSM2) Programmer's Guide*
- *Intel® Omni-Path Fabric Performance Tuning User Guide*
- *Intel® Omni-Path Host Fabric Interface Platform Configuration Reference Guide*
- *Intel® Omni-Path Fabric Software Release Notes*
- *Intel® Omni-Path Fabric Manager GUI Release Notes*
- *Intel® Omni-Path Storage Router Design Guide*
- *Building Lustre* Servers with Intel® Omni-Path Architecture Application Note*
- *Intel® Omni-Path Fabric Staging Guide*

Documents are available at the following URLs:

- Intel® Omni-Path Switches Installation, User, and Reference Guides

  http://www.intel.com/omnipath/SwitchPublications
- Intel® Omni-Path Host Fabric Interface Installation, User, and Reference Guides (includes software documents)

  http://www.intel.com/omnipath/FabricSoftwarePublications
- Drivers and Software (including Release Notes)

  http://www.intel.com/omnipath/Downloads

Cluster Configurator for Intel® Omni-Path Fabric

The Cluster Configurator for Intel® Omni-Path Fabric is available at: http://www.intel.com/content/www/us/en/high-performance-computing-fabrics/omni-path-configurator.html.

This tool generates sample cluster configurations based on key cluster attributes, including a side-by-side comparison of up to four cluster configurations. The tool also generates parts lists and cluster diagrams.

Documentation Conventions

The following conventions are standard for Intel® Omni-Path documentation:

- *Note:* provides additional information.
- ***Caution:*** indicates the presence of a hazard that has the potential of causing damage to data or equipment.
- ***Warning:*** indicates the presence of a hazard that has the potential of causing personal injury.
- Text in blue font indicates a hyperlink (jump) to a figure, table, or section in this guide. Links to websites are also shown in blue. For example:

  See License Agreements on page 11 for more information.

  For more information, visit www.intel.com.
- Text in **bold** font indicates user interface elements such as menu items, buttons, check boxes, key names, key strokes, or column headings. For example:

Click the **Start** button, point to **Programs**, point to **Accessories**, and then click **Command Prompt**.

Press **CTRL+P** and then press the **UP ARROW** key.

- Text in `Courier` font indicates a file name, directory path, or command line text. For example:

  Enter the following command: `sh ./install.bin`

- Text in *italics* indicates terms, emphasis, variables, or document titles. For example:

  Refer to *Intel® Omni-Path Fabric Software Installation Guide* for details.

  In this document, the term *chassis* refers to a managed switch.

Procedures and information may be marked with one of the following qualifications:

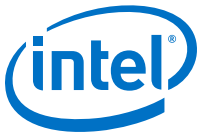
- **(Linux)** – Tasks are only applicable when Linux* is being used.
- **(Host)** – Tasks are only applicable when Intel® Omni-Path Fabric Host Software or Intel® Omni-Path Fabric Suite is being used on the hosts.
- **(Switch)** – Tasks are applicable only when Intel® Omni-Path Switches or Chassis are being used.
- Tasks that are generally applicable to all environments are not marked.

Laser Safety Information

This product may use Class 1 laser optical transceivers to communicate over the fiber optic conductors. The U.S. Department of Health and Human Services (DHHS) does not consider Class 1 lasers to be hazardous. The International Electrotechnical Commission (IEC) 825 Laser Safety Standard requires labeling in English, German, Finnish, and French stating that the product uses Class 1 lasers. Because it is impractical to label the transceivers, the following label is provided in this manual.

Electrostatic Discharge Sensitivity (ESDS) Precautions

The assemblies used in the switch chassis are ESD sensitive. Observe ESD handling procedures when handling any assembly used in the switch chassis.



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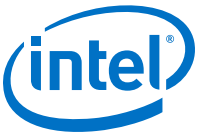
Technical Support

Technical support for Intel® Omni-Path products is available 24 hours a day, 365 days a year. Please contact Intel Customer Support or visit www.intel.com for additional detail.



1.0 Introduction

This manual describes the Intel® Omni-Path Fabric Chassis Viewer graphical user interface (GUI). It provides task-oriented procedures for configuring and managing the Intel® Omni-Path Switch family.

1.1 Document Organization

This manual is organized as follows:

- This **Introduction** provides an overview of this document, its structure, and the Intel® Omni-Path Fabric Chassis Viewer GUI.
- **Getting Started** provides tasks and information for starting the Intel® Omni-Path Fabric Chassis Viewer GUI and accessing the switches and components.
- **Accessing Chassis Component Information** provides tasks accessing general information on each component of the switch.
- **Using Toolbar Commands** describes the common hardware commands such as logging out, rebooting and viewing logs, commonly accessed through the Toolbar.
- **Configuring and Monitoring the Switch** describes the configuration and administration tasks for the Director Class Switches and Edge Switches.

1.2 Overview

The Intel® Omni-Path Fabric Chassis Viewer is browser-based device management software. Chassis Viewer provides the primary management interface for the Intel® Omni-Path Switch family, allowing you to perform management, configuration, and monitoring tasks.

The Chassis Viewer runs on the firmware of the Intel® Omni-Path Switch family. The browser must be on a workstation that has IP connectivity to the LAN port (RJ-45 connector) on the switch.

Chassis Viewer manages:

- The switch chassis
- Logging and monitoring functionality

2.0 Getting Started

This section provides tasks and information for getting started with the Intel® Omni-Path Fabric Chassis Viewer GUI.

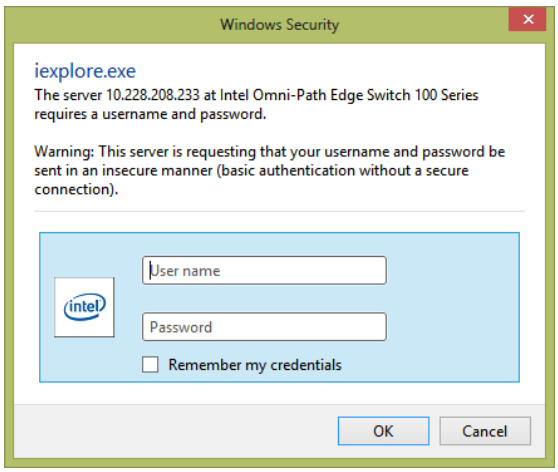
2.1 Accessing Chassis Viewer

The Chassis Viewer runs on Internet Explorer. For additional supported browsers, refer to the Release Notes.

1. To access Chassis Viewer, point your browser to the IP address of the switch.

   Note: The default IP address is 192.168.100.9 and the default netmask is 255.255.255.0.

2. If user authentication is enabled, a **User Authentication** window is displayed.



   Enter the user name and password. Default values are:

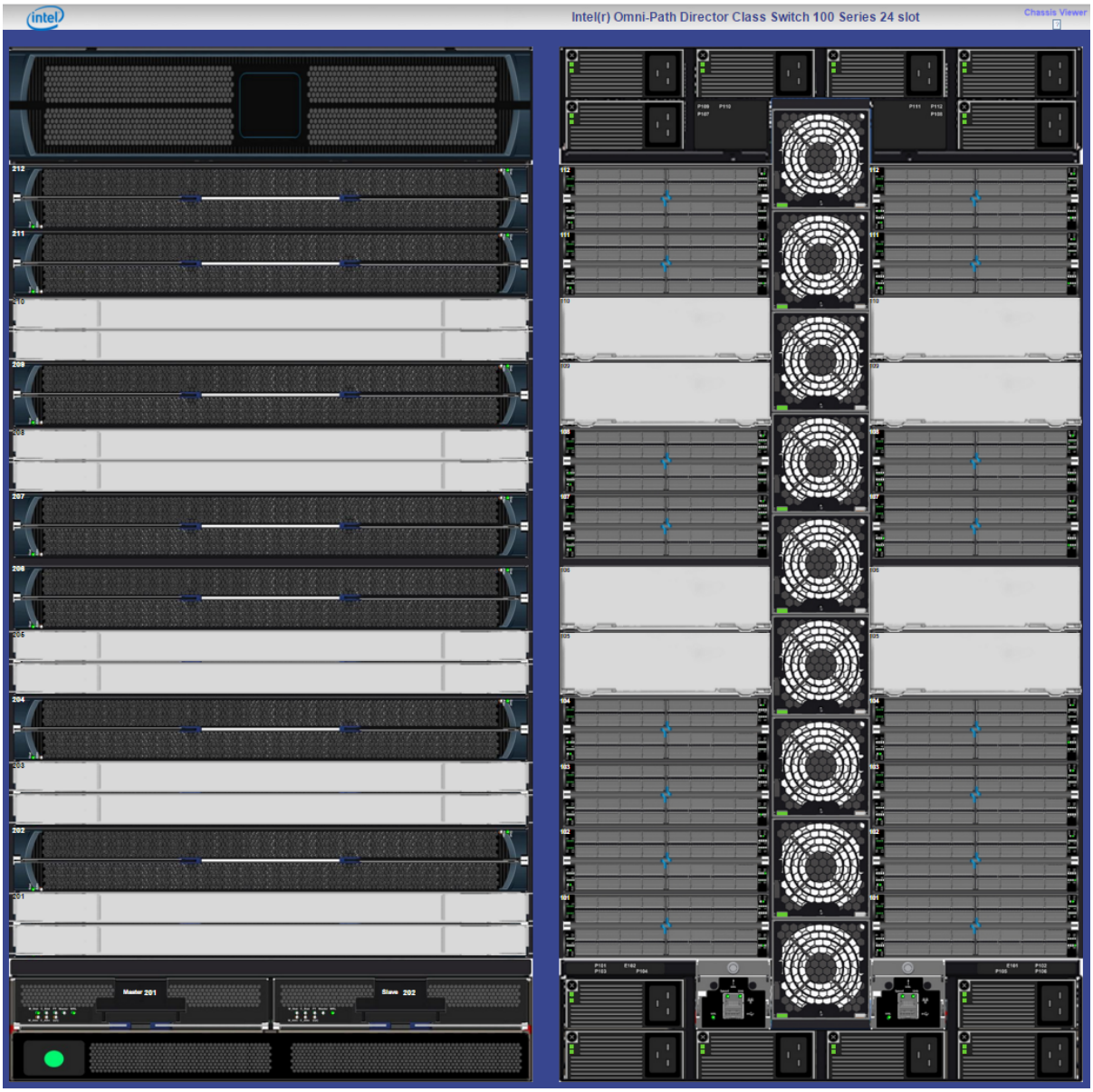
   - User name: `admin`
   - Password: `adminpass`

   The Chassis Viewer home page is displayed.

2.1.1 Home Page for Intel® Omni-Path Director Class Switch 100 Series

The Chassis Viewer home page provides a high-level overview of the switch. This area is the starting point for more detailed information for the chassis and its components.

Figure 1. Intel® Omni-Path Director Class Switch 100 Series Home Page



The **?** button in the upper right area of the window accesses online help. Each help window provides a topic-specific description.

2.1.2 Home Page and Chassis Details for Intel® Omni-Path Edge Switch 100 Series

The Chassis Viewer home page provides a high-level overview of the switch and the Chassis Details.

Figure 2. Intel® Omni-Path Edge Switch 100 Series 48-Port Home Page

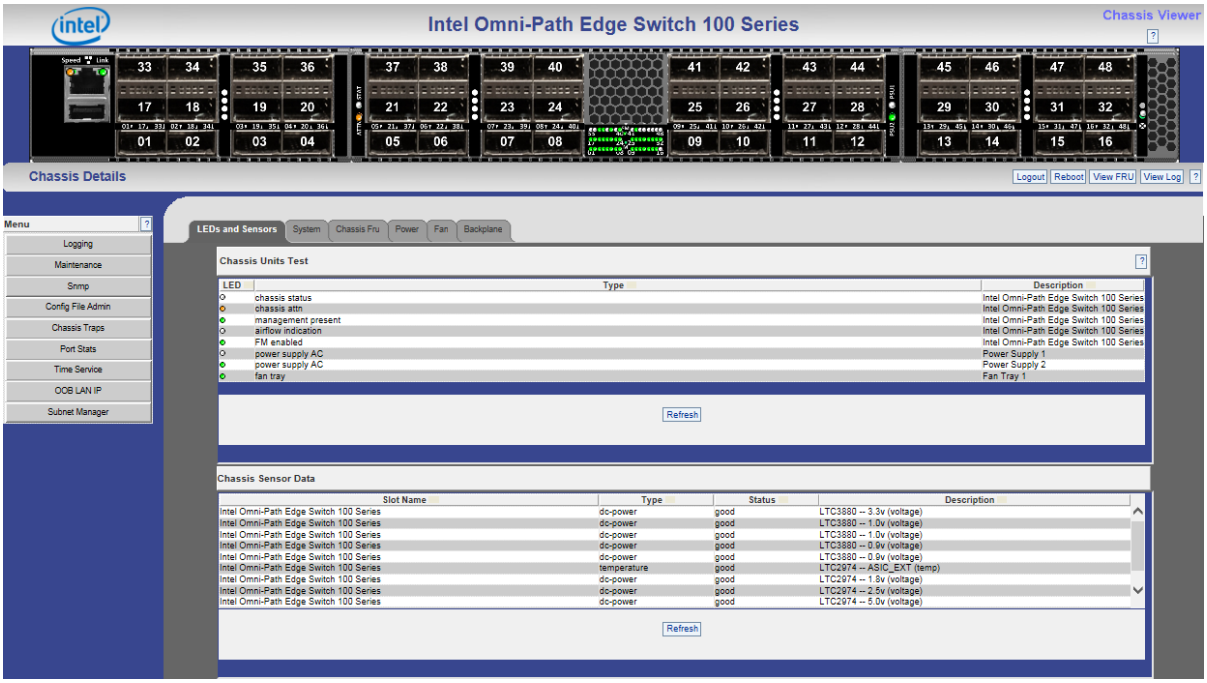
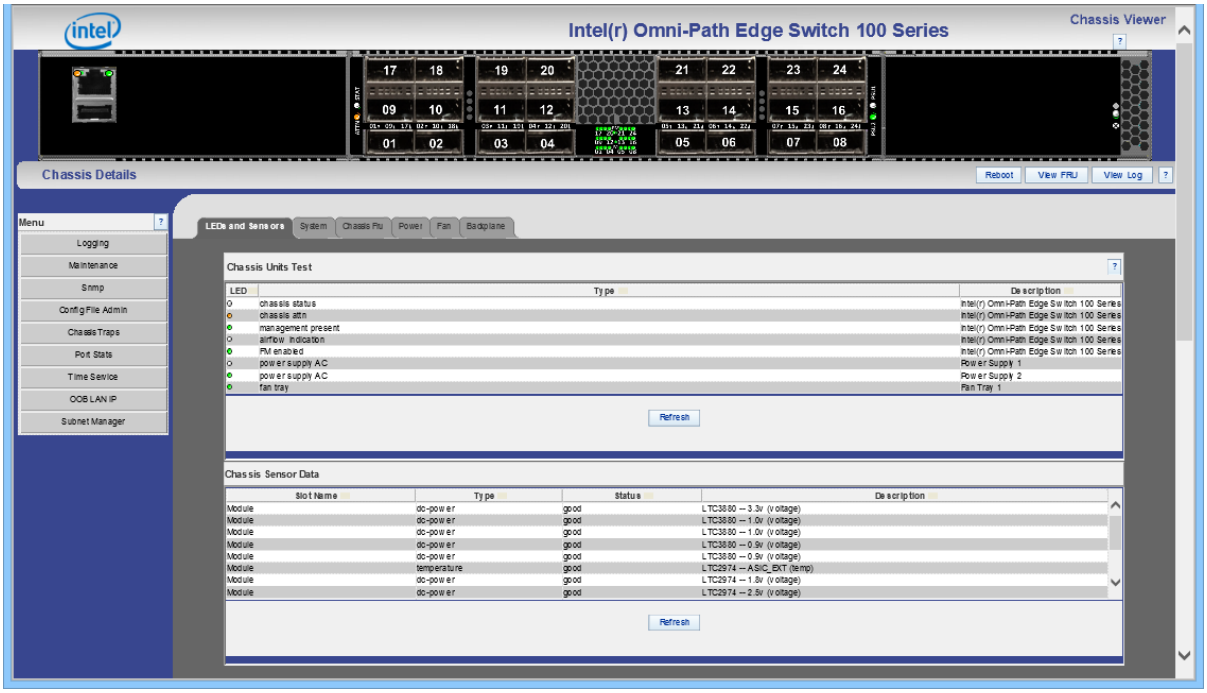
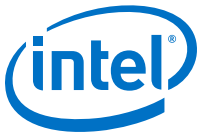


Figure 3. Intel® Omni-Path Edge Switch 100 Series 24-Port Home Page



The **?** button in the top right area of the window accesses online help. Each help window provides a topic-specific description.



2.2 Navigating Chassis Components

The Intel® Omni-Path Director Class Switch 100 Series is comprised of multiple components that are accessible from the Chassis Viewer.

- Chassis
- Leaf
- Spine
- Management Module

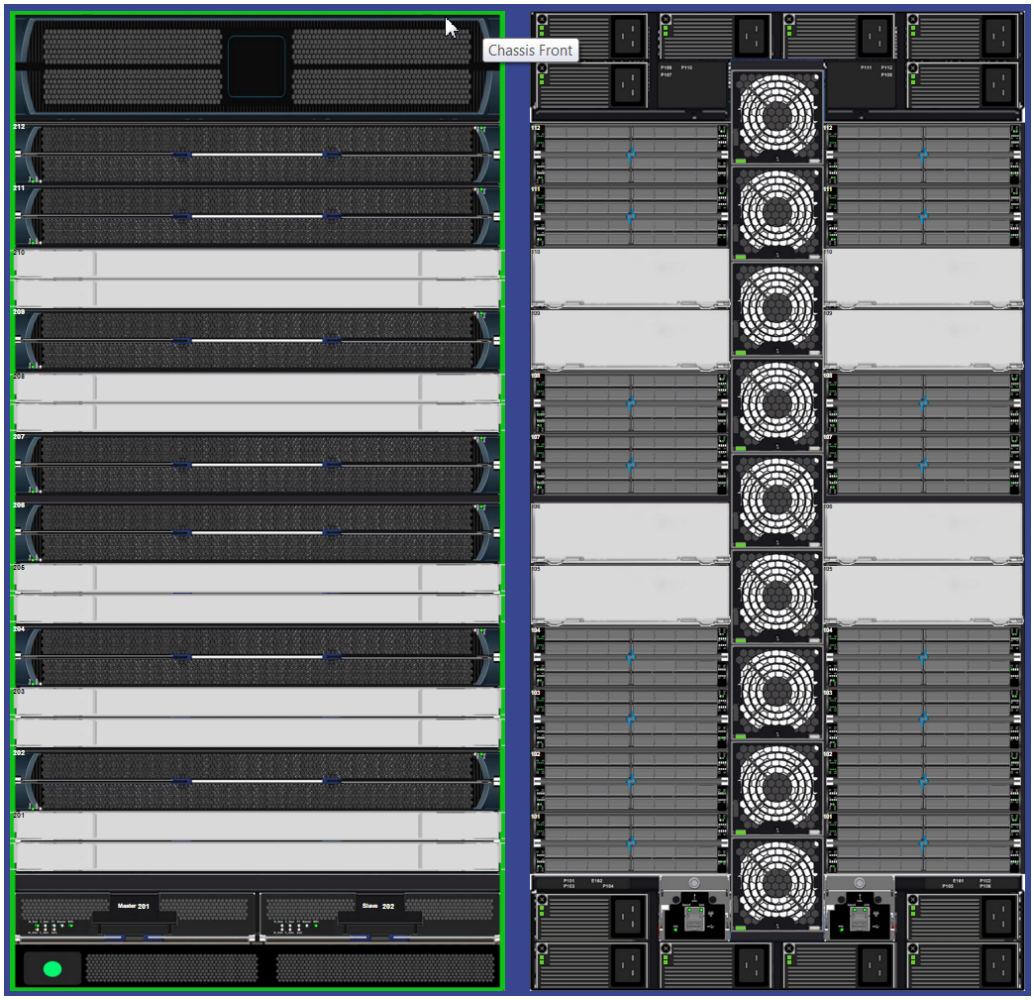
2.2.1 Displaying Chassis Details for Intel® Omni-Path Director Class Switch 100 Series

There are two ways to display the chassis details for the Intel® Omni-Path Director Class Switch 100 Series. The left side view shows the Chassis Front; the right side view shows the Chassis Back.

Chassis Front View

1. From the Home Page, move your cursor over the left side, outer region of the display.

   The edges of the chassis are highlighted green and display text states "Chassis Front" as shown in the following diagram:



2. Click the green highlight.

   The Chassis Details window is displayed.

Chassis Rear View

1. From the Home Page, move your cursor over the right side, outer region of the display.

   The edges of the chassis are highlighted green and display text states "Chassis Back" as shown in the following diagram:

2. Click the green highlight.

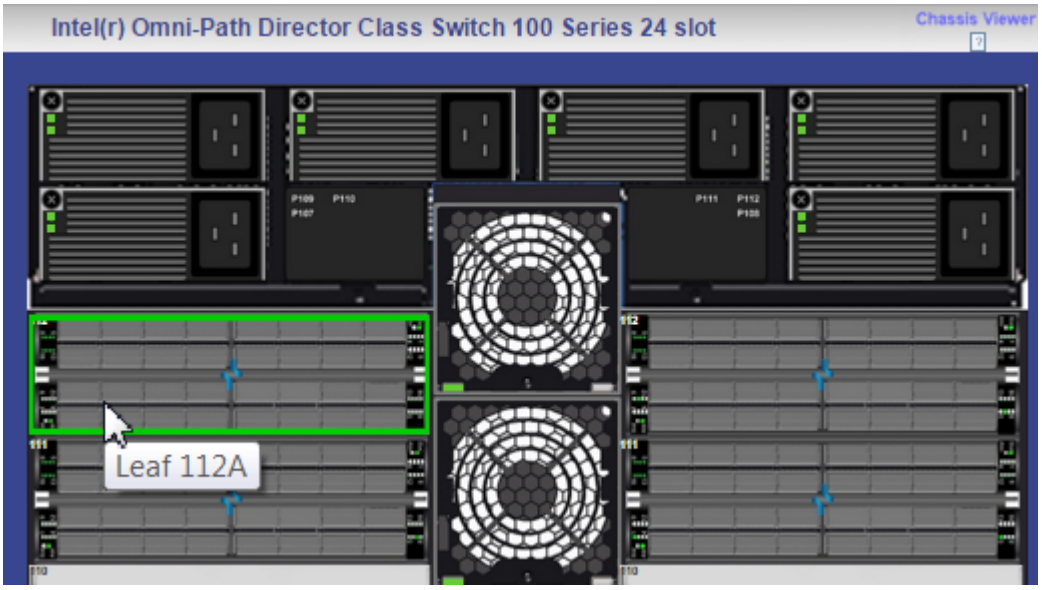
   The Chassis Details window is displayed.

