



Intel® Omni-Path Fabric Switches Command Line Interface

Reference Guide

Rev. 9.0

April 2018



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Revision History

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

Date	Revision	Description
April 2018	9.0	Updates to this document include: <ul style="list-style-type: none"> Updated <code>prompt</code> to state the new prompt will be saved across reboots if done by the admin. Updated <code>fwUpdate</code>, <code>fwUpdateSlot</code>, <code>fwUpdateChassis</code>, and <code>fwVersion</code> to clarify behavior. Added <code>biosVersion</code>, <code>biosUpdate</code>, <code>bcFwVersion</code>, <code>bcFwUpdate</code>, <code>ShowLastBiosRetCode</code> <code>showLastBcFwRetCode</code>. Added How to Search the Intel® Omni-Path Documentation Set to Preface.
October 2017	8.0	Updates to this document include: <ul style="list-style-type: none"> Added <code>auditLog</code>. Added <code>ismPortSetDiagnosticMode</code>. The <i>Intel® Omni-Path Fabric Suite FastFabric Command Line Interface Reference Guide</i> has been merged into the <i>Intel® Omni-Path Fabric Suite FastFabric User Guide</i>. In this document, all references have been updated appropriately. See the Intel® Omni-Path Documentation Library for details.
August 2017	7.0	Updates to this document include: <ul style="list-style-type: none"> Updated <code>showInventory</code> with new example. Updated <code>smLogLevel</code> and changed loglevel 2 = INFINI_INFO+
April 2017	6.0	Updates to this document include: <ul style="list-style-type: none"> Added <code>showDefaultIpv6Route</code> and <code>setDefaultIpv6Route</code>. Updated filepath from <code>/etc/sysconfig/</code> to <code>/etc/</code> in Configuring the Syslog Server. Added Intel® Omni-Path Documentation Library to Preface.
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August 2016	4.0	Updates to this document include: <ul style="list-style-type: none"> Updated <code>genPost</code> with new output description table. Updated <code>fwUpdate</code>, <code>fwUpdateSlot</code>, and <code>fwUpdateChassis</code> to clarify behavior. Added Configuring the Syslog Server.
May 2016	3.0	Updates to this document include: <ul style="list-style-type: none"> Added <code>rlogin</code>. Updated <code>.pkg</code> to <code>.spkg</code> in <code>fwUpdate</code> Example. Updated Example for <code>userListShow</code>.
February 2016	2.0	Updates to this document include: <ul style="list-style-type: none"> Updated <code>ismPort...</code> commands to use <code>portNameList</code> instead of <code>port</code>.
continued...		



Date	Revision	Description
		<ul style="list-style-type: none">Updated chassisQuery command to return external slot names instead of internal slot numbers. This change impacts other commands, including: reboot, hwMonitor, fruInfo, fwUpdateSlot, showLastScpRetCode, fwVersion, bootQuery, and bootSelect.Renamed some commands in Network category, from IPoSt1 prefix to IPoIB prefix.Added smListSecurityFiles
November 2015	1.0	Updates to this document include: <ul style="list-style-type: none">Added pmShowRunningTotals and showAllConfigurationRenamed smShowGroups to smShowMcMemberRenamed smShowSubscriptions to smShowInform



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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 the next generation, High-Performance Computing (HPC) network solution that is designed to cost-effectively meet the growth, 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.

Intel® Omni-Path Documentation Library

Intel® Omni-Path publications are available at the following URLs:

- Intel® Omni-Path Switches Installation, User, and Reference Guides
<http://www.intel.com/omnipath/SwitchPublications>
- Intel® Omni-Path Software Installation, User, and Reference Guides (includes HFI documents)
<http://www.intel.com/omnipath/FabricSoftwarePublications>
- Drivers and Software (including Release Notes)
<http://www.intel.com/omnipath/Downloads>

Use the tasks listed in this table to find the corresponding Intel® Omni-Path document.

Task	Document Title	Description
Key: Shading indicates the URL to use for accessing the particular document.		
• Intel® Omni-Path Switches Installation, User, and Reference Guides:	http://www.intel.com/omnipath/SwitchPublications	
• Intel® Omni-Path Software Installation, User, and Reference Guides (includes HFI documents):	http://www.intel.com/omnipath/FabricSoftwarePublications (no shading)	
• Drivers and Software (including Release Notes):	http://www.intel.com/omnipath/Downloads	
<i>continued...</i>		



Task	Document Title	Description
Using the Intel® OPA documentation set	<i>Intel® Omni-Path Fabric Quick Start Guide</i>	A roadmap to Intel's comprehensive library of publications describing all aspects of the product family. It outlines the most basic steps for getting your Intel® Omni-Path Architecture (Intel® OPA) cluster installed and operational.
Setting up an Intel® OPA cluster	<i>Intel® Omni-Path Fabric Setup Guide</i>	Provides a high level overview of the steps required to stage a customer-based installation of the Intel® Omni-Path Fabric. Procedures and key reference documents, such as Intel® Omni-Path user guides and installation guides are provided to clarify the process. Additional commands and best known methods are defined to facilitate the installation process and troubleshooting.
Installing hardware	<i>Intel® Omni-Path Fabric Switches Hardware Installation Guide</i>	Describes the hardware installation and initial configuration tasks for the Intel® Omni-Path Switches 100 Series. This includes: Intel® Omni-Path Edge Switches 100 Series, 24 and 48-port configurable Edge switches, and Intel® Omni-Path Director Class Switches 100 Series.
	<i>Intel® Omni-Path Host Fabric Interface Installation Guide</i>	Contains instructions for installing the HFI in an Intel® OPA cluster. The Intel® HFI utilizes Intel® Omni-Path switches and cabling.
Installing host software Installing HFI firmware Installing switch firmware (externally-managed switches)	<i>Intel® Omni-Path Fabric Software Installation Guide</i>	Describes using a Text-based User Interface (TUI) to guide you through the installation process. You have the option of using command line interface (CLI) commands to perform the installation or install using the Linux* distribution software.
Managing a switch using Chassis Viewer GUI Installing switch firmware (managed switches)	<i>Intel® Omni-Path Fabric Switches GUI User Guide</i>	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. Help: GUI embedded help files
Managing a switch using the CLI Installing switch firmware (managed switches)	<i>Intel® Omni-Path Fabric Switches Command Line Interface Reference Guide</i>	Describes the command line interface (CLI) task information for the Intel® Omni-Path Switch family. Help: -help for each CLI
Managing a fabric using FastFabric	<i>Intel® Omni-Path Fabric Suite FastFabric User Guide</i> (Merged with: <i>Intel® Omni-Path Fabric Suite FastFabric Command Line Interface Reference Guide</i>)	Provides instructions for using the set of fabric management tools designed to simplify and optimize common fabric management tasks. The management tools consist of Text-based User Interface (TUI) menus and command line interface (CLI) commands. Help: -help and man pages for each CLI. Also, all host CLI commands can be accessed as console help in the Fabric Manager GUI.
Managing a fabric using Fabric Manager	<i>Intel® Omni-Path Fabric Suite Fabric Manager User Guide</i>	The Fabric Manager uses a well defined management protocol to communicate with management agents in every Intel® Omni-Path Host Fabric Interface (HFI) and switch. Through these interfaces the Fabric Manager is able to discover, configure, and monitor the fabric.
	<i>Intel® Omni-Path Fabric Suite Fabric Manager GUI User Guide</i>	Provides an intuitive, scalable dashboard and set of analysis tools for graphically monitoring fabric status and configuration. It is a user-friendly alternative to traditional command-line tools for day-to-day monitoring of fabric health. Help: Fabric Manager GUI embedded help files
continued...		



Task	Document Title	Description
Configuring and administering Intel® HFI and IPoIB driver Running MPI applications on Intel® OPA	<i>Intel® Omni-Path Fabric Host Software User Guide</i>	Describes how to set up and administer the Host Fabric Interface (HFI) after the software has been installed. The audience for this document includes both cluster administrators and Message-Passing Interface (MPI) application programmers, who have different but overlapping interests in the details of the technology.
Writing and running middleware that uses Intel® OPA	<i>Intel® Performance Scaled Messaging 2 (PSM2) Programmer's Guide</i>	Provides a reference for programmers working with the Intel® PSM2 Application Programming Interface (API). The Performance Scaled Messaging 2 API (PSM2 API) is a low-level user-level communications interface.
Optimizing system performance	<i>Intel® Omni-Path Fabric Performance Tuning User Guide</i>	Describes BIOS settings and parameters that have been shown to ensure best performance, or make performance more consistent, on Intel® Omni-Path Architecture. If you are interested in benchmarking the performance of your system, these tips may help you obtain better performance.
Designing an IP, LNet or storage router on Intel® OPA	<i>Intel® Omni-Path IP and LNet Router Design Guide</i> (Old title: <i>Intel® Omni-Path IP and Storage Router Design Guide</i>)	Describes how to install, configure, and administer an IPoIB router solution (Linux® IP or LNet) for inter-operating between Intel® Omni-Path and a legacy InfiniBand® fabric.
Building a Lustre® Server using Intel® OPA	(OBSOLETE) <i>Building Lustre® Servers with Intel® Omni-Path Architecture Application Note</i>	This document has been removed from the Intel® OPA Documentation Library. For information on how to build and configure a Lustre® server with Intel® OPA, see the Lustre® wiki: http://wiki.lustre.org .
Building Containers for Intel® OPA fabrics	<i>Building Containers for Intel® Omni-Path Fabrics using Docker® and Singularity® Application Note</i>	Provides basic information for building and running Docker® and Singularity® containers on Linux®-based computer platforms that incorporate Intel® Omni-Path networking technology.
Writing management applications that interface with Intel® OPA	<i>Intel® Omni-Path Management API Programmer's Guide</i>	Contains a reference for programmers working with the Intel® Omni-Path Architecture Management (Intel OPAMGT) Application Programming Interface (API). The Intel OPAMGT API is a C-API permitting in-band and out-of-band queries of the FM's Subnet Administrator and Performance Administrator.
Using NVMe® over Fabrics on Intel® OPA	<i>Configuring Non-Volatile Memory Express® (NVMe®) over Fabrics on Intel® Omni-Path Architecture Application Note</i>	Describes how to implement a simple Intel® Omni-Path Architecture-based point-to-point configuration with one target and one host server.
Learning about new release features, open issues, and resolved issues for a particular release	<i>Intel® Omni-Path Fabric Software Release Notes</i>	
	<i>Intel® Omni-Path Fabric Manager GUI Release Notes</i>	
	<i>Intel® Omni-Path Fabric Switches Release Notes</i> (includes managed and externally-managed switches)	
	<i>Intel® Omni-Path Fabric Unified Extensible Firmware Interface (UEFI) Release Notes</i>	
	<i>Intel® Omni-Path Fabric Thermal Management Microchip (TMM) Release Notes</i>	
	<i>Intel® Omni-Path Fabric Firmware Tools Release Notes</i>	

How to Search the Intel® Omni-Path Documentation Set

Many PDF readers, such as Adobe® Reader and Foxit® Reader, allow you to search across multiple PDFs in a folder.

Follow these steps:

1. Download and unzip all the Intel® Omni-Path PDFs into a single folder.



2. Open your PDF reader and use **CTRL-SHIFT-F** to open the Advanced Search window.
3. Select **All PDF documents in...**
4. Select **Browse for Location** in the dropdown menu and navigate to the folder containing the PDFs.
5. Enter the string you are looking for and click **Search**.

Use advanced features to further refine your search criteria. Refer to your PDF reader Help for details.

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 15 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.



CLASS 1 LASER PRODUCT
LASER KLASSE 1
LUOKAN 1 LASERLAITE
APPAREIL A LASER DE CLASSE 1
TO IEC 825 (1984) + CENELEC HD 482 S1

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.

License Agreements

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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 <http://www.intel.com/omnipath/support> for additional detail.



1.0 Introduction

This manual describes the command line interface (CLI) task information for the Intel® Omni-Path Switch family.

For details about the other documents for the Intel® Omni-Path product line, refer to [Intel® Omni-Path Documentation Library](#) on page 11 of this document.

This manual is organized as follows:

- This section provides an overview of the CLI, including the command groups, online help, and keyboard shortcuts.
- [Groups and Commands](#) on page 21 describes the CLI commands.

1.1 CLI Overview

This section details the usage of the Command Line Interface (CLI) feature for the Intel® Omni-Path Switch family. The CLI allows you to perform remote configuration and management tasks that mirror the functionality of the Intel® Omni-Path Fabric Chassis Viewer GUI.

The CLI is accessed through a terminal attached to the USB port or through the out-of-band (OOB) management port using Telnet and secure shell (SSH).

Accessing the CLI through the serial port does not require a login and password (unless configured to do so) and defaults to administrator privileges. Using the serial port allows permanent access to the switch, even if Telnet and SSH are not functioning.

For a standalone switch, Telnet to the IP address of the unit. Once connected, the CLI works as any Telnet session does.

To access the CLI using Telnet and SSH, a login and password are required. There are two user modes, operator and administrator, with the following access privileges:

Operator:

- Read only access.

Administrator:

- Read and write access.
- Reboot access.
- Change operator and administrator passwords.
- Disable user login and passwords, which allows all users administrator-level access without the need for a user name or password.
- View all current user sessions.
- Access all of the commands executed from any open operator session.
- Log out any open user sessions.



- Send messages to the open user sessions.

The CLI allows multiple users to be logged in simultaneously. However, some commands are locked to users if another user is executing the same command.

1.2 Commands and Functional Groups

The CLI commands are grouped into functional areas as shown in the following table.

Type `list -noprompt` to display the list of command groups.

Table 1. Command Groups

Group	Description
General	General on page 21 General commands for user management and CLI configuration.
Chassis	Chassis on page 42 Chassis management commands, such as FRU info, fan/power supply state, and others.
Network	Network on page 51 Ethernet interface management commands.
Firmware	Firmware on page 65 Commands that display or modify firmware revision levels.
Fm	Fabric Management on page 75 Commands used for Subnet Manager (SM), Subnet Administration (SA), Performance Manager (PM), and Fabric Executive (FE) configuration and operation.
Log	Log on page 96 Commands for viewing log files as well as configuring logging parameters.
Ism	Interconnect Switch Management (ISM) on page 102 Port configuration and statistics commands.
Tm	Time Management on page 141 Commands for retrieving and setting the current system time, setting the time zone, and setting daylight saving time parameters.
Snmp	SNMP on page 146 Commands for configuring trap destinations and security parameters required to access the switch from an SNMP manager.
CaptureInfo	CaptureInfo on page 152 Analysis and debugging commands for capturing switch-specific information.

To list commands within a functional group, simply type the functional group name. For example, to list all of the firmware commands, type `list Firmware`. The system displays information similar to the following:

```
-> list firmware
fwUpdate          Used to update firmware.
fwListFiles       Used to display the set of files in the firmware ramdisk.
fwShowUpdateParams Used to display the firmware default update parameters.
fwSetUpdateParams Used to configure firmware default update parameters.
showCapability     Used to display the capabilities/features.
showLastScpRetCode Used to display the return code from the last SCP Firmware or
                  XML Config Push.
```



fwVersion	Used to display the firmware revisions.
bootQuery	Used to display firmware boot image information.
bootSelect	Used to modify the boot selection.

1.3 Online Help

The online help for the CLI provides all necessary information to successfully run each command.

Access online help by typing `help CommandName` or `CommandName help`.

For example, typing `help list` displays the following information for the `list` command:

```
-> help list
NAME
    list

SYNOPSIS
    list [{all | <group>}] [-noprompt] [-verbose]

DESCRIPTION
    Used to display all the valid commands.

OPTIONS
    all          :List the commands for all groups.
    <group>      :List the commands in that particular group, see NOTES.
    -noprompt    :Just list the command groups.
    -verbose     :Print full help for each command, instead of summary.

NOTES
    Use 'list all' to display brief help for all available commands.
    Use 'list all -verbose' to display verbose help for all commands.
    Use 'list -noprompt' to display the list of command groups.
```

1.4 Keyboard Shortcuts

- Use the **UP ARROW** and **DOWN ARROW** keys to access the history of recently run commands.
- Use the **LEFT ARROW** and **RIGHT ARROW** keys to edit the current command.
- Press the **TAB** key after typing at least one character to either complete a command or to list all the available commands that begin with the typed characters.

1.5 Accessing the CLI

The CLI can be accessed in the following ways:

- through Ethernet, using Telnet or SSH
- using the switch serial port:
 - Intel® OP Edge Switch 100 Series (with optional management module): connects through the USB serial port
 - Intel® OP Director Class Switch 100 Series series: connects through the USB port on the SEEB module



Note: Be sure to connect to the SEEB serial port associated with the Management Module (MM) on the opposite side of the chassis.

The following instructions use Telnet.

1. Telnet to the IP address of the switch with the following command:

```
telnet <IP ADDRESS>
```

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

2. The system prompts for a user name. The CLI has the following default user names:

Operator access: `operator`

Administrator access: `admin`

Type the appropriate user name and press **ENTER**.

3. The system prompts for a password. The CLI has the following default passwords:

Operator access: `operpass`

Administrator access: `adminpass`

Type the appropriate password and press **ENTER**. The system responds with:

```
Welcome to the <SWITCH> CLI. Type 'list' for the list of commands.
```

1.6 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/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
```



2.0 Groups and Commands

This section lists all CLI functional groups along with the commands for each group. The commands for all supported switches are listed. Any commands that are different for a particular switch are noted.

For more specific information for each functional group, run the command:

```
help GroupName
```

For more specific command information, run the command:

```
help CommandName
```

2.1 General

Commands in this category are used for user management and CLI configuration.

2.1.1 help

Displays help information for a specific command.

Syntax

To get help on a particular command, type:

```
[command] help
```

For convenience purposes, you can also type:

```
help [command]
```

Note: Tab completion mode does not work if you use the form `help [command]`.

Options

command Name of the command for which help information is requested.

Example

```
-> help list
NAME
    list
SYNOPSIS
    list [group] [-noprompt]
DESCRIPTION
    List available commands.
```



OPTIONS

- `group` - List the commands in that particular group
- `-noprompt` - Just list the command groups.

Notes

The following General Help text is returned when `help help` is entered:

```
-> help help
General Help
Type list or ? for the list of commands.
To get help on a particular command type: <command> help.
For convenience purposes you can also type: help <command>

Use the Up and Down arrow keys to browse command history, Left and Right arrow
keys to edit the current command and the Tab key for tab completion of a command.

Two alternate key bindings exist for the backspace and delete keys. If these keys
are not responding as expected, use the 'swapBsDel' command to swap the bindings.

Commands are grouped into subcategories. To list the commands in a subcategory,
type in the category heading. Category headings are identified by starting with a
capital letter. For example, to list all the commands that handle log
configuration, type 'Log'.
```

The help descriptions use the following conventions. Formatting differences between the help output and this document are also noted.

- Square brackets `[]` indicate optional parameters. For example, `[-noprompt]`

- Angle brackets `< >` indicate user-selectable input. For example, `<command>`.

Note: In this document, user-selectable input is indicated with italics, such as `help command`

- Text outside the angle brackets `< >` is actual text that needs to be entered.

When there is more than one choice, the options are separated by pipe characters `|` within curly braces `{ }`. For example, `case {off | on}`

2.1.2 list

Displays a list of all valid commands.

Syntax

```
list [{all | group}] [-noprompt] [-verbose]
```

Options

- | | |
|------------------------|--|
| <code>all</code> | Lists the commands for all groups. |
| <code>group</code> | Displays a list of commands for a particular group. See Example for options. |
| <code>-noprompt</code> | Displays a list of the command groups only. |
| <code>-verbose</code> | Prints full help for each command, instead of a summary. |



Example

```
->list -noprompt
List of Valid Groups:
General      General commands for user management and CLI configuration.
Chassis      Chassis management commands. (FRU info, fan / power supply state,
              etc).
Network      Ethernet interface management commands.
Firmware     Used to display or modify firmware revision levels.
Fm           SM configuration and management.
Log          Log file display and configuration.
Ism          Port configuration and statistics.
Tm           Used to display and configures the system time.
Snmpp       Snmp configuration commands.
CaptureInfo  Information capture commands for support personnel use.
```

Notes

Type `list all` to display brief help for all available commands.

Type `list all -verbose` to display verbose help for all commands.

Type `list -noprompt` to display the list of command groups.

2.1.3 history

Displays the command history for the CLI session.

Syntax

```
history
```

Options

None.

Example

```
-> history
command history [30 max lines]:
ismPortCounters
ismPortSetWidth Cable01 -verbose
ismPortEnable help
time
timeZoneConf
timeDSTConf
history
```

2.1.4 reboot

Reboots the device.

Syntax

```
reboot [now] [-m] [slot slot] [-s] [-n] [all]
```



Options

<code>now</code>	Does not prompt before rebooting.
<code>-m</code>	Reboots Master Management Module (non-disruptive).
<code>slot slot</code>	Reboots specific device where <code>slot = slotName</code> (disruptive).
<code>-s</code>	Reboots Slave Management Module.
<code>-n</code>	Reboots Slave (remote) management card only (non-disruptive).
<code>all</code>	Reboots all local devices (excludes <code>-n/-m/-s</code> options).

Example

```
-> reboot
Disruptive reboot selected
Proceed with reboot? [N]
```

Notes

Default (no arguments) reboots the local device disruptively after prompt.

Use the argument `all` to perform disruptive reboot of all present Management Modules and cards.

You can reboot the local (Master) Management Module or the remote (Slave) Management Module with one or multiple arguments.

Non-disruptive reboots do not interfere with switch traffic if ASIC firmware is not changing.

If rebooting the local device from Telnet, SSH, or another method, you must reconnect after rebooting.

See also: [showInventory](#) on page 49.

2.1.5 killCliSession

Terminates an existing CLI session.

Syntax

```
killCliSession sessionNumber
```

Options

`sessionNumber` The session number that is returned from the `who` command.



Example

```
-> killCliSession
must supply session number
```

Notes

This command logs out remote sessions. Use [who](#) on page 25 to obtain the list of active sessions.

2.1.6 who

Displays all the active CLI sessions.

Syntax