2.2.2 Displaying Leaf Details

To display the leaf details:

1. From the Intel® Omni-Path Director Class Switch 100 Series Home Page, move your cursor over the leaf module.

   The edges of the leaf module are highlighted green and display text identifies the specific Leaf as shown in the following diagram:



2. Click the leaf module.

   The Leaf Details view is displayed.

Figure 4. Leaf Details

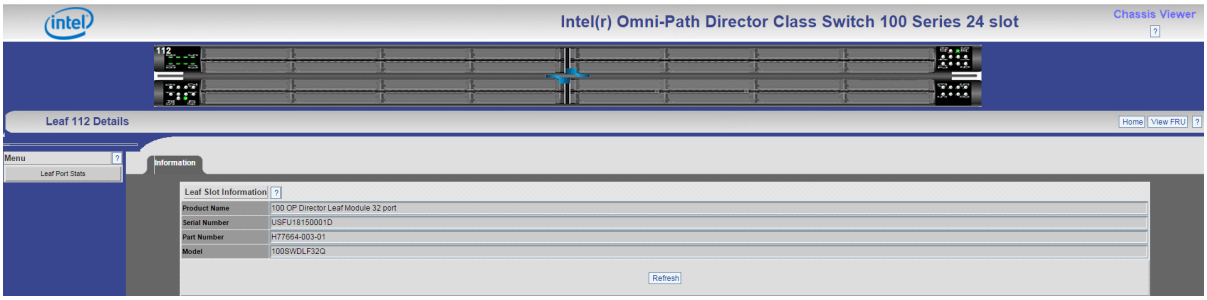


Table 1. Leaf Slot Information Tab and Descriptions

Tab/Information	Description
Product Name	Displays the product name, assigned by an administrator.
Serial Number	Displays the component serial number.
Part Number	Displays the part number of the component.
Model	Displays the model of the component.
Refresh Button	Refreshes all fields in the Information tab.

2.2.3 Displaying Spine Details

To display the spine details:

1. From the Intel® Omni-Path Director Class Switch 100 Series Home Page, move your cursor over the spine module.

The edges of the spine module are highlighted green and display text will identify the specific Spine as shown in the following diagram.

2. Click the spine module.

   The Spine Details view is displayed.

Figure 5. Spine Details

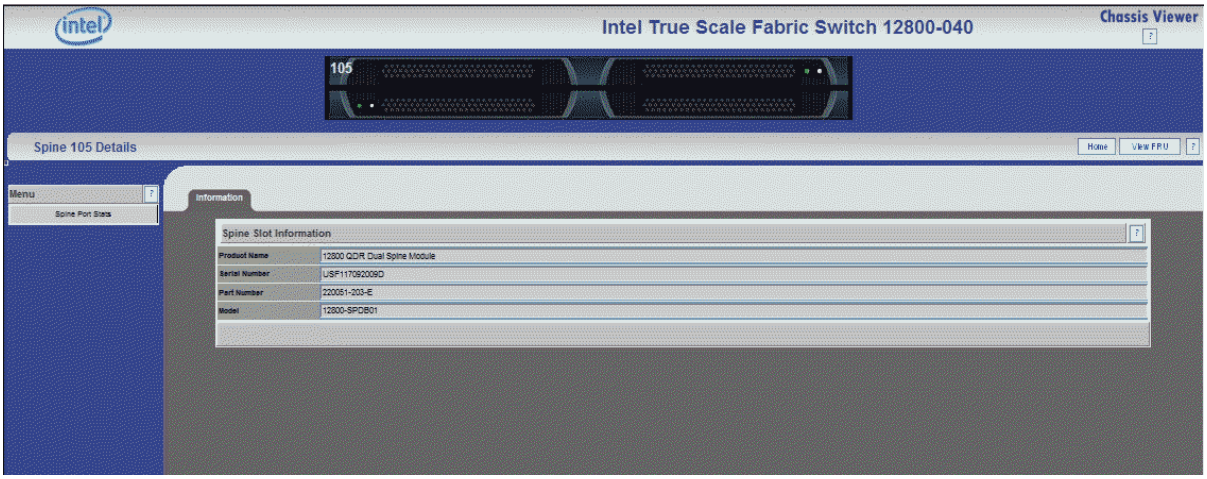


Table 2. Spine Slot Information Tab and Descriptions

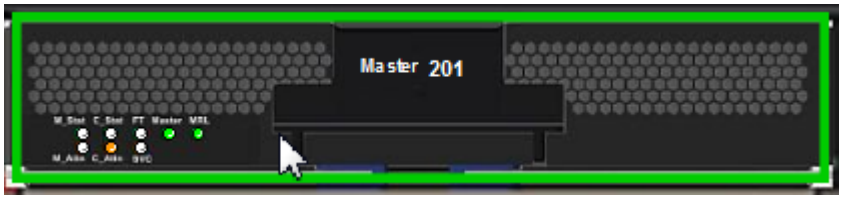
Tab/Information	Description
Product Name	Displays the product name, assigned by an administrator.
Serial Number	Displays the component serial number.
Part Number	Displays the part number of the component.
Model	Displays the model of the component.

2.2.4 Displaying Management Module Details

To display the management module details:

1. From the Intel® Omni-Path Director Class Switch 100 Series Home Page, move your cursor over the management module.

   The edges of the module are highlighted green and display text will identify the specific management module as shown in the following diagram:



2. Click the management module.

   The Management Module Details view is displayed.

Figure 6. Management Module Details

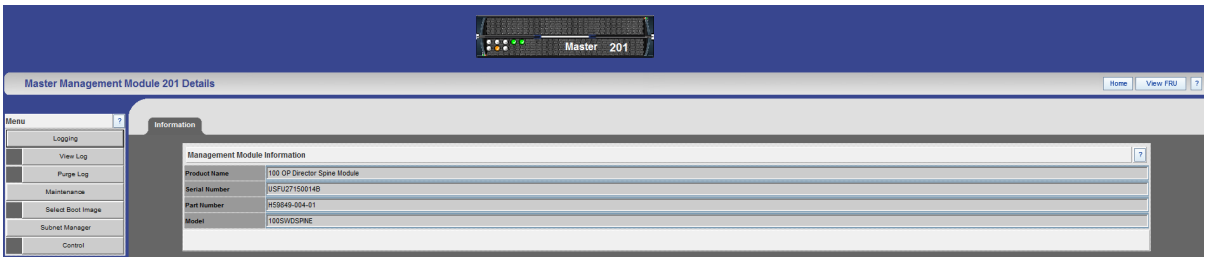


Table 3. Management Module Information Tab and Descriptions

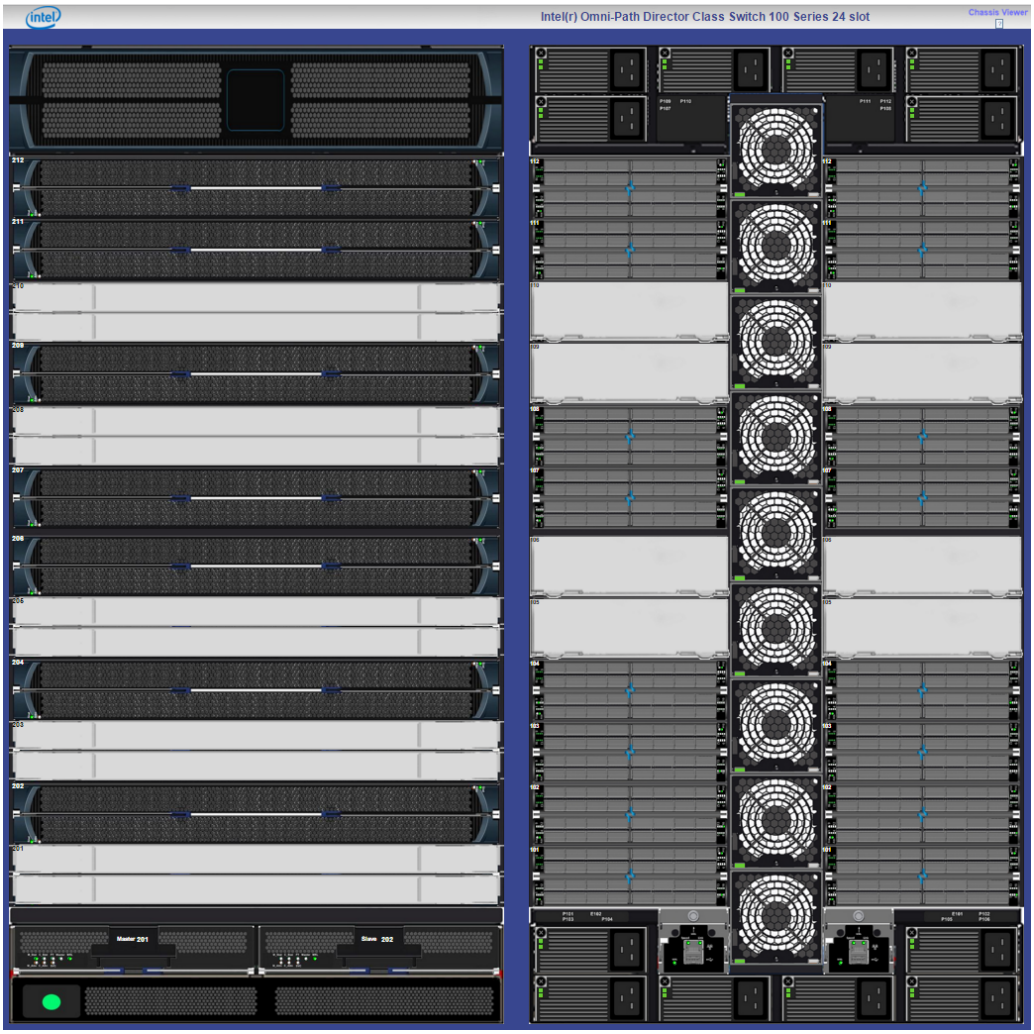
Tab/Information	Description
Product Name	Displays the product name, assigned by an administrator.
Serial Number	Displays the component serial number.
Part Number	Displays the part number of the component.
Model	Displays the model of the component.

2.2.5 Returning to the Home Page for the Intel® Omni-Path Director Class Switch 100 Series

The **Home** button takes you to the home page of the Intel® Omni-Path Director Class Switch 100 Series. From there, you can access other modules in the switch.

1. From the Chassis Details toolbar, click **Home**.

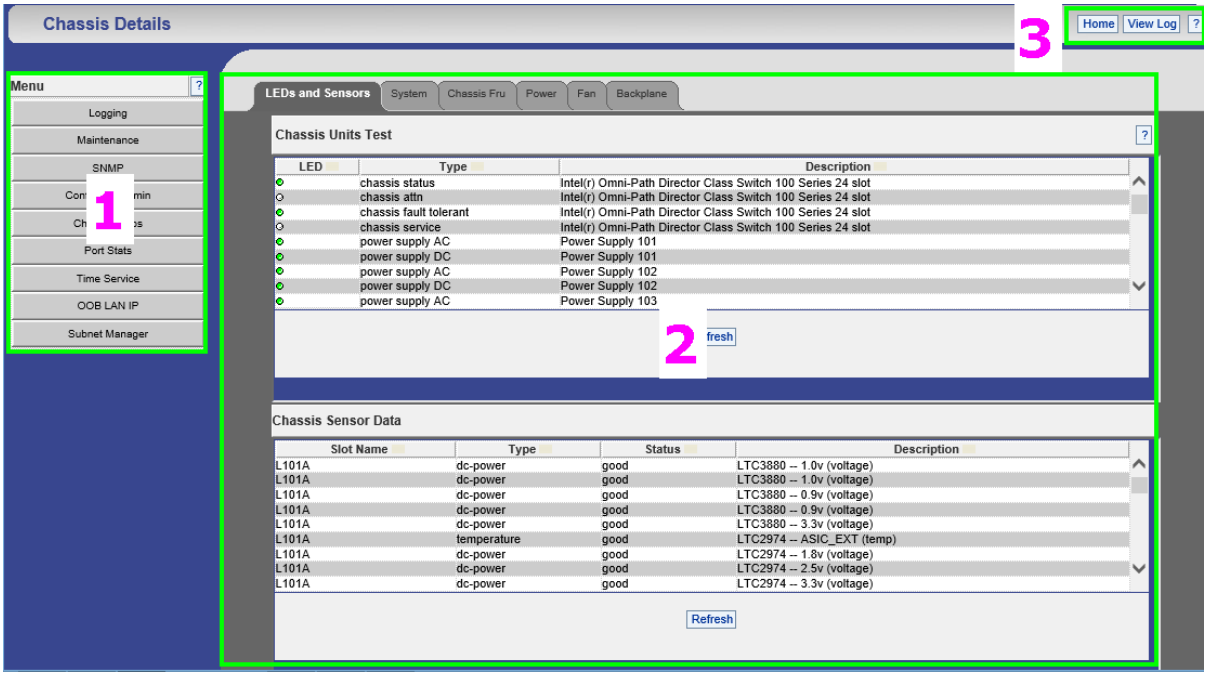
   The Intel® Omni-Path Director Class Switch 100 SeriesHome page is displayed showing the different modules in the switch.



2.3 Details Area Overview

The Details area has three major sections, which are marked in the following example.

Figure 7. Example of Chassis Details for Intel® OP Director Class Switch 100 Series



Note: The content of this window will be different depending on the type of switch and the particular component.

1. The **Menu** (referred to as the "main menu"), on the left, allows you to configure and monitor the system components.
2. The **Component Information Area**, in the center, allows you to monitor important information for each specific hardware component, as well as important system information.
3. The **Toolbar** buttons, on the upper right, allow you to run command tasks for each hardware component.

Each of these sections, as well as the top-level Chassis Viewer, has an associated Help button as denoted by "**?**".

3.0 Accessing Chassis Component Information

The chassis Component Information area comprises fields that are tied to live data from the selected hardware component as well as live system information. You can access general information about each component.

3.1 Displaying LEDs and Sensors Information

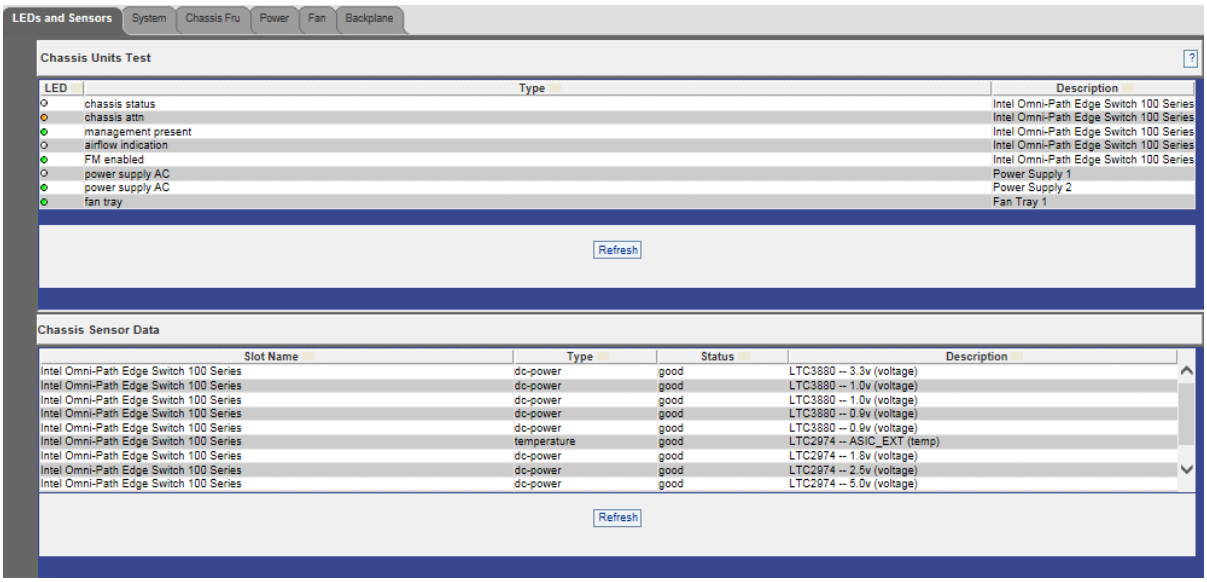
The **LEDs and Sensors** tab displays information about the switch LEDs and Sensors.

To display Chassis Units Test information and Chassis Sensor Data, perform the following steps:

1. From the Chassis Details window, select the **LEDs and Sensors** tab in the Component Information Area.

   Note: This is the start-up tab for the Chassis Details.

Figure 8. LEDs and Sensors Tab



2. Click **Refresh** to refresh information in the fields.

LEDs and Sensors Field Descriptions

Table 4. LEDs and Sensors Tab Descriptions

Tab/Information	Description
Chassis Units Test: Displays switch component LED information for chassis status, fan, and power supplies. *Note:* For a detailed explanation of physical LEDs on the hardware components, refer to the *Intel® Omni-Path Fabric Switches Hardware Installation Guide*.	
LED	Displays a green or white circle icon specifying whether the LED is activated.
Type	Displays the component type.
Description	Displays a description of the component, assigned by an administrator.
Chassis Sensor Data: Displays slot-based temperature and AC-power sensor data for the internal switching complex.	
Slot Name	Displays the slot name of the sensor.
Type	Displays the sensor type.
Status	Displays the status of the sensor.
Description	Displays a description of the sensor.

3.2 Displaying and Modifying System Information

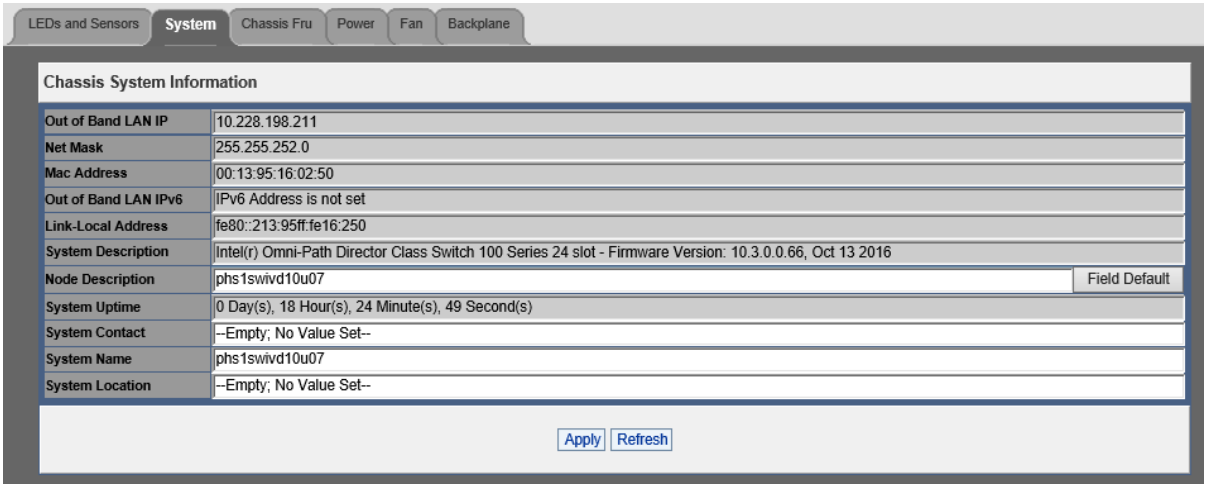
The **System** tab displays overall system information for the applicable switch chassis.

Displaying the Chassis System Information

To display chassis system information, perform the following steps:

1. From the Chassis Details window, select the **System** tab in the Component Information Area.

Figure 9. System Tab



2. Click **Refresh** to refresh information in the fields.

Modifying the Chassis System Information

Notes:

- White fields (Read/Write) allow you to add or modify applicable general and system information that is specific to your environment.
- Gray fields (Read Only) are tied to live data from the selected hardware component as well as live system information.

To modify information, perform the following steps:

1. Click in the field to be modified.

   Note: You can only modify fields that are not grayed out.
2. Enter information for your network environment.
3. Click **Apply** to apply changes.
4. Click **Refresh** to refresh information in the fields.

System Tab Field Descriptions

Table 5. System Tab and Descriptions

Tab/Information	Description
Out of Band LAN IP	The IP address of the switch. The IP address of the switch can be changed by the administrator.
Net Mask	The current net mask settings for the Chassis. The net mask of the chassis can be changed by the administrator.
Mac Address	The MAC address of the switch.
Out of Band LAN IPv6	The IP v6 address of the switch. The out of band LAN address can be changed by the administrator.
Link-Local Address	The IP v6 Link-Local address of the switch.
System Description	A read-only textual description of the system.
Node Description	Assigned by the administrator, the node description is a fabric-applicable name that will be displayed within the Intel® Omni-Path Fabric Chassis Viewer. To reset this field to the default setting, click the **Field Default** button. *Note:* If this field has been changed since the last reboot of either management module, the next reboot will be treated as disruptive.
System Uptime	The elapsed time since the master management module was re-initialized.
System Contact	The textual identification of the contact person and their contact information for this system, assigned by the administrator.
System Name	The name for the system, assigned by an administrator. One convention is to use the system's fully qualified domain name.
System Location	The location of the system, assigned by an administrator.

3.3 Displaying and Modifying Chassis FRU Information

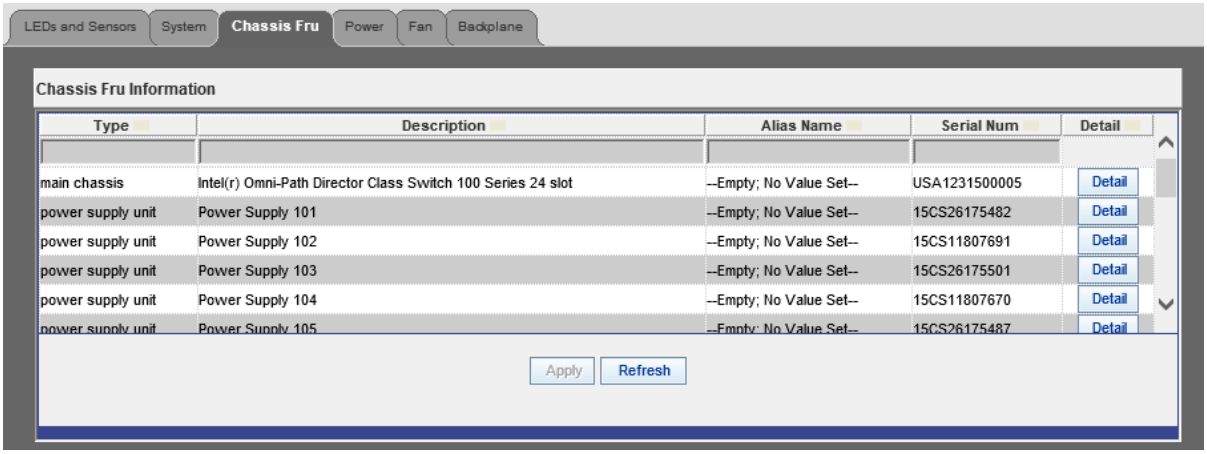
The **Chassis FRU** tab displays information about the switch Field Replaceable Unit (FRU).

Displaying the Chassis FRU Information

To display FRU information, perform the following steps:

1. From the Chassis Details window, select the **Chassis FRU** tab in the Component Information Area.

Figure 10. Chassis FRU Tab



2. Click **Detail** to view more information about the FRU.
3. Click **Back** to return to the main window.

Modifying the Chassis FRU Information

Notes:

- White fields (Read/Write) allow you to add or modify applicable general and system information that is specific to your environment.
- Gray fields (Read Only) are tied to live data from the selected hardware component as well as live system information.

To modify information, perform the following steps:

1. Click on the row to be modified.

   The row's information will be displayed in the top row allowing you to modify fields that are not grayed out.
2. Enter information for your network environment.
3. Click **Apply** to apply changes.
4. Click **Refresh** to refresh information in the fields.

Chassis FRU Tab Field Descriptions

Table 6. Chassis FRU Tab and Descriptions

Tab/Information	Description
Type	The type of component.
Description	A description of the component, assigned by an administrator.
Alias Name	Name of the component, assigned by an administrator.
Serial Number	Component serial number.
Detail	A button for each row that displays additional detail about the component.

continued...

Tab/Information	Description
Part Number	Displays the part number of the component.
Model	Displays the model of the component.
Version	Displays the version of the component.
Manufacturer Name	Displays the manufacturer's name of the component.
Product Name	Displays the product name of the component.
Manufacturing ID	Displays the manufacturer's ID of the component.
Manufacturing Date	Displays the manufacturing date of the component.

3.4 Displaying and Modifying Chassis Power Supply Information

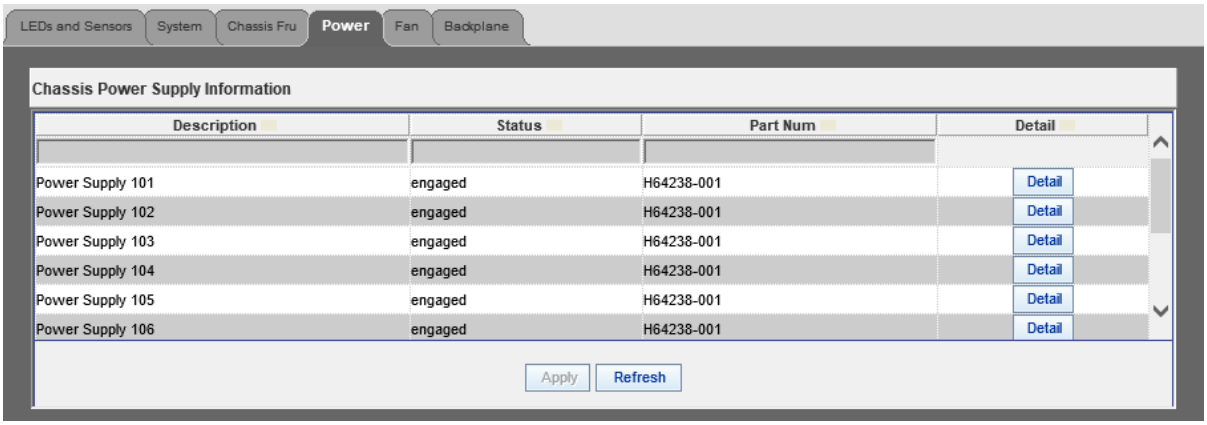
The **Power** tab displays information about the switch power supply.

Displaying the Chassis Power Supply Information

To display chassis power supply information, perform the following steps:

1. From the Chassis Details window, select the **Power** tab in the Component Information Area.

Figure 11. Power Tab



2. Click **Detail** to view more information about the Power Supply.
3. Click **Back** to return to the main window.

Modifying the Chassis Power Supply Information

Notes:

- White fields (Read/Write) allow you to add or modify applicable general and system information that is specific to your environment.
- Gray fields (Read Only) are tied to live data from the selected hardware component as well as live system information.

To modify information, perform the following steps:

1. Click on the row to be modified.

The row's information will be displayed in the top row allowing you to modify fields that are not grayed out.

2. Enter information for your network environment.
3. Click **Apply** to apply changes.
4. Click **Refresh** to refresh information in the fields.

Power Tab Field Descriptions

Table 7. Power Tab and Descriptions

Tab/Information	Description
Description	A description of the component, assigned by an administrator.
Status	Displays the status of the component.
Part Number	Displays the part number of the component.
Detail	A button for each row that displays additional detail about the component.
Manufacturer Name	Displays the manufacturer's name of the component.
Product Name	Displays the product name of the component.
Manufacturing ID	Displays the manufacturer's ID of the component.

3.5 Displaying and Modifying Chassis Fan Information

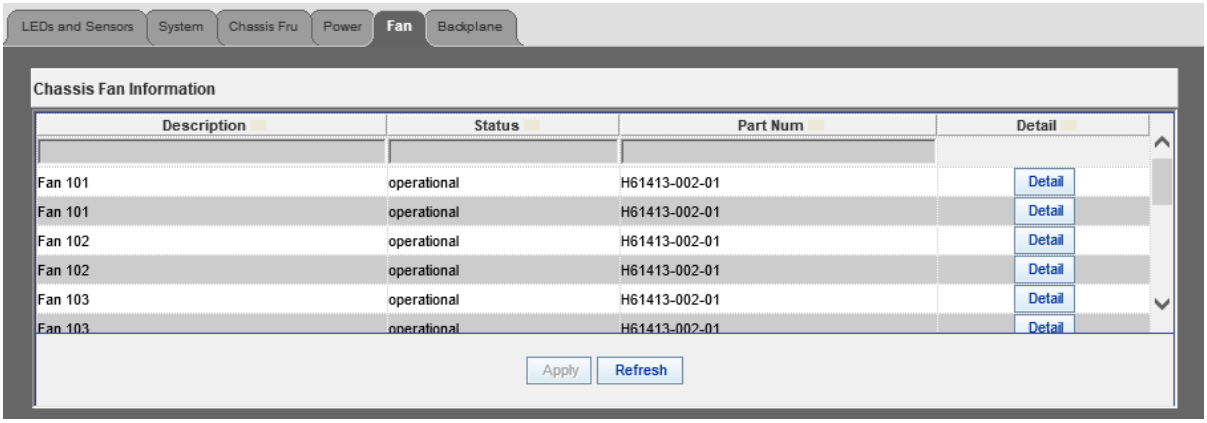
The **Fan** tab displays information about the switch fan.

Displaying the Chassis Fan Information

To display chassis fan information, perform the following steps:

1. From the Chassis Details window, select the **Chassis Fan** tab in the Component Information Area.

Figure 12. Fan Tab



2. Click **Detail** to view more information about the Fan.
3. Click **Back** to return to the main window.

Modifying the Chassis Fan Information

Notes:

- White fields (Read/Write) allow you to add or modify applicable general and system information that is specific to your environment.
- Gray fields (Read Only) are tied to live data from the selected hardware component as well as live system information.

To modify information, perform the following steps:

1. Click on the row to be modified.

   The row's information will be displayed in the top row allowing you to modify fields that are not grayed out.
2. Enter information for your network environment.
3. Click **Apply** to apply changes.
4. Click **Refresh** to refresh information in the fields.

Fan Tab Field Descriptions

Table 8. Fan Tab and Descriptions

Tab/Information	Description
Description	A description of the component, assigned by an administrator.
Status	Displays the status of the component.
Part Number	Displays the part number of the component.
Detail	A button for each row that displays additional detail about the component.
Manufacturer Name	Displays the manufacturer's name of the component.
Product Name	Displays the product name of the component.
Manufacturing ID	Displays the manufacturer's ID of the component.

3.6 Displaying and Modifying Chassis Backplane Information

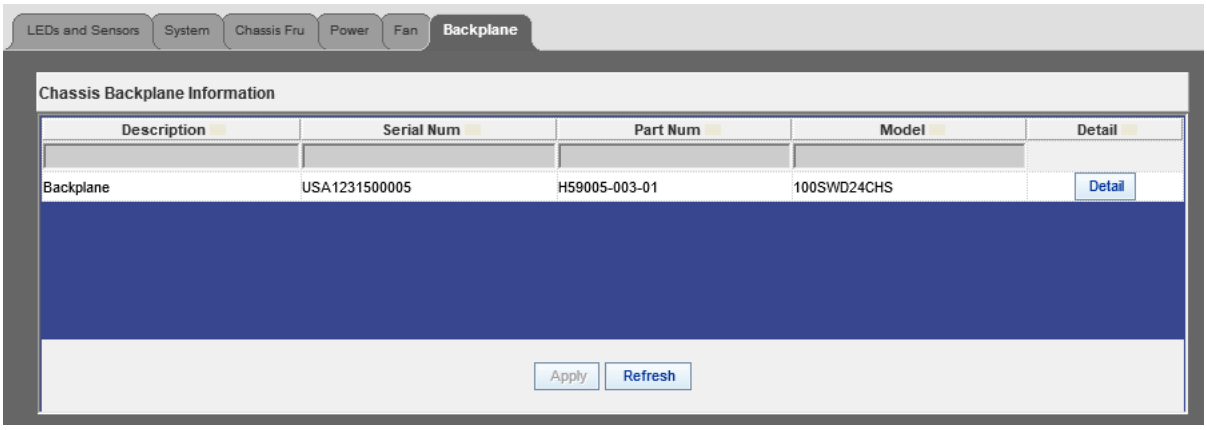
The **Backplane** tab displays information about the switch backplane.

Displaying the Chassis Backplane Information

To display chassis backplane information, perform the following steps:

1. From the Chassis Details window, select the **Backplane** tab in the Component Information Area.

Figure 13. Backplane Tab



2. Click **Detail** to view more information about the Backplane.
3. Click **Back** to return to the main window.

Modifying the Chassis Backplane Information

Notes:

- White fields (Read/Write) allow you to add or modify applicable general and system information that is specific to your environment.
- Gray fields (Read Only) are tied to live data from the selected hardware component as well as live system information.

To modify information, perform the following steps:

1. Click on the row to be modified.

   The row's information will be displayed in the top row allowing you to modify fields that are not grayed out.
2. Enter information for your network environment.
3. Click **Apply** to apply changes.
4. Click **Refresh** to refresh information in the fields.

Backplane Tab Field Descriptions

Table 9. Backplane Tab and Descriptions

Tab/Information	Description
Description	A description of the component, assigned by an administrator.
Serial Number	Displays the serial number of the component.
Part Number	Displays the part number of the component.
Model	Displays the model of the component.
Details Button	A button for each row that displays additional details about the component.
Version	Displays the version of the component.
Manufacturer Name	Displays the manufacturer's name of the component.

continued...

Tab/Information	Description
Product Name	Displays the product name of the component.
Manufacturing ID	Displays the manufacturer's ID of the component.
Manufacturing Date	Displays the manufacturing date of the component.

4.0 Using Toolbar Commands

This section describes how to run toolbar commands.

4.1 Logging Out of the Switch

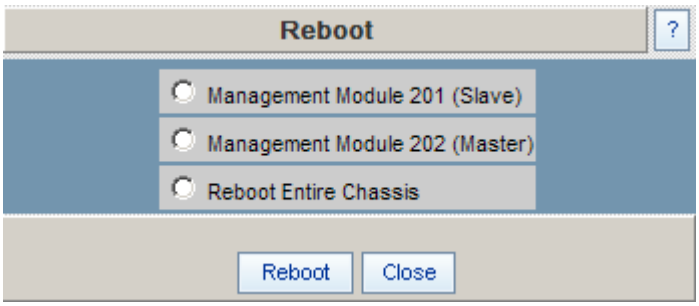
Note: The **Logout** button is only displayed if you have set the User Authentication parameter to **Login Enabled** through the HTTP Session Configuration submenu.

1. From the Chassis Details toolbar, click **Logout** to log out of the system.

4.2 Rebooting the Intel® Omni-Path Director Class Switch 100 Series

The **Reboot** menu allows you to reboot selected components or the entire switch.

1. From the main menu, select **Maintenance**.
2. Click **Reboot**.
   The reboot dialog is displayed:



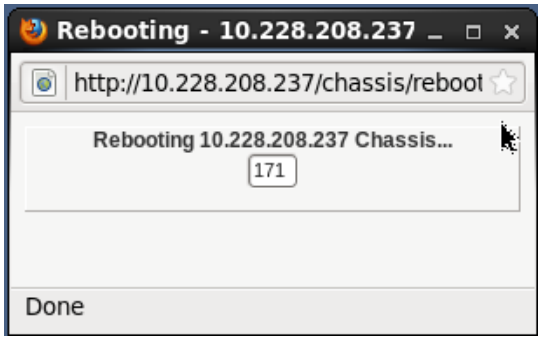
3. Select the management module to be rebooted, or select **Reboot Entire Chassis** to reboot the switch and all management modules.
4. Click **Reboot**.

4.3 Rebooting the Intel® Omni-Path Edge Switch 100 Series

The **Reboot** button allows you to reboot the switch.

1. From the Chassis Details toolbar, click **Reboot**.
   A confirmation window is displayed.
2. Click **OK** to reboot.

   The following rebooting status window is displayed.

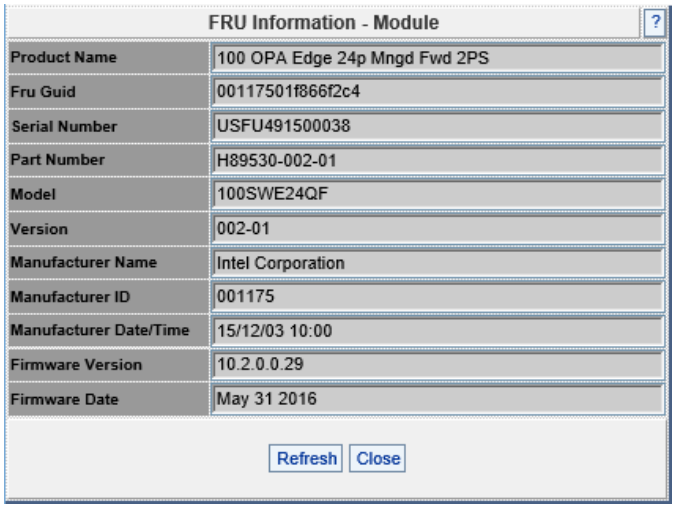


4.4 Viewing the FRU Information on the Intel® Omni-Path Edge Switch 100 Series

The **View FRU** button provides a information about Field Replaceable Units (FRUs) of the Intel® Omni-Path Edge Switch 100 Series, which could be useful when servicing or replacing a unit.

1. From the Chassis Details toolbar, click **View FRU**.

   The FRU Information window is displayed.



2. Click **Refresh** to ensure latest information if required.
3. Click **Close** to dismiss the window.

FRU Information Field Descriptions

Descriptions for each field in the **FRU Information** window is listed in the following table.

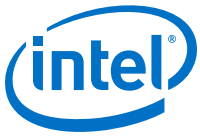


Table 10. FRU Information Field Descriptions

Name	Description
Product Name	The name of the product
Fru Guid	The globally unique identifier for the product
Serial Number	A unique number identifying the product
Part Number	A number identifying the product line
Model	A descriptor identifying a specific model within the product line
Version	A number identifying the version of the component
Manufacturer Name	A field identifying the company that is manufacturing and/or selling the product
Manufacturer ID	A number that identifies the original manufacturer
Manufacturer Date/Time	A date and time stamp identifying when the product was manufactured
Firmware Version	A number identifying the firmware embedded in the card. Firmware may be updated without replacing the card.
Firmware Date	A date identifying when the Firmware was released

4.5 Viewing the Log from the Toolbar

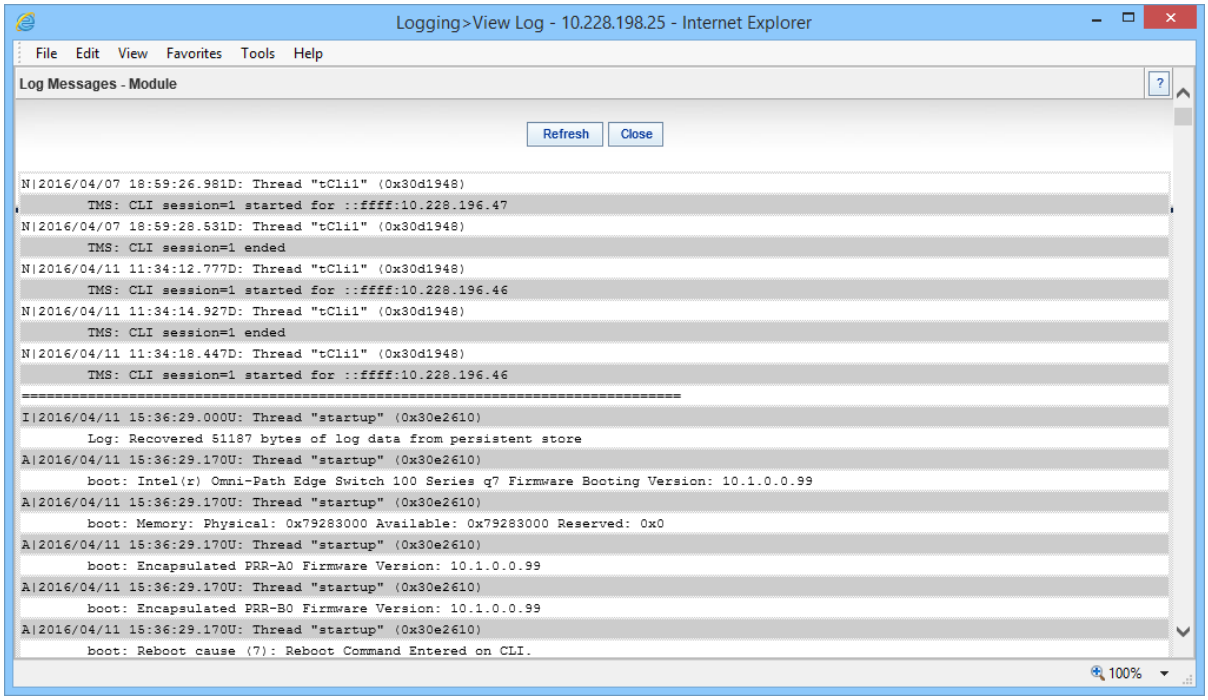
The **View Log** button located on the Chassis Details toolbar provides a list of the log messages for the chassis.

Viewing the Log

To view the message log:

1. From the Chassis Details toolbar on the Home Page, click the **View Log**.

   The **Log Message** window is displayed.



2. Click **Refresh** to ensure latest information, if required.
3. Click **Close** to dismiss the window.

Saving the Log

To save a log message for further analysis, perform the following steps:

1. Use your Web Browser's capabilities to select and copy the text.
2. In a text editing package, such as Notepad, paste the text.
3. Save as a plain text (`.txt`) file.

5.0 Configuring and Monitoring the Switch

This section presents tasks using the Chassis Viewer for configuring and monitoring switch components.

Tasks are organized in the following categories:

- Logging
- Maintenance
- SNMP
- Configuration File Administration
- Chassis Traps
- Port Statistics
- Time Service
- OOB LAN IP
- Subnet Manager

5.1 Logging

The **Logging** menu allows you to manage logging for the Switch.

Figure 14. Chassis Detail Logging Menu for Intel® Omni-Path Edge Switch 100 Series

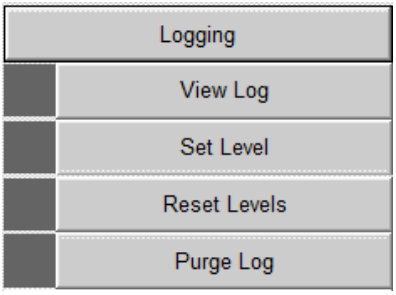


Figure 15. Chassis Detail Logging Menu for Intel® Omni-Path Director Class Switch 100 Series

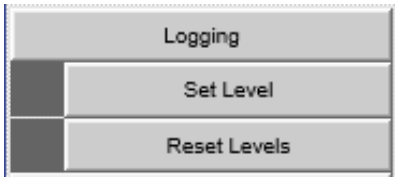
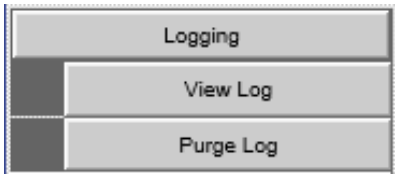


Figure 16. Management Module Logging Menu



5.1.1 Configuring the Syslog Server

To avoid losing log information in the event of a hardware failure, Intel recommends that you configure a syslog server.

Note: To centralize logging for all switches in a fabric, you can configure each switch to point to the same syslog server, which has the syslog daemon (`syslogd`) running.

1. Edit the `/etc/sysconfig/syslog` file and ensure that the `-r` option is included in `SYSLOGD_OPTIONS`. This allows logging from a remote system.

```
SYSLOGD_OPTIONS="-r -m 0"
```

2. Add or un-comment the following two lines from `/etc/rsyslog.conf` to provide UDP syslog reception:

```
$ModLoad imudp
$UDPServerRun 514
```

3. In the `/etc/rsyslog.conf` file, add the following text as the first rule:

```
$template ChassisBasedLog, "/var/log/chassis/%HOSTNAME%.log"
if $fromhost-ip != '<DNS_PREFIX' then -?ChassisBasedLog
&~
```

   For example, if the DNS name for the switches is prefixed with `phemb`, then the rule reads:

```
$template ChassisBasedLog, "/var/log/chassis/%HOSTNAME%.log"
if $fromhost-ip != 'phemb' then -?ChassisBasedLog
&~
```

4. Type `/etc/init.d/syslog restart`, and press **Enter**.

Post-requisites: To test that the message is being sent/received:

- Run the following command line at the server:

```
tcpdump udp port 514
```

- Run the following command line at the switch:

```
logSyslogTest -e
```

5.1.2 Viewing the Log for the Intel® Omni-Path Director Class Switch 100 Series

The **View Log** menu allows you to view a recent snapshot of the log. Currently, the log displays the last 25 K of messages it contains. Each management module maintains a separate log.