```
who
```

Options

None.

Example

```
->who
user  role  index logged in          last cmd          type ip address
-----
admin admin 0      02:25:26 10/14/2015 02:25:26 10/14/2015 serial
admin admin 1      09:23:16 10/16/2015 09:59:01 10/16/2015 ssh    ::ffff:
10.127.236.39
```

Notes

Displays a list of currently active CLI sessions. Note that a session can be *active*, but no user information is available. In most cases, this indicates the session is waiting for the user to enter login information.

For each session, the following information is displayed:

- `user` - user name of the logged in user.
- `role` - security role of the user.
- `index` - internal session index.
- `logged in` - timestamp of when the user logged in.
- `last cmd` - timestamp of the user's last command.
- `type` - method used to connect to the system.
- `ip address` - IP address of the user (if applicable).

2.1.7 broadcast

Writes a message to all active CLI sessions.



Syntax

```
broadcast "msg"
```

Options

"*msg*" Message text. The message text must be encapsulated in quotes " " and must be non-empty.

Example

```
-> broadcast "The system will be rebooted in 5 minutes."
```

2.1.8 swapBsDel

Toggles the key bindings for the backspace and delete characters.

Syntax

```
swapBsDel
```

Options

None.

Example

```
-> swapBsDel
```

Notes

Terminals may bind the backspace and delete key bindings differently. This command swaps two commonly used bindings, which allow you to use the backspace and delete keys properly without having to adjust your terminal settings.

Backspace and delete swapping is persistently maintained per user (that is, each login account can have a separate binding).

2.1.9 setTermWidth

Modifies the terminal width for text formatting purposes.

Syntax

```
setTermWidth width
```

Options

width Width of your terminal window. Minimum width is 20 characters. Note that not all commands adhere to this setting.



Example

```
-> setTermWidth 100
```

2.1.10 **getTermWidth**

Displays the terminal width for text formatting purposes.

Syntax

```
getTermWidth
```

Options

None.

Example

```
-> getTermWidth  
Current terminal width: 80 characters.
```

Notes

Displays the terminal width used for text formatting purposes. Note that not all commands adhere to this setting.

2.1.11 **prompt**

Modifies the CLI prompt (global for all active CLI sessions).

Syntax

```
prompt prompt
```

Options

prompt The new prompt, range 1 - 11 characters. The new prompt is saved across reboots if done by the admin.

Example

```
-> prompt "Edge-> "  
Edge->
```

Notes

If the prompt contains a space, asterisk, comma, parenthesis, or semicolon it must be enclosed with double quotes " ", for example: "**a prompt**". Also, if a prompt is not accepted, try to enclose it with double quotes.

The prompt must end in "-> " (note trailing space) for some Intel® Omni-Path Fabric Suite FastFabric Tools to function correctly.



To reset to the default prompt, use "" as the *prompt* parameter. For example:
prompt ""

2.1.12 case

Displays or modifies the case sensitivity of the command interpreter for the CLI session.

Syntax

```
case [{off | on}]
```

Options

off | on Turns case sensitivity off or on.

Example

```
-> case off  
Case sensitivity is now off
```

Notes

If no value is entered, the current setting is displayed.

When case sensitivity is on, the CLI input must match the exact character case (lower and upper case) as specified in the help text. When case sensitivity is turned off, the CLI input can be any combination of upper and lower case.

2.1.13 showLastRetCode

Displays the return code from the last executed command.

Syntax

```
showLastRetCode [-brief]
```

Options

-brief Displays only the numeric value of the return code.

Example

```
-> showLastRetCode  
Last Exit Code: 0: Success
```

Notes

This allows for automated systems to determine if a command was successful or not.



2.1.14 echo

Echoes the input parameters back to the output.

Syntax

```
echo [text1 text2]
```

Options

text1 text2 Text to be echoed. If there are multiple arguments, they must be separated by spaces.

Example

```
-> echo text1 text2  
text1 text2
```

2.1.15 rlogin

Opens a terminal to local I/O devices within the chassis.

Syntax

```
rlogin [deviceName]
```

Options

deviceName The name of the device to connect.

Example

```
-> rlogin Slave
```

Notes

See also [hostShow](#) on page 60.

You can escape out of the remote CLI session, back to the local CLI, by typing]~.<Enter>.

2.1.16 logout

Terminates the current CLI session.

Syntax

```
logout
```



Options

None.

Example

```
-> logout
```

2.1.17 user

Modifies user accounts.

Syntax

```
user [username]
```

Options

username Name of user account to change to.

Example

```
-> user operator
User changed to: operator
```

Notes

Use this command to change to the `operator` account, or to the `admin` account.

2.1.18 passwd

Modifies a user account password.

Syntax

```
passwd [username] [-r]
```

Options

username User account name associated with the password change.

`-r` Resets user account password. This option is only allowed from serial connection.

Example

```
-> passwd operator1
Changing password for user: operator1
(current) password:
(new) password:
confirm the new password:
Password was updated successfully.
```



Note: Password text is not displayed.

Notes

The minimum password length is eight (8) characters. The maximum length is 40 characters.

If you call this command when logged in from an operator account, you can only reset the password for the current account and no arguments are accepted.

2.1.19 userAdd

Adds a user account.

Syntax

```
userAdd role username [password]
```

Options

role Options include:

admin Administrator

operator Operator

support Support personnel

username New user account name. Must be between 4 and 32 characters.

password Optional password. If not supplied, the default password for that role is used.

Example

```
-> userAdd admin Bob
User added: Bob
Password is set to the default password for this role: admin
```

2.1.20 userRem

Removes a user account.

Syntax

```
userRem username
```

Options

username User account name to delete.



Example

```
-> userRem Bob
User deleted: Bob
```

2.1.21 userListShow

Displays all user accounts for this device.

Syntax

```
userListShow
```

Options

None.

Example

```
-> userlistshow
username      role
operator      operator
admin         admin
```

2.1.22 sshKey

Displays or modifies the configured set of SSH keys.

Syntax

```
sshKey [{show | add "key" | rem <index> | rem -all} [-u username]]
```

Options

`show` Displays the SSH public keys in the user's `authorized_keys` file.

`add "key"` Adds key to the user's `authorized_keys` file. Must be enclosed within double-quotes as shown: `"key"`

`rem index` Removes key at `index` for the user.

`rem -all` Removes all keys for the user.

`-u username` Performs the operation on the user `username` (must have administrative privileges).

Note: Users with administrative privileges can use the `-u` option to manage keys for other users. When valid key is present, user can log in without a password.



Example

```
-> sshKey show
Index    Key
-----
1        "ssh-rsa AAAAB3NzaClyc2EAAAABiWAAQEA..."
```

2.1.23 loginMode

Displays or changes how users are authenticated when connecting to the GUI or CLI.

Syntax

```
loginMode [mode]
```

Options

mode Determines how users are able to login. Options include:

- 0 Username and password are required.
- 1 Password is not required.
- 2 Username and password are **not** required.
- 3 LDAP Authentication is required.

Example

```
-> loginmode
Current login mode is: 2 = Username / password are not required
```

Notes

If no value is entered, the current setting is displayed.

When user names are disabled, all users are logged on as the administrative user. There is no way to change this behavior.

2.1.24 setldapSvrIpAddr

Displays or modifies the LDAP server IP address.

Syntax

```
setldapSvrIpAddr [ipaddress]
```

Options

ipaddress IP address of the LDAP server to be modified in the format 192.168.0.1. The LDAP server is contacted for remote authentication.

Note: If no value is entered, the current setting is displayed.

Example

```
-> setldapSvrIpAddr 192.168.0.29
```

2.1.25 setldapSvrPort

Displays or modifies the TCP port number to use for LDAP.

Syntax

```
setldapSvrPort [port]
```

Options

port The TCP port number to use for LDAP user login authentication.

Note: If no value is entered, the current setting is displayed.

Example

```
-> setldapSvrPort 389
```

2.1.26 idleTimeoutGet

Displays the idle timeouts for the CLI and GUI interfaces to the system. If set to zero, the timeout for that interface is disabled.

Syntax

```
idleTimeoutGet [--all | --cli | --gui]
```

Options

--all Display all timeouts. If no option is entered, this is the default behavior.

--cli Display the timeout for CLI sessions.

--gui Display the timeout for GUI sessions.

Example

```
-> idleTimeoutGet --all
CLI timeout is 600 seconds.
GUI timeout is 0 seconds.
```



2.1.27 idleTimeoutSet

Sets the idle timeout for the CLI and GUI interfaces.

Syntax

```
idleTimeoutSet [--all | --cli | --gui] timeout
```

Options

--all Sets the idle timeout for both the CLI and the GUI to the same value.

--cli Sets the idle timeout for the CLI. This is the default if no identifier is specified.

--gui Sets the idle timeout for the GUI.

timeout Value for idle timeout (in seconds). If set to 0, the timeout is disabled.

Example

```
-> idleTimeoutSet --all 700
CLI timeout is 700 seconds.
GUI timeout is 700 seconds.
```

2.1.28 sessionTimeoutDisable

Disables the idle timeout for the current CLI session.

Syntax

```
sessionTimeoutDisable
```

Options

None.

Example

```
-> sessionTimeoutDisable
Disabled session idle timeout.
```

Notes

This value does not persist across instances of the session. That is, each time you log on, it defaults back to the system default value.

2.1.29 sessionTimeoutEnable

Enables the idle timeout for the CLI session.



Syntax

```
sessionTimeoutEnable
```

Options

None.

Example

```
-> sessionTimeoutEnable  
Enabled session idle timeout.
```

Notes

This value does not persist across instances of the session. That is, each time you log on, it defaults back to the system default value.

2.1.30 loginMsgGet

Displays the CLI login message.

Syntax

```
loginMsgGet
```

Options

None.

Example

```
-> loginMsgGet  
Welcome message: Be certain to logout when you are finished using the CLI.
```

Notes

You can customize the login message using [loginMsgSet](#) on page 36.

2.1.31 loginMsgSet

Sets the welcome message displayed when logging onto the CLI.

Syntax

```
loginMsgSet {-clear | string}
```

Options

-clear Clears welcome message.

string Sets the welcome message.



Note: Must be encapsulated in double quotes.

Example

```
-> loginMsgSet "Be certain to logout when you are finished using the CLI."  
Welcome message set successfully
```

Notes

View the current message using [loginMsgGet](#) on page 36.

2.1.32 loginNameGet

Displays the text string that is shown prior to logging in through Telnet.

Syntax

```
loginNameGet
```

Options

None.

Example

```
-> loginNameGet  
login-name: Switch1
```

Notes

The login name is an arbitrary string displayed prior to a user attempting a login to a new CLI session. This command displays the current value of this string.

2.1.33 loginNameSet

Modifies the text string that is displayed prior to logging in through Telnet.

Syntax

```
loginNameSet {-clear | loginName}
```

Options

`-clear` Clears the login name.

`loginName` Sets the login name.



Example

```
-> loginNameSet Switch1  
login-name set successfully
```

Notes

The login name is an arbitrary string displayed prior to a user attempting a login to a new CLI session. This command modifies this string.

2.1.34 serialAuthGet

Displays the mode setting for serial console authentication. If enabled, user login and authentication are required on the serial console of the system.

Syntax

```
serialAuthGet
```

Options

None.

Example

```
-> serialAuthGet  
Serial authentication is currently disabled.
```

2.1.35 serialAuthSet

Modifies the serial console authentication mode setting.

Syntax

```
serialAuthSet {0 | 1}
```

Options

Note: You must exit and log in again for the setting to take effect.

0 Disables authentication.

1 Enables authentication.

Example

```
-> serialAuthSet 1  
Serial authentication set to enabled.
```



2.1.36 uiConfig

Displays or modifies the user interface access methods.

Syntax

```
uiConfig [-telnet {0|1}] [-https {0|1}] [-http {0|1}] [-sftp {0|1}] [-snmp {0|1}]
[-snmpv1 {0|1}] [-snmpv2 {0|1}] [-snmpv3 {0|1}] [-snmpreadonly {0|1}]
[-ssh {0|1}]
```

Options

-telnet	Disables or enables access to the device through Telnet. 0 = Disable access. 1 = Enable access.
-https	Disables or enables HTTPS access. 0 = Disable access. 1 = Enable access.
-http	Disables or enables HTTP access. 0 = Disable access. 1 = Enable access.
-sftp	Disables or enables SFTP access. 0 = Disable access. 1 = Enable access.
-snmp	Disables or enables overall SNMP access. 0 = Disable access. 1 = Enable access.
-snmpv1	Disables or enables SNMP V1 access. 0 = Disable access. 1 = Enable access.
-snmpv2	Disables or enables SNMP V2 access. 0 = Disable access. 1 = Enable access.
-snmpv3	Disables or enables SNMP V3 access.



0 = Disable access.

1 = Enable access.

`-snmpreadonly` Disables or enables SNMP write access.

0 = Enable access.

1 = Disable access.

`-ssh` Disables or enables SSH access.

0 = Disable access.

1 = Enable access.

Example

```
-> uiconfig -telnet 0
Successfully modified configuration.
Option      Value
-----
-telnet      0
-http        1
-https       0
-sftp        1
-snmp        1
-ssh         1
```

Notes

There are several access methods for this device. With no arguments, this command displays the access methods that can be configured, and whether each method is currently enabled or disabled.

This command can also be used to enable or disable various access methods. Use `-<proto> 0` to disable a protocol, and `-<proto> 1` to enable it. Multiple operations can be specified in a single command.

A reboot is not required for this command to take effect. Depending on the specific method, it may take 5-10 seconds for the change to take effect. Note that existing connections (for example, a Telnet session) are not affected by disabling the underlying access method.

Any access method supported by the device but not listed here, cannot be configured and is always enabled.

2.1.37 **genPost**

Displays power-on self-test (POST) results and runs on-demand tests.

If no argument is entered, the list of tests is displayed; however, no tests are run.

A single test can be run by entering its ID. All on-demand tests can be run by entering `all`.



The power-on tests are meaningful for a managed Intel® OP Edge Switch 100 Series. The CPU, DRAM, RAM, and Boot ROM are located on the Q7 module. The power-on tests run on every power cycle, so they are always automatically enabled.

Table 2. genPost Output Description

Output Field	Description
ID	Index. Tests that can be run on-demand have a numeric ID. Tests that cannot be run on-demand have * as the ID.
Gen POST Name	POST test name. Power-On Tests <ul style="list-style-type: none"> CPU Test CPU. MEM DRAM Test DRAM addressability and contents. BOOTROM IMG CHKSUM Check boot ROM image checksum. RUN-TIME IMG CHKSUM Check run-time image checksum. JMP RAM Execute from RAM. On-Demand Tests <ul style="list-style-type: none"> I2C PROBE Probe I2C bus for expected I2C devices present. FAN TRAYS Check for expected number of fans present and operational. REAL-TIME CLOCK Check for real-time clock operational. PROTO Test the CLI and GUI interfaces to POST.
Result	After executing one or more tests, the screen is updated with the result of each test run. <i>Note:</i> Power-on tests always have a result of PASS, since all tests must complete successfully and the boot process must complete in order for the CLI to become operational.
ENA	Enabled flag: indicates whether a test is supported on a platform.
DEM	On-demand flag: indicates whether the test can be run on-demand or not.
PWR	Power-on flag: indicates whether the test can be run at power-on.
Result-Ext	Extended result information: displays information about a test failure.

Syntax

```
genPost [{all | test}]
```

Options

all Runs all tests.

test Runs specific test number.



Example

The CLI prompts you to enter a test number or enter `all` to run all tests.

```
-> genPost
```

ID	Gen	POST Name	Result	ENA	DEM	PWR	Result-Ext
*		POST TEST CPU	NO-RUN	Y	N	Y	
*		POST TEST MEM DRAM	NO-RUN	Y	N	Y	
*		POST TEST BOOTROM IMG CHKSUM	NO-RUN	Y	N	Y	
*		POST TEST RUN-TIME IMG CHKSUM	NO-RUN	Y	N	Y	
*		POST TEST JMP RAM	NO-RUN	Y	N	Y	
6		POST TEST I2C PROBE	NO-RUN	Y	Y	N	
7		POST TEST FAN TRAYS	NO-RUN	Y	Y	N	
8		POST TEST REAL-TIME CLOCK	NO-RUN	Y	Y	N	
9		POST TEST PROTO	NO-RUN	Y	Y	N	

```
Enter Test Index(0 to Exit, 'all' for All tests)
all
Running: all
POST PROTO Parameters P1:1 P2:2 P3:3
```

ID	Gen	POST Name	Result	ENA	DEM	PWR	Result-Ext
*		POST TEST CPU	NO-RUN	Y	N	Y	
*		POST TEST MEM DRAM	NO-RUN	Y	N	Y	
*		POST TEST BOOTROM IMG CHKSUM	NO-RUN	Y	N	Y	
*		POST TEST RUN-TIME IMG CHKSUM	NO-RUN	Y	N	Y	
*		POST TEST JMP RAM	NO-RUN	Y	N	Y	
6		POST TEST I2C PROBE	PASS	Y	Y	N	
7		POST TEST FAN TRAYS	FAIL	Y	Y	N	Fans (1) < minimum (4)
8		POST TEST REAL-TIME CLOCK	PASS	Y	Y	N	
9		POST TEST PROTO	PASS	Y	Y	N	ResultExt: Successful, no errors

```
Enter Test Index(0 to Exit, 'all' for All tests)
0
```

2.1.38 exit

Terminates the current CLI session.

Syntax

```
exit
```

Options

None.

Example

```
exit
```

2.2 Chassis

Commands in this category are used for chassis management, such as FRU info, fan/power supply state, and others.



2.2.1 hwCheck

Displays the hardware status for chassis, modules, fans, and power supplies.

Syntax

```
hwCheck [{-verbose | {0 | 1}}]
```

Options

Returns GOOD or provides detailed status/warning/error information. If an error/warning is detected, this command automatically provides verbose information. Options include:

`-verbose` Verbose output mode.

0 Quiet output (default).

1 Verbose output.

Example

```
-> hwcheck
Chassis hardware status: GOOD
-> hwcheck -verbose
Chassis hardware status: GOOD
Fan Tray 1 health:
    status=Operational
    errors=0
    warnings=0.
Power Supply 1 health:
    status=Engaged
    errors=0
    warnings=0
    fanErrors=0.
Power Supply 2 health:
    status=Engaged
    errors=0
    warnings=0
    fanErrors=0.
Intel Omni-Path Edge Switch 100 Series health:
    LTC4260 Voltage Min Val.      Max Val.      Status
    12.995      10.800      14.300      Voltage is OK
    LTC2974 Voltage Min Val.      Max Val.      Status
    1.800      1.614      1.984      Voltage is OK
    2.515      2.244      2.755      Voltage is OK
    5.000      4.744      5.255      Voltage is OK
    3.300      2.963      3.635      Voltage is OK
    LTC3880 Voltage Min Val.      Max Val.      Status
    0.999      0.945      1.054      Voltage is OK
    LTC3880 Voltage Min Val.      Max Val.      Status
    0.998      0.945      1.054      Voltage is OK
    LTC3880 Voltage Min Val.      Max Val.      Status
    0.899      0.804      0.995      Voltage is OK
    LTC3880 Voltage Min Val.      Max Val.      Status
    0.901      0.804      0.995      Voltage is OK
    LTC3880 Voltage Min Val.      Max Val.      Status
    3.334      3.161      3.508      Voltage is OK
    Temperature      Warning      Critical      Actual
    ASIC_EXT          90C          105C          30C
    ASIC_INT           94C          104C          34C
    QSFP_MAX           70C          100C          N/A
```



```
CPU_CORE          90C          100C          26C
Temperature Errors = 0
Temperature Warnings = 0
Temperature I/O Errors = 0
Good Temperatures = 3
Voltage Warnings = 0
Voltage Errors = 0
Voltage I/O Errors = 0
Initialize Errors = 0
Module Attention LED color = Off
Chassis LED color = Green
```

2.2.2 hwMonitor

Displays current port states, fan speeds, temperatures, and voltages until disabled.

Syntax

```
hwMonitor [slot] [onepass] [-all]
```

Options

slot Slot name to display.

onepass Displays the current values and exit. Do not continuously monitor.

-all Displays all information screens.

Example

The CLI displays different output depending on the Intel® Omni-Path switch type. The display refreshes automatically.

Example for Intel® OP Switch 100 Series

```
-> hwmonitor
System monitor, Uptime: 4 days 0 hours 21 minutes 1 seconds
Power Supply 1: online      Power Supply 2: offline
Fan Tray 1 Speed: 7620 7483 7554 7859 7749 7516

Temperatures: LTC2974 U42      [Unused]=25C
               [Unused]=25C
               [Unused]=25C
               [ASIC_EXT]=32C
Temperatures: FROM ASIC      [ASIC_INT]=35C
Temperatures: FROM ASIC      [QSFP_MAX]=N/A
Temperatures: MGMT CARD      [CPU_CORE]=29C

Voltages: LTC4260 U2      [12.0v(Raw)]=12.880
Voltages: LTC3880 U4      [1.0v]=0.999
Voltages: LTC3880 U5      [1.0v]=0.999
Voltages: LTC3880 U6      [0.9v]=0.899
Voltages: LTC3880 U7      [0.9v]=0.898
Voltages: LTC3880 U8      [3.3v]=3.334
Voltages: LTC2974 U42      [1.8v]=1.799 [2.5v]=2.499 [5.0v]=5.000 [3.3v]=3.299

               Omni-Path Port Status
Cable01[ Down ] Cable02[Active] Cable03[ Down ] Cable04[ Down ]
Cable05[ Down ] Cable06[ Down ] Cable07[ Down ] Cable08[ Down ]
Cable09[ Down ] Cable10[ Down ] Cable11[ Down ] Cable12[ Down ]
Cable13[Active] Cable14[ Down ] Cable15[ Down ] Cable16[ Down ]
```



```

Cable17[ Down ]   Cable18[ Down ]   Cable19[ Down ]   Cable20[ Down ]
Cable21[ Down ]   Cable22[ Down ]   Cable23[ Down ]   Cable24[Active]
Cable25[ Down ]   Cable26[ Down ]   Cable27[ Down ]   Cable28[ Down ]
Cable29[ Down ]   Cable30[ Down ]   Cable31[Active]    Cable32[ Down ]
Cable33[ Down ]   Cable34[ Down ]   Cable35[ Down ]   Cable36[Active]
Cable37[ Down ]   Cable38[ Down ]   Cable39[ Down ]   Cable40[ Down ]
Cable41[ Down ]   Cable42[ Down ]   Cable43[ Down ]   Cable44[ Down ]
Cable45[ Down ]   Cable46[Active]   Cable47[ Down ]   Cable48[ Down ]

```

Example for Intel® OP Director Class Switch 100 Series