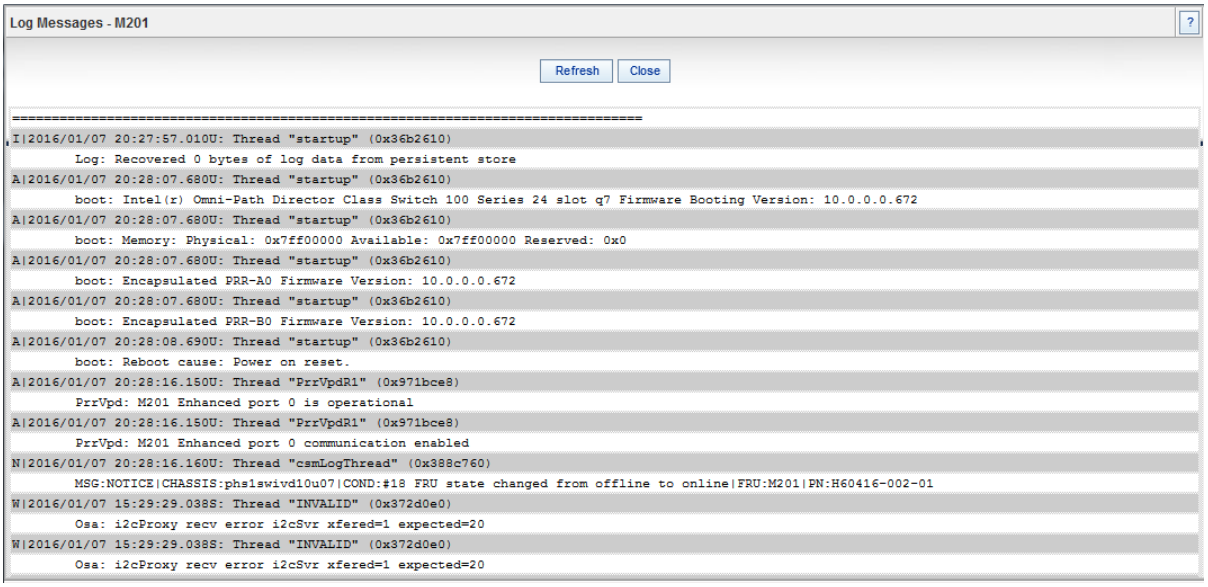
Note: You can also quickly view the message log by clicking the **View Log** button located on the Chassis Details toolbar.

Viewing the Log

To view the message log, perform the following steps:

1. From the Maintenance Module main menu, select **Logging.**
2. Click **View Log**.

   The **Log Message** window is displayed.



3. Click **Refresh** to refresh the messages.
4. Click **Close** to dismiss the window.

Saving the Log

To save a log message for further analysis, perform the following steps:

1. Use your Web Browser's capabilities to select and copy the text.
2. In a text editing package, such as Notepad, paste the text.
3. Save as a plain text (`.txt`) file.

5.1.3 Viewing the Log for the Intel® Omni-Path Edge Switch 100 Series

The **View Log** menu allows you to view a recent snapshot of the log. Currently, the log displays the last 25 K of messages it contains.

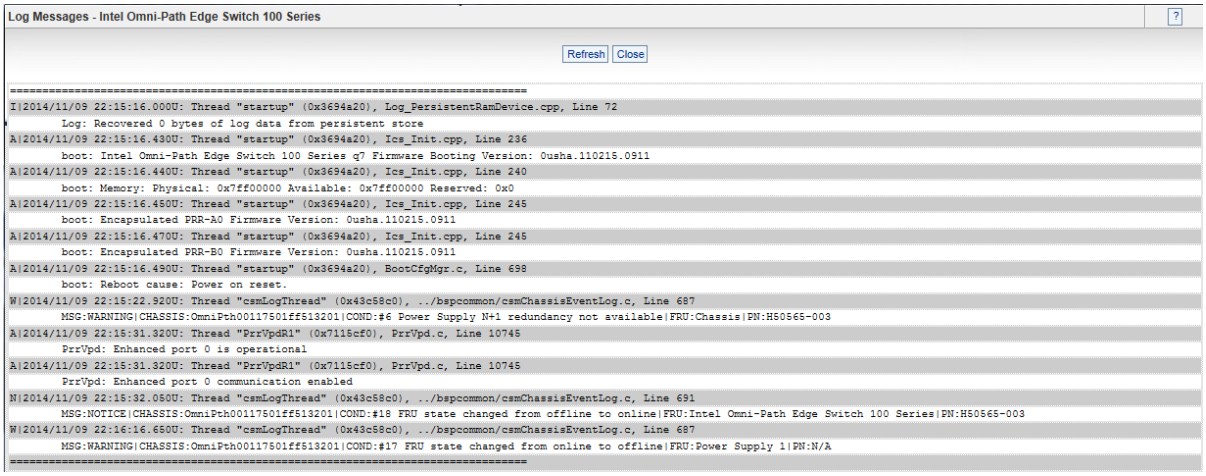
Note: You can also quickly view the message log by clicking the **View Log** button located on the Chassis Details toolbar.

Viewing the Log

To view the message log, perform the following steps:

1. From the Chassis Details main menu, select **Logging.**
2. Click **View Log**.

   The **Log Message** window is displayed.



3. Click **Refresh** to refresh the messages.
4. Click **Close** to dismiss the window.

Saving the Log

To save a log message for further analysis, perform the following steps:

1. Use your Web Browser's capabilities to select and copy the text.
2. In a text editing package, such as Notepad, paste the text.
3. Save as a plain text (`.txt`) file.

5.1.4 Setting Log Levels

The **Set Level** menu allows you to set log level configuration parameters for all software modules.

To efficiently set up log filtering, enable only those levels that need to appear in the log. The levels are handled by two layers:

- **Device Levels:** This allows you to select the levels of log messages to be saved.
- **Preset Layer:** This layer allows you to select the levels of messages the switch will generate. If the level is selected here, it can be logged against the Ram Device or the Syslog Device. Any unselected levels will not be logged against any device.

Setting Device Log Levels

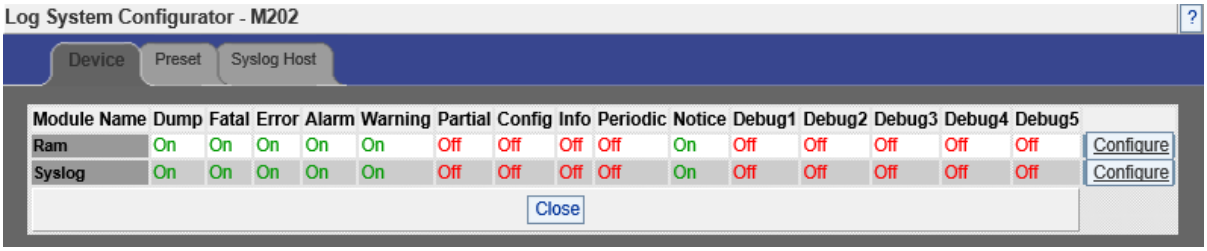
The **Device** tab presents current log level configuration settings for the following software modules:

- **RAM:** The circular log buffer contained in memory. To access the contents of this buffer, use the Chassis Viewer **View Log** button.
- **Syslog:** Messages that are sent to the syslog host.

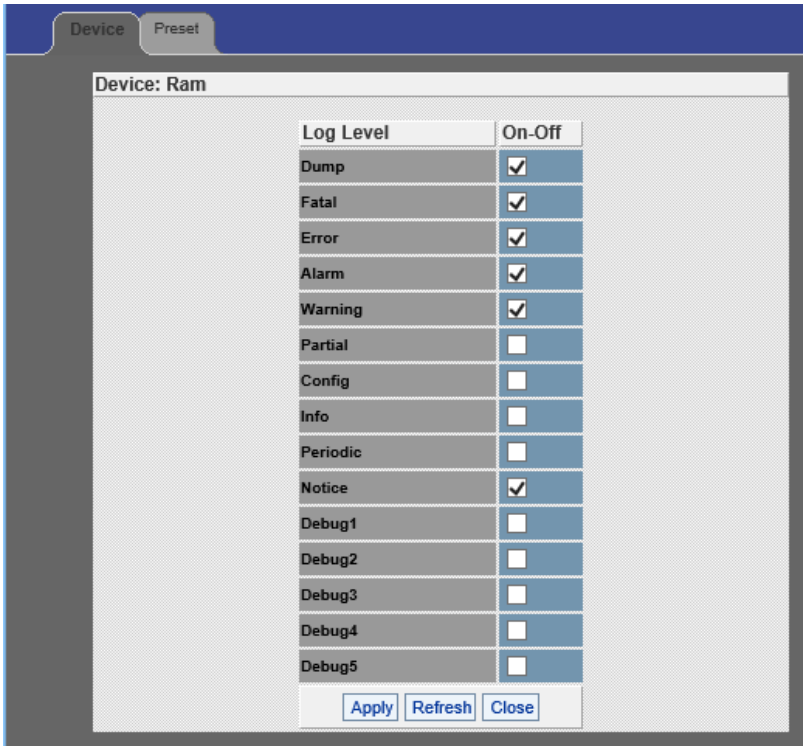
To set device log levels, perform the following steps:

1. From the Chassis Details main menu, select **Logging.**
2. Click **Set Level**.

   The **Log System Configurator** window (**Device** tab) is displayed.



3. For each module to be configured, click the **Configure** button. (Refer to Log System Configurator Field Descriptions on page 44 for field descriptions.)



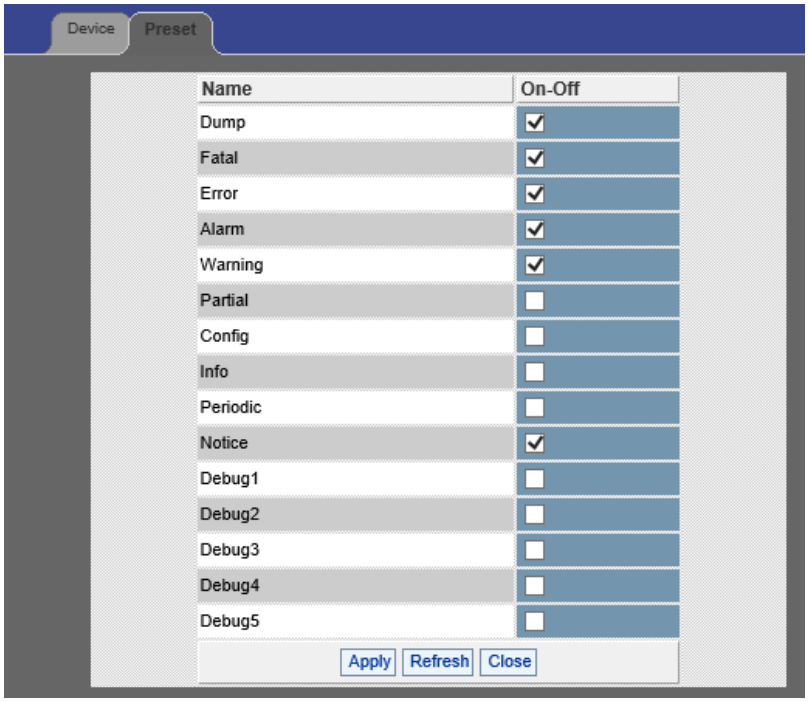
a. Select or clear the On-Off checkbox to set target log levels.
b. Click **Apply**.
c. Click **Close** to close the dialog and go back to the **Device** tab.

4. Click **Close** to dismiss the window.

Setting Preset Log Levels

To set preset log levels, perform the following steps:

1. From the Chassis Details main menu, select **Logging.**
2. Click **Set Level**.
3. Click on the **Preset** tab.

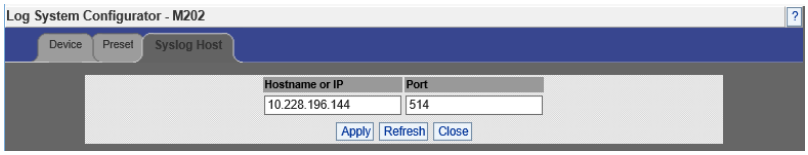


4. Select or clear the On-Off checkbox to set preset log levels. (Refer to Log System Configurator Field Descriptions for field descriptions.)
5. Click **Apply**.
6. Click **Close** to close the dialog and go back to the **Preset** tab.
7. Click **Close** to dismiss the window.

Setting the Syslog Host

To set syslog host, perform the following steps:

1. From the Chassis Details main menu, select **Logging.**
2. Click **Set Level**.
3. Click on the **Syslog Host** tab.



4. Enter the hostname or IP address for the syslog server.
5. Enter the port number.
6. Click **Apply** to apply changes.
7. Click **Refresh** to refresh information in the fields.
8. Click **Close** to dismiss the window.

Log System Configurator Field Descriptions

Descriptions for each field in the **Log System Configurator**, **Device** and **Preset** windows are listed in the following table.

Table 11. Log System Configurator Field Descriptions

Name	Description
DUMP	Indicates that a problem has caused the system to produce a system dump file. Intel recommends that you retrieve the dump that was produced. Support engineers may require the information contained in the dump file to diagnose the cause of the problem.
FATAL	Indicates that a non-recoverable system problem has occurred. You should reboot the system or component and verify that the subsystem is fully functional to determine whether the fault has been corrected. If the problem persists, you should contact the supplier.
ERROR	Indicates that a serious system error has occurred which might be recoverable. If the system exhibits any instability, you should reboot the system or component. If errors persist, you should immediately contact the supplier's technical support.
ALARM	Indicates that a serious problem has occurred which degrades capacity or service. If the error is recoverable, you should correct the failure. If the alarm/failure persists, you should reboot the system at a convenient time. If the problem is still not cleared, you should contact the supplier.
WARNING	Indicates that a recoverable problem has occurred. You do not need to take action.
PARTIAL	When more information is available, Partial causes additional message-related details to be displayed.
CONFIGURATION	An informational message indicating changes that a user has made to the system configuration. You do not need to take any action.
INFO	Informational messages that occur during a system or component boot. You do not need to take any action.
PERIODIC	An informational message containing periodic statistics. You do not need to take action.
NOTICE	Notice is used for failures that could be a result of "frequent" user actions, such as a server reboot.
Debug Message Levels 1 through 5 Debug messages are for supplier and engineering use and are not necessarily indicative of actions that you may need to take.	
DEBUG1	Messages that describe the states of connections and links.
DEBUG2	Messages that describe major configuration changes or operations.
DEBUG3	Messages that describe the I/O flow.
DEBUG4	Messages that contain the packet dumps within an I/O flow. I/O flows contain multiple packets.
DEBUG5	Messages that contain the packet dumps within an I/O flow. I/O flows contain multiple packets.
Syslog Host	
Hostname or IP	The hostname or IP address of the syslog server.
Port	The port number for the syslog server. The default is 514.

Caution: When configuring the log levels to display debug messages, be careful to ensure that system performance issues are weighed against troubleshooting requirements. Generally, the higher the debug number, the more information is written to the log. Specifically, DEBUG3 through DEBUG5 have the most effect on system performance.

5.1.5 Resetting Log Levels

The **Reset Levels** menu resets the logging levels to their factory default values.

To reset the logging levels, perform the following steps:

1. From the Chassis Details main menu, select **Logging.**
2. Click **Reset Levels**.
3. Click **OK** to reset logging or **Cancel**.

5.1.6 Purging the Log for the Intel® Omni-Path Director Class Switch 100 Series

The **Purge Log** menu purges the RAM, clearing the log files. For example, in order to clearly document the results of a troubleshooting test, the user would first purge the existing message log file.

To purge the log, perform the following steps:

1. From the Maintenance Module main menu, select **Logging**.
2. Click **Purge Log**.
3. Click **OK** to confirm purge.

   The message log file is purged.

5.1.7 Purging the Log for the Intel® Omni-Path Edge Switch 100 Series

The **Purge Log** menu purges the RAM, clearing the log files. For example, in order to clearly document the results of a troubleshooting test, the user would first purge the existing message log file.

To purge the log, perform the following steps:

1. From the Chassis Details main menu, select **Logging**.
2. Click **Purge Log**.
3. Click **OK** to confirm purge.

   The message log file is purged.

5.2 Maintenance

The **Maintenance** menu allows you to perform maintenance functions for the switch, including selecting an alternate firmware file for the switch and setting HTTP and CLI session time out parameters.

Note that submenu options may be different depending on the type of switch. The tasks in this section will note the applicable switch.

Figure 17. Chassis Detail Maintenance Menu for Intel® Omni-Path Edge Switch 100 Series

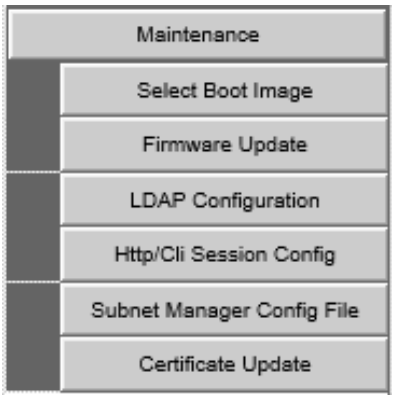


Figure 18. Chassis Detail Maintenance Menu for Intel® OP Director Class Switch 100 Series

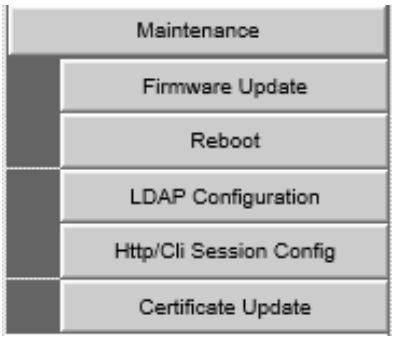
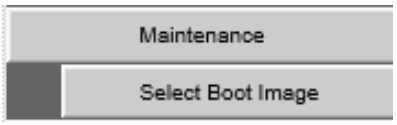


Figure 19. Management Module Maintenance Menu



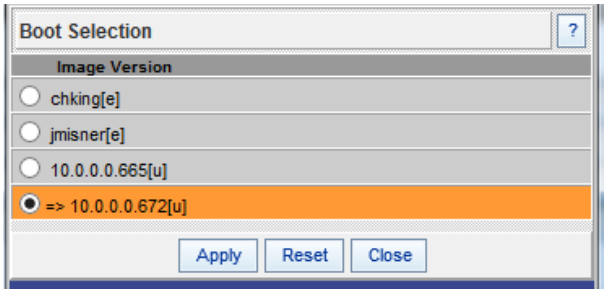
5.2.1 Selecting the Boot Image for the Intel® Omni-Path Director Class Switch 100 Series

The **Select Boot Image** menu allows you to choose an alternative boot image for the management module.

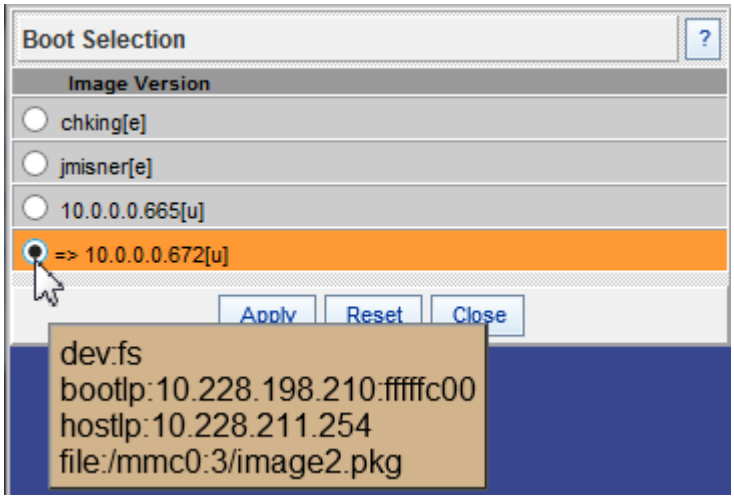
To select a boot image, perform the following steps:

1. From the Management Module main menu, select **Maintenance**.
2. Click **Select Boot Image**.

   The **Boot Image Selection** window is displayed.



3. You can view additional information about each file by placing your cursor over the image options in the **Boot Selection** window.



4. Select the new boot image.
5. Click **Apply** to activate the image the next time the card is rebooted or click **Reset** to return the window to its original state.
6. Click **Close** to close the window.

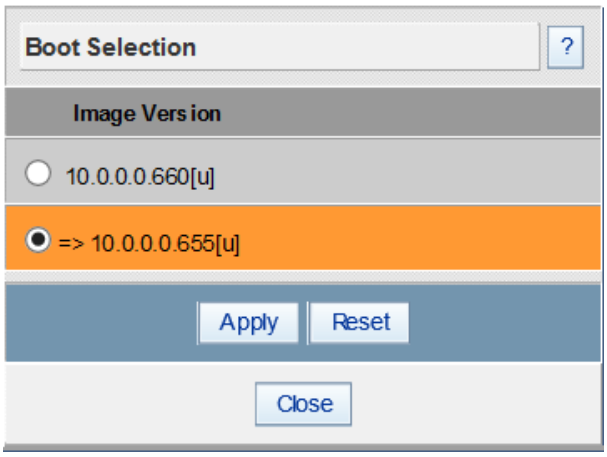
5.2.2 Selecting the Boot Image for the Intel® Omni-Path Edge Switch 100 Series

The **Select Boot Image** menu allows you to choose an alternative boot image for the switch.

To select a boot image, perform the following steps:

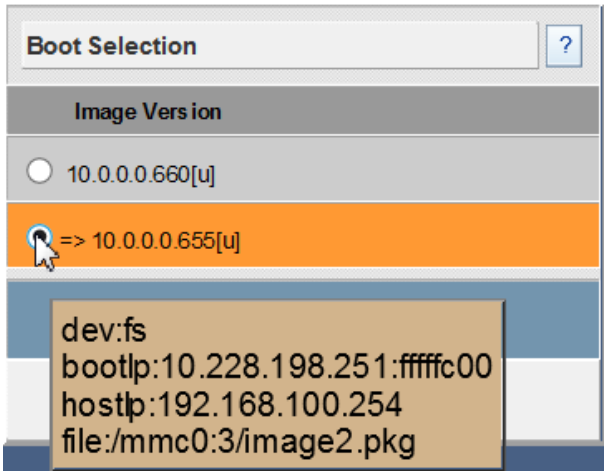
1. From the Chassis Details main menu, select **Maintenance**.
2. Click **Select Boot Image**.

   The **Boot Image Selection** window is displayed.



Note: The boot image that is currently active is indicated with an arrow (=>) to the left of the listing.

3. You can view additional information about each file by placing your cursor over the radio button in the **Boot Selection** window.



4. Select the new boot image radio button.
5. Click **Apply** to activate the image the next time the card is rebooted or click **Reset** to return the window to its original state.
6. Click **Close** to close the window.

5.2.3 Updating the Firmware for Intel® Omni-Path Director Class Switch 100 Series

The **Firmware Update** menu allows you to update firmware files and select an alternate firmware file to run at the next boot. The firmware files are listed in the **Firmware Update** window.

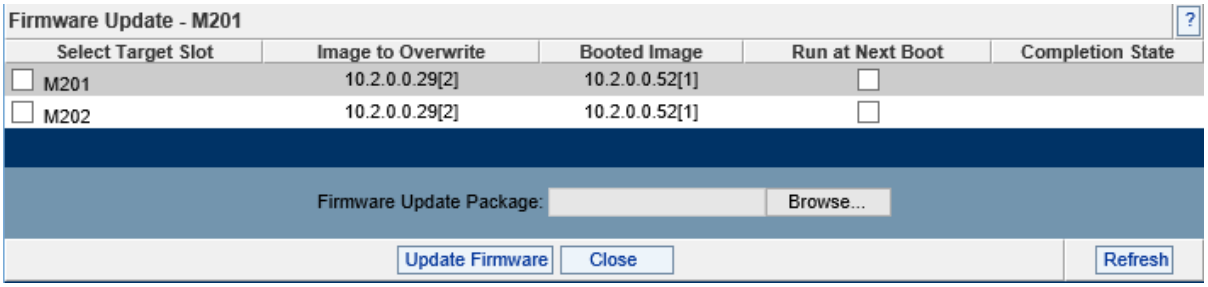
Note: Two firmware images are installed on each module: one is the active booted image and the other is available to be overwritten. You cannot update the active booted image.