```

-> hwMonitor M201
System monitor, Uptime: 0 days 4 hours 55 minutes 37 seconds
  MODULES          MODULES(cont)  MODULES(cont)      Power & Fans
  SLOT|P|TMP|VLT   SLOT|P|TMP|VLT   SLOT|P|TMP|VLT   SLOT|P|SPEED   SLOT|P|SPEED
  | |E|W|E|W       | |E|W|E|W       | |E|W|E|W       | |             | |
M201 |*| | | |    L101 |*| | | |    | | | | |    P201| |       F201|*| 6840
M202 |*| | | |    L102 |*| | | |    | | | | |    P202|*| 6480
S105A|*| | | |    L103 |*| | | |    | | | | |    P203| |       F203|*| 6480
S105B|*| | | |    L104 |*| | | |    | | | | |    P204|*| 6480
Max Temp=60C (Management Module 202)
Legend: P=pres/abs TMP=Temperature VLT=Voltage E=Err W=Warn (X=Err/Warn found)

```

Notes

To exit monitoring, press the **Enter** key.

The character meanings on the main monitoring page include the following:

P (Power) column heading uses the following characters:

- * = Device is inserted and powered on.
- ! = Device is inserted and powered off.
- A = Device is required in the configuration, but is not inserted.
- = Device is not required in the configuration, and is not inserted. (Column is empty.)

TMP (Temperature) headings have two columns:

- E (Error) column heading uses the following characters:
 - x = A temperature error condition exists on the device.
 - = No temperature error condition on the device. (Column is empty.)
- W (Warning) column heading uses the following characters:
 - x = A temperature warning condition exists on the device.
 - = No temperature warning condition on the device. (Column is empty.)

VLT (Voltage) headings have two columns:

- E (Error) column heading uses the following characters:
 - x = A voltage error condition exists on the device.
 - = No voltage error condition on the device. (Column is empty.)
- W (Warning) column heading uses the following characters:
 - x = A voltage warning condition exists on the device.
 - = No voltage warning condition on the device. (Column is empty.)



2.2.3 showNodeDesc

Displays the node subnet management agent (SMA) description (or the default).

Syntax

```
showNodeDesc [-d]
```

Options

-d Shows the default node name for this unit.

Example

```
-> showNodeDesc  
Node (SMA) Description is = OmniPth000000f600000000
```

Notes

If no value is entered, the current node description is displayed.

2.2.4 setNodeDesc

Modifies the node subnet management agent (SMA) description.

Syntax

```
setNodeDesc "nodeString"
```

Options

nodeString Node description must be enclosed in quotes and must be no more than 64 characters.

Example

```
-> setNodeDesc "OmniPath Fabric Switch"  
Node (SMA) Description successfully changed to "OmniPath Fabric Switch"
```

2.2.5 setNodeDescFormat

Displays or modifies the node subnet management agent (SMA) description format modifier.

Syntax

```
setNodeDescFormat [format]
```



Options

format Description format type. If no value is entered, the current setting is displayed. Options include:

- 0 Verbose format.
- 1 Brief format (consistent with the CLI/GUI Port Stat port naming).

Example

```
-> setNodeDescFormat
Format = 0
```

2.2.6 fruInfo

Displays field replaceable unit (FRU) information.

Syntax

```
fruInfo {[slot] | -all}
```

Options

slot Slot name to display FRU information.

-all Displays information for all available slots.

Example

```
-> fruInfo
Display chassis info
xInfo_ChassisInfo:
  RecType:      1                LastRec:      0
  LenMult:      0
  ReadOnly:     1                RecordFormat:  2
  RecLen:       14
  LogicalLen:   020
  HdrChkSum:    c6
  ChassisGuid:  00117501ff5131bf
  SlotCount:    1                (IB Mods in Chassis)
  SlotNumbers:  81                (pairs:ext0|Slt1)
  CmeAccess:    80                (bits:ext0|Slt1|Cme)
  SlotNumber:   0 <-Record accessed via this slot
  CmeAccessBits: 2                (Access slot relative)
  ProxyAccess:  0                (Access slot relative)
  LockDrivesCTR: 0                (Clear to Remove interlock)
  MechLock:     1
  NodeCount:    0

xInfo_AssetTagInfo:
  RecType:      8                LastRec:      1
  LenMult:      0
  ReadOnly:     0                RecordFormat:  1
  RecLen:       c
  LogicalLen:   012
  HdrChkSum:    68
```



```
FRUHandle:      1
Asset Tag Enc:  4
Asset Tag:      00 00 00 07

xInfo_FRUInfo:
  RecType:      2                      LastRec:      0
  LenMult:      0
  ReadOnly:     1                      RecordFormat:  1
  RecLen:       74
    LogicalLen: 116
    HdrChkSum:  66
    FruType:    4
    FruHandle:  1
    FRUGUIDType: 1
    FruGuid:    00117501ff5131bf
    SerNumEncLen: cd    SerNum:      USFU131500007
    PtNumEncLen:  ca    PartNum:     H50565-004
    ModelEncLen:  cb    ModelNum:    100SWE48QF2
    VersionEncLen: c3   Version:     004
    MfgEncLen:    d1    Manufacturer: Intel Corporation
    ProdNmEncLen: df    ProductName: 100 OP Edge 48p Q7 forward 2PSU
    MfgIdEncLen:  1    MfgId:       001175
    MfgTime:      15/03/26 10:00
    OemEncLen:    40    OemData:
```

2.2.7 chassisQuery

Displays information about the line cards in a chassis.

Syntax

```
chassisQuery [-master] [-slave] [slot] [-showType] [-type cardtype]
[-ignoreInvalidType]
```

Options

`-master` Displays the master slot name.

`-slave` Displays the slave slot name.

`slot` Slot name.

`-showType` Displays the card type.

`-type card_type` Displays slots that have the specified card type.

Note: Use `chassisQuery -showType` to display valid card types for the chassis.

`-ignoreInvalidType` Does not return an error if an invalid card type is supplied.

Note: This option is only valid when used with `-type`.



Example

Example for Intel® OP Switch 100 Series

```
-> chassisQuery
slots: Module
```

Example for Intel® OP Director Class Switch 100 Series

```
-> chassisQuery
slots: M201 M202
```

Notes

If no options are entered, all currently occupied slots that support firmware update are displayed.

2.2.8 showInventory

Displays asset information on all entities in the chassis.

Syntax

```
showInventory
```

Options

None.

Example

```
-> showInventory

          Power Supply 1
-----
Manufacturer Id - 001175
Manufacturer Name - Intel Corporation
Part Number - J47711-xxx
Product Name - Intel(r) Omni-Path Edge Switch 100 Series Power Supply

          Power Supply 2
-----
Manufacturer Id - 001175
Manufacturer Name - Intel Corporation
Part Number - J47711-xxx
Product Name - Intel(r) Omni-Path Edge Switch 100 Series Power Supply

          Fan Tray 1
-----
Manufacturer Id - 001175
Manufacturer Name - Intel Corporation
Part Number - J46697-xxx
Product Name - Intel(r) Omni-Path Edge Switch 100 Series Fan Tray

          Fan Tray 2
-----
Manufacturer Id - 001175
```



```
Manufacturer Name - Intel Corporation
Part Number - J46697-xxx
Product Name - Intel(r) Omni-Path Edge Switch 100 Series Fan Tray
```

```
-----
Module
-----
GUID - 00117501ff60260b
Manufacturer Id - 001175
Manufacturer Name - Intel Corporation
Mfg Date/Time - 2016/12/16 10:00
Model - 100SWE48QFH
Part Number - J45152-001-01
Product Name - 100 OPA Edge 48p Mgmt Fwd HS
Serial Number - USFU51160008A
Version - 001-01
Total devices found: 5
```

2.2.9 setBeacon

Modifies or displays the chassis beacon LED setting.

Note: This command is only available on Intel® Omni-Path Director Class Switch 100 Series.

Syntax

```
setBeacon [{0 | 1}]
```

Options

If no value is entered, the current setting is displayed. Options include:

- 0 Disable beacon.
- 1 Enable beacon.

Example

```
-> setBeacon 0
```

2.2.10 setSystemContact

Sets or displays the chassis system contact information.

Syntax

```
setSystemContact [contact]
```

Options

contact System contact string; must be enclosed in double quotes. Maximum length is 255 characters.

If no value is entered, the current setting is displayed.



Example

```
-> setSystemContact
System Contact      : {no value}
```

2.2.11 setSystemName

Sets or displays the chassis system name.

Syntax

```
setSystemName [name]
```

Options

name System name string; must be enclosed in double quotes. Maximum length is 255 characters.

If no value is entered, the current setting is displayed.

Example

```
-> setSystemName
System Name         : {no value}
```

2.2.12 setSystemLocation

Sets or displays the chassis system location.

Syntax

```
setSystemLocation [location]
```

Options

location System location string; must be enclosed in double quotes. Maximum length is 255 characters.

If no value is entered, the current setting is displayed.

Example

```
-> setSystemLocation
System Location     : {no value}
```

2.3 Network

Commands in this category are used for Ethernet interface management.



2.3.1 ifShow

Displays the interface statistics for the out-of-band (OOB) management port.

Syntax

```
ifShow [ifName]
```

Options

ifName The network interface name. If *ifName* is entered, only the interfaces belonging to that group are displayed. If no value is entered for *ifName*, all attached interfaces are displayed.

Example

```
-> ifShow
lo0    Link type:Local loopback Queue:none
       inet 127.0.0.1 mask 255.255.255.255
       inet6 unicast fe80::1%lo0 prefixlen 64 automatic
       inet6 unicast ::1 prefixlen 128
       UP RUNNING LOOPBACK MULTICAST NOARP ALLMULTI
       MTU:1500 metric:1 VR:0 ifindex:1
       RX packets:41 mcast:3 errors:0 dropped:0
       TX packets:41 mcast:3 errors:0
       collisions:0 unsupported proto:0
       RX bytes:1903 TX bytes:1903

gei0    Link type:Ethernet HWaddr 00:00:95:12:d3:1d Queue:none
       capabilities: TXCSUM TX6CSUM VLAN MTU VLAN TXHWTAG VLAN RXHWTAG
       inet 10.228.209.95 mask 255.255.252.0 broadcast 10.228.211.255
       inet6 unicast 2002:ae4:d15f::ae4:d15f prefixlen 32
       inet6 unicast fe80::200:95ff:fe12:d31d%gei0 prefixlen 64 automatic
       UP RUNNING SIMPLEX BROADCAST MULTICAST
       MTU:1500 metric:1 VR:0 ifindex:2
       RX packets:226 mcast:0 errors:0 dropped:0
       TX packets:156 mcast:10 errors:0
       collisions:0 unsupported proto:0
       RX bytes:14k TX bytes:13k
```

2.3.2 routeShow

Displays the interface routes for the out-of-band (OOB) management port.

Syntax

```
routeShow
```

Options

None.

Example

```
-> routeShow

INET route table - vr: 0, table: 254
Destination      Gateway          Flags    Use    If      Metric
0.0.0.0/0         10.228.208.1    UGS      40     gei      0      0
10.228.208.0/22   WRS-Template    UC       4      gei      0      0
```



WRS-Template	WRS-Template	UH	25	lo0	0
localhost	localhost	UH	17	lo0	0
INET6 route table - vr: 0, table: 254					
Destination	Gateway	Flags	Use	If	Metric
localhost6	localhost6	UH	0	lo0	0
2002:ae4::/32	2002:ae4:d15f::ae4:d15f	UC	0	gei	0
2002:ae4:d15f::ae4:d15f	2002:ae4:d15f::ae4:d15f	UH	0	lo0	0
fe80::%lo0/64	fe80::1%lo0	UC	0	lo0	0
fe80::%gei0/64	fe80::200:95ff:fe12:d31d%gei0	UC	0	gei	0
fe80::1%lo0	fe80::1%lo0	UH	0	lo0	0
fe80::200:95ff:fe12:d31d%gei0	fe80::200:95ff:fe12:d31d%gei0	UH	0	lo0	0
ipnet_cmd_route failed ret:0					

2.3.3 ping

Sends ping packets to a specified IP address.

Syntax

```
ping {hostname | ipAddress} [packetCount]
```

Options

hostname The network hostname to ping. Hostname is limited to 64 characters.

ipAddress The IP address to ping.

packetCount The number of packets with which to ping the host (default is 5).

Example

```
-> ping 172.26.0.254
PING 172.26.0.254: 56 data bytes
64 bytes from 172.26.0.254: icmp_seq=0. time=0. ms
64 bytes from 172.26.0.254: icmp_seq=1. time=0. ms
64 bytes from 172.26.0.254: icmp_seq=2. time=0. ms
64 bytes from 172.26.0.254: icmp_seq=3. time=0. ms
64 bytes from 172.26.0.254: icmp_seq=4. time=0. ms
----172.26.0.254 PING Statistics----
5 packets transmitted, 5 packets received, 0% packet loss
round-trip (ms)  min/avg/max = 0/0/0
```

Notes

If *packetCount* is defined, the process exits after the defined number of packets are sent.

If *packetCount* is not defined, the process exits after the default 5 packets are sent.

2.3.4 ping6

Sends ping packets to a specified IPv6 address.

Syntax

```
ping6 [-n] [-c packetCount] [-I interface] ipv6Address
```



Options

- `-n` Numeric output only.
- `-c packetCount` The number of packets with which to ping the host (default is 5).
- `-I interface` The local interface name to use (useful for link local ping).
- `ipv6Address` The network host to ping (scoped address accepted).

Notes

If `packetCount` is defined, the process exits after the defined number of packets are sent.

If `packetCount` is not defined, the process exits after the default 5 packets are sent.

2.3.5 showChassisIpAddr

Displays the chassis IP address.

Syntax

```
showChassisIpAddr
```

Options

None.

Example

```
-> showChassisIpAddr  
Chassis IP Address: 10.228.209.95 Net mask: 255.255.252.0
```

2.3.6 setChassisIpAddr

Modifies the chassis IP address and network mask.

Syntax

```
setChassisIpAddr [-h ipaddress] [-m netMask]
```

Options

- `-h ipaddress` The new IP address in dotted notation format `xxx.xxx.xxx.xxx`.
- `-m netMask` The network mask (may be in dotted notation or hexadecimal format).



Example

```
-> setChassisIpAddr -h 172.26.0.221 -m 255.255.240.0
```

Notes

Use the console port when changing the chassis IP address to avoid dropping the connection to the CLI and causing the device to become unreachable.

2.3.7 setChassisIpv6Addr

Changes the user-configured chassis IPv6 address.

Syntax

```
setChassisIpv6Addr {ipv6Address | maskLen}
```

Options

ipv6Address The new IPv6 address in notation format a:b:c:d:e:f:g:h; embedded 0s can be shortened, for example, a:b::g:h.

maskLen Network mask length (0-128).

Notes

Use the console port when changing the chassis IPv6 address to avoid dropping the connection to the CLI and causing the device to become unreachable.

2.3.8 delChassisIpv6Addr

Deletes the user-configured chassis IPv6 address.

Syntax

```
delChassisIpv6Addr
```

Options

None.

Notes

Use the console port when deleting the chassis IPv6 address to avoid dropping the connection to the CLI and causing the device to become unreachable. This command does not affect link-local or autoconfigured addresses.

2.3.9 showChassisIpv6Addr

Displays the user-configured chassis IPv6 address.



Syntax

```
showChassisIpv6Addr
```

Options

None.

Example

```
-> showChassisIpv6Addr  
Chassis IPv6 Address/Prefix Length: 2002:0ae4:d15f::0ae4:d15f/32
```

Notes

Only displays the user-configured IPv6 address. To see all the IPv6 addresses, including any autoconfigured addresses, use the command [ifShow](#) on page 52.

2.3.10 autoConfIPv6Enable

Enables IPv6 address autoconfiguration.

Syntax

```
autoConfIPv6Enable
```

Options

None.

Notes

This command allows prefix learning from attached routers. It does not affect link-local or manually configured addresses.

2.3.11 autoConfIPv6Disable

Disables IPv6 address autoconfiguration.

Syntax

```
autoConfIPv6Disable
```

Options

None.

Example

```
-> autoConfIPv6Disable
```




Notes

This command prevents prefix learning from attached routers. It does not affect link-local or manually configured addresses.

2.3.12 autoConfIPv6Show

Displays IPv6 address autoconfiguration settings.

Syntax

```
autoConfIPv6Show
```

Options

None.

Example

```
-> autoConfIPv6Show
OOB IPv6 Autoconfig is enabled
```

2.3.13 ndpShow

Displays the IPv6 neighbors table.

Syntax

```
ndpShow
```

Options

None.

Example

```
-> ndpShow
Neighbor                               Linklayer Address  Netif    Expire  St
2002:ae4::                             00:00:95:12:d3:1d  gei0     perm    R
2002:ae4:d15f::ae4:d15f                 00:00:95:12:d3:1d  gei0     perm    R
ff02::2                                 33:33:00:00:00:02  gei0     587 s   S
ff02::2                                 link#1             lo0      577 s   S
::1                                     link#1             lo0      perm    R
ff02::1:ff12:d31d                       33:33:ff:12:d3:1d  gei0     564 s   S
fe80::200:95ff:fe12:d31d                 00:00:95:12:d3:1d  gei0     perm    R
ff02::16                                 33:33:00:00:00:16  gei0     585 s   S
fe80::1                                  link#1             lo0      perm    R
fe80::                                  00:00:95:12:d3:1d  gei0     perm    R
ipnet_cmd_ndp failed ret:0
```

2.3.14 showDefaultIPv6Route

Displays the default gateway IPv6 address.



Syntax

```
showDefaultIpv6Route
```

Options

None.

Example

```
-> showDefaultIpv6Route  
Gateway IPv6 Address: fe80::862b:2bff:fe5b:3b6
```

Notes

This is the IPv6 address for the default gateway to route packets from the out-of-band (OOB) management port to an external network.

2.3.15 **setDefaultIpv6Route**

Modifies the default gateway IPv6 address.

Syntax

```
setDefaultIpv6Route -h ipv6address
```

Options

`-h ipv6address` The IPv6 address you wish to set in notation format `a:b:c:d:e:f:g:h`; embedded 0s can be shortened, for example, `a:b::g:h`.

Notes

Use this command to configure the IPv6 address for the default gateway to route packets from the out-of-band (OOB) management port to an external network.

2.3.16 **showDefaultRoute**

Displays the default gateway IP address.

Syntax

```
showDefaultRoute
```

Options

None.



Example

```
-> showDefaultRoute
Gateway IP Address: 172.26.0.254
```

Notes

This is the IP address for the default gateway to route packets from the out-of-band (OOB) management port to an external network.

2.3.17 **setDefaultRoute**

Changes the default gateway IP address.

Syntax

```
setDefaultRoute -h ipaddress
```

Options

-h *ipaddress* The default gateway IP address in dotted decimal format (*xxx.xxx.xxx.xxx*).

Example

```
setDefaultRoute -h 172.26.0.235
```

Notes

Use this command to configure the IP address for the default gateway to route packets from the out-of-band (OOB) management port to an external network.

2.3.18 **arpShow**

Displays the link level address resolution protocol (ARP) table.

Syntax

```
arpShow
```

Options

None.

Example

```
-> arpShow
10.228.209.95 at 00:00:95:12:d3:1d permanent published on gei0
10.228.211.255 at ff:ff:ff:ff:ff:ff on gei0
10.228.208.1 at 00:00:5e:00:01:50 on gei0
```



2.3.19 hostShow

Displays the host name table.

Syntax

```
hostShow
```

Options

None.

Example

```
-> hostShow
hostname      inet address      aliases
-----
localhost     127.0.0.1          CHASSIS
WRS-Template  10.228.209.95
home          10.228.211.254
switchA       127.1.1.1
```

2.3.20 dhcpEnable

Enables DHCP on the Ethernet interface.

Syntax

```
dhcpEnable
```

Options

None.

Example

```
-> dhcpEnable
DHCP is enabled
```

Notes

Enables the DHCP client subsystem, requests a DHCP lease, and then configures the interface with the lease data from the server.

2.3.21 dhcpDisable

Disables DHCP on the Ethernet interface.

Syntax

```
dhcpDisable
```



Options

None.

Example

```
-> dhcpDisable  
DHCP is disabled
```

Notes

Any DHCP-acquired IP address is released. The interface is then configured to the default static values from the current bootline.

2.3.22 **dhcpShow**

Displays the current DHCP leases.

Syntax

```
dhcpShow [{-verbose | -v}]
```

Options

-verbose Enables verbose output mode.

-v Enables verbose display.

Example

```
-> dhcpShow  
Client state = BOUND  
Assigned IP address: 172.26.3.35  
Client subnet mask: 255.255.240.0  
DHCP server: 172.26.1.20  
Default IP router: 172.26.0.1  
Client lease duration: 518400 secs (421299 remaining)
```

2.3.23 **dnsParamsShow**

Displays the stored domain name system (DNS) parameters.

Syntax

```
dnsParamsShow
```

Options

None.



Example

```
-> dnsParamsShow
DNS Resolver      : Enabled
DNS Server Address : xxx.xxx.xxx.xxx
Local Domain Name : st.intel.com
```

Notes

This command retrieves the stored configuration parameters used for domain name resolution.

2.3.24 dnsParamsSet

Changes the DNS configuration parameters.

Syntax

```
dnsParamsSet [-s ipaddress] [-d domain name] [-e {1|0}]
```

Options

- | | |
|------------------------------------|--|
| <code>-s <i>ipaddress</i></code> | DNS server IP address in dotted notation format (<code>xxx.xxx.xxx.xxx</code>) |
| <code>-d <i>domain name</i></code> | The local domain name where this switch is installed (limit 32 characters). |
| <code>-e</code> | 0 = Disable the DNS resolver.
1 = Enable the DNS resolver. |

Example

```
-> dnsParamsSet -e 0
-> dnsParamsShow
DNS Resolver      : Disabled
DNS Server Address : xxx.xxx.xxx.xxx
Local Domain Name : st.intel.com
```

Notes

The DNS resolver cannot be enabled until both the server address and local domain name have been configured. It is necessary to manually reboot the switch in order to start or stop the DNS resolver.

2.3.25 IpoIbConfigShow

Displays the IP over InfiniBand* (IPoIB) enable/disable setting.

Syntax

```
IpoIbConfigShow
```

**Options**

None.

Example

```
-> IpoIbConfigShow  
IpoIb feature is currently disabled
```

2.3.26 IpoIbConfigEnable

Enables the IP over InfiniBand* (IPoIB) feature.

Syntax

```
IpoIbConfigEnable
```

Options

None.

Example

```
-> IpoIbConfigEnable
```

2.3.27 IpoIbConfigDisable

Disables the IP over InfiniBand* (IPoIB) feature.

Syntax

```
IpoIbConfigDisable
```

Options

None.

Example

```
-> IpoIbConfigDisable
```

2.3.28 IpoIbAddressShow

Displays the IP over InfiniBand* (IPoIB) IP address and associated netmask settings.

Note: IPoIB must be enabled to display these fields.

Syntax

```
IpoIbAddressShow
```



Options

None.

Example

```
-> IpoIbAddressShow
IP Address & Netmask are not configured for IpoIb interface
```

2.3.29 IpoIbAddressSet

Changes the IP over InfiniBand* (IPoIB) IP address and network mask settings.

Note: IPoIB must be enabled to display these fields.

Syntax

```
IpoIbAddressSet -h ipaddress [-m netMask]
```

Options

-h *ipaddress* The new IP address in dotted notation format *xxx.xxx.xxx.xxx*.

-m *netMask* Network mask (in hexadecimal format).

Example

```
-> IpoIbAddressSet -h 123.45.6.789
```

2.3.30 IpoIbAddressSetIPv6

Modifies the IP over InfiniBand* (IPoIB) IPv6 address and netmask.

Syntax

```
IpoIbAddressSetIPv6 ipv6Address/netMaskLen
```

Options

The option *ipv6Address/netMaskLen* is made up of two major components, separated by a */*.

ipv6Address Notation format is: *a:b:c:d:e:f:g:h*, where embedded 0s can be shortened (for example, *a:b::g:h*).

netMaskLen Value between 0 and 128 inclusive.

Example

```
-> IpoIbAddressSetIPv6 ipv6Address/netMaskLen
```




2.3.31 IpoIbAddressShowIPv6

Displays the IP over InfiniBand* (IPoIB) IPv6 address and associated netmask settings.

Syntax

```
IpoIbAddressShowIPv6
```

Options

None.

Example

```
-> IpoIbAddressShowIPv6
```

2.4 Firmware

Commands in this category are used to manage firmware, such as display firmware revision, update firmware, and other tasks.

2.4.1 fwUpdate

Updates the firmware. You must reboot for the update to take effect.

Note: This command is only available on Intel® Omni-Path Edge Switch 100 Series.

Each switch has two firmware images that are installed by default. When you run `fwUpdate`, the *other* image is updated, not the one that is currently running. So, if you are running image1, the update replaces image2. You can then reboot, which runs image2 and then rerun `fwUpdate` to update image1.

Before you use this command, Intel recommends that you perform the following steps:

1. Run `chassisQuery` to get slot info.
2. Run `bootQuery <slot> -all`

The `bootQuery` output lists three versions:

- Primary: the image that will run at next boot.
- Alternate: the other image.
- Active: the current image.

You can also use `bootSelect <slot> -noprompt` to view this information.

Syntax

```
fwUpdate [hostip username password directory filename]
```



Options

Firmware update uses FTP to retrieve the firmware file, then writes the file to flash. If you omit any options, the system prompts you to provide it, as shown in the example.

hostip Host IP address where the firmware file resides.

username FTP user name.

password FTP user password.

directory After logging in, the directory to change to.

filename Name of the firmware file.

Example

```
-> fwUpdate
Enter 1 for FTP, 2 for local file: 1
Ftp Server IP Address:[192.168.0.195]
Ftp user name:[ftp] xxxxx
Ftp password:[ftp] xxxxx
File Directory:[PATH TO FIRMWARE FILE]
File name:[xxxx.spkg]
```

Notes

This command uses multiple modes to update firmware images:

- Mode 1 initiates a FTP transfer for the firmware package and saves the firmware image to flash.
- Mode 2 copies the firmware package from a local file system and saves the firmware image to flash.

If all options are passed from the command line, Mode 1 is the default. Any other modes are specified by omitting the command line options and entering the mode interactively when prompted. Some modes may not be available in all configurations.

2.4.2 fwUpdateSlot

Updates the firmware on a specific card. You must reboot for the update to take effect.

Note: This command is only available on Intel® Omni-Path Director Class Switch 100 Series.

Each *slot* has two firmware images that are installed by default. When you run `fwUpdateSlot`, the *other* image is updated, not the one that is currently running. So, if you are running image1, the update replaces image2. You can then reboot, which runs image2 and then rerun `fwUpdateSlot` to update image1.

Before you use this command, Intel recommends that you perform the following steps:

1. Run `chassisQuery` to get slot info.
2. Run `bootQuery <slot> -all`



The `bootQuery` output lists three versions:

- Primary: the image that will run at next boot.
- Alternate: the other image.
- Active: the current image.

You can also use `bootSelect <slot> -noprompt` to view this information.

Syntax

```
fwUpdateSlot slot [hostip username password directory filename]
```

Options

Firmware update uses FTP to retrieve the firmware file, then writes the file to flash. If you specify only the `slot`, the system prompts you to provide the remaining information, as shown in the example.

`slot` Chassis slot name to update.

`hostip` Host IP address where the firmware file resides.

`username` FTP user name.

`password` FTP user password.

`directory` After logging in, the directory to change to.

`filename` Name of the firmware file.

Example

```
-> fwUpdateSlot M201
Enter 1 for FTP, 2 for local file: 1
Ftp Server IP Address:[192.168.0.195]
Ftp user name:[ftp] xxxxx
Ftp password:[ftp] xxxxx
File Directory:[PATH TO FIRMWARE FILE]
File name:[xxxx.spkg]
```

2.4.3 fwUpdateChassis

Updates the firmware for all cards in a chassis or management card only. You must reboot for the update to take effect.

Note: This command is only available on Intel® Omni-Path Director Class Switch 100 Series.

Each `moduletype` has two firmware images that are installed by default. When you run `fwUpdateChassis`, the *other* image is updated, not the one that is currently running. So, if you are running image1, the update replaces image2. You can then reboot, which runs image2 and then rerun `fwUpdateChassis` to update image1.



Before you use this command, Intel recommends that you perform the following steps:

1. Run `chassisQuery` to get slot info.
2. Run `bootQuery <slot> -all`

The `bootQuery` output lists three versions:

- Primary: the image that will run at next boot.
- Alternate: the other image.
- Active: the current image.

You can also use `bootSelect <slot> -noprompt` to view this information.

Syntax

```
fwUpdateChassis moduletype [-noprompt] [reboot]
```

Options

Firmware update retrieves the firmware file from an FTP server, saves the file locally, then writes the file to flash. Using the `all` option updates all cards in the chassis. This assumes that all firmware files are in the same directory of the FTP server. You are prompted for the names of each file for each *moduletype* present in the chassis. You are also prompted whether to save the entered values as defaults for future firmware updates.

moduletype Type of card to update. Values include:

`all` Updates all cards in the chassis.

`management` Updates the management card.

`-noprompt` When entered, the system does not prompt for FTP information, it uses the saved values.

`reboot` Upon successful completion, reboots the updated cards.

Example

```
-> fwUpdateChassis all reboot
```

2.4.4 fwListFiles

Lists the contents of the firmware directory.

Syntax

```
fwListFiles
```



Options

None.

Example

```
-> fwListFiles
Listing Directory /firmware:
drwxrwxrwx  1 0      0      1024 Oct 14 02:24 operator/
drwxrwxrwx  1 0      0      1024 Oct 14 02:24 admin/
drwxrwxrwx  1 0      0      1024 Oct 14 02:24 ivtester/
```

Notes

The firmware directory temporarily stores firmware files before they are written to flash.

2.4.5 fwShowUpdateParams

Displays the default update firmware settings.

Syntax

```
fwShowUpdateParams
```

Options

None.

Example

```
-> fwShowUpdateParams
Firmware update ftp configuration settings:
host:[10.127.236.39]
user:[ftp]
password:[ftp]
directory:[/pub]
filename management:[STL1.q7.10.0.0.991.51.spkg]
```

2.4.6 fwSetUpdateParams

Changes the default update firmware settings.

Syntax

```
fwSetUpdateParams [-c cardtype [-h hostname] [-u username] [-p password] [-d directory] -f filename]
```

Options

All options are shared across all card types, except for *filename*.

-c *cardtype* Options include: management



Note: The *cardtype* parameter is only required when specifying the *filename*.

- h *hostname* The host name or IP address of the FTP server. Maximum = 64 characters.
- u *username* The user name to access the FTP server.
- p *password* The password to access the FTP server.
- d *directory* The directory containing the firmware file.
- f *filename* The firmware file name.

2.4.7 showCapability

Displays capability and feature information for a specific release.

Syntax

```
showCapability [-key feature]
```

Options

- key *feature* Displays information for a particular feature.

Note: If no value is entered, the key features for the system are displayed.

Example

```
-> showCapability
fwPush: 1
slaveCli: 1
smConfig: 1
```

2.4.8 showLastScpRetCode

Displays the return code from the last SCP firmware or XML configuration push operation to the unit.

Syntax

```
showLastScpRetCode [slot] [-all]
```

Options

- slot* The slot name in the chassis.



-all All slots in the chassis.

Example

Example for Intel® OP Switch 100 Series

```
-> showLastScpRetCode Module
SCP: Slot 0 Last Exit Code: 0: Success
```

Example for Intel® OP Director Class Switch 100 Series

```
-> showLastScpRetCode M201
SCP: Slot 201 Last Exit Code: 0: Success
```

Notes

Use this command in automated systems to determine whether or not an SCP firmware or XML config push was successful.

2.4.9 fwVersion

Displays the firmware versions for a unit.

Note: The `fwVersion` command shows the bootrom version that was used at boot, not the bootrom version that was last installed. If you have recently updated firmware, you must reboot for the new bootrom to become active. See [fwUpdate](#), [fwUpdateSlot](#), and [fwUpdateChassis](#) for more details.

Syntax

```
fwVersion [slot]
```

Options

slot Slot name.

Example

```
-> fwVersion
Intel Omni-Path Edge Switch 100 Series Information -----
  Firmware Version: 10.0.0.991.51
  Firmware build:   10_0_0_991_51
  Firmware BSP:     q7
  Bootrom Version:  10.0.0.991.43
```

2.4.10 bootQuery

Displays boot image version information.



Syntax

```
bootQuery slot [-active] [-alternate] [-all]
```

Options

- slot* Slot name.
- active* Displays the version of the active firmware image.
- alternate* Displays the version of the alternate firmware image.
- all* Displays the versions for the primary and alternate firmware images.

Example

Example for Intel® OP Switch 100 Series

```
-> bootQuery Module -all
Primary firmware version: 10.0.0.991.51
Alternate firmware version: 10.0.0.991.42
Active firmware version: 10.0.0.991.51
```

Example for Intel® OP Director Class Switch 100 Series

```
-> bootQuery M201 -all
Primary firmware version: 10.0.0.991.51
Alternate firmware version: 10.0.0.991.42
Active firmware version: 10.0.0.991.51
```

2.4.11 bootSelect

Selects which boot image to start next.

Syntax

```
bootSelect slot [-i index] [-alternate] [-version version] [-noprompt]
```

Options

- slot* The slot name using the next boot image.
- i index* The index of the boot image to be used next.
- alternate* Chooses the alternate image to be used next.
- version version* Chooses a specific version to be the image to be used next.
- noprompt* Displays the current configuration only.



Example

```
-> bootselect Module
Currently installed firmware versions
index : alias      : version
-----
   1  : image1      : :10.0.0.0.604;
*# 2  : image2      : :10.0.0.0.608;

   * - indicates Primary image (will run at next reboot)
   # - indicates Active image

Default boot image index = 2

Enter new Default image index: [2]
->
```

Notes

In the output:

- * next to the image entry indicates the currently selected boot image.
- # indicates the currently active boot image.

2.4.12 biosVersion

Displays System BIOS version.

Syntax

```
biosVersion slot
```

Options

slot Slot name.

Example

```
-> biosVersion
```

2.4.13 biosUpdate

Updates the System BIOS version.

Syntax

```
biosUpdate [-noprompt]
```

Options

-noprompt Does not prompt for update confirmation.



Example

```
-> biosUpdate
```

2.4.14 bcFwVersion

Displays Board Controller firmware version.

Syntax

```
bcFwVersion slot
```

Options

slot Slot name.

Example

```
-> bcFwVersion
```

2.4.15 bcFwUpdate

Updates Board Controller firmware version.

Syntax

```
bcFwUpdate [-noprompt]
```

Options

-noprompt Does not prompt for update confirmation.

Example

```
-> bcFwUpdate
```

2.4.16 ShowLastBiosRetCode

Used to display the return code from the last sftp System BIOS Push. This allows for automated systems to determine if a System BIOS push was successful or not.

Syntax

```
showLastBiosRetCode [<slot>] [-all]
```

Options

<slot> The slot name.



-all All slots in the chassis.

Example

```
-> ShowLastBiosRetCode -all
```

2.4.17 showLastBcFwRetCode

Used to display the return code from the last SFTP Board Controller Firmware Push. This allows for automated systems to determine if a Board Controller Firmware push was successful or not.

Syntax

```
showLastBcFwRetCode [<slot>] [-all]
```

Options

<slot> The slot name.

-all All slots in the chassis.

Example

```
-> showLastBcFwRetCode -all
```

2.5 Fabric Management

Commands in this category are used for Subnet Manager (SM), Subnet Administration (SA), Performance Manager (PM), and Fabric Executive (FE) configuration and operation.

2.5.1 pmResetCounters

Resets various statistics and counters maintained by the performance manager (PM).

Syntax

```
pmResetCounters
```

Options

None.

Example

```
-> pmResetCounters
```



2.5.2 pmShowCounters

Displays various statistics and counters maintained by the performance manager (PM).

Syntax

```
pmShowCounters
```

Options

None.

Example

```
-> pmShowCounters
```

	COUNTER:	THIS SWEEP	LAST SWEEP	TOTAL
PM Sweeps:		0	1	32039
Ports whose PMA failed query:		0	0	206
Nodes with 1 or more failed Ports:		0	0	197
Total transmitted PMA Packets:		0	228	7307203
PMA Query Retransmits:		0	0	7418
PMA Query Retransmits Exhausted:		0	0	206
PM TX GET(ClassPortInfo):		0	0	98
PM TX GET(PortSamplesControl):		0	0	0
PM TX GET(PortSamplesResult):		0	0	0
PM TX GET(PortCounters):		0	172	5507335
PM TX SET(PortCounters):		0	35	1119563
PM TX GET(PortCountersExtended):		0	11	352409
PM TX GET(VendorPortCounters):		0	0	0
PM TX SET(VendorPortCounters):		0	10	320380
PM RX GETRESP(*):		0	228	7299579
PM RX STATUS BUSY:		0	0	0
PM RX STATUS REDIRECT:		0	0	0
PM RX STATUS BADCLASS:		0	0	0
PM RX STATUS BADMETHOD:		0	0	0
PM RX STATUS BADMETHODATTR:		0	0	0
PM RX STATUS BADFIELD:		0	0	0
PM RX STATUS UNKNOWN:		0	0	0
PA RX GET(ClassPortInfo):		0	0	0
PA RX GET(GrpList):		0	0	13
PA RX GET(GrpInfo):		0	0	82
....				
....				
....				

2.5.3 pmShowRunningTotals

Displays the running total counters for all ports in the fabric maintained by the performance manager (PM).

Syntax

```
pmShowRunningTotals
```

Options

None.



2.5.4 smAdaptiveRouting

Displays or dynamically sets SM Adaptive Routing when the feature is configured.

Syntax

```
smAdaptiveRouting [runningMode]
```

Options

runningMode 0 = adaptive routing is disabled.

1 = adaptive routing is enabled.

Example

```
-> smAdaptiveRouting
SmAdaptiveRouting is 0 (disabled)
```

Notes

The subnet manager must be running to use this command. Changes made with this command affect only the currently running SM in a fabric with multiple SMs running. Changes are lost if the SM is restarted or the chassis is rebooted. To make changes permanent, edit the Fabric Manager XML configuration file.

2.5.5 smControl

Starts and stops the embedded FM.

Syntax

```
smControl [start | stop | restart | status]
```

Options

start Starts the embedded FM.

stop Stops the embedded FM.

restart Restarts the embedded FM. (Starts it if it's not already running.)

status Prints out the embedded FM status.

Example

```
-> smControl start
Starting the SM...
```



2.5.6 smConfig

Configures startup parameters of the embedded subnet manager.

Syntax

```
smConfig [query] [startAtBoot yes|no] [startOnSlaveCmu yes|no]
```

Options

query	Displays present settings, no change.
startAtBoot	yes Displays present settings, no change. no Does not start the subnet manager at chassis boot.
startOnSlaveCmu	Starts the subnet manager at chassis boot. yes Starts the subnet manager on the slave CMU. no Does not start the subnet manager on the slave CMU.

Examples

Option 1

```
-> smConfig  
Start at boot? [Y]  
Start on slave CMU? [N]
```

Option 2

```
-> smConfig startAtBoot yes startOnSlaveCmu yes  
Saving....  
Saving complete...
```

Notes

Use this command to configure the subnet manager. Changes to these parameters do not take effect until the next reboot of the Chassis Management Cards.

This command is only available on the master chassis management card.

2.5.7 smListSecurityFiles

Displays the FM security files stored in the flash.

Syntax

```
smListSecurityFiles [-showSingleLine]
```



Options

`showSingleLine` Displays the file names on one line.

Example

```
-> smListSecurityFiles -showSingleLine
proc list_esm_security_files { } {
##
## list_esm_security_files
## -----
## return the list of FM security files in the given chassis
##
## Usage:
##     list_esm_security_files
## Arguments:
##     none
## Returns:
##     list of .pem files in chassis
##     -code error on failure
## Additional Information:
##     The global timeout is changed by this routine

    global spawn_id expect_out spawn_out timeout
    global expecting

    send_chassis_cmd "smListSecurityFiles -showSingleLine"

    # this could return no *.pem files, in which case "none" is output
    # The \r\n is needed to bound the + so we get all the data on the line
    set out [expect list 60 "{files: \[0-9A-Za-z._ \]+\[\r\n\]}" { "usage"
"Error" "Failed" "roblem" "not found" } ]
    expect_chassis_prompt 60
    #log_message "out=$out"

    # The \r\n is needed to bound the + so we get all the data on the line
    # there may be trailing spaces, TCL lists will ignore
    regexp {: ([0-9A-Za-z._ \]+\[\r\n\])} $out line ret
    #log_message "ret=$ret"
    if {[ regexp -nocase "none" "$ret" ] } {
        set ret ""
    }

    return "$ret"
}
```

2.5.8 smPKeys

Displays partition keys (PKeys) in the PKey table.

Note: The subnet manager must be running to display PKeys.

Identical information can also be obtained using the CLI command on the management node:

```
opasaquery -o pkey
```

Syntax

```
smPKeys
```



Options

None.

Example

```
-> smPKeys
LID: 0x00000002 PortNum: 0 BlockNum: 0
  0- 7: 0x8001 0x7fff 0xffff 0x0000 0x0000 0x0000 0x0000 0x0000
  8- 15: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
 16- 23: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
 24- 31: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
-----
LID: 0x00000002 PortNum: 9 BlockNum: 0
  0- 7: 0x8001 0x0000 0xffff 0x0000 0x0000 0x0000 0x0000 0x0000
  8- 15: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
 16- 23: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
 24- 31: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
-----
LID: 0x00000002 PortNum: 12 BlockNum: 0
  0- 7: 0x8001 0x0000 0xffff 0x0000 0x0000 0x0000 0x0000 0x0000
  8- 15: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
 16- 23: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
 24- 31: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
-----
LID: 0x00000002 PortNum: 41 BlockNum: 0
  0- 7: 0x8001 0x0000 0xffff 0x0000 0x0000 0x0000 0x0000 0x0000
  8- 15: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
 16- 23: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
 24- 31: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
-----
LID: 0x00000002 PortNum: 44 BlockNum: 0
  0- 7: 0x8001 0x0000 0xffff 0x0000 0x0000 0x0000 0x0000 0x0000
  8- 15: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
 16- 23: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
 24- 31: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
-----
LID: 0x00000003 PortNum: 1 BlockNum: 0
  0- 7: 0x8001 0x7fff 0xffff 0x0000 0x0000 0x0000 0x0000 0x0000
  8- 15: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
 16- 23: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
 24- 31: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
-----
LID: 0x00000004 PortNum: 1 BlockNum: 0
  0- 7: 0x8001 0x7fff 0xffff 0x0000 0x0000 0x0000 0x0000 0x0000
  8- 15: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
 16- 23: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
 24- 31: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
-----
LID: 0x00000005 PortNum: 1 BlockNum: 0
  0- 7: 0x8001 0x7fff 0xffff 0x0000 0x0000 0x0000 0x0000 0x0000
  8- 15: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
 16- 23: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
 24- 31: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
-----
LID: 0x00000001 PortNum: 1 BlockNum: 0
  0- 7: 0x8001 0x7fff 0xffff 0x0000 0x0000 0x0000 0x0000 0x0000
  8- 15: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
 16- 23: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
 24- 31: 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000 0x0000
```

2.5.9 smForceSweep

Forces a fabric sweep by the embedded subnet manager.



Syntax

```
smForceSweep
```

Options

None.

Example

```
-> smForceSweep
```

Notes

This command has no output message. To see the resulting sweep information, the “Info” level log messages must be turned on. Refer to [smLogLevel](#) on page 82, [smLogMode](#) on page 82, and [smLogMask](#) on page 83.

2.5.10 smResetCounters

Resets various statistics and counters maintained by the subnet manager.

Syntax

```
smResetCounters
```

Options

None.

Example

```
-> smResetCounters
```

2.5.11 smRestorePriority

Restores normal priorities from elevated states for the SM and PM.

Syntax

```
smRestorePriority [sm|all]
```

Options

sm Restore normal SM priority.

all Restore normal priorities for the SM and PM.

Example

```
-> smRestorePriority
```



Notes

This command restores the normal priorities of various subnet managers after they have elevated their priority as a result of a failover. Issuing this command allows the "unsticking" of a sticky failover. Issuing this command without arguments restores the normal priorities of the SM. The priority of the PM is based on the priority of the SM.

2.5.12 smLogLevel

Displays or dynamically sets the subnet manager logging level.

Syntax

```
smLogLevel [loglevel]
```

Options

loglevel Logging level. Options include:

- 0 NONE+
- 1 WARN+
- 2 NOTICE+
- 3 INFO+
- 4 VERBOSE+
- 5 DEBUG2+
- 6 DEBUG4+
- 7 TRACE+

Example