To update both firmware images on each module, first update the Image to be Overwritten, reboot the switch to make it the booted image, then update the new Image to be Overwritten.

To update a firmware image, perform the following steps:

1. From the Chassis Details main menu, select **Maintenance**.
2. Click **Firmware Update**.

   The **Firmware Update** window is displayed.



3. In the **Select Target Slot** column, select the hardware component to change its firmware.

   Note: If there are multiple modules of the same type, you can select all slots that apply.
4. In the Firmware Update Package text box, enter the path to the alternate firmware file. If the path is not known, you can use the **Browse...** button to locate it.

   Note: Before using the **Browse...** button, make certain that the browser is tied to an SFTP server where the firmware files reside (that is, if the firmware file does not reside on the local computer).
5. Select the **Run at Next Boot** checkbox to have the new image become active after the next reboot.
6. Click the **Update Firmware** button.
7. Click **Refresh** to monitor the Completion State of the update.
8. Click **Close** to dismiss the **Firmware Update** window.
9. Reboot the management modules or entire chassis (refer to Rebooting the Intel® Omni-Path Director Class Switch 100 Series on page 33).

   The updated firmware is now the booted image.

5.2.4 Updating the Firmware for Intel® Omni-Path Edge Switch 100 Series

The **Firmware Update** menu allows you to update the firmware file by uploading an alternate firmware file to run at the next boot.

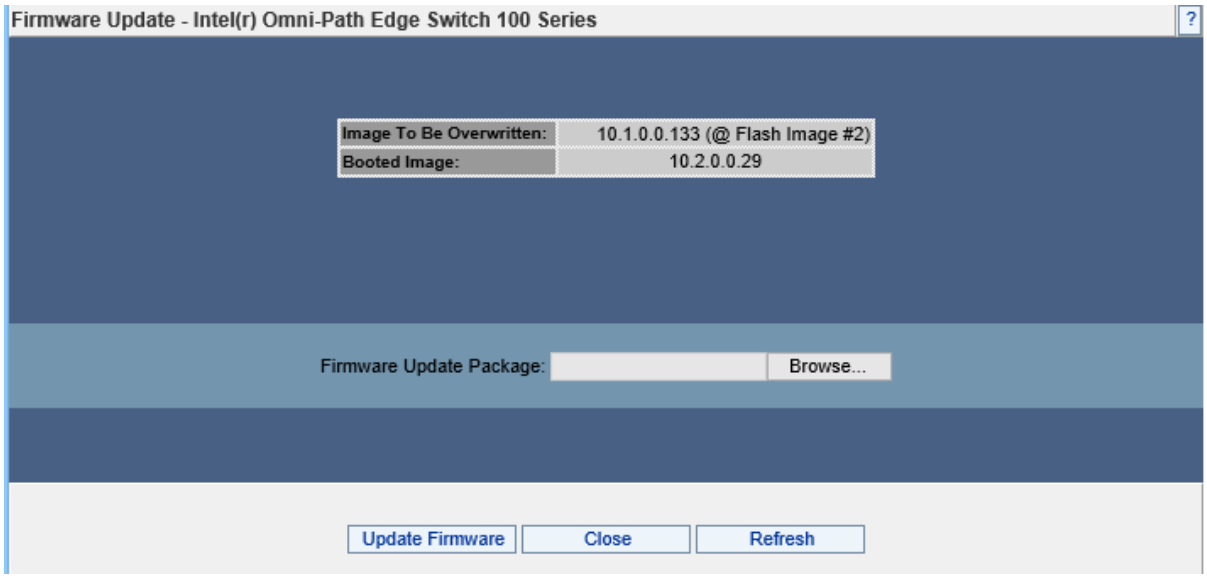
Note: Two firmware images are installed on each module: one is the active booted image and the other is available to be overwritten. You cannot update the active booted image.

To update both firmware images, first update the Image to be Overwritten, reboot the switch to make it the booted image, then update the new Image to be Overwritten.

To update a firmware file, perform the following steps:

1. From the Chassis Details main menu, select **Maintenance**.
2. Click **Firmware Update**.

   The **Firmware Update** window is displayed.



3. In the Firmware Update Package text box, enter the path to the alternate firmware file. If the path is not known, you can use the **Browse...** button to locate it.

   Note: Before using the **Browse...** button, make certain that the browser is tied to an SFTP server where the firmware files reside (that is, if the firmware file does not reside on the local computer).
4. Click the **Update Firmware** button.
5. Click **Refresh** to monitor the Completion State of the update.
6. Click **Close** to dismiss the **Firmware Update** window.
7. Reboot the switch (refer to Rebooting the Intel® Omni-Path Edge Switch 100 Series on page 33).

   The updated firmware is now the booted image.

5.2.5 Configuring LDAP Authentication

The lightweight directory access protocol (LDAP) configuration feature allows you to set and configure authentication for the switch. The LDAP service resides on a server that has access to a usercode and password database.

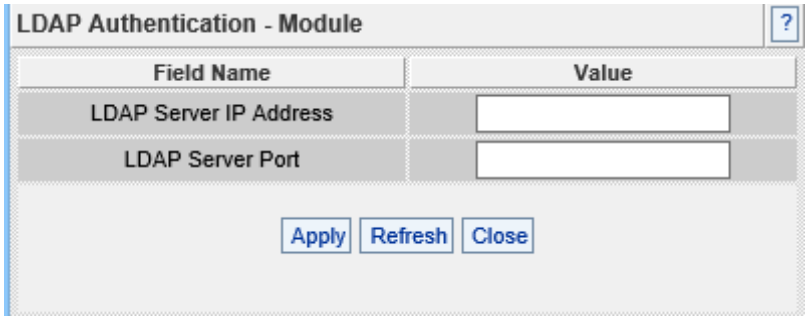
When a user attempts to log into either the Chassis Viewer or the console, the LDAP client intercepts the login attempt and rather than authenticating internally, encrypts and packages the information in an LDAP packet and sends it to a pre-configured LDAP server over TCP/IP (that is, the out-of-band LAN). The LDAP server receives the request, passes it on to the authentication services, and responds to the client with a yes or no, either allowing or denying the user access.

When LDAP is disabled, internal authentication becomes the default.

To set up LDAP authentication, perform the following steps:

1. From the Chassis Details main menu, select **Maintenance**.
2. Click **LDAP Configuration**.

   The **LDAP Authentication** window is displayed.



3. In the **LDAP Server IP Address** field, enter the address of the applicable LDAP server.
4. In the **LDAP Server Port** field, enter the applicable server port number (the default is 389).
5. Click **Apply** to update the IP Address and Port of the server.
6. Click **Refresh** to refresh the window.
7. Click **Close** to close the window.

5.2.6 Configuring the HTTP/CLI Session

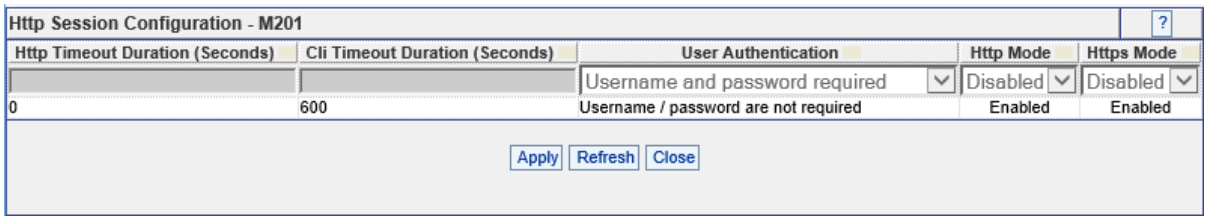
The hypertext transfer protocol (HTTP) and command line interface (CLI) session configuration feature allows you to set HTTP and CLI session time out parameters, as well as set security requirements for the switch.

The session time out duration is the length of time that a session remains active if there is no user interaction. If a session is inactive for a time exceeding the time out duration, you are logged out.

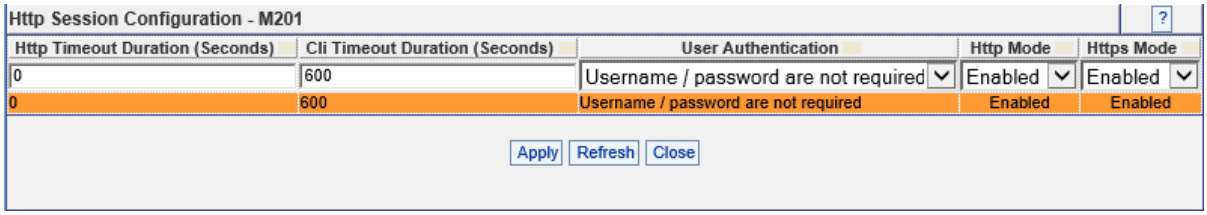
To configure the HTTP/CLI session, perform the following steps:

1. From the Chassis Details main menu, select **Maintenance**.
2. Click **HTTP/CLI Session Config**.

   The **HTTP/CLI Session Configuration** window is displayed.



3. To modify any of the settings, click on the existing configuration row (highlighted in the previous screen). The row changes to orange.



4. In the **HTTP Timeout Duration** field, enter the new timeout duration, in seconds. The default is 0 seconds (no timeout).
5. In the **CLI Timeout Duration** field, enter the new timeout duration, in seconds. The default is 600 seconds.
6. To change the **User Authentication** parameter, click the **User Authentication** drop-down button.

   Select the preferred user authentication method.

   - **Username and password required** - UserName and Password must be entered, and must match what is in the database of the local switch.
   - **Password is not required** - According to the local switch database, a valid username must be entered. A password is not required.
   - **Username / Password are not required** - Does not require username or password.
   - **LDAP Authentication** - Use an LDAP server. If the user name/password validation fails to complete successfully, check the database of the local switch.
7. To change the **HTTP Mode** parameter, click the drop-down menu and select **Enabled** or **Disabled**.
8. To change the **HTTPs Mode** parameter, click the drop-down menu and select **Enabled** or **Disabled**.
9. Click **Apply** to apply settings.
10. Click **Refresh** to refresh all fields with the latest information.
11. Click **Close** to close the window.

5.2.7 Managing the Subnet Manager Configuration File for the Intel® Omni-Path Edge Switch 100 Series

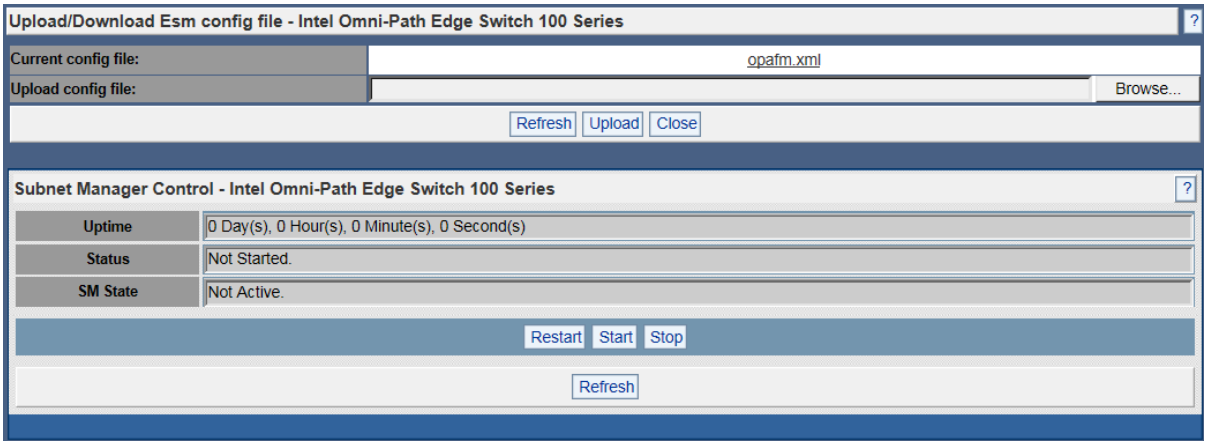
The **Subnet Manager Configuration File** window allows you to upload Intel® Omni-Path Fabric Suite Fabric Manager embedded subnet manager configuration files, as well as start and restart the subnet manager using the new file.

Note: This window also can be accessed from the main menu through the **Config File Admin** menu.

To upload a new configuration file, perform the following steps:

1. From the Chassis Details main menu, select **Config File Admin**.
2. Click **Subnet Manager Config File**.

   The **Subnet Manager Configuration** window is displayed.



3. In the Upload Config File text box, enter the path to the alternate embedded subnet manager file (`opafm.xml`). If the path is not known, you can use the **Browse...** button to locate it.
4. Once the new file is located, click the **Upload** button.
5. In the **Subnet Manager Control** window, click **Stop**, **Refresh**, then **Restart** to activate the new file.
6. Click **Close** to dismiss the window.

Subnet Manager Control Field Descriptions

Descriptions for each field under **Subnet Manager Control** are listed in the following table.

Table 12. Subnet Manager Control Field Descriptions

Name	Description
Uptime	Indicates the amount of time the SM has been running.
Status	Provides information about the status of the Fabric OS, including:

continued...

Name	Description
	• Starting Up • Running • Shutting Down • Not Started
SM State	Indicates whether the SM is the Master (Active) Subnet Manager in the Fabric.

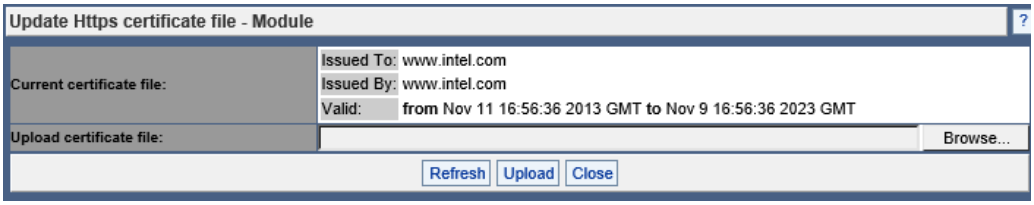
5.2.8 Updating the Certificate

The **Update Https certification file** window allows you to upload a new HTTPS certificate.

To update the certificate, perform the following steps:

1. From the Chassis Details main menu, select **Maintenance**.
2. Click **Certificate Update**.

   The **Update Https certificate file** window is displayed.

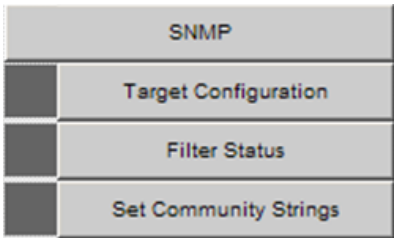


3. In the Update certificate file field, enter the path to the certificate. If the path is not known, you can use the **Browse...** button to locate it.
4. Once the new file is located, click the **Upload** button.
5. Click **Refresh** to refresh the window.
6. Click **Close** to close the window.

5.3 SNMP

The **SNMP** menu allows you to view and modify SNMP trap configuration information.

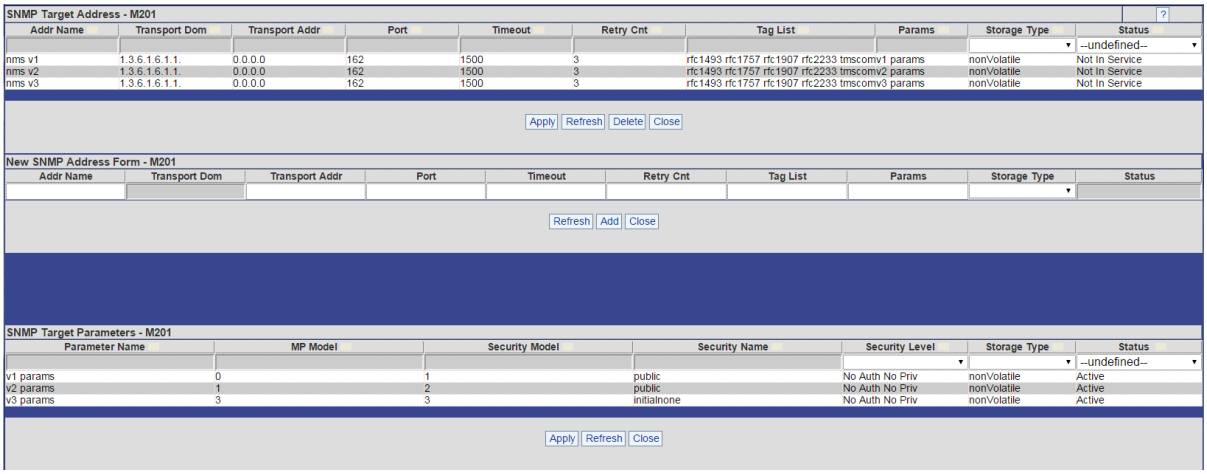
Figure 20. Chassis Detail SNMP Menu



5.3.1 Configuring SNMP Targets

The **Target Configuration** menu displays the **SNMP Target Configuration** window, allowing you to manage SNMP trap destinations and target parameters.

Note: Though you can create new target addresses with this menu, you cannot create new target parameters. Target parameters can only be created using the CLI.



The **SNMP Target Configuration** window is split into three panes:

- **SNMP Target Addresses** (top) allows you to determine what type of SNMP traps are sent, and where they are sent. The rows provide an area for specifying multiple trap destinations.
- **New SNMP Address Form** (middle) allows you to record new SNMP address information for the applicable module.
- **SNMP Target Parameters** (bottom) allows you to configure each trap destination with version, optional security information, and filtering mechanisms.

Modifying an SNMP Target Address

To modify an SNMP Target Address, perform the following steps:

1. From the Chassis Details main menu, select **SNMP**.
2. Click **Target Configuration**.

   The **SNMP Target Configuration** window is displayed.
3. In the SNMP Target Addresses pane, select the row to be modified.
4. Edit the following fields as necessary (refer to SNMP Target Configuration Field Descriptions on page 57 for field descriptions):
   - Transport Address
   - Port
   - Timeout
   - Retry Count
   - Tag List
   - Parameters

- Storage Type
- Status

5. Click **Apply** to apply settings.
6. Click **Refresh** to refresh settings.
7. Click **Close** to close the window.

Deleting an SNMP Target Address

To delete an SNMP Target Address, perform the following steps:

1. From the main menu, select **SNMP**.
2. Click **Target Configuration**.

   The **SNMP Target Configuration** window is displayed.
3. In the SNMP Target Addresses pane, select the row to be deleted.
4. Click **Delete** to delete an address
5. Click **Refresh** to refresh settings.
6. Click **Close** to close the window.

Adding a New SNMP Address

To add a new SNMP Address, perform the following steps:

- From the main menu, select **SNMP**.
- Click **Target Configuration**.

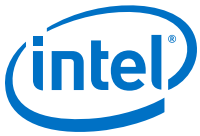
  The **SNMP Target Configuration** window is displayed.
- In the New SNMP Address Form pane, enter the following information (refer to SNMP Target Configuration Field Descriptions on page 57 for field descriptions):
  - Address Name
  - Transport Address
  - Port
  - Timeout
  - Retry Count
  - Tag List
  - Parameters
  - Storage Type
- Click **Add** to add the address.
- Click **Refresh** to refresh settings.
- Click **Close** to close the window.

Modifying an SNMP Target Parameter

Note: Changes can only be made to rows that have a status of **Not In Service**.

To modify an SNMP Target Parameter, perform the following steps:

1. From the main menu, select **SNMP**.



2. Click **Target Configuration**.

   The **SNMP Target Configuration** window is displayed.
3. In the SNMP Target Parameters pane, select the row to be modified.
4. For Status, select *Not In Service* from the drop-down menu.
5. Edit the following fields as necessary (refer to SNMP Target Configuration Field Descriptions on page 57 for field descriptions):
   - Parameter Name
   - MP Model
   - Security Model
   - Security Name
   - Security Level
   - Retry Count
   - Storage Type
6. For Status, select *Active* from the drop-down menu.
7. Click **Apply** to apply settings.
8. Click **Refresh** to refresh settings.
9. Click **Close** to close the window.

Creating a New Target Parameter

You must use the CLI to create a new target parameter.

To create a new target parameter, use CLI to enter the following syntax:

```
snmpTargetAddr add -n name -a addr [-p port] [-t timeout] [-r retry_count] [-l
        tag_list] [-v parameters] [-s storage_type]
```

For example, to add a trap target with the IP address 192.168.0.123 that accepts SNMP v2c style traps:

```
snmpTargetAddr add -n traphost1 -a 192.168.0.123 -v "v2 params"
```

Or, to add the same target except using SNMP v1 traps:

```
snmpTargetAddr add -n traphost1 -a 192.168.0.123 -v "v1 params"
```

SNMP Target Configuration Field Descriptions

Descriptions for each field in the **Target Configuration** window are listed in the following table.

Table 13. SNMP Target Configuration Field Descriptions

Name	Description
SNMP Target Addresses and **New SNMP Address Form**	
Address Name	Specifies a unique, administrator-defined name the system uses to identify a row.
Transport Domain	Specifies the transport type of the address contained in the snmpTargetAddrTAddress object (for example, 1.3.6.1.6.1.1 = udp, 1.3.6.1.4.1.1977.200.1 = tcp).
Transport Address	Specifies the IP address in dotted decimal format. *Note:* The combination of the Transport Domain and the Transport Address determines the trap destination.
Port	Specifies the TCP or UDP port where the SNMP trap is sent.
Timeout	Specifies the time (in milliseconds) that the trap sender waits on a response before re-sending the trap.
Retry Count	Specifies the number of attempts to be made to send the trap after a timeout condition occurs. *Note:* Timeout and Retry Count are SNMP v2.c and above (not applicable for v1 traps).
Tag List	Specifies which traps will be sent to this particular destination. *Note:* RFC2233 specifies the link up/down traps. Including RFC2233 in the Tag List specifies that the trap receiver gets link up/down traps.
Parameters	Specifies a mapping to an entry in the SNMP Target Parameters table, determining the version of SNMP to use.
Storage Type	Determines whether or not the entry is saved for each reboot of the switch. • *Nonvolatile* means that the value is saved, and remains after each subsequent reboot. • *Volatile* or *Other* indicates it is not saved.
Status	Indicates the current status of the row. The row may be in one of three states: • *Active* • *Not In Service* • *Not Ready* *Note:* A status of *Not In Service* indicates that the current row is not used in the event a trap is generated by the system. Toggling a trap to *Not In Service*, which temporarily suspends trap forwarding, may be useful to keep values intact.
SNMP Target Parameters	
Parameter Name	Specifies a mapping to an entry in the SNMP Target Parameters table, determining the version of SNMP to use.
MP Model	Specifies the Message Processing Model to be used when generating SNMP messages for entry. Values for this field are 0 for SNMP v1, 1 for SNMP v2 and 3 for SNMP v3.
Security Model	Specifies the Security Model to be used when generating SNMP messages using this entry. Values for this field are 1 for SNMP v1, 2 for SNMP v2, or 3 for SNMP v3.
Security Name	Specifies the entity for whom SNMP messages are generated. *Note:* This is equivalent to the community string in an SNMP get.
Security Level	One of three options: • *NoAuthNoPriv*: No Authentication, no privacy. • *AuthNoPriv*: Authentication, no privacy.

continued...