```
-> smLogLevel  
Log Level:2
```

Notes

The subnet manager must be running to use this command. Changes made with this command affect only the currently running SM in a fabric with multiple SMs running. Changes are lost if the SM is restarted or the chassis is rebooted. To make changes permanent, edit the Fabric Manager XML configuration file.

2.5.13 smLogMode

Displays or dynamically sets the subnet manager logging mode.



Syntax

```
smLogMode [logmode]
```

Options

logmode Logging mode. Options include:

- 0 Use normal logging levels.
- 1 Logging is quieted by downgrading the majority of fatal, error, warn, and info log messages.
- 3 (INFO) and only outputting user actionable events when LogLevel is 1 or 2.

Example

```
-> smLogMode  
Log Mode:0
```

Notes

The subnet manager must be running to use this command. Changes made with this command affect only the currently running SM in a fabric with multiple SMs running. Changes are lost if the SM is restarted or the chassis is rebooted. To make changes permanent, edit the Fabric Manager XML configuration file.

2.5.14 smLogMask

Displays or dynamically sets the subnet manager logging mask for a specific subsystem.

Syntax

```
smLogMask subsystem [mask]
```

Options

subsystem Subsystem. Options include: CS, MAI, CAL, DVR, IF3, SM, SA, PM, PA, FE, APP

mask Bit mask for logging to enable.

Example

```
-> smLogMask SA  
SA Log Mask: 0x1fff
```



Notes

The subnet manager must be running to use this command. Changes made with this command affect only the currently running SM in a fabric with multiple SMs running. Changes are lost if the SM is restarted or the chassis is rebooted. To make changes permanent, edit the Fabric Manager XML configuration file.

2.5.15 smPmStart

Controls the start of the performance manager (PM) and Fabric Executive (FE) during subnet manager (SM) start-up.

Syntax

```
smPmStart [enable | disable | none]
```

Options

enable Enables the start of the PM and FE at SM start-up.

disable Enables the start of the FE and disables the PM at SM start-up.

none Disables the start of PM and Fabric Executive (FE) at SM start-up.

Example

```
-> smPmStart
SM is enabled
PM is enabled
FE is enabled
-> smPmStart disable
SM is enabled
PM is disabled
FE is enabled
```

Notes

The configuration can only be changed from the master Chassis Management Card.

2.5.16 smShowConfig

Displays the XML configuration file.

Syntax

```
smShowConfig [-infoOnly | -contentOnly] [-noprompt]
```

Options

-infoOnly Displays the timestamp for the XML configuration file.

-contentOnly Displays the contents of the XML configuration file.



`-noprompt` Do not prompt to 'Continue' for each page of displayed output.

Examples

Example 1

```
->smShowConfig -infoOnly
XML config file loaded 09:43:07    04/09/2015
```

Example 2

```
->smShowConfig
XML config file loaded 09:43:07 04/09/2015
<?xml version="1.0" encoding="utf-8"?>
<Config>
<!-- Common FM configuration, applies to all FM instances/subnets -->
<Common>
<!-- Various sets of Applications which may be used in Virtual Fabrics -->
<!-- Applications defined here are available for use in all FM instances. -->
<!-- Additional Applications may be defined here or per FM instance. -->
<!-- Applications specified per FM instance will add to -->
<!-- instead of replace those Application definitions. -->
<Applications>
...
...
...
Continue? [Y]
```

Notes

With no arguments, the XML configuration file timestamp and contents are displayed, one screen at a time. Enter `Y` or `Enter` at the prompt to continue displaying command output. Enter `N` at the prompt to terminate the output.

The `-infoOnly` and `-contentOnly` flags limit the information that is displayed. Use the `-noprompt` flag to send all output to the screen at once.

This command is only available on the master Chassis Management Card.

2.5.17 smShowLids

Displays all fabric LID information as known by the subnet manager.

Syntax

```
smShowLids
```

Options

None.

Notes

Use this command to display the current LID assignments for the devices in the fabric. This command requires the given chassis to be the master FM.



Similar information can also be obtained using the CLI commands on the management node:

- opasaquery
- opareport

2.5.18 smShowMcMember

Displays multicast member information in the embedded subnet manager.

Syntax

```
smShowMcMember [-h]
```

Options

-h Display the host name as part of the output.

Example

```
-> smShowMcMember
Multicast Groups:
  join state key: F=Full N=Non S=SendOnly Member
0xff12601bffff0000:00000001fffd5bb (c001)
  qKey = 0x00000000 pKey = 0xFFFF mtu = 4 rate = 3 life = 19 sl = 0
  0x0011750000ffd5bb F
0xff12401bffff0000:00000000ffffffff (c000)
  qKey = 0x00000000 pKey = 0xFFFF mtu = 4 rate = 3 life = 19 sl = 0
  0x00117501a0007116 F 0x00117502003fffd5 F 0x00117500a00001ac F
  0x00117501a000015d F 0x00117500a00001a3 F 0x00117500a00001dc F
  0x00117500a000035a F 0x0011750000ffd5c2 F 0x0011750000ffd664 F
  0x0011750000ffd9c2 F 0x0011750000ffd9f8 F 0x0011750000ffd5b9 F
  0x0011750000ffda4a F 0x0011750000ffd5bb F 0x0011750000ffd9de F
```

Notes

Use this command to display multicast member information in the subnet manager. This command is not available unless the subnet manager is in Master mode.

Similar information can also be obtained using the CLI command on the management node:

- opashowmc

2.5.19 smShowServices

Displays subnet administration service records of the subnet manager.

Syntax

```
smShowServices
```

Options

None.



Notes

The components (fields) of each service record are displayed. Each service record is stored in a location identified by a *Slot* number that is displayed before any component of that service record. If a group of slots does not contain service records, the first slot of the empty group is displayed as *empty*.

This command states that the SM is in the STANDBY mode if the SM is not in MASTER mode.

Similar information can also be obtained using the CLI command on the management node:

- `opasaquery -o service`

2.5.20 smShowInform

Displays event forwarding (inform) table in the embedded subnet manager.

Syntax

```
smShowInform
```

Options

None.

Notes

Use this command to display the event forwarding (inform) table in the subnet manager. This command is not available unless the subnet manager is in the Master mode.

Similar information can also be obtained using the CLI command on the management node:

- `opasaquery -o inform`

2.5.21 smShowCounters

Displays various statistics and counters maintained by the subnet manager.

Syntax

```
smShowCounters
```

Options

None.

Example

```
-> smShowCounters
COUNTER:
-----
SM State transition to DISCOVERY: 0 0 2
```



SM State transition to MASTER:	0	0	1
SM State transition to STANDBY:	0	0	1
SM State transition to INACTIVE:	0	0	0
Total transmitted SMA Packets:	123	711	2181
Direct Routed SMA Packets:	123	711	2122
LID Routed SMA Packets:	0	0	40
SMA Query Retransmits:	0	0	18
SMA Query Retransmits Exhausted:	0	0	3
SM TX GET(Notice):	0	0	0
SM TX SET(Notice):	0	0	0
SM RX TRAP(Notice):	0	0	0
SM TX TRAPREPRESS(Notice):	0	0	0
SM TX GET(NodeDescription):	0	148	444
SM TX GET(NodeInfo):	0	148	444
SM TX GET(SwitchInfo):	0	6	18
...			

Notes

This command is not available unless the subnet manager is in Master mode.

2.5.22 smShowLidMap

Displays the LID-to-port GUID map for the subnet manager.

Syntax

```
smShowLidMap
```

Options

None.

Example

```
Edge-> smShowLidMap
-----
SM is currently in the MASTER state, with Topology Pass count = 3
-----
Lid 0x0001: guid = 0x001175010165b157, pass = 3, phkpstl057 hfi1_0
Lid 0x0002: guid = 0x001175010265baf7, pass = 3, OmniPth00117501ff65baf7
Lid 0x0003: guid = 0x001175010165ac3a, pass = 3, phkpstl058 hfi1_0
Lid 0x0004: guid = 0x001175010165ad44, pass = 3, phkpstl059 hfi1_0
Lid 0x0005: guid = 0x001175010165ae43, pass = 3, phkpstl060 hfi1_0
Lid 0x0006: guid = 0x0000000000000000, pass = 0
Lid 0xbfff: guid = 0x0000000000000000, pass = 0
```

Notes

Use this command to display the LID-to-port GUID map of the subnet manager. The pass count for a LID is incremented each time the SM sweep detects that LID.

If LMC has been used to assign multiple LIDs to a node, those assignments are reflected in the output.

This command is not available unless the subnet manager is in the Master mode.

Similar information can also be obtained using the CLI command on the management node:

- opasaquery



- `opareport -o lids`

2.5.23 **smShowTopology**

Displays the current LID assignments for the devices in the fabric.

Syntax

```
smShowTopology
```

Options

None.

2.5.24 **smShowVFInfo**

Displays Virtual Fabric (VF) information.

Note: The subnet manager must be running to use this command.

Syntax

```
smShowVFInfo
```

Options

None.

2.5.25 **smLooptestStart**

Starts the SM Loop Test in normal mode with the specified number of 256 byte packets. If the SM has not been previously started, this command starts the SM.

Note: The Loop Test only operates if the SM is in the Master state.

In the default mode, the SM uses an exhaustive approach to set up loop routes and includes each ISL in as many loops as possible. This ensures that each ISL is in the same number of loops and therefore sees the same amount of utilization. However, finding all possible loops is computationally intensive and can take a long time. In most cases, Intel recommends you use fast mode.

Syntax

```
smLooptestStart [packets]
```

Options

packets The number of 256 byte packets used when starting the SM Loop Test. Valid values = 0 - 10. Default = 0. If the number of packets is 0, then no packets are injected.



Example

```
-> smLoopTestStart
Waiting for SM to complete startup...N|2015/09/15 14:24:17.180U: Thread
"esm_top"
(0xccace3f0)
MSG:NOTICE|SM:OmniPath GUID=0x00117501e30027xx:port 0|COND:#5 SM state
to master|NODE:OmniPath GUID=0x00117501e3002711:port
0:0x00117501e3002711|DETAIL:transition from DISCOVERING to MASTER
topology_loopTest: DONE
W|2015/09/15 14:24:17.280U: Thread "esm_top" (0xccace3f0)
MSG:WARNING|SM:OmniPath GUID=0x00117501e30027xx:port 0|COND:#1
Redundancy lost|NODE:OmniPath GUID=0x00117501e3002711:port
0:0x00117501e3002711|DETAIL:SM redundancy not available
topology_loopTest: DONE
.....done
The SM Loop Test is being started
Loop Test is setup, but no packets have been injected and no traffic is running
```

2.5.26 smLoopTestFastModeStart

Starts the SM Loop Test in fast mode with the specified number of 256 byte packets. If the SM has not been previously started, this command starts the SM.

Note: The Loop Test only operates if the SM is in the Master state.

Intel recommends you use the fast mode for ISL validation and link integrity testing. In fast mode, the loop test does not attempt to include each ISL in all possible loops, but includes it in at least the specified number of loops (using the `MinISLRedundancy` parameter). In typical fast mode operations, using the default `MinISLRedundancy` value = 4, injecting five packets into each loop is sufficient to get a high utilization on the ISLs.

Syntax

```
smLoopTestFastModeStart [packets]
```

Options

packets The number of 256 byte packets used when starting the SM Loop Test in Fast Mode. Valid values = 0 - 10. Default = 5. If the number of packets is 0, then no packets are injected.

Example

```
-> smLoopTestFastModeStart
Waiting for SM to complete startup...Local LID changed to: 0
.N|2015/09/15 14:19:28.280U: Thread "esm_top" (0xcca0d828)
MSG:NOTICE|SM:OmniPath GUID=0x00117500e30027xx:port 0|COND:#5 SM state
to master|NODE:OmniPath GUID=0x00117500e30027xx:port
0:0x00117500e3002711|DETAIL:transition from DISCOVERING to MASTER
Local LID changed to: 1
Local LID changed to: 1
topology_loopTest: DONE
W|2015/09/15 14:19:28.390U: Thread "esm_top" (0xcca0d828)
MSG:WARNING|SM:OmniPath GUID=0x00117500e30027xx:port 0|COND:#1
Redundancy lost|NODE:OmniPath GUID=0x00117500e3002711:port
0:0x00117500e3002711|DETAIL:SM redundancy not available
```



```
topology_loopTest: DONE
.....done
The SM Loop Test is being started in Fast Mode
```

2.5.27 smLoopTestStop

Stops the SM Loop Test.

Syntax

```
smLoopTestStop
```

Options

None.

Example

```
-> smLoopTestStop
Waiting for SM to complete shutdown...
A|2015/09/15 14:21:46.500U: Thread "esm_Start" (0x85738dd8)
    ESM: SM Control: Initiating shutdown of the subnet manager. Some errors
and
warnings are common during this process 0
N|2015/09/15 14:21:46.500U: Thread "esm_Start" (0x85738dd8)
    MSG:NOTICE|SM:OmniPath GUID=0x00117500e3002711:port 0|COND:#7 SM
shutdown|NODE:OmniPath GUID=0x00117500e3002711:port 0:0x00117500e3002711
.....N|2015/09/15 14:21:54.720U: Thread "INVALID" (0xcc13ac8)
    MSG:NOTICE|SM:OmniPath GUID=0x00117500e3002711:port 0|COND:#13 SM state
to inactive|NODE:OmniPath GUID=0x00117500e3002711:port
0:0x00117500e3002711|DETAIL:transition from MASTER to NOTACTIVE
...A|2015/09/15 14:21:57.720U: Thread "esm_Start" (0x85738dd8)
    ESM: SM Control: Subnet manager shutdown complete. 0
.....done
The SM Loop Test is being stopped
```

Notes

Use this command to stop the SM Loop Test. Returns switch LFTs back to normal.

Note: This command will stop SM if it was started by either the `smLoopTestStart` command or the `smLoopTestFastModeStart` command. If SM was started using the `smcontrol start` command, this command will not stop SM.

2.5.28 smLoopTestInjectPackets

Injects packets into the SM Loop Test.

Syntax

```
smLoopTestInjectPackets [packets]
```

Options

packets The number of packets to inject into the SM Loop Test. Valid values are 1 - 10 (default = 1).



Example

```
-> smLooptestInjectPackets 2
Sending 2 packets to all loops
Packets have been injected into the SM Loop Test
-> topology_loopTest: DONE
```

2.5.29 smLooptestInjectAtNode

Injects packets to a specific switch node for the SM Loop Test.

Syntax

```
smLooptestInjectAtNode [node index]
```

Options

node index The node index of the switch to inject packets.

Example

```
-> smLooptestInjectAtNode 3
Sending 2 packets to node index 3
Packets have been injected into the SM Loop Test for node 3
-> topology_loopTest: DONE
```

2.5.30 smLooptestInjectEachSweep

Enables/disables packet injected on each sweep for the SM Loop Test.

Syntax

```
smLooptestInjectEachSweep setting
```

Options

setting Options include:

- 1 Inject packets on each sweep.
- 0 Do not inject packets on each sweep for the SM Loop Test.

Example

```
-> smLooptestInjectEachSweep 1
sm_looptest_inject_packets_each_sweep: loop test will inject packets every sweep,
numPackets=2
The SM Loop Test will inject packets every sweep
```



2.5.31 smLooptestPathLength

Sets the loop path length for the SM Loop Test.

Syntax

```
smLooptestPathLength [length]
```

Options

length The loop path length for the SM Loop Test. Valid values are 2, 3 (default), and 4.

Example

```
-> smLooptestPathLength 3
The SM Loop Test path length has been set to 3
-> topology_loopTest: DONE
```

2.5.32 smLooptestMinISLRedundancy

Sets the minimum number of loops in which to include each ISL for the SM Loop Test in Fast Mode.

Syntax

```
smLooptestMinISLRedundancy [loops]
```

Options

loops The minimum number of loops to include in each ISL for the SM Loop Test. If no value is entered, the default (default = 4) is used.

Note: This command is only applicable if running the Loop Test in Fast Mode.

Example

```
-> smLooptestMinISLRedundancy 3
-> topology_loopTest: DONE
```

2.5.33 smLooptestShowLoopPaths

Displays the loop paths for the SM Loop Test.

Syntax

```
smLooptestShowLoopPaths [node index]
```



Options

node index The node index of the node to print the loop paths. If no value is entered, the default (all nodes) is used.

Example

```
-> smLooptestShowLoopPaths
Node Idx: 0, Guid: 0x00117500e3002711 Desc OmniPath GUID=0x00117500e3002711
-----
Node  Node      NODE GUID      Node  Path
Idx   Lid              #Ports  LID   PATH[n:p->n:p]
-----
      0 0x0001  0x00117500e3002711    36   0x0040  0:9->0:33
      0 0x0001  0x00117500e3002711    36   0x0042  0:33->0:9
-----
There are 2 total loop paths of <=4 links in length in the fabric!
Two LIDs are used per loop path to inject packets in clockwise and anti-clockwise
directions
```

2.5.34 smLooptestShowSwitchLft

Displays the switch LID Forwarding Table (LFT) for the SM Loop Test.

Syntax

```
smLooptestShowSwitchLft [node index]
```

Options

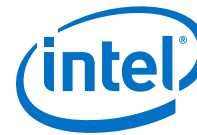
node index The node index of the switch for which to print the switch LFT. If no value is entered, the default (all switches) is used.

Example

```
-> smLooptestShowSwitchLft
Node[0000] LID=0x0001 GUID=0x00117500e3002711
[OmniPath GUID=0x00117500e3002711] Linear Forwarding Table
  LID      PORT
  -----
0x0001    0000
0x0005    0031
0x0009    0017
0x0010    0011
0x0016    0021
0x001d    0022
0x0021    0025
0x0040    0009
0x0041    0033
0x0042    0033
0x0043    0009
```

2.5.35 smLooptestShowTopology

Displays the topology for the SM Loop Test.



Syntax

```
smLooptestShowTopology
```

Options

None.

Example

```
-> smLooptestShowTopology
sm_state = MASTER      count = 481    LMC = 0, Topology Pass count = 4, Priority = 0,
Mkey = 0x0000000000000000
-----
OmniPath GUID=0x00117500e3002711
-----
Node[ 0] => 00117500e3002711 (2) ports=36, path=
Port ---- GUID ---- (S) LID LMC _VL_ _MTU_ _WIDTH_
SPEED CAP MASK N# P#
2.5-10 5.0 0200004a 0 0 4 LID=0001 LMC=0000 1 1 4k 4k 1X-8X 4X
9 0000000000000000 4 1 1 2k 2k 4X 4X
2.5-10 10.0 00000000 0 33 4 1 1 2k 2k 4X 4X
11 0000000000000000 4 1 1 2k 2k 4X 4X
2.5-10 10.0 00000000 1 1 4 1 1 2k 2k 4X 4X
17 0000000000000000 4 1 1 2k 2k 4X 4X
2.5-10 10.0 00000000 2 1 4 1 1 2k 2k 4X 4X
21 0000000000000000 4 1 1 2k 2k 4X 4X
2.5-10 10.0 00000000 3 1 4 1 1 2k 2k 4X 4X
22 0000000000000000 4 1 1 2k 2k 4X 4X
2.5-10 10.0 00000000 4 1 4 1 1 2k 2k 4X 4X
25 0000000000000000 4 1 1 2k 2k 4X 4X
2.5-10 10.0 00000000 5 1 4 1 1 2k 2k 4X 4X
31 0000000000000000 4 1 1 2k 2k 4X 4X
2.5-10 10.0 00000000 6 1 4 1 1 2k 2k 4X 4X
33 0000000000000000 4 1 1 2k 2k 4X 4X
2.5-10 10.0 00000000 0 9 9
-----
st164 HFI-1
-----
Node[ 1] => 001175000100d050 (1) ports=2, path=11
Port ---- GUID ---- (S) LID LMC _VL_ _MTU_ _WIDTH_
SPEED CAP MASK N# P#
2.5-10 10.0 02510868 0 11 11 4 LID=0010 LMC=0000 8 1 2k 2k 1X/4X 4X
-----
st10 HFI-1
-----
Node[ 2] => 00117500007eaa56 (1) ports=2, path=17
Port ---- GUID ---- (S) LID LMC _VL_ _MTU_ _WIDTH_
SPEED CAP MASK N# P#
2.5-10 10.0 07610868 0 17 17 4 LID=0009 LMC=0000 2 1 4k 2k 1X/4X 4X
-----
st166 HFI-1
-----
Node[ 3] => 00117500007ec376 (1) ports=1, path=21
Port ---- GUID ---- (S) LID LMC _VL_ _MTU_ _WIDTH_
SPEED CAP MASK N# P#
2.5-10 10.0 07610868 0 21 21 4 LID=0016 LMC=0000 2 1 4k 2k 1X/4X 4X
-----
compute000 HFI-1
-----
Node[ 4] => 0011750300032de8 (1) ports=2, path=22
Port ---- GUID ---- (S) LID LMC _VL_ _MTU_ _WIDTH_
SPEED CAP MASK N# P#
2.5-10 10.0 02510868 0 22 22 4 LID=001d LMC=0000 8 1 2k 2k 1X/4X 4X
-----
compute001 HFI-1
-----
Node[ 5] => 0011750300033694 (1) ports=2, path=25
Port ---- GUID ---- (S) LID LMC _VL_ _MTU_ _WIDTH_
SPEED CAP MASK N# P#
2.5-10 10.0 02510868 0 25 25 4 LID=0021 LMC=0000 8 1 2k 2k 1X/4X 4X
-----
st9 HFI-1
-----
Node[ 6] => 00117500007eaa1c (1) ports=1, path=31
Port ---- GUID ---- (S) LID LMC _VL_ _MTU_ _WIDTH_
SPEED CAP MASK N# P#
2.5-10 10.0 07610868 0 31 31 4 LID=0005 LMC=0000 2 1 4k 2k 1X/4X 4X
-----
```

2.5.36 smLooptestShowConfig

Displays the configuration for the SM Loop Test.



Syntax

```
smLooptestShowConfig
```

Options

None.

Example

```
-> smLooptestShowConfig
Loop Test is running with following parameters:
Max Path Length   #Packets   Inject Point
-----
         4         00004         All Nodes
FastMode=1, FastMode MinISLRedundancy=4, InjectEachSweep=0, TotalPktsInjected
since start=4
```

2.6 Log

Commands in this category are used for log file display and configuration.

2.6.1 logShow

Displays the log file that is contained in RAM.

Syntax