Name	Description
	• *AuthPriv*: Authentication and privacy
Storage Type	Specifies whether or not the entry is saved for each reboot of the switch. • *Nonvolatile* means that the value is saved, and remains after each subsequent reboot. • *Volatile* or *Other* indicates it is not saved.
Status	Indicates the current status of the row. The row may be in one of three states: • *Active* • *Not In service* • *Not Ready* *Note:* A status of *Not In Service* indicates that the current row is not used in the event a trap is generated by the system. Toggling a trap to *Not In Service*, which temporarily suspends trap forwarding, may be useful to keep values intact.

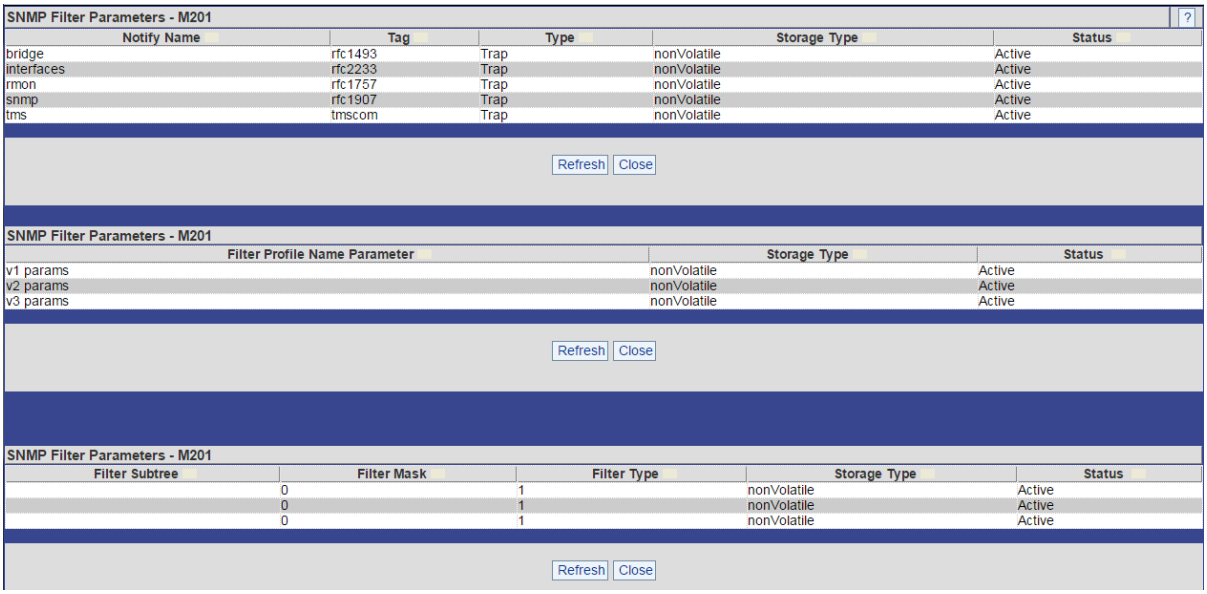
5.3.2 Viewing the Filter Status

The **SNMP Filter Status** menu allows you to view parameters for RFC 2273 (SNMP-NOTIFICATION-MIB).

To view the **SNMP Filter Status**, perform the following steps:

1. From the Chassis Details main menu, select **SNMP**.
2. Click **Filter Status**.

   The **SNMP Filter Status** window is displayed.



3. Click **Refresh** to refresh the status window.
4. Click **Close** to close the status window.

SNMP Filter Status Field Descriptions

Descriptions for each field in the **Filter Status** window are listed in the following table.

Table 14. SNMP Filter Status Field Descriptions

Name	Description
Top Pane	
Notify Name	Only traps and informs are generated for notify names of interfaces, SNMP and TMS. All traps originating from a line card fall into the TMS group.
Tag	Specifies the MIB tag.
Type	Specifies the type of messages to be sent to a management workstation. Either Trap (1) or Inform (2) messages may be specified in this column.
Storage Type	Determines whether or not the entry is saved for each reboot of the switch. • *Nonvolatile* means that the value is saved, and remains after each subsequent reboot. • *Volatile* or *Other* indicates it is not saved.
Status	Indicates the current status of the row. The row may be in one of several states: • *Not In Service* • *Active*
Middle Pane	
Filter Profile Name Parameter	The name of the filter profile to be used when generating notifications using the corresponding entry in the snmpTargetAddrTable.
Storage Type	Determines whether or not the entry is saved for each reboot of the switch. • *Nonvolatile* means that the value is saved, and remains after each subsequent reboot. • *Volatile* or *Other* indicates it is not saved.
Status	Indicates the current status of the row. The row may be in one of several states: • *Not In Service* • *Active*
Bottom Pane	
Filter Subtree	The MIB subtree which, in combination with the corresponding instance of snmpNotifyFilterMask, defines a family of subtrees which are included in or excluded from the filter profile.
Filter Mask	The bit mask which, in combination with the corresponding instance of snmpNotifyFilterSubtree, defines a family of subtrees which are included in or excluded from the filter profile.
Filter Type	This object indicates whether the family of filter subtrees defined by this entry are included in or excluded from a filter.
Storage Type	Determines whether or not the entry is saved for each reboot of the switch. • *Nonvolatile* means that the value is saved, and remains after each subsequent reboot. • *Volatile* or *Other* indicates it is not saved.
Status	Indicates the current status of the row. The row may be in one of several states: • *Not In Service* • *Active*

5.3.3 Setting Community Strings

The **Set Community Strings** menu allows you to set two SNMP community names:

- Read Only Community Name

Read Only Comm. Name is the community string that, when specified in an SNMP client, allows read-only access to SNMP fields exported by the SNMP server.

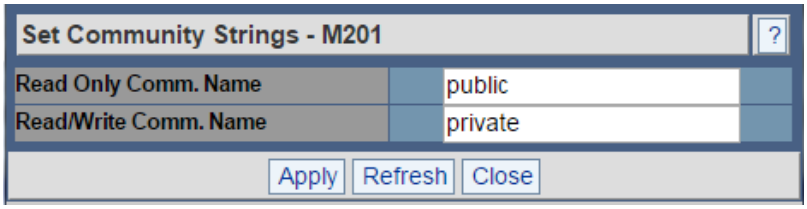
- Read/Write Community Name

  Read/Write Comm. Name is the community string that, when specified in an SNMP client, allows read and write access to SNMP fields exported by the SNMP server.

To set the Community Strings, perform the following steps:

1. From the Chassis Details main menu, select **SNMP**.
2. Click **Set Community Strings**.

   The **Set Community Strings** window is displayed.

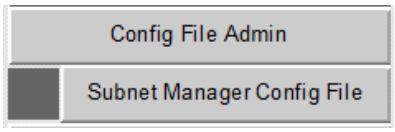


3. For **Read Only Comm. Name** field, enter a meaningful name (for example, **public**).
4. For **Read/Write Comm. Name** field, enter a meaningful name (for example, **private**).
5. Click **Apply** to apply the settings.
6. Click **Refresh** to refresh the settings.
7. Click **Close** to close the window.

5.4 Configuration File Administration

The **Config File Admin** menu allows you to upload and download new Fabric Manager embedded subnet manager files, as well as start and restart all applicable master and standby subnet managers using the new file via the **Subnet Manager Configuration File** menu option.

Figure 21. Chassis Detail Config File Admin Menu



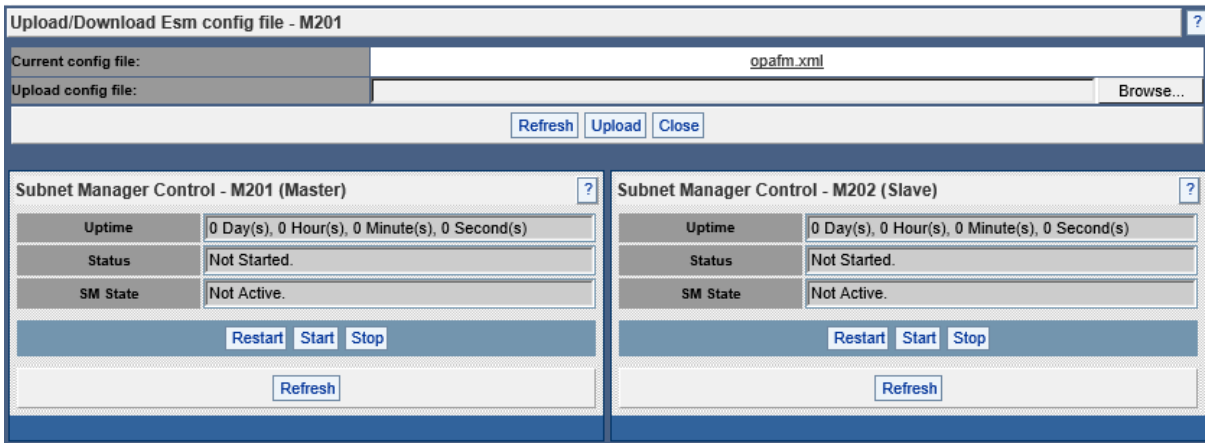
5.4.1 Managing the Subnet Manager Configuration File for the Intel® Omni-Path Director Class Switch 100 Series

The **Subnet Manager Configuration File** window allows you to upload Intel® Omni-Path Fabric Suite Fabric Manager embedded subnet manager configuration files, as well as start and restart all applicable master and standby subnet managers using the new file.

To upload a new configuration file, perform the following steps:

1. From the Chassis Details main menu, select **Config File Admin**.
2. Click **Subnet Manager Config File**.

   The **Subnet Manager Configuration File Upload/Download** window is displayed.



3. In the Upload Config File text box, enter the path to the alternate embedded subnet manager file (`opafm.xml`). If the path is not known, you can use the **Browse...** button to locate it.
4. Once the new file is located, click the **Upload** button.
5. In the **Subnet Manager Control (Master)** window, click **Stop**, **Refresh**, then **Restart** to activate the new file.
6. In the **Subnet Manager Control (Slave)**, click **Refresh** to have the new file become active.
7. Click **Close** to dismiss the window.

Subnet Manager Control Field Descriptions

Descriptions for each field under **Subnet Manager Control** are listed in the following table.

Name	Description
Uptime	Indicates the amount of time the SM has been running.
Status	Provides information about the status of the Fabric OS, including: • Starting Up • Running • Shutting Down • Not Started
SM State	Indicates whether the SM is the Master (Active) Subnet Manager in the Fabric.

5.4.2 Managing the Subnet Manager Configuration File for the Intel® Omni-Path Edge Switch 100 Series

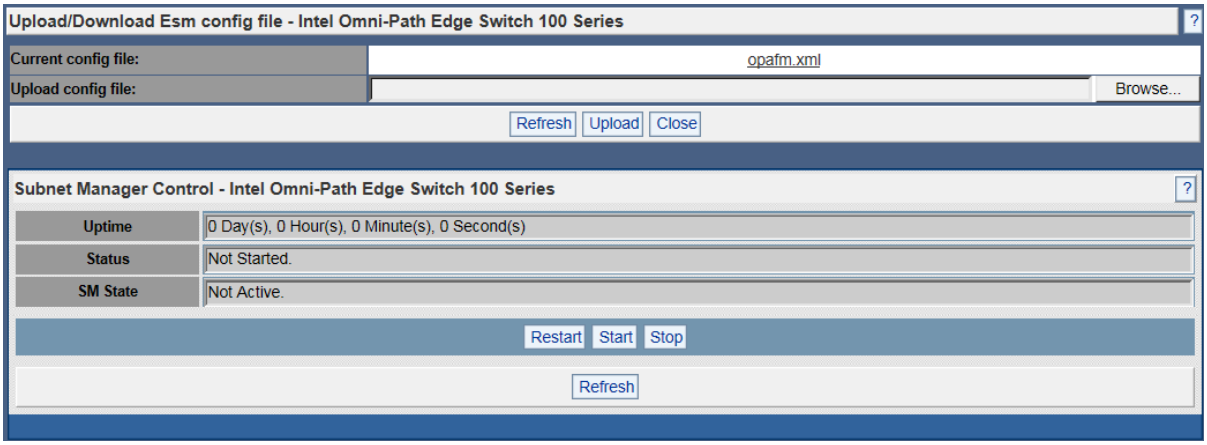
The **Subnet Manager Configuration File** window allows you to upload Intel® Omni-Path Fabric Suite Fabric Manager embedded subnet manager configuration files, as well as start and restart the subnet manager using the new file.

Note: This window also can be accessed from the main menu through the **Maintenance** menu.

To upload a new configuration file, perform the following steps:

1. From the Chassis Details main menu, select **Config File Admin**.
2. Click **Subnet Manager Config File**.

   The **Subnet Manager Configuration** window is displayed.



3. In the Upload Config File text box, enter the path to the alternate embedded subnet manager file (`opafm.xml`). If the path is not known, you can use the **Browse...** button to locate it.
4. Once the new file is located, click the **Upload** button.
5. In the **Subnet Manager Control** window, click **Stop**, **Refresh**, then **Restart** to activate the new file.
6. Click **Close** to dismiss the window.

Subnet Manager Control Field Descriptions

Descriptions for each field under **Subnet Manager Control** are listed in the following table.

Name	Description
Uptime	Indicates the amount of time the SM has been running.
Status	Provides information about the status of the Fabric OS, including: • Starting Up • Running

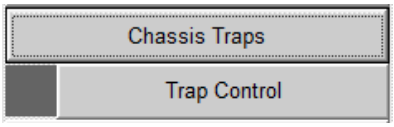
continued...

Name	Description
	• Shutting Down • Not Started
SM State	Indicates whether the SM is the Master (Active) Subnet Manager in the Fabric.

5.5 Chassis Traps

The **Chassis Traps** menu allows you to set default trap scenarios related to the chassis, via the **Trap Control** menu option. Traps can be set for chassis performance, chassis power supplies, and chassis fans.

Figure 22. Chassis Detail Chassis Traps Menu



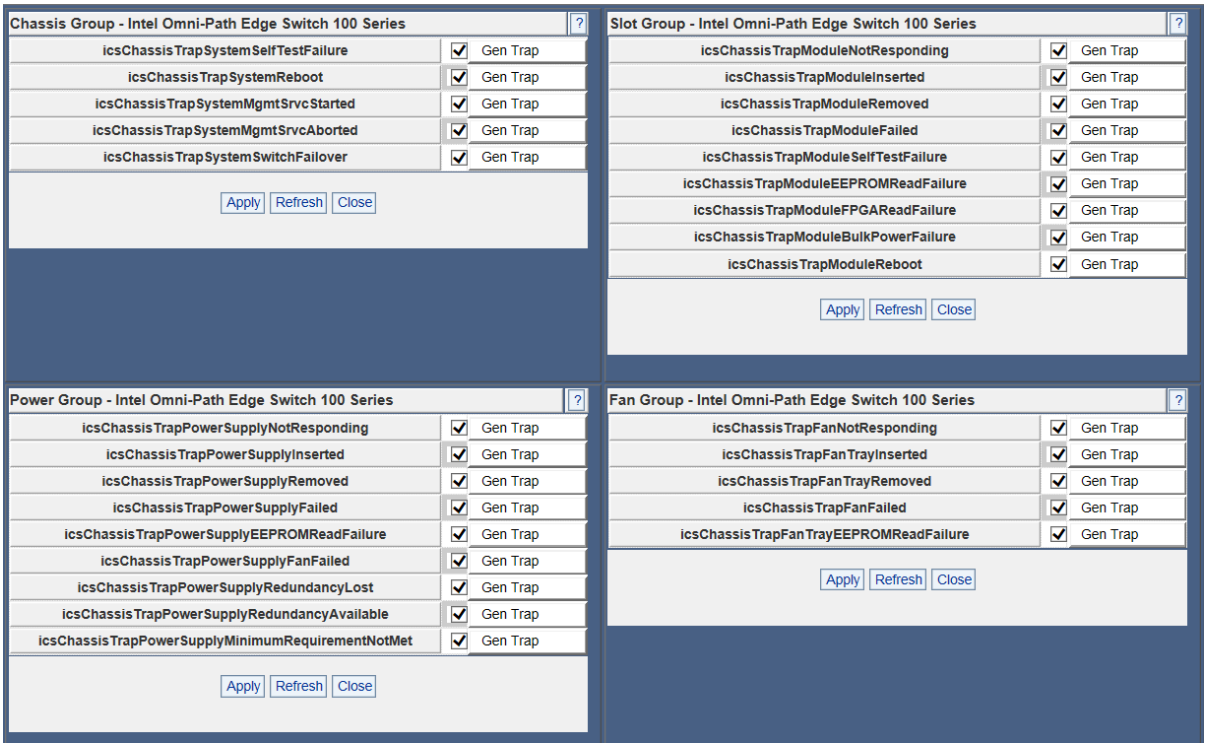
5.5.1 Setting Chassis Trap Scenarios

The **Chassis Trap Control** window allows you to set default trap scenarios related to the switch.

To set the chassis traps scenarios, perform the following steps:

1. From the Chassis Details main menu, select **Chassis Traps**.
2. Click **Trap Control**.

   The **Chassis Trap Control** window is displayed.



3. Select or clear the desired traps.

   Refer to Trap Control Field Descriptions on page 65.
4. To generate an immediate trap, click the applicable **Gen Trap** button.
5. Click **Apply** to save settings for each category.
6. Click **Refresh** to refresh the settings.
7. Click **Close** to close the window.

Trap Control Field Descriptions

Definitions for each chassis trap are listed in the following table.

Table 15. Trap Control Field Descriptions

Name	Description
Chassis Group	
icsChassisTrapSystemSelfTestFailure	The chassis failed one or more of its self-tests.
icsChassisTrapSystemReboot	The chassis is in the process of rebooting.
icsChassisTrapSystemMgmtSrvcStarted	The internal service used to support the management of the chassis is operational.
icsChassisTrapSystemMgmtSrvcAborted	The internal service used to support the management of the chassis has terminated abnormally.
icsChassisTrapSystemSwitchFailover	There was a fail over from one switch in the chassis to the other.

continued...

Name	Description
Slot Group	
icsChassisTrapModuleNotResponding	A module is not responding to HEARTBEAT poll requests, that are issued by the internal chassis management service.
icsChassisTrapModuleInserted	A module was inserted into the chassis.
icsChassisTrapModuleRemoved	A module was removed from the chassis.
icsChassisTrapModuleFailed	A module has failed and is not operational.
icsChassisTrapModuleSelfTestFailure	The module failed one or more of its self tests.
icsChassisTrapModuleEEPROMReadFailure	An error condition was encountered when reading the EEPROM of the module.
icsChassisTrapModuleFPGAReadFailure	An error condition was encountered when reading the Field-Programmable Gate Array (FPGA) of the module.
icsChassisTrapModuleBulkPowerFailure	The bulk power used by a module has failed within the chassis.
icsChassisTrapModuleReboot	The module is in the process of rebooting.
Power Group	
icsChassisTrapPowerSupplyNotResponding	A power supply is not responding to HEARTBEAT poll requests that are issued by the internal chassis management service.
icsChassisTrapPowerSupplyInserted	A power supply was inserted into the chassis.
icsChassisTrapPowerSupplyRemoved	A power supply was removed from the chassis.
icsChassisTrapPowerSupplyFailed	A power supply has failed and is not operational.
icsChassisTrapPowerSupplyEEPROMReadFailure	An error condition was encountered when reading the EEPROM of the power supply.
icsChassisTrapPowerSupplyFanFailed	A power supply fan has failed and is not operational.
Fan Group	
icsChassisTrapFanNotResponding	A fan is not responding to HEARTBEAT poll requests that are issued by the internal chassis management service.
icsChassisTrapFanTrayInserted	A fan was inserted into the chassis.
icsChassisTrapFanTrayRemoved	A fan was removed from the chassis.
icsChassisTrapFanFailed	A fan has failed and is not operational.
icsChassisTrapFanTrayEEPROMReadFailure	An error condition was encountered when reading the EEPROM of the fan tray.

5.6 Port Statistics

The **Port Stats** menu allows you to monitor port statistics and to enable a port LEDs to flash, assisting a user in locating a port.

Figure 23. Chassis Detail Port Stats Menu

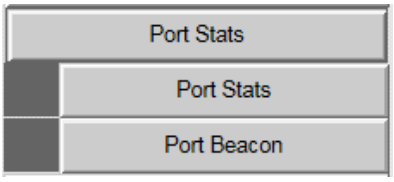
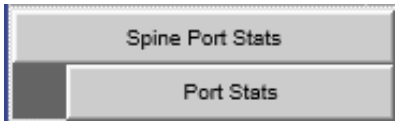


Figure 24. Leaf Port Stats Menu

Figure 25. Spine Port Stats Menu



5.6.1 Viewing Port Statistics

The **Port Stats** menu allows you to monitor various statistics pertaining to each port of the switch.

Note: On Intel® Omni-Path Director Class Switch 100 Series, the Port Stats feature can also be accessed using the Spine and Leaf module main menus.

To view port statistical information, perform the following steps:

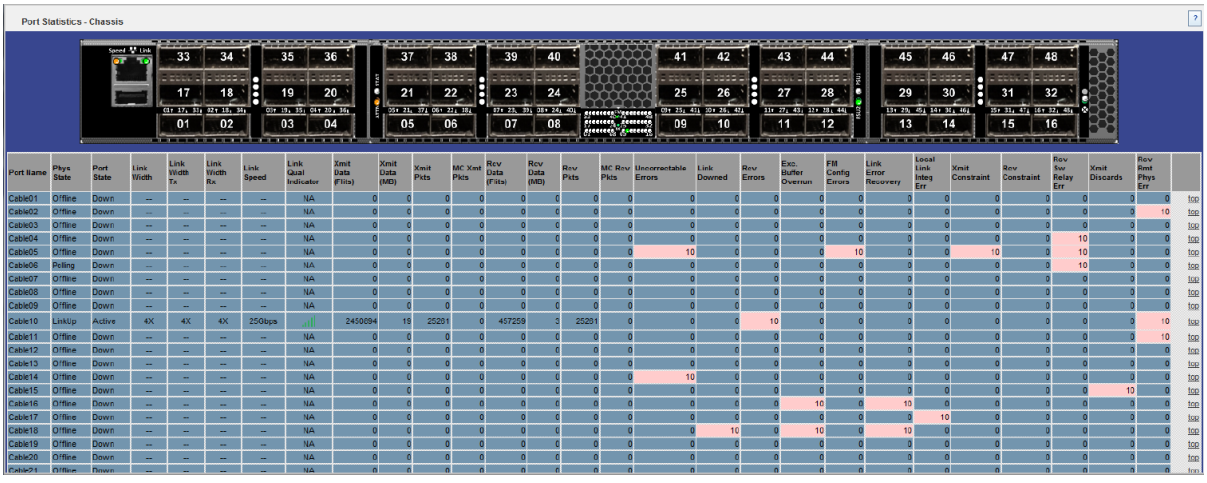
1. From the Chassis Details main menu, click **Port Stats**.
2. Click **Port Stats**.

   The **Port Statistics** window is displayed.

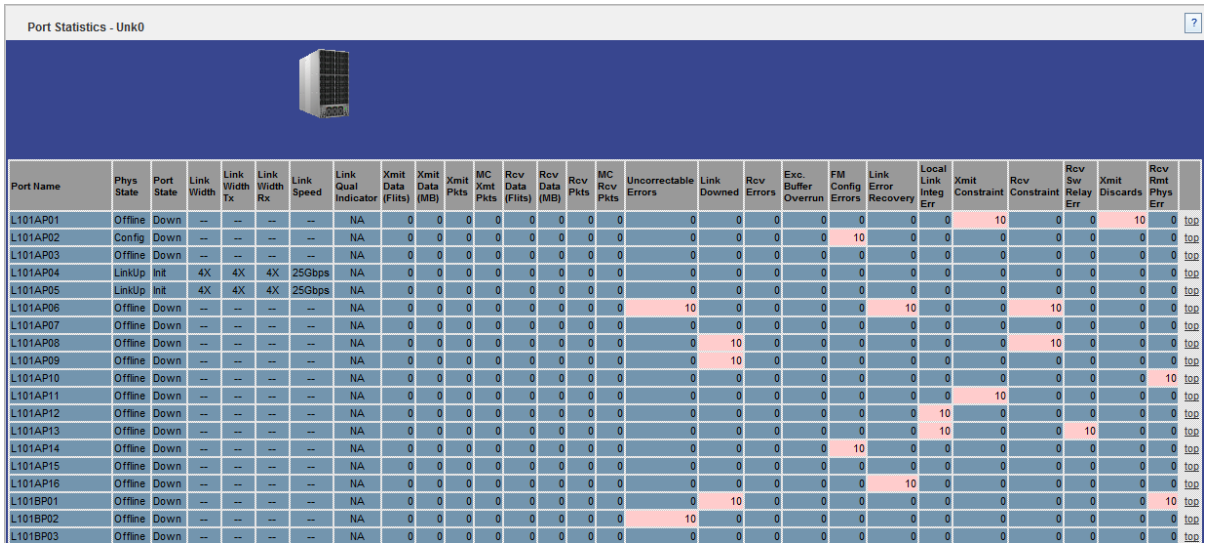
   Note: It may take some time for all the ports to display since it is pulling information from multiple modules.

   Note: The samples below show partial screenshots for both Intel® OP Edge Switch 100 Series and Intel® OP Director Class Switch 100 Series.

   The example below shows the Intel® OP Edge Switch 100 Series:



   The example below shows the Intel® OP Director Class Switch 100 Series:



Port Name	Phys State	Port State	Link Width	Link Width Tx	Link Width Rx	Link Speed	Link Qual Indicator	Xmit Data (Flits)	Xmit Data (MB)	Xmit Pkts	MC Xmt Pkts	Rcv Data (Flits)	Rcv Data (MB)	Rcv Pkts	MC Rcv Pkts	Uncorrectable Errors	Link Downed	Rcv Errors	Exc. Buffer Overrun	FM Config Errors	Link Error Recovery	Local Link Integ Err	Xmit Constraint	Rcv Constraint	Rcv Sw Relay Err	Xmit Discards	Rcv Rmt Phys Err	
L101AP01	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	0	top
L101AP02	Config	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	top
L101AP03	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L101AP04	LinkUp	Init	4X	4X	4X	25Gbps	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L101AP05	LinkUp	Init	4X	4X	4X	25Gbps	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L101AP06	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	10	0	0	0	0	10	0	0	10	0	0	0	top
L101AP07	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L101AP08	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	0	0	0	top
L101AP09	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	top
L101AP10	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	top
L101AP11	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	top
L101AP12	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	top
L101AP13	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	10	0	0	top
L101AP14	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	top
L101AP15	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L101AP16	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	top
L101BP01	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	10	top
L101BP02	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	top
L101BP03	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top

Refer to Port Statistics Field Descriptions on page 68 for definitions.

Note: If an error counter is a number other than zero, the table cell will appear red.

3. Click **top**, located on the right side of each row, to take you to the top of the window.
4. Click **Clear** to clear the port statistics.
5. Click **Refresh** to refresh the port statistics.
6. Click **Close** to close the window.

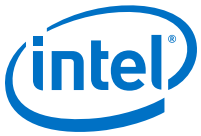
Port Statistics Field Descriptions

The following table contains port statistics fields and descriptions.

Table 16. Port Statistics Fields and Descriptions

Field	Description
Port Name	Indicates the port name. Port naming conventions are explained below: • Edge Switch ports: Cable ports: Cablexx For example, Cable12 is Switch *external* Port 12 to which a cable connects. • Leaf modules/ports: L = Leaf module number, P = Leaf module port number For example, L12P01 is leaf module 12 port number 1. • Interswitch Link (ISL) Ports: S = Spine module number, L = Leaf leaf module number, A = Spine module switch chip A, B = Spine module switch chip B

continued...



Field	Description
	For example, S3AL11 is the ISL between spine module 3, switch chip A and leaf module 11. **NOTE:** Spine chips are referenced by the spine number and the switch chip identifier. Each spine module contains two switch chips (Switch chip A and B).
Phys State	Physical state: Indicates whether the internal connection to the port is up or down. Possible values are: • No State Change • Sleep • Polling • Disabled • Training • Up • Error Recovery • Link Up • Offline
Port State	Port state: Indicates whether the link associated with the physical port indicated by the tab is up or down. Possible values are: • No state change • Down • Init • Armed • Active • Unknown
Link Width	Link Width: Indicates the bandwidth of the link on the backplane. The bandwidth is specified as a multiplier of 2.5 Gbit/sec full duplex serial links. As an example, 4x specifies a bandwidth of 10 Gbit/sec. **NOTE:** Values of 1X are possible in this field with 4X cables if poor cable connections or defective 4X cables are used.
Link Width Tx	Transmit link width
Link Width Rx	Receive link width
Link Speed	Link speed: Indicates the speed of the full duplex serial link.
Link Qual Indicator	Link quality indicator
Xmit Data (Flits)	Transmit data in Flits: Indicates the number of 32-bit data words transmitted by the port, not including flow control and VCRC data.
Xmit Data (MB)	Transmit data in MB: Indicates the number of 32-bit data words transmitted by the port, not including flow control and VCRC data.
Xmit Pkts	Transmit packets: Indicates the number of data packets transmitted by the port, not including flow control packets.
MC Xmit Pkts	Multicast transmit packets
Rcv Data (Flits)	Receive data, in Flits: Indicates the number of 32-bit data words received by the port, not including flow control and VCRC data.
Rcv Data (MB)	Receive data, in MB: Indicates the number of 32-bit data words received by the port, not including flow control and VCRC data.
Rcv Pkts	Receive packets: Indicates the number of data packets received by the port, not including flow control packets.
MC Rcv Pkts	Multicast receive packets
Uncorrectable Errors	Uncorrectable errors

continued...

Field	Description
Link Downed	Link downed: Number of times the link error recovery process failed.
Rcv Errors	Receive errors
Exc. Buffer Overrun	Excessive buffer overrun: Indicates error detected when the Overrun Errors threshold is exceeded by the number of consecutive flow control update periods with at least one overrun error in each period given in the PortInfo attribute.
FM Config Errors	Fabric Manager configuration errors
Link Error Recovery	Link error recovery: Indicates the number of times the link error recovery process happened successfully.
Local Link Integ Err	Local link integrity error: Indicates error caused by a marginal link. Depending upon the number of code violations, physical switch problems are detected at the physical layer. These errors are based on a count of local physical errors.
Xmit Constraint	Transmit constraint
Rcv Constraint	Receive constraint.
Rcv Sw Relay Err	Receive switch relay error.
Xmit Discards	Transmit discards: Indicates the number of port transmit discards.
Rcv Rmt Phys Err	Receive remote physical error: Indicates bit errors on a link other than the physically attached link.

5.6.2 Viewing Leaf Module Port Statistics

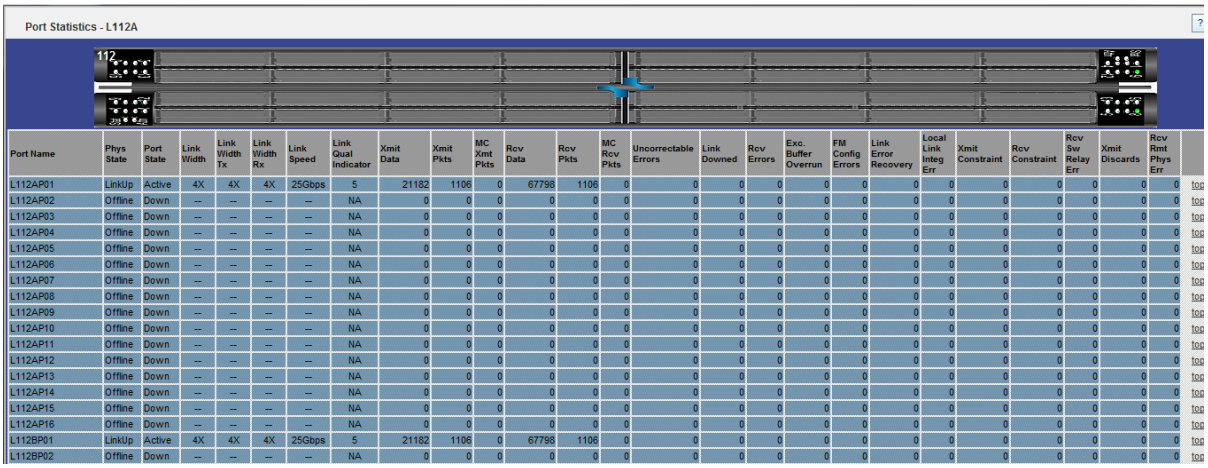
The **Port Stats** option under the **Leaf Port Stats** menu allows you to view various port statistical information for a specific leaf.

To view port statistical information for a leaf module, perform the following steps:

1. Access the Intel® Omni-Path Director Class Switch 100 Series Chassis Viewer Home Page by clicking the **Home** button from the toolbar.
2. Select the target leaf module.

   The leaf module view is displayed.
3. From the Leaf main menu, select **Leaf Port Stats**.
4. Click **Port Stats**.

   The **Port Statistics** window for the leaf is displayed.



Port Name	Phys State	Port State	Link Width	Link Width Tx	Link Width Rx	Link Speed	Link Qual Indicator	Xmit Data	Xmit Pkts	MC Xmit Pkts	Rcv Data	Rcv Pkts	MC Rcv Pkts	Uncorrectable Errors	Link Downed	Rcv Errors	Exc. Buffer Overrun	FM Config Errors	Link Error Recovery	Local Link Integ Err	Xmit Constraint	Rcv Constraint	Rcv Sw Relay Err	Xmit Discards	Rcv Rmt Phys Err	
L112AP01	LinkUp	Active	4X	4X	4X	25Gbps	5	21182	1106	0	67798	1106	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP02	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP03	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP04	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP05	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP06	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP07	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP08	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP09	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP10	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP11	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP12	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP13	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP14	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP15	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP16	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112BP01	LinkUp	Active	4X	4X	4X	25Gbps	5	21182	1106	0	67798	1106	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112BP02	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top

Refer to Port Statistics Field Descriptions on page 68 for definitions.

5. Click **top**, located on the right side of each row, to take you to the top of the window.
6. Click **Clear** to clear the port statistics.
7. Click **Refresh** to refresh the port statistics.
8. Click **Close** to close the window.

5.6.3 Viewing Spine Module Port Statistics

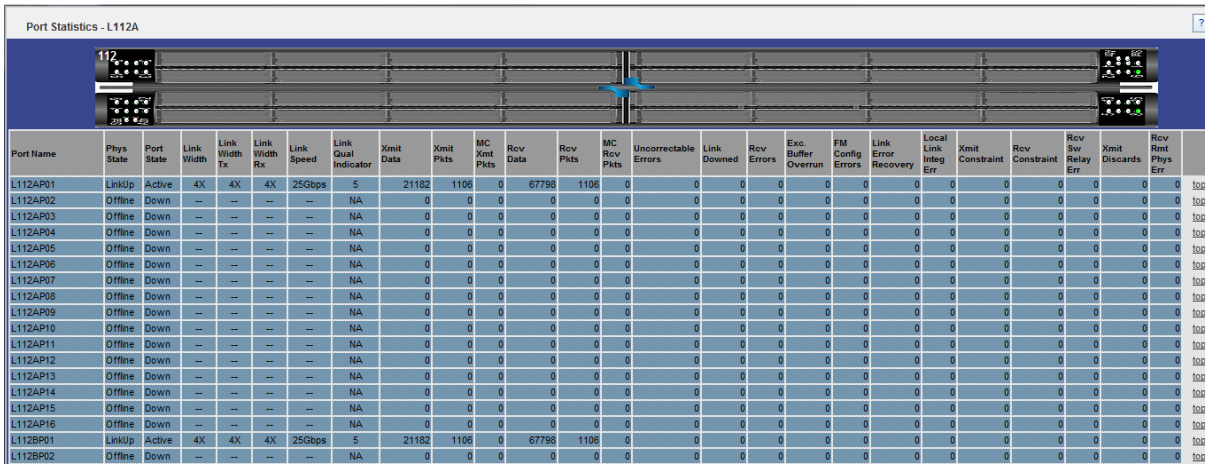
The **Port Stats** option under the **Spine Port Stats** menu allows you to view various port statistical information for a specific spine.

To view port statistical information for a spine module, perform the following steps:

1. Access the Intel® Omni-Path Director Class Switch 100 Series Chassis Viewer Home Page by clicking the **Home** button from the toolbar.
2. Select the target spine module.

   The spine module view is displayed.
3. From the Spine main menu, select **Spine Port Stats**.
4. Click **Port Stats**.

   The **Port Statistics** window for the spine is displayed.



Port Name	Phys State	Port State	Link Width	Link Width Tx	Link Width Rx	Link Speed	Link Qual Indicator	Xmit Data	Xmit Pkts	MC Xmt Pkts	Rcv Data	Rcv Pkts	MC Rcv Pkts	Uncorrectable Errors	Link Downed	Rcv Errors	Exc. Buffer Overrun	FM Config Errors	Link Error Recovery	Local Link Integ Err	Xmit Constraint	Rcv Constraint	Rcv Sw Relay Err	Xmit Discards	Rcv Rmt Phys Err	
L112AP01	LinkUp	Active	4X	4X	4X	25Gbps	5	21182	1106	0	67798	1106	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP02	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP03	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP04	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP05	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP06	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP07	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP08	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP09	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP10	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP11	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP12	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP13	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP14	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP15	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112AP16	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112BP01	LinkUp	Active	4X	4X	4X	25Gbps	5	21182	1106	0	67798	1106	0	0	0	0	0	0	0	0	0	0	0	0	0	top
L112BP02	Offline	Down	--	--	--	--	NA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	top

Refer to Port Statistics Field Descriptions on page 68 for definitions.

5. Click **top**, located on the right side of each row, to take you to the top of the window.
6. Click **Clear** to clear the port statistics.
7. Click **Refresh** to refresh the port statistics.
8. Click **Close** to close the window.

5.6.4 Enabling Port Beacons

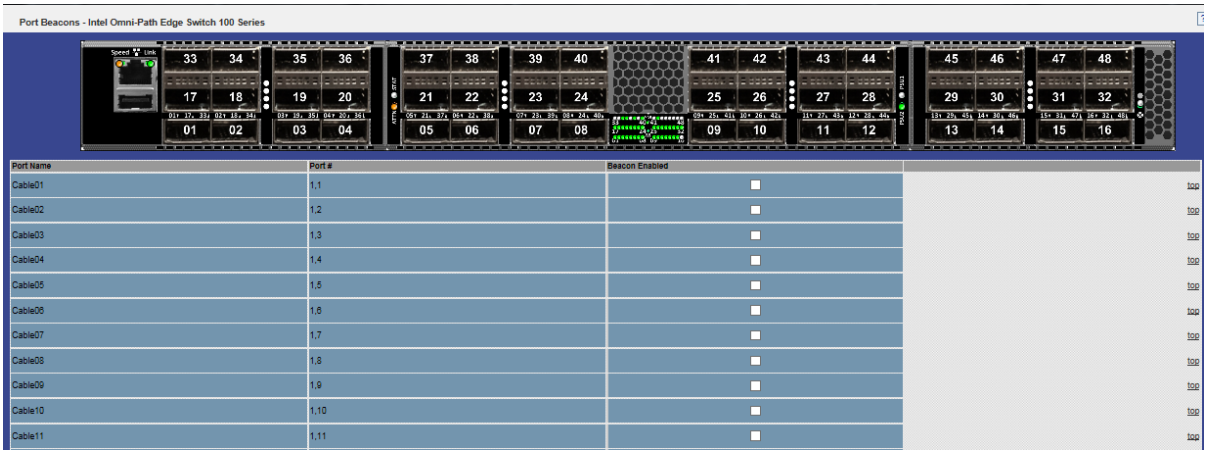
The **Port Beacon** menu allows you to enable port LEDs to flash, assisting you in locating a port.

Note: On Intel® Omni-Path Director Class Switch 100 Series, the Port Beacon feature can also be accessed using the Leaf module main menu.

To enable port beacons, perform the following steps:

1. From the Chassis Details main menu, click **Port Stats**.
2. Click **Port Beacon**.

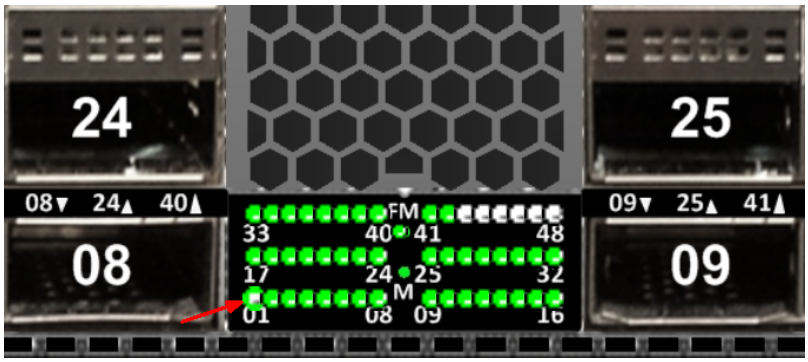
   The **Port Beacon** window is displayed.



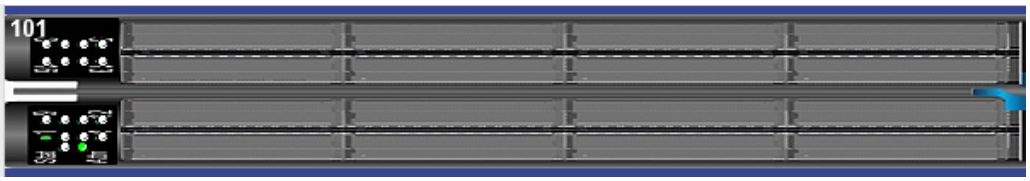
3. If required, select **Clear All** (located at the bottom of the window) to clear existing selections.
4. Select the port to be enabled. (Refer to Table 16 on page 68 for port naming conventions.)
   a. To select all ports, click **Select All** (located at the bottom of the window).
   b. To select a subset of the ports, click the **Beacon Enabled** check box for each target port.
5. Click **Apply Selected** to apply the settings.

   The physical port's LED blinks. In Chassis Viewer, the Link Status LED for the port is highlighted.

   The example below shows LEDs enabled for Intel® Omni-Path Edge Switch 100 Series:



   The example below shows LEDs enabled for a Intel® Omni-Path Director Class Switch 100 Series Leaf Module:



6. Click **Refresh** to refresh the window.
7. Click **Close** to close the window.

5.6.5 Enabling Leaf Module Port Beacon

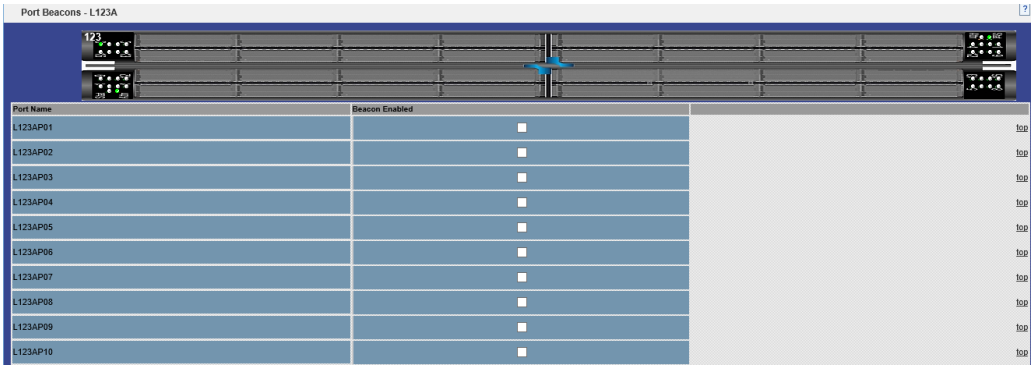
The **Port Beacon** option under the **Leaf Port Stats** menu allows you to enable port LEDs to flash, assisting you in locating a port.

To enable port beacons, perform the following steps:

1. Access the Intel® Omni-Path Director Class Switch 100 Series Chassis Viewer Home Page by clicking the **Home** button from the toolbar.
2. Select the target leaf module.

   The Leaf module view is displayed.
3. From the Leaf main menu, select **Leaf Port Stats**.
4. Click **Port Beacon**.

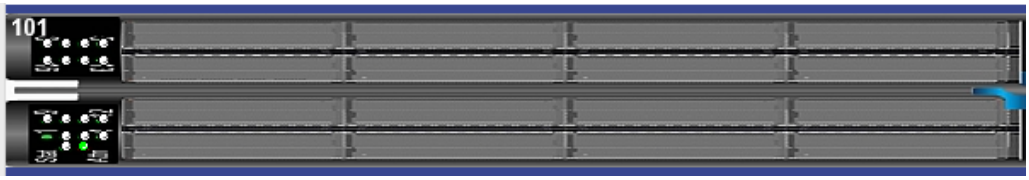
   The **Port Beacon** window is displayed.



5. If required, select **Clear All** (located at the bottom of the window) to clear existing selections.
6. Select the port to be enabled. (Refer to Table 16 on page 68 for port naming conventions.)
   a. To select all ports, click **Select All** (located at the bottom of the window).
   b. To select a subset of the ports, click the **Beacon Enabled** check box for each target port.
7. Click **Apply Selected** to apply the settings.

   The physical port's LED blinks. In Chassis Viewer, the Link Status LED for the port is highlighted.