```
logShow
```

Options

None.

Example

```
-> logShow
N|2015/10/14 02:20:14.820U: Thread "csmLogThread" (0x42358c0)
MSG:NOTICE|CHASSIS:hds1swb6231|COND:#18 FRU state changed from offline to
online|FRU:Intel Omni-Path Edge Switch 100 Series|PN:H50565-004
=====
I|2015/10/14 02:24:55.010U: Thread "startup" (0x3520a20)
Log: Recovered 51127 bytes of log data from persistent store
A|2015/10/14 02:24:55.190U: Thread "startup" (0x3520a20)
boot: Intel Omni-Path Edge Switch 100 Series q7 Firmware Booting Version:
10.0.0.991.51
A|2015/10/14 02:24:55.190U: Thread "startup" (0x3520a20)
boot: Memory: Physical: 0x7ff00000 Available: 0x7ff00000 Reserved: 0x0
A|2015/10/14 02:24:55.190U: Thread "startup" (0x3520a20)
boot: Encapsulated PRR-A0 Firmware Version: PRR-A0
A|2015/10/14 02:24:55.190U: Thread "startup" (0x3520a20)
boot: Reboot cause (7): Reboot Command Entered on CLI.
N|2015/10/14 02:24:57.710U: Thread "csmLogThread" (0x42358c0)
MSG:NOTICE|CHASSIS:hds1swb6231|COND:#7 Power Supply N+1 redundancy
available|FRU:Chassis|PN:H50565-004
A|2015/10/14 02:25:15.970U: Thread "PrrVpdR1" (0x6f7dce8)
PrrVpd: Enhanced port 0 is operational
A|2015/10/14 02:25:15.970U: Thread "PrrVpdR1" (0x6f7dce8)
PrrVpd: Enhanced port 0 communication enabled
```




```
N|2015/10/14 02:25:16.820U: Thread "csmLogThread" (0x42358c0)
MSG:NOTICE|CHASSIS:hds1swb6231|COND:#18 FRU state changed from offline to
online|FRU: Intel Omni-Path Edge Switch 100 Series|PN:H50565-004
```

2.6.2 logClear

Deletes all entries in the log file.

Syntax

```
logClear [-noprmt]
```

Options

-noprmt Delete all log messages without prompting.

Example

```
-> logClear
Ram Log cleared
```

2.6.3 logConfigure

Configures the log settings.

Syntax

```
logConfigure
```

Options

None. This is an interactive command. See **Notes** section for configuration selections.

Example

```
-> logConfigure
Type Q or X to exit.
Please enter the number corresponding to what you want to configure.
index : name          : description
-----
  1  : Device          : Logging device. (IE. Ram, syslog, etc)
  2  : Preset          : General log filter.
Select: 1
Configurable devices
index : name          : |D|F|E|A|W|P|C|I|P|N|1|2|3|4|5|
-----
  1  : Ram            : |X|X|X|X|X| | | | |X| | | | |
  3  : Console        : |X|X|X|X|X| | | | |X| | | | |
  5  : Syslog         : |X|X|X|X|X| | | | |X| | | | |
Type Q or X to exit
Enter the device index you wish to configure: 1
Level: Dump [1]
Level: Fatal [1]
Level: Error [1]
Level: Alarm [1]
Level: Warning [1]
Level: Partial [0]
```



```
Level: Config [0]
Level: Info [0]
Level: Periodic [0]
Level: Notice [1]
Level: Debug1 [0]
Level: Debug2 [0]
Level: Debug3 [0]
Level: Debug4 [0]
Level: Debug5 [0]
Log device configuration changed
...
```

Notes

This is an interactive command to configure active log settings, options include:

- 2 Preset Enable or disable each log level that may be generated on the system. The log presets act as a general filter. For example, if the Info logging level is disabled in the presets, no Info messages will be shown on any output device, regardless of the Info log setting for a device.
- 1 Device Enable a device to display or process log messages of each level. The level must also be active in Preset for log messages to be processed for a device. Choose a device to configure log levels for that device. If chosen, additional options are displayed:
 - 5 Syslog Syslog server on the network.
 - 1 Ram Internal log storage for the switch.
 - 3 Console Switch serial console

2.6.4 logResetToDefaults

Restores the log file default settings.

Syntax

```
logResetToDefaults [-noprompt]
```

Options

-noprompt Restore the defaults without prompting.

Example

```
-> logResetToDefaults
Log configuration has been reset
```

2.6.5 logSyslogConfig

Configures the syslog host IP address and port.



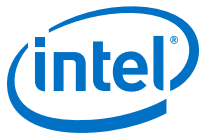
To avoid losing log information in the event of a hardware failure, Intel recommends that you configure a syslog server. This command allows you to configure the host and port to send messages to and the facility to use in the messages. For additional details, see [Configuring the Syslog Server](#) on page 19.

Syntax

```
logSyslogConfig [-h hostname or ip_address] [-p port] [-f facility] [-m mode]
```

Options

<code>-h <i>hostname or ip_address</i></code>	Sets the syslog server hostname or IP address in dotted decimal format (<code>xxx.xxx.xxx.xxx</code>).																																
<code>-p <i>port</i></code>	The host port number on which the syslog server is listening, in <code>xxxx</code> format.																																
<code>-f <i>facility</i></code>	The syslog facility to use in the messages. Values include: <table> <tr><td>0</td><td>kern</td></tr> <tr><td>1</td><td>user</td></tr> <tr><td>2</td><td>mail</td></tr> <tr><td>3</td><td>daemon</td></tr> <tr><td>4</td><td>auth</td></tr> <tr><td>5</td><td>syslog</td></tr> <tr><td>6</td><td>lpr</td></tr> <tr><td>7</td><td>news</td></tr> <tr><td>8</td><td>uucp</td></tr> <tr><td>9</td><td>cron</td></tr> <tr><td>10</td><td>authpriv</td></tr> <tr><td>11</td><td>ftp</td></tr> <tr><td>12</td><td>ntp</td></tr> <tr><td>13</td><td>audit</td></tr> <tr><td>14</td><td>alert</td></tr> <tr><td>15</td><td>clock</td></tr> </table>	0	kern	1	user	2	mail	3	daemon	4	auth	5	syslog	6	lpr	7	news	8	uucp	9	cron	10	authpriv	11	ftp	12	ntp	13	audit	14	alert	15	clock
0	kern																																
1	user																																
2	mail																																
3	daemon																																
4	auth																																
5	syslog																																
6	lpr																																
7	news																																
8	uucp																																
9	cron																																
10	authpriv																																
11	ftp																																
12	ntp																																
13	audit																																
14	alert																																
15	clock																																



16 local0
17 local1
18 local2
19 local3
20 local4
21 local5
22 local6
23 local7

`-m mode` Whether syslog is to be put into a special OEM mode. Values are 0 or 1.

Example

```
-> logSyslogConfig -h 172.26.0.202  
Successfully configured the syslog host
```

2.6.6 logShowConfig

Displays the current log configuration settings.

Syntax

```
logShowConfig
```

Options

None.

Example

```
-> logshowconfig  
  
Log Configuration for: Intel Omni-Path Edge Switch 100 Series  
-----  
Configurable devices  
index : name      : |D|F|E|A|W|P|C|I|P|N|1|2|3|4|5|  
-----  
  1   : Ram        : |X|X|X|X|X| | | | |X| | | | |  
  3   : Console    : |X|X|X|X|X|X|X|X|X|X| | | | |  
  5   : Syslog     : |X|X|X|X|X| | | | |X| | | | |  
  
Configurable presets  
index : name      : state  
-----  
  1   : Dump       : Enabled
```



```

2 : Fatal : Enabled
3 : Error : Enabled
4 : Alarm : Enabled
5 : Warning : Enabled
6 : Partial : Enabled
7 : Config : Enabled
8 : Info : Enabled
9 : Periodic : Enabled
15 : Notice : Enabled
10 : Debug1 : Disabled
11 : Debug2 : Disabled
12 : Debug3 : Disabled
13 : Debug4 : Disabled
14 : Debug5 : Disabled

```

2.6.7 logSyslogTest

Tests the Syslog configuration.

Syntax

```
logSyslogTest severityType
```

Options

severityType Options include:

- e Send Error severity CSM test message to Syslog.
- w Send Warning severity CSM test message to Syslog.
- n Send Notice severity CSM test message to Syslog.

Example

```

-> logSyslogTest -e
Currently configured Syslog host is: 0.0.0.0 port 514 facility 22
Syslog configuration has been tested

```

Notes

This command tests the Syslog configuration by sending CSM messages to registered Syslog servers.

2.6.8 auditLog

Enables or disables logging of user activities (such as logging in and out) and operational commands (such as upgrading software or restarting the system).

Note: You must have administrative privileges to use this CLI.

Syntax

```
auditLog [{ 1 | 0}]
```



Options

If no value is entered, the current setting is displayed. Options include:

- 1 Enable logging of all CLI commands.
- 0 Disable logging of all CLI commands.

Example

```
-> auditLog 1  
Successfully configured auditLog
```

2.7 Interconnect Switch Management (ISM)

Commands in this category are used for port configuration and statistics.

2.7.1 ismPortStats

Displays statistics for all ports.

Syntax

```
ismPortStats [-clear] [-all] [-link] [-performance] [-congestion] [-bubbles] [-  
si] [-security] [-other]  
[-noprompt] [-cols columns] [portNameList]
```

Options

-clear	Clears the statistics. Statistics are displayed first, then cleared.
-all	Includes all counters and link status.
-link	Includes link status.
-performance	Includes performance transmit and receive counters.
-congestion	Includes congestion counters.
-bubbles	Includes performance bubble counters.
-si	Includes signal integrity counters.
-security	Includes security counters.
-other	Includes other counters.
-noprompt	Does not provide a <code>Continue</code> prompt for each page of display.
-cols columns	Sets the number of columns to be displayed per line.



portNameList Valid entries for *portNameList* depend on the chassis type. You can use all in the *portNameList*.

On Edge platforms, an example cable port name in the *portNameList* is:

Cable01, that is, Cable Port 1.

On Director platforms, an example cable port name in the *portNameList* is:

L101AP01, that is, Leaf 101A Port 1.

On Director platforms, an example interswitch link name in the *portNameList* is:

S201AP24L101AP25, that is, Spine 201A port 24 which connects to Leaf 101A port 25.

Example

```
-> ismPortStats
Name          Cable01          Cable02          Cable03
PhysState     Up                Up                Up
PortState     Act              Act              Act
LinkWidth     4X               4X               4X
LinkSpeed     25Gbps          25Gbps          25Gbps
LinkDowned    26               23               23
InPKeyViol    0                0                0
OutPKeyViol    0                0                0
Continue? [Y] y

Name          Cable04          Cable05          Cable06
PhysState     Up                Up                Up
PortState     Act              Act              Act
LinkWidth     4X               4X               4X
LinkSpeed     25Gbps          25Gbps          25Gbps
LinkDowned    23               23               23
InPKeyViol    0                0                0
OutPKeyViol    0                0                0
Continue? [Y] n
```

Notes

If no specific counter groups are selected, the `-link`, `-performance`, and `-si` options are used by default.

`-link` counters include:

- Phys State - Physical state of the port.
- Port State - Logical link state.
- Link Width - Link width when the port initially reached LinkUp.
- Link Width Tx - Current TX link width.
- Link Width Rx - Current RX link width.
- Link Speed - Current link speed. Link rate is Link Width * Link Speed.



- Link Qual Indicator - Current link signal quality.

-performance counters include:

- Xmit Data - Data words transmitted.
- Xmit Pkts - Packets transmitted.
- MC Xmt Pkts - Multicast packets transmitted.
- Rcv Data - Data words received.
- Rcv Pkts - Packets received.
- MC Rcv Pkts - Multicast packets received.

-congestion counters include:

- Congestion Discards - Packets discarded at egress due to congestion.
- Rcv FECN - Packets received with FECN indicator.
- Rcv BECN - Packets received with BECN indicator.
- Mark FECN - Packets marked with FECN indicator.
- Xmit Time Congestion - Flit times the port was in the congested state.
- Xmit Wait - Idle output flits due to lack of credits/arb rules.

-bubbles counters include:

- Xmit Wasted BW - Idle output flits due to interleaving limits.
- Xmit Wait Data - Idle output flits due to packet bubbles.

-si counters include:

- Uncorrectable Errors - UncorrectableErrors (for example, internal errors).
- Link Downed - Number of link error recoveries that failed.
- Rcv Errors - PortRcvErrors (for example, invalid packets).
- Exc. Buffer Overrun - Packets dropped due to receiver overrun.
- FM Config Errors - FMConfigErrors (for example, inconsistent link config).
- Link Error Recovery - Number of link error recoveries that succeeded.
- Local Link Integ Err - LTP retries initiated by LT layer.

-security counters include:

- Xmit Constraint - Outbound packets discarded due to security checks.
- Rcv Constraint - Inbound packets discarded due to security checks.

-other counters include:

- Rcv Sw Relay Err - PortRcvSwitchRelayErrors (for example, invalid routing).
- Xmit Discards - PortXmitDiscards (for example, superset of congestion discards).
- Rcv Rmt Phys Err - Received packets already marked with an error.



2.7.2 ismPortCounters

Displays a table of performance counter and link status information with a row for each port of the switch.

If the `-noprompt` option is not used, the system prompts to continue the output after each group of ports are displayed.

Note: This command is best displayed with a terminal width of at least 120 columns.

Syntax

```
ismPortCounters [-clear] [-active] [-errors] [-potential] [-noprompt]
```

Options

- `-clear` Clears the counters. Counters are first displayed, then cleared.
- `-active` Displays only the counters for ports in the active state.
- `-errors` Displays only the counters for ports with a signal integrity category error.
- `-potential` Displays only the counters for ports with active width under their maximum supported value.
- `-noprompt` Does not provide a Continue prompt for each page of display.

Example

```
-> ismPortCounters
```

Name	Packets	Transmit Words	Discard	Packets	Receive Words	Symbol Errors	Active Speed	Active Width	Potential
Cable01	3951205094	2800544271045	0	4154378847	3019711679236	0	25Gbps	4X	100%
Cable02	8993888342	5766797571908	0	9315042983	5518255518847	0	25Gbps	4X	100%
Cable03	6868061425	4318743689062	0	8561944708	5264142620113	0	25Gbps	4X	100%
Cable04	8262061496	5049268426836	1	6800356522	4251674103990	0	25Gbps	4X	100%
Cable05	8546497592	5227761745800	0	6941410928	4331259837656	0	25Gbps	4X	100%
Cable06	8350835339	5037891440796	0	6958770839	4337087233138	0	25Gbps	4X	100%
Cable07	7021157994	4402588069177	0	8546345859	5122253460133	0	25Gbps	4X	100%
Cable08	3101749244	2075461900855	0	3817201891	2834664788232	0	25Gbps	4X	100%
Cable09	0	0	0	0	0	0	0.0Gbps	0X	0%
Cable10	0	0	0	0	0	0	0.0Gbps	0X	0%
Cable11	0	0	0	0	0	0	0.0Gbps	0X	0%
Cable12	0	0	0	0	0	0	0.0Gbps	0X	0%
Cable13	0	0	0	0	0	0	0.0Gbps	0X	0%
Cable14	0	0	0	0	0	0	0.0Gbps	0X	0%
Cable15	0	0	0	0	0	0	0.0Gbps	0X	0%
Cable16	0	0	0	0	0	0	0.0Gbps	0X	0%
Cable17	0	0	0	0	0	0	0.0Gbps	0X	0%
Cable18	0	0	0	0	0	0	0.0Gbps	0X	0%
Cable19	0	0	0	0	0	0	0.0Gbps	0X	0%
Cable20	0	0	0	0	0	0	0.0Gbps	0X	0%
Cable21	0	0	0	0	0	0	0.0Gbps	0X	0%
Cable22	0	0	0	0	0	0	0.0Gbps	0X	0%

Continue? [Y] n

Notes

Port counter descriptions:

- Transmit
 - Words - Number of data words transmitted by the port.
- Receive

- Words - Number of data words received by the port.
- Active
 - Qual - Active link signal integrity quality measure (5 is best).
 - Speed - Active link speed of the port.
 - Tx - Active link transmit width of the port.
 - Rx - Active link receive width of the port.
 - Potential - Utilization of the port based on its maximum supported link speed and maximum supported link width.
 - Errs - Y indicates the port has one or more signal integrity counters that are non-zero.

2.7.3 ismLinearFwdb

Displays the entries in the linear forwarding table. LIDs and a corresponding port are shown. A packet addressed to a LID is forwarded to the corresponding port listed in the displayed table.

Syntax

```
ismLinearFwdb [switch]
```

Options

switch Switch number.

Example

```
-> ismLinearFwdb
Switch Switch 1 Linear Fwdb (LFTTOP = 0x3):
  LID :: Port
0001      10 (Cable10)
0002       0 ( )
0003       3 (Cable03)
```

2.7.4 ismMultiFwdb

Displays the Multicast Forwarding database for the switch.

Syntax

```
ismMultiFwdb [switch]
```

Options

switch Switch identifier.



Example

```
-> ismMultiFwdb  
  
Switch Switch 1 Multicast Fwdb:  
c003      11 (Cable11) 27 (Cable27)  
c023      11 (Cable11) 27 (Cable27)
```

Notes

This command is best displayed with a terminal width of at least 120 columns.

2.7.5 ismSwitchInfoLid

Displays SMA switch information for a specific switch chip.

Syntax

```
ismSwitchInfoLid switch
```

Options

switch Switch index (number of a Leaf or Spine switch or of the local switch).

2.7.6 ismPortStatLid

Displays port statistics for a specific LID.

Syntax

```
ismPortStatLid lid port
```

Options

lid IBTA local identifier (LID of the Leaf or Spine switch or the local switch).

port Port number (defaults to 0).

2.7.7 ismPortInfoLid

Displays SMA port information for a specific LID.

Syntax

```
ismPortStatLid lid [port]
```

Options

lid IBTA local identifier (LID of the Leaf or Spine switch or the local switch).

port Port number (defaults to 0).



2.7.8 ismNodeInfoLid

Displays SMA node information for a specific LID.

Syntax

```
ismNodeInfoLid lid
```

Options

lid IBTA local identifier (LID of the Leaf or Spine switch or the local switch).

2.7.9 ismPortSetWidth

Displays or modifies the LinkWidth.Supported setting for a port. LinkWidth.Supported should be a subset of LinkWidthDowngrade.Supported for proper port operation.

Syntax

```
ismPortSetWidth [portNameList] [linkWidth] [-bounce] [-verbose]
```

Options

portNameList Valid entries for *portNameList* depend on the chassis type. Use the command `ismPortStats` to see the actual port names for the chassis. You can use `all` in the *portNameList*.

On Edge platforms, an example cable port name in the *portNameList* is:

Cable01, that is, Cable Port 1.

On Director platforms, an example cable port name in the *portNameList* is:

L101AP01, that is, Leaf 101A Port 1.

On Director platforms, an example interswitch link name in the *portNameList* is:

S201AP24L101AP25, that is, Spine 201A port 24 which connects to Leaf 101A port 25.

linkWidth Options include:

1 1X

2 2X

3 2X_1X



- 4 3X
- 5 3X_1X
- 6 3X_2X
- 7 3X_2X_1X
- 8 4X
- 9 4X_1X
- 10 4X_2X
- 11 4X_2X_1X
- 12 4X_3X
- 13 4X_3X_1X
- 14 4X_3X_2X
- 15 4X_3X_2X_1X

- bounce Brings the active links down and back up if a new value is set.

Calling this function with the `-bounce` option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.
- verbose Verbose output mode.

Example

```
-> ismPortSetWidth Cable01 -verbose
Cable01 link width supported: 4X_3X_2X_1X
```

Notes

If only the *portNameList* is entered, the current settings are displayed.

2.7.10 ismChassisSetWidth

Displays or modifies the LinkWidth.Supported setting for all chassis ports. LinkWidth.Supported should be a subset of LinkWidthDowngrade.Supported for proper port operation.



Syntax

```
ismChassisSetWidth [linkWidth] [-bounce] [-verbose]
```

Options

linkWidth Options include:

- 1 1X
- 2 2X
- 3 2X_1X
- 4 3X
- 5 3X_1X
- 6 3X_2X
- 7 3X_2X_1X
- 8 4X
- 9 4X_1X
- 10 4X_2X
- 11 4X_2X_1X
- 12 4X_3X
- 13 4X_3X_1X
- 14 4X_3X_2X
- 15 4X_3X_2X_1X

-bounce Brings the active links down and back up if a new value is set.

Calling this function with the `-bounce` option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.

-verbose Verbose output mode.



Example

```
-> ismChassisSetWidth
Cable01 link width supported: 2X
Cable02 link width supported: 2X
Cable03 link width supported: 2X
...
```

Notes

If no parameter is entered, the current settings are displayed.

2.7.11 ismModuleSetWidth

Displays or modifies the LinkWidth.Supported setting for each of the module ports. LinkWidth.Supported should be a subset of LinkWidthDowngrade.Supported for proper port operation.

Note: This command is only available on Intel® Omni-Path Host Fabric Interface.

Syntax

```
ismModuleSetWidth [linkWidth] [-bounce]
```

Options

linkWidth Options include:

- 1 1X
- 2 2X
- 3 2X_1X
- 4 3X
- 5 3X_1X
- 6 3X_2X
- 7 3X_2X_1X
- 8 4X
- 9 4X_1X
- 10 4X_2X
- 11 4X_2X_1X
- 12 4X_3X



- 13 4X_3X_1X
- 14 4X_3X_2X
- 15 4X_3X_2X_1X

`-bounce` Brings the active links down and back up if a new value is set.

Calling this function with the `-bounce` option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.

Notes

If no parameter is entered, the current settings are displayed.

2.7.12 ismIslSetWidth

Displays or modifies the LinkWidth.Supported setting for each of the inter-switch-link (ISL) ports. LinkWidth.Supported should be a subset of LinkWidthDowngrade.Supported for proper port operation.

Note: This command is only available on Intel® Omni-Path Director Class Switch 100 Series.

Syntax

```
ismIslSetWidth [linkWidth] [-bounce] [-verbose]
```

Options

`linkWidth` Options include:

- 1 1X
- 2 2X
- 3 2X_1X
- 4 3X
- 5 3X_1X
- 6 3X_2X
- 7 3X_2X_1X
- 8 4X
- 9 4X_1X



```

10  4X_2X
11  4X_2X_1X
12  4X_3X
13  4X_3X_1X
14  4X_3X_2X
15  4X_3X_2X_1X

```

-bounce Brings the active links down and back up if a new value is set.

Calling this function with the **-bounce** option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.

-verbose Verbose output mode.

Notes

If no parameter is entered, the current settings are displayed.

2.7.13 ismPortSetLWDS

Displays or modifies the LinkWidthDowngrade.Supported (LWDS) setting for a port. This setting becomes effective on the next port bounce.

Syntax