   The example below shows LEDs enabled for a Intel® Omni-Path Director Class Switch 100 Series Leaf Module:

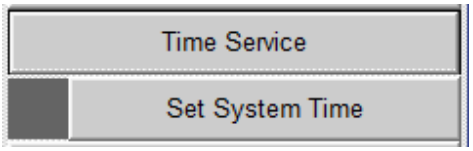


8. Click **Refresh** to refresh the window.
9. Click **Close** to close the window.

5.7 Time Service

The **Time Service** menu allows you to set system time options for the switch.

Figure 26. Chassis Detail Time Service Menu



5.7.1 Setting System Time

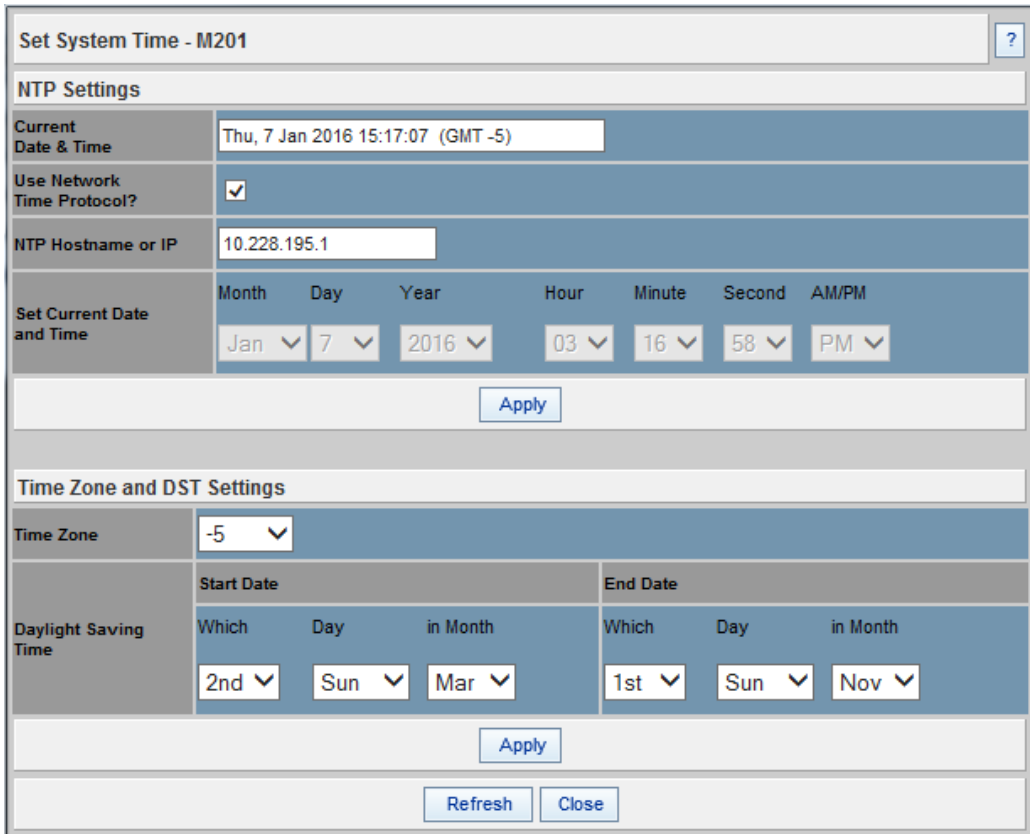
The **Set System Time** menu allows you to set the system time using either network time protocol (NTP) or manual overrides.

Setting NTP or Manual Override

To set the system time using NTP or the manual override, perform the following steps:

1. From the Chassis Details main menu, select **Time Service**.
2. Click **Set System Time**.

   The **System Time Information** window is displayed.



3. To use NTP, click the **Use Network Time Protocol?** check box.

   Note: If using Network Time Protocol (NTP) and host names (instead of IP addresses), DNS information must first be set up using the CLI command `dnsParamsSet`. Remember to reboot the switch after executing this command. For detailed information, refer to the *Intel® Omni-Path Fabric Switches Command Line Interface Reference Guide*.

   a. In the **NTP Hostname or IP** field, enter either the DNS host name or IP address for the NTP server.

   b. Click **Apply** to save the settings.

4. To manually set the system time, be sure the **Use Network Time Protocol?** check box is cleared.

   a. Set the current date and time using the drop-downs menus for the following fields:

      - Month
      - Day
      - Year
      - Hour
      - Minute
      - Seconds

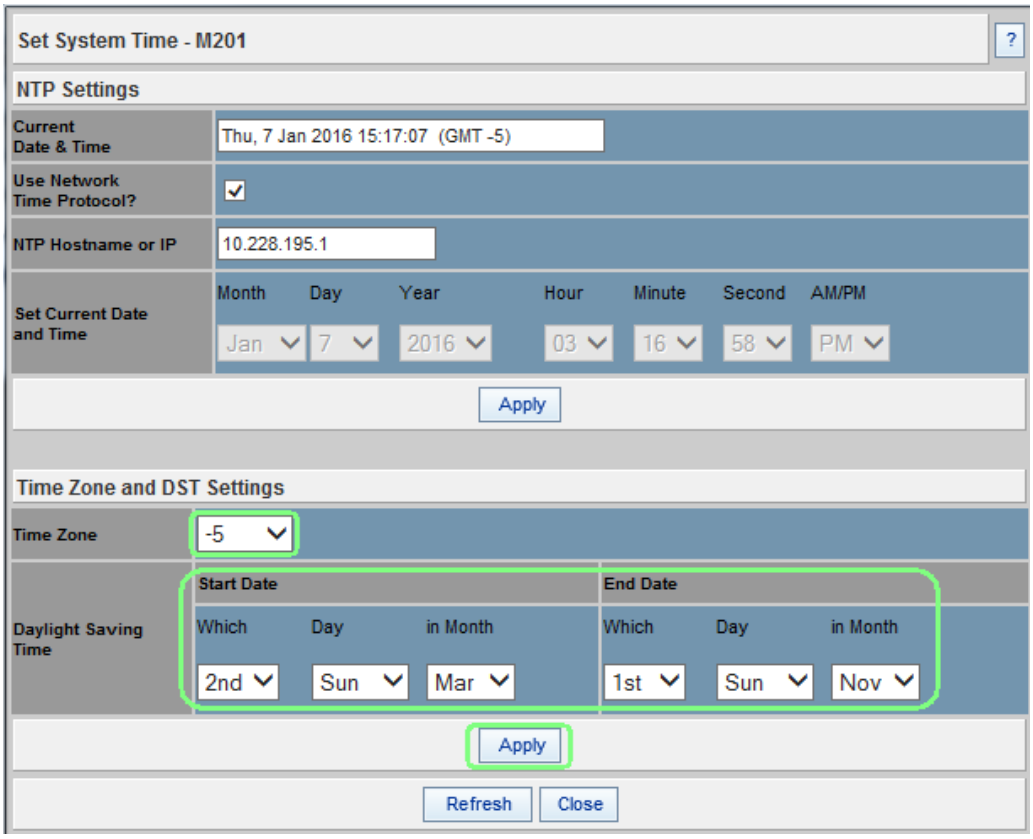
- AM/PM

b. Click **Apply** to save the settings.

Setting Time Zone and Daylight Saving Time

To set time zone and daylight saving time (DST), perform the following steps:

1. In the **Time Zone** drop-down, select the target time zone based upon Greenwich Mean Time (GMT).

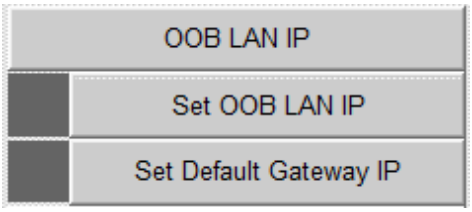


2. Set the Start Date and End Date for Daylight Saving Time using the drop-downs menus for the following fields:
   - Which
   - Day
   - in Month
3. Click **Apply** to save the settings.
4. Click **Refresh** to refresh the window.
5. Click **Close** to close the window.

5.8 OOB LAN IP

The **OOB LAN IP** menu allows you to configure the OOB LAN IP address and Default Gateway IP in the switch.

Figure 27. Chassis Detail OOB LAN IP Menu



5.8.1 Setting the Switch OOB IP Address

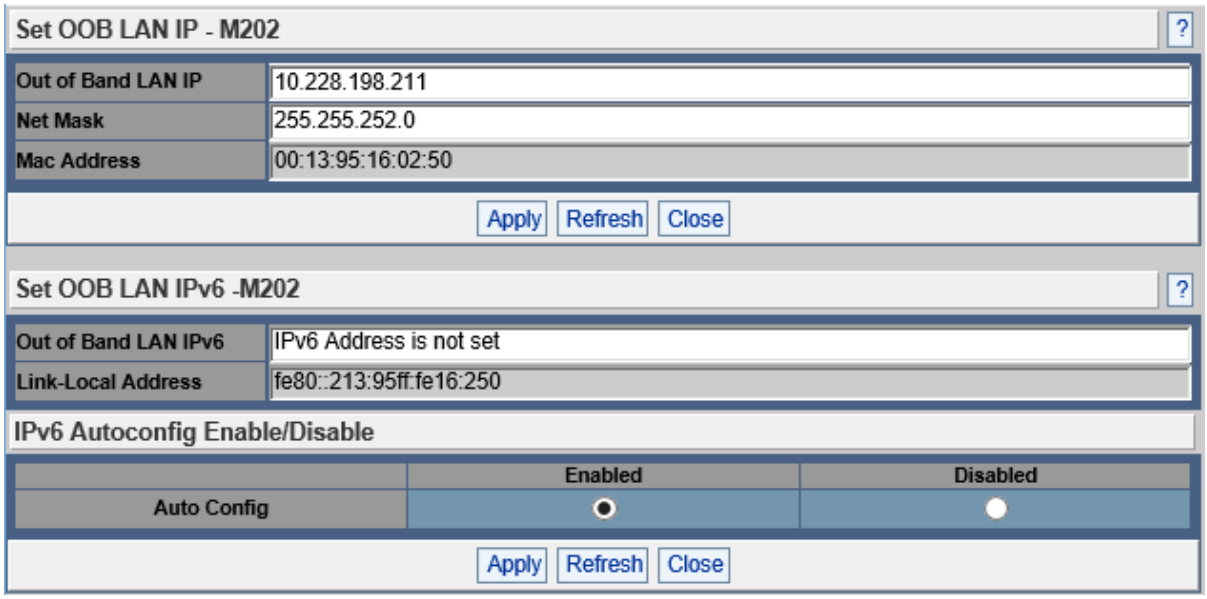
The **Set OOB LAN IP** menu allows you to configure the OOB LAN IP address. This address is used to access the Chassis Viewer from the browser.

Setting OOB IP Address

To set the Switch IP address, perform the following steps:

1. From the Chassis Details main menu, select **OOB LAN IP**.
2. Click **Set OOB LAN IP**.

   The **Set OOB LAN IP** window is displayed.



3. Click in the **Out of Band LAN IP Address** text box and enter an applicable switch IP address.
4. Click in the **Net Mask** text box, and enter an applicable switch net mask.
5. Click **Apply** to apply the settings.

6. Click **Refresh** to refresh the window.
7. Click **Close** to close the window.

Setting OOB LAN IPv6

The **Set OOB LAN IPv6** pane allows the user to configure the switch with an IPv6 address.

To set the IPv6 IP address, perform the following steps:

1. If using IPv6, you can manually enter an applicable static IPv6 address (in hexadecimal format address/prefix) in the **Out of Band LAN IP** text box.
2. In the **Out of Band LAN IP** text box, manually enter an applicable static IPv6 address (in hexadecimal format address/prefix).
3. For **Auto Config**, select **Enabled** or **Disabled** to automatically configure and assign addresses from an IPv6 router.

   Note: The IPv6 router must be configured to assign addresses using stateless address auto configuration.
4. Click **Apply** to apply the settings.
5. Click **Refresh** to refresh the window.
6. Click **Close** to close the window.

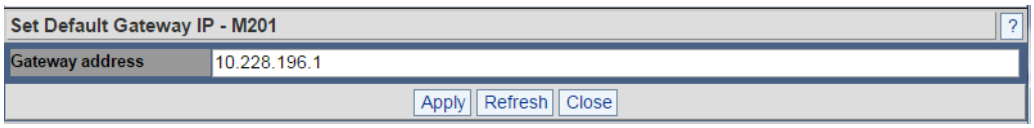
5.8.2 Setting the Switch Default Gateway IP Address

The **Set Default Gateway IP** menu allows you to configure the IP address for the default gateway to route packets from the OOB management port to an external network.

To set the Switch default gateway IP address, perform the following steps:

1. From the Chassis Details main menu, select **OOB LAN IP**.
2. Click **Set Default Gateway IP**.

   The **Set Default Gateway IP** window is displayed.



3. Click in the **Gateway address** text box and enter the IP address of the default gateway.
4. Click **Apply** to apply the setting.

   Note: You must reboot the device for the setting to take effect.
5. Click **Refresh** to refresh the window.
6. Click **Close** to close the window.

5.9 Subnet Manager

The **Subnet Manager** menu provides access to the embedded version of the Fabric Manager.

Figure 28. Chassis Detail Subnet Manager Menu for Intel® Omni-Path Edge Switch 100 Series

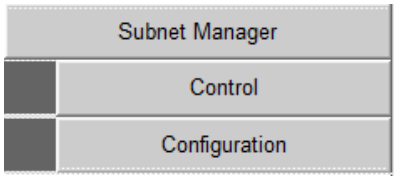


Figure 29. Chassis Detail Subnet Manager Menu for Intel® OP Director Class Switch 100 Series

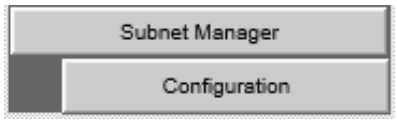
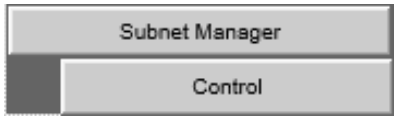


Figure 30. Management Module Subnet Manager Menu



5.9.1 Accessing the Fabric Manager for Intel® Omni-Path Director Class Switch 100 Series

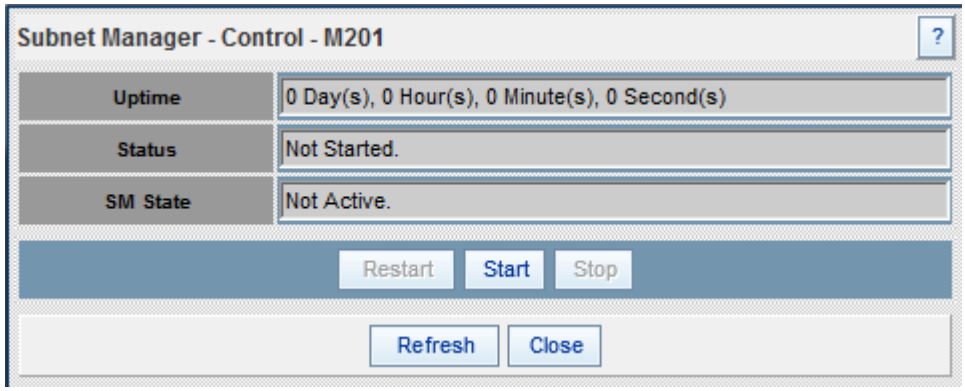
The **Subnet Manager Control** window presents status information relating to the Intel® Omni-Path Fabric Suite Fabric Manager and provides a mechanism for starting, stopping, and restarting the Fabric Manager.

Viewing the Fabric Manager Status

To view the Fabric Manager status, perform the following steps:

1. From the Management Module main menu, click **Subnet Manager**.
2. Click **Control**.

   The **Subnet Manager Control** window is displayed.



3. Click **Refresh** to refresh the window.
4. Click **Close** to close the window.

Subnet Manager Control Field Descriptions

Descriptions for each field in the **Subnet Manager Control** window are listed in the following table.

Table 17. Subnet Manager Control Field Descriptions

Name	Description
Uptime	Indicates the amount of time the SM has been running
Status	Provides information about the status of the SM, including Starting Up, Running, Shutting Down, and Not Started
SM State	Indicates whether the SM is the Master (Active) Subnet Manager in the Fabric.

Starting the Fabric Manager

1. To start the Fabric Manager, click **Start**.

   The system responds by displaying **Starting up** in the **Status** box of the **Subnet Manager Control** window.
2. Click **Refresh** to confirm that the Fabric Manager has started.

   Once the Fabric Manager is running, the system reports **Running** in the **Status** box and begins to increment the **Uptime** counter.
3. Click **Close** to close the window.

Stopping the Fabric Manager

1. To stop the Fabric Manager, click **Stop**.

   The system responds by displaying **Shutting Down** in the **Status** box of the **Subnet Manager Control** window.
2. Click **Refresh** to confirm that the Fabric Manager has shut down.

   Once the Fabric Manager has shut down, the system reports **Not Started** in the **Status** box of the **Subnet Manager Control** window.
3. Click **Close** to close the window.

Restarting the Fabric Manager

1. To restart the Fabric Manager, click **Restart**.

   The system responds by displaying **Shutting Down** in the **Status** box of the **Subnet Manager Control** window.

2. Click **Refresh** to confirm that the Fabric Manager has restarted.

   Once the Fabric Manager is running, the system reports **Running** in the **Status** box and begins to increment the **Uptime** counter.

3. Click **Close** to close the window.

5.9.2 Accessing the Fabric Manager for Intel® Omni-Path Edge Switch 100 Series

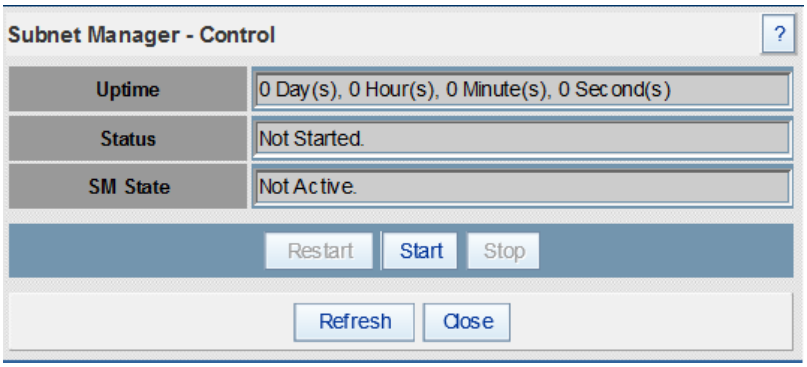
The **Subnet Manager Control** window presents status information relating to the Intel® Omni-Path Fabric Suite Fabric Manager and provides a mechanism for starting, stopping, and restarting the Fabric Manager.

Viewing the Fabric Manager Status

To view the Fabric Manager status, perform the following steps:

1. From the Chassis Details main menu, click **Subnet Manager**.
2. Click the **Control** button.

   The **Subnet Manager Control** window is displayed.



The table below defines the field descriptions for the Subnet Manager Control window.

Name	Description
Uptime	Indicates the amount of time the SM has been running
Status	Provides information about the status of the SM, including Starting Up, Running, Shutting Down, and Not Started
SM State	Indicates whether the SM is the Master (Active) Subnet Manager in the Fabric.

3. Click **Refresh** to refresh the window.
4. Click **Close** to close the window.

Starting the Fabric Manager

1. To start the Fabric Manager, click **Start**.

   The system responds by displaying **Starting up** in the **Status** box of the **Subnet Manager Control** window.

2. Click **Refresh** to confirm that the Fabric Manager has started.

   Once the Fabric Manager is running, the system reports **Running** in the **Status** box and begins to increment the **Uptime** counter.

3. Click **Close** to close the window.

Stopping the Fabric Manager

1. To stop the Fabric Manager, click **Stop**.

   The system responds by displaying **Shutting Down** in the **Status** box of the **Subnet Manager Control** window.

2. Click **Refresh** to confirm that the Fabric Manager has shut down.

   Once the Fabric Manager has shut down, the system reports **Not Started** in the **Status** box of the **Subnet Manager Control** window.

3. Click **Close** to close the window.

Restarting the Fabric Manager

1. To restart the Fabric Manager, click **Restart**.

   The system responds by displaying **Shutting Down** in the **Status** box of the **Subnet Manager Control** window.

2. Click **Refresh** to confirm that the Fabric Manager has restarted.

   Once the Fabric Manager is running, the system reports **Running** in the **Status** box and begins to increment the **Uptime** counter.

3. Click **Close** to close the window.

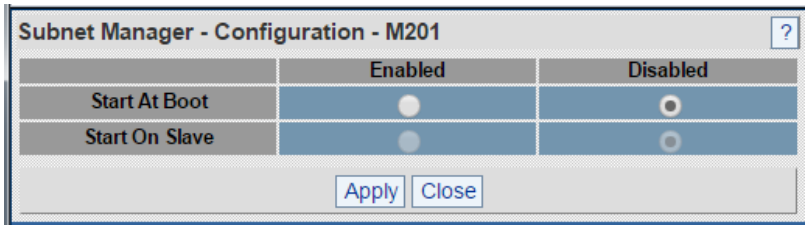
5.9.3 Configuring Fabric ManagerAutomatic Start for Intel® Omni-Path Director Class Switch 100 Series

The **Subnet Manager Configuration** menu allows you to enable or disable the automatic start of the Fabric Manager at boot time.

To enable the Fabric Manager to automatically start at boot time, perform the following steps:

1. From the Chassis Details main menu, select **Subnet Manager**.
2. Click **Configuration**.

   The **Subnet Manager Configuration** window is displayed.



3. Click **Enabled** to automatically start the Fabric Manager with each boot.
4. Click **Disabled** to manually activate the Fabric Manager.
5. For switches in a redundant management configuration: Set the **Start On Slave** option to **Disabled**.

   In the event that the Fabric Manager on the master Management Module is disabled, the Fabric Manager on the slave Management Module turns on automatically when it becomes the chassis management module.
6. Click **Apply** to save your settings.
7. Click **Close** to close the window.

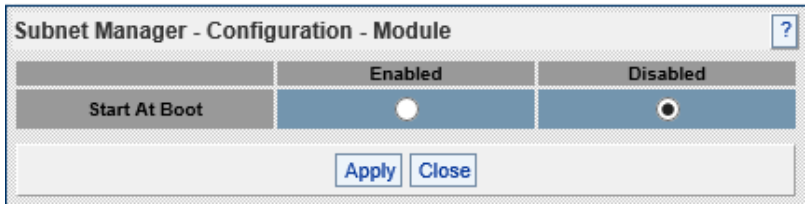
5.9.4 Configuring Fabric ManagerAutomatic Start for Intel® Omni-Path Edge Switch 100 Series

The **Subnet Manager Configuration** menu allows you to enable or disable the automatic start of the Fabric Manager at boot time.

To enable the Fabric Manager to automatically start at boot time, perform the following steps:

1. From the Chassis Details main menu, select **Subnet Manager**.
2. Click **Configuration**.

   The **Subnet Manager Configuration** window is displayed.



3. Click **Enabled** to automatically start the Fabric Manager with each boot.
4. Click **Disabled** to manually activate the Fabric Manager.
5. Click **Apply** to save your settings.
6. Click **Close** to close the window.