```
ismPortSetLWDS [portNameList] [LinkWidthDownGradeSupported] [-bounce] [-verbose]
```

Options

portNameList

Valid entries for *portNameList* depend on the chassis type. Use the command `ismPortStats` to see the actual port names for the chassis. You can use `all` in the *portNameList*.

On Edge platforms, an example cable port name in the *portNameList* is:

Cable01, that is, Cable Port 1.

On Director platforms, an example cable port name in the *portNameList* is:

L101AP01, that is, Leaf 101A Port 1.



On Director platforms, an example interswitch link name in the *portNameList* is:

S201AP24L101AP25, that is, Spine 201A port 24 which connects to Leaf 101A port 25.

LinkWidthDownGradeSupported Options include:

- 1 1X
- 2 2X
- 3 2X_1X
- 4 3X
- 5 3X_1X
- 6 3X_2X
- 7 3X_2X_1X
- 8 4X
- 9 4X_1X
- 10 4X_2X
- 11 4X_2X_1X
- 12 4X_3X
- 13 4X_3X_1X
- 14 4X_3X_2X
- 15 4X_3X_2X_1X

-bounce

Brings the active links down and back up if a new value is set.

Calling this function with the -bounce option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.

-verbose

Verbose output mode.



Example

```
-> ismPortSetLWDS Cable01
Cable01 LWDS: 4X_3X_2X_1X
```

Notes

Calling this function with only the *portNameList* option displays the current values.

2.7.14 ismChassisSetLWDS

Displays or modifies the LinkWidthDowngrade.Supported (LWDS) setting for all chassis ports. This setting becomes effective on the next port bounce.

Syntax

```
ismChassisSetLWDS [LinkWidthDownGradeSupported] [-bounce] [-verbose]
```

Options

LinkWidthDownGradeSupported Options include:

- 1 1X
- 2 2X
- 3 2X_1X
- 4 3X
- 5 3X_1X
- 6 3X_2X
- 7 3X_2X_1X
- 8 4X
- 9 4X_1X
- 10 4X_2X
- 11 4X_2X_1X
- 12 4X_3X
- 13 4X_3X_1X
- 14 4X_3X_2X



15 4X_3X_2X_1X

-bounce

Brings the active links down and back up if a new value is set.

Calling this function with the `-bounce` option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.

-verbose

Verbose output mode.

Notes

If no parameter is entered, the current settings are displayed.

2.7.15 ismModuleSetLWDS

Displays or modifies the LinkWidthDowngrade.Supported (LWDS) setting for each of the module ports. This setting becomes effective on the next port bounce.

Note: This command is only available on Intel® Omni-Path Host Fabric Interface.

Syntax

```
ismModuleSetLWDS [LinkWidthDownGradeSupported] [-bounce]
```

Options

LinkWidthDownGradeSupported Options include:

- 1 1X
- 2 2X
- 3 2X_1X
- 4 3X
- 5 3X_1X
- 6 3X_2X
- 7 3X_2X_1X
- 8 4X
- 9 4X_1X



```

10  4X_2X
11  4X_2X_1X
12  4X_3X
13  4X_3X_1X
14  4X_3X_2X
15  4X_3X_2X_1X

```

`-bounce`

Brings the active links down and back up if a new value is set.

Calling this function with the `-bounce` option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.

Example

```

-> ismModuleSetLWDS
Cable01 LWDS: 4X_3X_2X_1X
Cable02 LWDS: 4X_3X_2X_1X
Cable03 LWDS: 4X_3X_2X_1X
...

```

Notes

If no parameter is entered, the current settings are displayed.

2.7.16 ismIslSetLWDS

Displays or modifies the LinkWidthDowngrade.Supported (LWDS) setting for each of the inter-switch-link (ISL) ports. This setting becomes effective on the next port bounce.

Note: This command is only available on Intel® Omni-Path Director Class Switch 100 Series.

Syntax

```
ismIslSetLWDS [LinkWidthDowngradeSupported] [-bounce] [-verbose]
```

Options

LinkWidthDowngradeSupported Options include:

```
1  1X
```



- 2 2X
- 3 2X_1X
- 4 3X
- 5 3X_1X
- 6 3X_2X
- 7 3X_2X_1X
- 8 4X
- 9 4X_1X
- 10 4X_2X
- 11 4X_2X_1X
- 12 4X_3X
- 13 4X_3X_1X
- 14 4X_3X_2X
- 15 4X_3X_2X_1X

-bounce

Brings the active links down and back up if a new value is set.

Calling this function with the `-bounce` option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.

-verbose

Verbose output mode.

Notes

If no parameter is entered, the current settings are displayed.

2.7.17 ismPortSetFmEnabled

Displays or modifies the FM ENABLED setting for a port.

Syntax

```
ismPortSetFmEnabled portNameList [fmEnabled] [-bounce] [-verbose]
```



Options

portNameList Valid entries for *portNameList* depend on the chassis type. Use the command *ismPortStats* to see the actual port names for the chassis. You can use *all* in the *portNameList*.

On Edge platforms, an example cable port name in the *portNameList* is:

Cable01, that is, Cable Port 1.

On Director platforms, an example cable port name in the *portNameList* is:

L101AP01, that is, Leaf 101A Port 1.

On Director platforms, an example interswitch link name in the *portNameList* is:

S201AP24L101AP25, that is, Spine 201A port 24 which connects to Leaf 101A port 25.

fmEnabled Options include:

0 Disabled.

1 Enabled.

-bounce Brings the active links down and back up if a new value is set. Calling this function with the *-bounce* option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.

-verbose Verbose output mode.

Example

```
-> ismPortSetFmEnabled Cable01
Cable01 FM_ENABLED: DISABLED
```

Notes

Calling this function with only the *portNameList* option displays its current values.

2.7.18 ismChassisSetFmEnabled

Displays or modifies the FM ENABLED setting for all chassis ports.



Syntax

```
ismChassisSetFmEnabled [fmEnabled] [-bounce] [-verbose]
```

Options

fmEnabled Options include:

0 Disabled.

1 Enabled.

-bounce Brings the active links down and back up if a new value is set.
Calling this function with the **-bounce** option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.

-verbose Verbose output mode.

Example

```
-> ismChassisSetFmEnabled
Cable01 FM_ENABLED: DISABLED
Cable02 FM_ENABLED: DISABLED
Cable03 FM_ENABLED: DISABLED
...
```

Notes

Calling this function without specifying a setting displays the current values.

2.7.19 ismPortSetCrcMode

Displays or modifies the cyclic redundancy check (CRC) mode setting for a port.

Syntax

```
ismPortSetCrcMode [portNameList] [crcMode] [-bounce] [-verbose]
```

Options

portNameList Valid entries for *portNameList* depend on the chassis type. Use the command `ismPortStats` to see the actual port names for the chassis. You can use `all` in the *portNameList*.

On Edge platforms, an example cable port name in the *portNameList* is:

Cable01, that is, Cable Port 1.



On Director platforms, an example cable port name in the *portNameList* is:

L101AP01, that is, Leaf 101A Port 1.

On Director platforms, an example interswitch link name in the *portNameList* is:

S201AP24L101AP25, that is, Spine 201A port 24 which connects to Leaf 101A port 25.

crcMode

Options include:

- 0 16b
- 1 14b_or_16b
- 2 48b_or_16b
- 3 48b_or_14b_or_16b
- 4 per_lane_or_16b
- 5 per_lane_or_14b_or_16b
- 6 per_lane_or_48b_or_16b
- 7 per_lane_or_48b_or_14b_or_16b

-bounce

Brings the active links down and back up if a new value is set.

Calling this function with the -bounce option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.

-verbose

Verbose output mode.

Example

```
-> ismPortSetCrcMode Cable01
Cable01 CRD_MODE: 14b_or_16b
```

Notes

Calling this function with only the *portNameList* option displays its current values.

2.7.20 ismChassisSetCrcMode

Displays or modifies the cyclic redundancy check (CRC) mode setting for all chassis ports.



Syntax

```
ismChassisSetCrcMode [crcMode] [-bounce] [-verbose]
```

Options

crcMode Options include:

- 0 16b
- 1 14b_or_16b
- 2 48b_or_16b
- 3 48b_or_14b_or_16b
- 4 per_lane_or_16b
- 5 per_lane_or_14b_or_16b
- 6 per_lane_or_48b_or_16b
- 7 per_lane_or_48b_or_14b_or_16b

-bounce Brings the active links down and back up if a new value is set.

Calling this function with the *-bounce* option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.

-verbose Verbose output mode.

Example

```
-> ismChassisSetCrcMode
Cable01 CRD_MODE: 14b_or_16b
Cable02 CRD_MODE: 14b_or_16b
Cable03 CRD_MODE: 14b_or_16b
...
```

Notes

If no parameter is entered, the current settings are displayed.

2.7.21 ismModuleSetCrcMode

Displays or modifies the cyclic redundancy check (CRC) mode setting for all module ports.

Note: This command is only available on Intel® Omni-Path Host Fabric Interface.



Syntax

```
ismModuleSetCrcMode [crcMode] [-bounce]
```

Options

crcMode Options include:

- 0 16b
- 1 14b_or_16b
- 2 48b_or_16b
- 3 48b_or_14b_or_16b
- 4 per_lane_or_16b
- 5 per_lane_or_14b_or_16b
- 6 per_lane_or_48b_or_16b
- 7 per_lane_or_48b_or_14b_or_16b

-bounce Brings the active links down and back up if a new value is set.

Calling this function with the *-bounce* option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.

Example

```
-> ismModuleSetCrcMode
Cable01 CRD_MODE: 14b_or_16b
Cable02 CRD_MODE: 14b_or_16b
Cable03 CRD_MODE: 14b_or_16b
...
```

Notes

If no parameter is entered, the current settings are displayed.

2.7.22 ismIsISetCrcMode

Displays or modifies the cyclic redundancy check (CRC) mode setting for all inter-switch-link ports.

Note: This command is only available on Intel® Omni-Path Director Class Switch 100 Series.



Syntax

```
ismIslSetCrcMode [crcMode] [-bounce] [-verbose]
```

Options

crcMode Options include:

- 0 16b
- 1 14b_or_16b
- 2 48b_or_16b
- 3 48b_or_14b_or_16b
- 4 per_lane_or_16b
- 5 per_lane_or_14b_or_16b
- 6 per_lane_or_48b_or_16b
- 7 per_lane_or_48b_or_14b_or_16b

-bounce Brings the active links down and back up if a new value is set.
Calling this function with the **-bounce** option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.

-verbose Verbose output mode.

Notes

If no parameter is entered, the current settings are displayed.

2.7.23 ismPortSetVCU

Displays or modifies the Virtual lane Credit Units (VCU) setting for a port.

Syntax

```
ismPortSetVCU [portNameList] [vcu] [-bounce] [-verbose]
```

Options

portNameList Valid entries for *portNameList* depend on the chassis type. Use the command `ismPortStats` to see the actual port names for the chassis. You can use `all` in the *portNameList*.



On Edge platforms, an example cable port name in the *portNameList* is:

Cable01, that is, Cable Port 1.

On Director platforms, an example cable port name in the *portNameList* is:

L101AP01, that is, Leaf 101A Port 1.

On Director platforms, an example interswitch link name in the *portNameList* is:

S201AP24L101AP25, that is, Spine 201A port 24 which connects to Leaf 101A port 25.

<i>vcu</i>	Valid options range from 0 to 7 inclusive. Default = 0.
<code>-bounce</code>	Brings the active links down and back up if a new value is set. Calling this function with the <code>-bounce</code> option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.
<code>-verbose</code>	Verbose output mode.

Example

```
-> ismPortSetVCU Cable01
Cable01 VCU: 0
```

Notes

If only the *portNameList* is entered, the current settings are displayed.

2.7.24 ismPortSetDiagnosticMode

Displays or modifies the diagnostic mode for a set of ports. Diagnostic mode is typically enabled by OEMs when doing margin testing of a port.

Note: The diagnostic mode setting is NOT persistent across a power cycle or reboot of the chassis.

Syntax

```
ismPortSetDiagnosticMode [portNameList] [{0 | 1}]
```



Options

portNameList Valid entries for *portNameList* depend on the chassis type. Use the command `ismPortStats` to see the actual port names for the chassis. You can use `all` in the *portNameList*.

On Edge platforms, an example cable port name in the *portNameList* is:

Cable01, that is, Cable Port 1.

On Director platforms, an example cable port name in the *portNameList* is:

L101AP01, that is, Leaf 101A Port 1.

On Director platforms, an example interswitch link name in the *portNameList* is:

S201AP24L101AP25, that is, Spine 201A port 24 which connects to Leaf 101A port 25.

<enable> Options include:

0 Disabled.

1 Enabled.

Example

```
-> ismPortSetDiagnosticMode Cable01
Cable01 DiagnosticMode: 0
```

Notes

A port that is in diagnostic mode no longer participates in fabric link management, so the port will not recognize and respond to link-level state changes (for example, Link Up/Down) until the port is moved back out of diagnostic mode.

If only the *portNameList* is entered, the current settings are displayed.

2.7.25 ismChassisSetVCU

Displays or modifies the Virtual lane Credit Units (VCU) setting for all chassis ports.

Syntax

```
ismChassisSetVCU [vcu] [-bounce] [-verbose]
```

Options

vcu Valid options range from 0 to 7 inclusive. Default = 0.



-bounce Brings the active links down and back up if a new value is set.

Calling this function with the **-bounce** option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.

-verbose Verbose output mode.

Example

```
-> ismChassisSetVCU
Cable01 VCU: 0
Cable02 VCU: 0
Cable03 VCU: 0
...
```

Notes

If no parameter is entered, the current settings are displayed.

2.7.26 ismModuleSetVCU

Displays or modifies the Virtual lane Credit Units (VCU) setting for all module ports.

Note: This command is only available on Intel® Omni-Path Host Fabric Interface.

Syntax

```
ismModuleSetVCU [vcu] [-bounce]
```

Options

vcu Valid options range from 0 to 7 inclusive. Default = 0.

-bounce Brings the active links down and back up if a new value is set.

Calling this function with the **-bounce** option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.

Example

```
-> ismModuleSetVCU
Cable01 VCU: 0
Cable02 VCU: 0
Cable03 VCU: 0
...
```

Notes

If no parameter is entered, the current settings are displayed.



2.7.27 ismIslSetVCU

Displays or modifies the Virtual lane Credit Units (VCU) setting for all inter-switch-link ports.

Note: This command is only available on Intel® Omni-Path Director Class Switch 100 Series.

Syntax

```
ismIslSetVCU [vcu] [-bounce] [-verbose]
```

Options

- vcu* Valid options range from 0 to 7 inclusive. Default = 0.
- bounce* Brings the active links down and back up if a new value is set.
- Calling this function with the *-bounce* option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.
- verbose* Verbose output mode.

Notes

If no parameter is entered, the current settings are displayed.

2.7.28 ismChassisSetMtu

Displays and sets the chassis maximum packet MTU Capability and VL Capability for all ports.

Syntax

```
ismChassisSetMtu [mtuCap [vlCap]] [-bounce]
```

Options

- mtuCap* Options include:
- 4 2048 bytes
 - 5 4096 bytes
 - 6 8192 bytes
 - 7 10240 bytes
- vlCap* If the *vlCap* option is not specified, the command defaults to the maximum VLs for the selected *mtuCap*. Options include:



- 1 VL0
- 2 VL0-VL1
- 3 VL0-VL2
- 4 VL0-VL3
- 5 VL0-VL4
- 6 VL0-VL5
- 7 VL0-VL6
- 8 VL0-VL7

-bounce Brings the active links down and back up if a new value is set.

Calling this function with the **-bounce** option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.

Example

```
-> ismChassisSetMtu
Cable01 MTUCap=4(2048 bytes) VLCap=1(1 VLs)
Cable02 MTUCap=4(2048 bytes) VLCap=1(1 VLs)
Cable03 MTUCap=4(2048 bytes) VLCap=1(1 VLs)
...
```

Notes

If no value is entered for *mtuCap*, the current setting is displayed.

2.7.29 ismModuleSetMtu

Displays and sets the chassis maximum packet MTU Capability and VL Capability for all module ports.

Note: This command is only available on Intel® Omni-Path Host Fabric Interface.

Syntax

```
ismModuleSetMtu [mtuCap [vLCap]] [-bounce]
```

Options

mtuCap Options include:

- 4 2048 bytes



- 5 4096 bytes
- 6 8192 bytes
- 7 10240 bytes

vlCap If the *vlCap* option is not specified, the command defaults to the maximum VLs for the selected *mtuCap*. Options include:

- 1 VL0
- 2 VL0-VL1
- 3 VL0-VL2
- 4 VL0-VL3
- 5 VL0-VL4
- 6 VL0-VL5
- 7 VL0-VL6
- 8 VL0-VL7

-bounce Brings the active links down and back up if a new value is set.

Calling this function with the **-bounce** option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.

Example

```
-> ismModuleSetMtu
Cable01 MTUCap=4 (2048 bytes) VLCap=1 (1 VLs)
Cable02 MTUCap=4 (2048 bytes) VLCap=1 (1 VLs)
Cable03 MTUCap=4 (2048 bytes) VLCap=1 (1 VLs)
...
```

Notes

If no value is entered for *mtuCap*, the current setting is displayed.

2.7.30 ismPortEnable

Enables a port.

Syntax

```
ismPortEnable portNameList [-verbose]
```



Options

portNameList Valid entries for *portNameList* depend on the chassis type. Use the command *ismPortStats* to see the actual port names for the chassis. You can use *all* in the *portNameList*.

On Edge platforms, an example cable port name in the *portNameList* is:

Cable01, that is, Cable Port 1.

On Director platforms, an example cable port name in the *portNameList* is:

L101AP01, that is, Leaf 101A Port 1.

On Director platforms, an example interswitch link name in the *portNameList* is:

S201AP24L101AP25, that is, Spine 201A port 24 which connects to Leaf 101A port 25.

-verbose Verbose output mode.

Example

```
-> ismPortEnable Cable01 -verbose
Enabled port Cable01!
```

2.7.31 ismChassisSetEnable

Displays or modifies the port enable setting for each port in the chassis.

Syntax

```
ismChassisSetEnable [enable]
```

Options

enable Options include:

0 Disable

1 Enable

Example

```
-> ismChassisSetEnable
Cable01 is ENABLED
Cable02 is ENABLED
Cable03 is ENABLED
...
```



Notes

If no value is entered, the current setting is displayed.

When disabling ports, only cable ports are disabled.

2.7.32 **ismModuleSetEnable**

Displays or modifies the port enable setting for each port in the module.

Note: This command is only available on Intel® Omni-Path Host Fabric Interface.

Syntax

```
ismModuleSetEnable [enable]
```

Options

enable Options include:

- 0 Disable
- 1 Enable

Notes

If no value is entered, the current setting is displayed.

2.7.33 **ismPortDisable**

Disables a port.

Syntax

```
ismPortDisable portNameList [-verbose]
```

Options

portNameList Valid entries for *portNameList* depend on the chassis type. Use the command `ismPortStats` to see the actual port names for the chassis. You can use `all` in the *portNameList*.

On Edge platforms, an example cable port name in the *portNameList* is:

Cable01, that is, Cable Port 1.

On Director platforms, an example cable port name in the *portNameList* is:

L101AP01, that is, Leaf 101A Port 1.



On Director platforms, an example interswitch link name in the *portNameList* is:

S201AP24L101AP25, that is, Spine 201A port 24 which connects to Leaf 101A port 25.

-verbose Verbose output mode.

2.7.34 ismChassisSetSpeed

Displays or modifies the LinkSpeed.Supported setting for all ports in the chassis.

Syntax

```
ismChassisSetSpeed [linkSpeed] [-bounce]
```

Options

linkSpeed Options include:

2 25 Gbps

-bounce Brings the active links down and back up if a new value is set.

Calling this function with the -bounce option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.

Example

```
-> ismChassisSetSpeed
Cable01 link speed supported is force 25.5
Cable02 link speed supported is force 25.5
Cable03 link speed supported is force 25.5
Cable04 link speed supported is force 25.5
Cable05 link speed supported is force 25.5
Cable06 link speed supported is force 25.5
Cable07 link speed supported is force 25.5
Cable08 link speed supported is force 25.5
Cable09 link speed supported is force 25.5
Cable10 link speed supported is force 25.5
...
```

Notes

Each external port must be connected to another similarly configured port to establish a link.

Calling this function without an option displays the current settings.

2.7.35 ismModuleSetSpeed

Displays or modifies the LinkSpeed.Supported setting for all ports in the module.



Note: This command is only available on Intel® Omni-Path Host Fabric Interface.

Syntax

```
ismModuleSetSpeed [linkSpeed] [-bounce]
```

Options

linkSpeed Options include:

2 25 Gbps

-bounce Brings the active links down and back up if a new value is set.

Calling this function with the -bounce option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.

Notes

Each cable port must be connected to another similarly configured port to establish a link.

Calling this function without an option displays the current settings.

2.7.36 ismIslSetSpeed

Displays or modifies the LinkSpeed.Supported setting for all inter-switch ports in the chassis.

Note: This command is only available on Intel® Omni-Path Director Class Switch 100 Series.

Syntax

```
ismIslSetSpeed [linkSpeed] [-bounce]
```

Options

linkSpeed Options include:

2 25 Gbps

-bounce Brings the active links down and back up if a new value is set.

Calling this function with the -bounce option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.

Notes

This command sets the supported link speed on each of the internal switch-to-switch ports.



Calling this function without an option displays the current settings.

2.7.37 ismPortSetSpeed

Displays or modifies the LinkSpeed.Supported setting for a port.

Syntax

```
ismPortSetSpeed [portNameList] [linkSpeed] [-bounce]
```

Options

portNameList Valid entries for *portNameList* depend on the chassis type. Use the command `ismPortStats` to see the actual port names for the chassis. You can use `all` in the *portNameList*.

On Edge platforms, an example cable port name in the *portNameList* is:

Cable01, that is, Cable Port 1.

On Director platforms, an example cable port name in the *portNameList* is:

L101AP01, that is, Leaf 101A Port 1.

On Director platforms, an example interswitch link name in the *portNameList* is:

S201AP24L101AP25, that is, Spine 201A port 24 which connects to Leaf 101A port 25.

linkSpeed Options include:

2 25 Gbps

`-bounce` Brings the active links down and back up if a new value is set. Calling this function with the `-bounce` option disruptively brings active links down and back up so the links use the new setting immediately. Otherwise, the new setting is used the next time links retrain.

Example

```
-> ismPortSetSpeed Cable01
Cable01 link speed supported is force 25.5
```

Notes

Calling this function without an option displays the current settings.



2.7.38 ismPortSetBeacon

Displays or modifies the LED beacon indicator for a port.

Syntax

```
ismPortSetBeacon portNameList [{0 | 1}] [--verbose]
```

Options

portNameList Valid entries for *portNameList* depend on the chassis type. Use the command `ismPortStats` to see the actual port names for the chassis. You can use all in the *portNameList*.

On Edge platforms, an example cable port name in the *portNameList* is:

Cable01, that is, Cable Port 1.

On Director platforms, an example cable port name in the *portNameList* is:

L101AP01, that is, Leaf 101A Port 1.

On Director platforms, an example interswitch link name in the *portNameList* is:

S201AP24L101AP25, that is, Spine 201A port 24 which connects to Leaf 101A port 25.

{0 | 1} If no value is entered, the current setting is displayed. Options include:

0 Off

1 On

--verbose Verbose output mode.

Example

```
-> ismPortSetBeacon Cable01
Cable01 beacon is off
```

Notes

Calling this function without an option displays the current settings.

2.7.39 ismPortQsfpInfo

Displays information from the installed QSFPs.



Syntax

```
ismPortQsfpInfo [portNameList] [-verbose] [-binary]
```

Options

If no value is entered, the current setting is displayed. Options include:

portNameList Valid entries for *portNameList* depend on the chassis type. Use the command *ismPortStats* to see the actual port names for the chassis. You can use *all* in the *portNameList*.

On Edge platforms, an example cable port name in the *portNameList* is:

Cable01, that is, Cable Port 1.

On Director platforms, an example cable port name in the *portNameList* is:

L101AP01, that is, Leaf 101A Port 1.

On Director platforms, an example interswitch link name in the *portNameList* is:

S201AP24L101AP25, that is, Spine 201A port 24 which connects to Leaf 101A port 25.

-verbose Verbose output mode.

-binary In verbose mode, binary data is also displayed.

Example

```
ismPortQsfpInfo L102AP01
MasterM201-> ismPortQsfpInfo L102AP01
```

Port Name	Cable Type	Vendor Name	Cbl Len	Part Number	Rv Serial Number	Temp (C)	Spd sup
L102AP01	QSFP-DD AOC	Hisense	3m	DEF8504-2C03	12 U5T7BG00673	29.86	Y

```

Total number of QSFPs found: 0
Total number of QSFP-DDs found: 1

ismPortQsfpInfo L102AP01 -verbose
MasterM201-> ismPortQsfpInfo L102AP01 -verbose
```

```

Port Name      : L102AP01
Cable Type     : QSFP-DD AOC (850nm VCSEL)
Vendor Name    : Hisense
Vendor OUI     : AC-4A-FE
Vendor P/N     : DEF8504-2C03
Vendor Rev     : 12
Vendor S/N     : U5T7BG00673
Date Code      : 2017-10-31
Cable Length   : 3m
Far end conns  : 2 (4x,4x)

Max/Alloc Power: 3.5 W / 3.5 W
Spec Rev       : QSFP-DD mgmt rev 0.6
Firmware Rev   : 2.1
Temperature    : 29.87 C
25G/Ln Support: Yes
50G/Ln Support: No

Total number of QSFPs found: 0
Total number of QSFP-DDs found: 1
```



2.7.40 **ismChassisBounce**

Bounces enabled ports for an entire chassis.

Syntax

```
ismChassisBounce [-verbose]
```

Options

-verbose Verbose output mode.

2.7.41 **ismModuleBounce**

Bounces enabled ports for an entire module.

Note: This command is only available on Intel® Omni-Path Host Fabric Interface.

Syntax

```
ismModuleBounce [-verbose]
```

Options

-verbose Verbose output mode.

2.7.42 **ismIslBounce**

Bounces all enabled inter-switch-link ports in the chassis.

Note: This command is only available on Intel® Omni-Path Director Class Switch 100 Series.

Syntax

```
ismIslBounce [-verbose]
```

Options

-verbose Verbose output mode.

2.7.43 **ismPortBounce**

Bounces enabled ports.

Syntax

```
ismPortBounce portNameList [-verbose]
```



Options

portNameList Valid entries for *portNameList* depend on the chassis type. Use the command `ismPortStats` to see the actual port names for the chassis. You can use `all` in the *portNameList*.

On Edge platforms, an example cable port name in the *portNameList* is:

Cable01, that is, Cable Port 1.

On Director platforms, an example cable port name in the *portNameList* is:

L101AP01, that is, Leaf 101A Port 1.

On Director platforms, an example interswitch link name in the *portNameList* is:

S201AP24L101AP25, that is, Spine 201A port 24 which connects to Leaf 101A port 25.

`-verbose` Verbose output mode.

2.7.44 ismRemoveStateDump

Removes switch ASIC state dump files.

Syntax

```
ismRemoveStateDump [all] [-lid lid] [slot]
```

Options

`all` Removes all switch ASIC state dump files.

`-lid lid` Removes the remote switch ASIC state dump file for a specified LID.

`slot` Removes the ASIC state dump file for the specified slot name.

2.7.45 ismShowStateDump

Displays contents of switch ASIC state dump files.

Syntax

```
ismShowStateDump [all] [-lid lid] [slot]
```

Options

`all` Displays the header contents of all switch ASIC state dump files.



`-lid lid` Displays the header contents of a remote switch ASIC state dump file for a specified LID.

`slot` Displays the header contents of the ASIC state dump file for the specified slot name.

2.7.46 ismTakeStateDump

Captures switch ASIC state dump information.

Syntax

```
ismTakeStateDump {[-lid lid] | all | [slot]}
```

Options

`lid lid` Takes a switch ASIC state dump of the unmanaged switch with the specified `lid`.

`all` Takes a switch ASIC state dump of all chips and stores in a single file.

`slot` Takes a switch ASIC state dump of the specified slot name.

Notes

This command is only available in support Login mode. Contact Intel technical support for more information.

The state dump files are created in a local RAM file system. The naming convention is: `/firmware/prr*.gz`. Copy these files using `sftp` run from an external host.

After the files have been copied externally, Intel recommends you enter `reboot now all` to resume normal operation. You must do the file copy **before** the reboot, because the state dump files in the local RAM file system are not persistent across the reboot.

It is normal for the errors `PrrVpd: MadLocalProcess` and `Ism: Communication` to occur during and after capturing a state dump.

2.7.47 ismShowArConfig

Displays adaptive routing info for a specific switch chip or entire chassis.

Syntax

```
ismShowArConfig [switch]
```

Options

`switch` Switch index.



Example

```
-> ismShowArConfig
Switch Name | Ena | Pau | LRO | Algo | Freq | Thresh | Events
-----|---|---|---|-----|-----|-----|-----
Switch 1   | 0   | 0   | 0   | 0    | 0    | 0    | 0
```

2.7.48 ismShowArMoves

Displays adaptive routing adjustments for a specific switch chip or entire chassis.

Syntax

```
ismShowArMoves [switch]
```

Options

switch Switch index.

2.8 Time Management

Commands in this category are used for retrieving and setting the current system time, setting the time zone, and setting daylight saving time parameters.

2.8.1 time

Configures the time on the device.

Syntax

```
time [-S ipaddr] [-T hhmmss[mmddyyyy]]
```

Options

-S ipaddr Sets the NTP Server IP address.

-T hhmmss[mmddyyyy] Sets the local clock time hour, minutes, and seconds. Optionally, the month, day, and year can be set.

Example

```
-> time
09:52:12 10/16/2015
Configured to use the local clock

-> time -S 172.26.0.254
Configured the NTP server ip address successfully
13:53:02 10/16/2015
Configured to use NTP server IP address: 172.26.0.254
```



Notes

Time is configured locally (using a local clock) or is set to be updated by an NTP server. If you set the time locally, the unit unconfigures the NTP server IP address if set.

If no value is entered, the current system time is displayed.

2.8.2 timeZoneConf

Displays or configures the time zone setting.

Syntax

```
timeZoneConf [offset]
```

Options

offset The time offset in relation to Greenwich Mean Time (GMT). The *offset* parameter specifies a time zone the system uses when setting the time. In the United States, valid time zone offsets include:

- 5 Eastern Standard Time (GMT-5)
- 6 Central Standard Time (GMT-6)
- 7 Mountain Standard Time (GMT-7)
- 8 Pacific Standard Time (GMT-8)

Example

```
-> timeZoneConf -5
Timezone offset successfully configured
Current time zone offset is: -5
```

2.8.3 timeDSTConf

Configures and displays the Daylight Saving Time settings.

Syntax

```
timeDSTConf [sw sd sm ew ed em]
```

Options

sw Start which, valid options include:

- 1 1st



2 2nd

3 3rd

4 4th

5 5th

sd Start day, valid options include:

1 Sunday

2 Monday

3 Tuesday

4 Wednesday

5 Thursday

6 Friday

7 Saturday

sm Start month, valid options include:

3 March

4 April

5 May

6 June

7 July

8 August

9 September

10 October

11 November

ew End which, valid options include:



- 1 1st
- 2 2nd
- 3 3rd
- 4 4th
- 5 5th

ed End day, valid options include:

- 1 Sunday
- 2 Monday
- 3 Tuesday
- 4 Wednesday
- 5 Thursday
- 6 Friday
- 7 Saturday

em End month, valid options include:

- 3 March
- 4 April
- 5 May
- 6 June
- 7 July
- 8 August
- 9 September
- 10 October
- 11 November



Example

```
-> timeDSTConf 2 1 3 1 1 11
Timezone offset successfully configured
Current DST = Start: 2'nd Sunday of March End: 1'st Sunday of November
```

2.8.4 timeNtpTimeout

Displays or sets the number of seconds to wait for a NTP response.

Syntax

```
timeNtpTimeout [numSeconds]
```

Options

numSeconds New timeout setting (default = 2 seconds).

Example

```
-> timeNtpTimeout
Current NTP timeout value: 2 seconds
-> timeNtpTimeout 3
Current NTP timeout changed to 3 seconds
```

Notes

If no value is entered, the current setting is displayed.

NTP timeout is the amount of time (in seconds) for the system to wait for a response from the NTP server. This setting can be configured using the same command with the new timeout value (in whole seconds) as the only argument. The default setting is 2 seconds. The NTP timeout value is not used on line cards or slave CMUs.

2.8.5 timeNtpRefreshTime

Displays or sets the delay between syncing the clock using NTP.

Syntax

```
timeNtpRefreshTime [numSeconds]
```

Options

numSeconds New refresh delay setting.

Example

```
-> timeNtpRefreshTime
Current NTP refresh delay value: 60 seconds
-> timeNtpRefreshTime 50
Current NTP refresh delay changed to 50 seconds.
```



Notes

If no value is entered, the current setting is displayed.

The NTP refresh time is the delay in seconds between attempts to sync the clock via NTP. This value can be configured by using this same command with the new refresh time (in whole seconds) as the only argument. The NTP refresh time is not used on line cards or slave CMUs.

2.9 SNMP

Commands in this category are used for configuring trap destinations and SNMP security parameters.

2.9.1 snmpCommunityConf

Configures and displays the SNMP community strings.

Syntax

```
snmpCommunityConf [-r readonly_comm_str] [-w read_write_comm_str]
```

Options

`-r readonly_comm_str` A read-only community string.

`-w read_write_comm_str` A read/write community string.

Example

```
-> snmpCommunityConf -r public  
Read Only Community String Was Set To: public
```

Notes

If no value is entered, the current settings are displayed.

To disable an entry, use a set of double quotes (for example, " ") as the community name.

2.9.2 snmpTargetAddr

Displays and modifies the `snmpTargetAddrTable` entries.

Syntax

```
snmpTargetAddr {show | add | edit | delete} -n name [-a address] [-p port] [-t  
timeout] [-r retry_count] [-l tag_list] [-v parameters] [-s storage_type] [-i  
status]
```



Options

<code>show</code>	Displays the contents of the <code>snmpTargetAddrTable</code> .
<code>add</code>	Adds a row to the <code>snmpTargetAddrTable</code> .
<code>edit</code>	Modifies an existing row in the <code>snmpTargetAddrTable</code> .
<code>delete</code>	Removes an existing row of the <code>snmpTargetAddrTable</code> .
<code>-n name</code>	Name. A unique name used to identify a row. Any name with a space (for example, <code>xxx v3</code>) must be surrounded by double quotes (" ").
<code>-a addr</code>	The target machine IP address in dotted decimal form.
<code>-p port</code>	The target port to send traps and information.
<code>-t timeout</code>	The time to wait for an information response.
<code>-r retry_count</code>	Retry count. The number of re-send attempts for information.
<code>-l tag_list</code>	Tag list. Indicates the traps and information that is sent.
<code>-v parameters</code>	Parameters. This maps to an entry in the <code>snmpTargetAddrTable</code> .
<code>-s storage_type</code>	Storage type. Determines whether the entry is saved in flash memory. Options include: <code>volatile</code> or <code>nonVolatile</code> (string).
<code>-i status</code>	Status. Options include: <ol style="list-style-type: none"> 1 Active 2 Not In Service 3 Not Ready

Example

```
-> snmpTargetAddr
rfc2573t:snmpTargetAddrTDomain: nms v1 : 1.3.6.1.6.1.1
rfc2573t:snmpTargetAddrTDomain: nms v2 : 1.3.6.1.6.1.1
rfc2573t:snmpTargetAddrTDomain: nms v3 : 1.3.6.1.6.1.1
rfc2573t:snmpTargetAddrTAddress: nms v1 : (ip addr)00.00.00.00 (port)0000
rfc2573t:snmpTargetAddrTAddress: nms v2 : (ip addr)00.00.00.00 (port)0000
rfc2573t:snmpTargetAddrTAddress: nms v3 : (ip addr)00.00.00.00 (port)0000
```

Notes

If no value is entered, the current settings are displayed.

The output is in the form: `mib : mib_object : table_index : value`

For more details on the `snmpTargetAddrTable`, see SNMP-TARGET-MIB, RFC 2573.

2.9.3 `snmpTargetParams`

Displays the `snmpTargetParamsTable` entries.

Syntax

```
snmpTargetParams [show]
```

Options

`show` Displays the contents of the `snmpTargetParamsTable`.

Example

```
-> snmpTargetParams
rfc2573t:snmpTargetParamsMPModel: v1 params : 0
rfc2573t:snmpTargetParamsMPModel: v2 params : 1
rfc2573t:snmpTargetParamsMPModel: v3 params : 3
rfc2573t:snmpTargetParamsSecurityModel: v1 params : 1
rfc2573t:snmpTargetParamsSecurityModel: v2 params : 2
rfc2573t:snmpTargetParamsSecurityModel: v3 params : 3
```

Notes

If no value is entered, the current settings are displayed.

The output is in the form: `mib : mib_object : table_index : value`

For more details on the `snmpTargetParamsTable`, see SNMP-TARGET-MIB, RFC-2573.

2.9.4 `snmpNotifyProfile`

Displays the `snmpNotifyFilterProfileTable` entries.

Syntax

```
snmpNotifyProfile [show]
```

Options

`show` Displays the contents of the `snmpNotifyFilterProfileTable`.



Example

```
-> snmpNotifyProfile
rfc2573n:snmpNotifyFilterProfileName: v1 params : v1 params
rfc2573n:snmpNotifyFilterProfileName: v2 params : v2 params
rfc2573n:snmpNotifyFilterProfileName: v3 params : v3 params
rfc2573n:snmpNotifyFilterProfileStorType: v1 params : 3
rfc2573n:snmpNotifyFilterProfileStorType: v2 params : 3
rfc2573n:snmpNotifyFilterProfileStorType: v3 params : 3
```

Notes

If no value is entered, the current settings are displayed.

The output is in the form: mib : mib_object : table_index : value

For more details on the snmpNotifyFilterProfileTable, see SNMP-NOTIFICATION-MIB, RFC-2573.

2.9.5 snmpNotifyFilter

Displays the snmpNotifyFilterTable entries.

Syntax

```
snmpNotifyFilter [show]
```

Options

show Displays the contents of the snmpNotifyFilterTable.

Example

```
-> snmpNotifyFilter
rfc2573n:snmpNotifyFilterMask: v1 params : 0
rfc2573n:snmpNotifyFilterMask: v2 params : 0
rfc2573n:snmpNotifyFilterMask: v3 params : 0
rfc2573n:snmpNotifyFilterType: v1 params : 1
rfc2573n:snmpNotifyFilterType: v2 params : 1
rfc2573n:snmpNotifyFilterType: v3 params : 1
```

Notes

If no value is entered, the current settings are displayed.

The output is in the form: mib : mib_object : table_index : value

For more details on the snmpNotifyFilterTable, see SNMP-NOTIFICATION-MIB, RFC-2573.

2.9.6 snmpNotify

Displays the snmpNotifyTable entries.

Syntax

```
snmpNotify [show]
```

Options

show Displays the contents of the snmpNotifyTable.

Example

```
-> snmpNotify
rfc2573n:snmpNotifyTag: switch : rfc1493
rfc2573n:snmpNotifyTag: interfaces : rfc2233
rfc2573n:snmpNotifyTag: rmon : rfc1757
rfc2573n:snmpNotifyTag: snmp : rfc1907
rfc2573n:snmpNotifyTag: tms : tmscom
rfc2573n:snmpNotifyType: switch : 1
```

Notes

If no value is entered, the current settings are displayed.

The output is in the form: mib : mib_object : table_index : value

For more details on the snmpNotifyTable, see SNMP-NOTIFICATION-MIB, RFC-2573.

2.9.7 snmpSystem

Displays and modifies the SNMP system information.

Syntax

```
snmpSystem {show | edit} [-n sysName] [-c sysContact] [-l sysLocation]
```

Options

show Shows the contents of the snmpTargetAddrTable.

edit Modifies an existing row in the snmpTargetAddrTable.

-n sysName Specifies system name information.

-c sysContact Specifies system contact information.

-l sysLocation Specifies system location information.

Example

```
-> snmpSystem show
rfc1907:sysDescr: p : 20.28.4D.61.73.74.65.72.29
rfc1907:sysObjectID: : 1.3.6.1.4.1.10222.7.1.2
```



```
rfc1907:sysUpTime: : 1 Day(s), 23 Hour(s), 34 Minute(s), 47 Second(s)
rfc1907:sysContact: b : {no value}
rfc1907:sysName: b : Intel 12800-040-254
rfc1907:sysLocation: b : Main Chassis Unit, Slot 254
rfc1907:sysServices: : 79
```

Notes

If no value is entered, the current setting is displayed.

The output is in the form: `mib : mib_object : table_index : value.`

2.9.8 snmpUsrSec

Displays and configures SNMP V3 users.

Syntax

```
snmpUsrSec [{add username | show [username] | edit username | delete username} [-a {MD5 key | SHA key | NONE}]]
```

Options

<code>add username</code>	Adds an entry to the V3 user table.
<code>show username</code>	Shows entries in the V3 user table.
<code>edit username</code>	Modifies an entry in the V3 user table.
<code>delete username</code>	Removes an entry in the V3 user table.
<code>-a algo</code>	Authentication algorithm and key. Options include:
	MD5 <code>key</code> MD5 authentication algorithm is used.
	SHA <code>key</code> SHA authentication algorithm is used.
	NONE No authentication algorithm is used.

Example

```
-> snmpUsrSec
User      : initialmd5
Auth      : MD5
Auth Key: 0x047b473f93211a17813ce5fff290066b
Priv      : NONE
User      : initialsha
Auth      : SHA
Auth Key: 0x1c8cbd687fb0f0a22ddd24315db0d84c09eb5ff3
Priv      : NONE
User      : initialnone
Auth      : NONE
Priv      : NONE
```



Notes

If no value is entered, the current settings are displayed.

Handles configuration and display of SNMP v3 users. Supported authentication algorithms are: NONE, MD5, and SHA. A key (passphrase) is required for all except the NONE algorithm.

No privacy algorithms are currently supported.

2.10 CaptureInfo

Commands in this category are used by support personnel for analysis and debugging.

2.10.1 capture

Displays information for this device.

Syntax

```
capture
```

Options

None.

Notes

The output of this command is intended for support personnel to capture switch configuration, logs, and other pertinent data.

2.10.2 showAllConfig

Displays fundamental chassis configuration information.

Syntax

```
showAllConfig
```

Options

None.

Notes

The output of this command is intended for support personnel to capture switch configuration, logs, and other pertinent data.

2.10.3 captureFw

Displays firmware information for this device.

**Syntax**

```
captureFw
```

Options

None.

Notes

The output of this command is intended for support personnel to capture switch configuration, logs, and other pertinent data.

2.10.4 captureSm

Displays Subnet Management information for this device.

Syntax

```
captureSm
```

Options

None.

Notes

The output of this command is intended for support personnel to capture switch configuration, logs, and other pertinent data.

2.10.5 captureIsm

Displays switch information for this device.

Syntax

```
captureIsm
```

Options

None.

Options

None.

Notes

The output of this command is intended for support personnel to capture switch configuration, logs, and other pertinent data.

2.10.6 captureChassis

Displays chassis information for this device.



Syntax

```
captureChassis
```

Options

None.

Notes

The output of this command is intended for support personnel to capture switch configuration, logs, and other pertinent data.

2.10.7 captureNetwork

Displays network information for this device.

Syntax

```
captureNetwork
```

Options

None.

Notes

The output of this command is intended for support personnel to capture switch configuration, logs, and other pertinent data.

2.10.8 captureLog

Displays log information for this device.

Syntax

```
captureLog
```

Options

None.

Notes

The output of this command is intended for support personnel to capture switch configuration, logs, and other pertinent data.

2.10.9 captureMisc

Displays miscellaneous information for this device.

**Syntax**

```
captureMisc
```

Options

None.

Notes

The output of this command is intended for support personnel to capture switch configuration, logs, and other pertinent data.

2.10.10 captureSnmpp

Displays SNMP information for this device.

Syntax

```
captureSnmpp
```

Options

None.

Notes

The output of this command is intended for support personnel to capture switch configuration, logs, and other pertinent data.

2.10.11 captureShell

Displays shell command information for this device.

Syntax

```
captureShell
```

Options

None.

Notes

The output of this command is intended for support personnel to capture switch configuration, logs, and other pertinent data.