## Revision History

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<td>November 2015</td>
<td>1.0</td>
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<td>• Added pmShowRunningTotals and showAllConfiguration</td>
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<td>• Renamed smShowGroups to smShowMcMember</td>
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<td>0.7</td>
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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 adapters, edge switches, director switches and fabric management and development tools.

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

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

Intended Audience

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

Documentation Set

The following are the list of the complete end-user publications set for the Intel® Omni-Path product. These documents can be downloaded from https://downloadcenter.intel.com/.

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

This guide uses the following documentation conventions:

- **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 Web sites are also shown in blue. For example:
  - See License Agreements on page 12 for more information.
  - For more information, visit www.intel.com.
- Text in bold font indicates user interface elements such as a menu items, buttons, check boxes, or column headings. For example:
  - Click the Start button, point to Programs, point to Accessories, and then click Command Prompt.
- Text in Courier font indicates a file name, directory path, or command line text. For example:
  - Enter the following command: sh ./install.bin
- Key names and key strokes are shown in underlined bold uppercase letters. For example:
  - Press CTRL+P and then press the UP ARROW key.
- Text in italics indicates terms, emphasis, variables, or document titles. For example:
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Electrostatic Discharge Sensitivity (ESDS) Precautions

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

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Technical Support

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

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

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 17 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 via a terminal attached to the USB port or via the OOB (out of band) 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, you can Telnet to the IP address(es) 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 a user(s) 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>
<thead>
<tr>
<th>Group</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>General commands for user management and CLI configuration.</td>
</tr>
<tr>
<td>Chassis</td>
<td>Chassis management commands, such as FRU info, fan/power supply state, and others.</td>
</tr>
<tr>
<td>Network</td>
<td>Ethernet interface management commands.</td>
</tr>
<tr>
<td>Firmware</td>
<td>Commands that display or modify firmware revision levels.</td>
</tr>
<tr>
<td>Fm</td>
<td>Commands used for Subnet Manager (SM), Subnet Administration (SA), Performance Manager (PM), and Fabric Executive (FE) configuration and operation.</td>
</tr>
<tr>
<td>Log</td>
<td>Commands for viewing log files as well as configuring logging parameters.</td>
</tr>
<tr>
<td>Ism</td>
<td>Interconnect Switch Management (ISM) configuration and statistics commands.</td>
</tr>
<tr>
<td>Tm</td>
<td>Commands for retrieving and setting the current system time, setting the time zone, and setting daylight saving time parameters.</td>
</tr>
<tr>
<td>Snmp</td>
<td>Commands for configuring trap destinations and security parameters required to access the switch from an SNMP manager.</td>
</tr>
<tr>
<td>CaptureInfo</td>
<td>Analysis and debugging commands for capturing switch-specific information.</td>
</tr>
</tbody>
</table>

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:

```bash
-> 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 execute 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

- The CLI keeps a history of recently executed commands. Use the **UP ARROW** and **DOWN ARROW** keys to access the history.
- Edit the current command using the **LEFT ARROW** and **RIGHT ARROW** keys.
- 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 characters already typed.

1.5 Accessing the CLI

The CLI can be accessed via Telnet, SSH, or through the switch RS-232 serial port. 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.
   ```
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, execute the command:

```
help GroupName
```

For more specific command information, execute 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

all  Lists the commands for all groups.

group  Displays a list of commands for a particular group. See Example for
       options.

-noprompt  Displays a list of the command groups only.

-verbose  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.
Snmp     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

now
Does not prompt before rebooting.

-m
Reboots Master (local) Intel® Omni-Path Edge Switch 100 Family (non-disruptive).

slot slot
Resets specific device where slot = slotNumber (disruptive).

-s
Reboots Slave (remote) Intel® Omni-Path Edge Switch 100 Family.

-n
Reboots Slave (remote) management card only (non-disruptive).

all
Reboots all local devices (excludes -n/-m/-s 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 43.

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 21 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

gTermWidth

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

Options

prompt  The new prompt, range 1 - 11 characters. The new prompt is not saved across reboots.

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.
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 may 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 logout

Terminates the current CLI session.

### Syntax

```
logout
```

### Options

None.

### Example

```
-> logout
```

#### 2.1.16 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.
2.1.17 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.

2.1.18 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
```

### 2.1.19 userRem
Removes a user account.

**Syntax**

```
userRem username
```

**Options**

**username**  User account name to delete.

**Example**

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

### 2.1.20 userListShow
Displays all user accounts for this device.

**Syntax**

```
userListShow
```

**Options**

None.

**Example**

```
$ -> userlistshow
username             role
operator             operator
admin                admin
ivtester             support
```

### 2.1.21 sshKey
Displays or modifies the configured set of SSH keys.
### Syntax

```bash
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 may 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 AAAAB3NzaC1yc2EAAAABIwAAAQEAzNiSexu30rZjs1HAXxD8wTqJgcxLF..."
```

### 2.1.22 loginMode

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

### Syntax

```bash
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.

### 2.1.23 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
```

### 2.1.24 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
```
2.1.25 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.

2.1.26 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.

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

2.1.27 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.

---

**2.1.28 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.

---

**2.1.29 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 32.

2.1.30 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 31.

2.1.31 loginNameGet
Displays the text string that is shown prior to logging in via 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.

### 2.1.32 loginNameSet

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

**Syntax**

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

**Options**

- `-clear` Clears the login name.
- `loginName` Sets the login name.

**Example**

```bash
-> 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.

### 2.1.33 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**

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

### 2.1.34 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.

2.1.35  `uiConfig

Displays or modifies the user interface access methods.

Syntax

`uiConfig [-telnet {0|1}] [-https {0|1}] [-http {0|1}] [-sftp {0|1}] [-ssh {0|1}]

Options

-`telnet  Disables or enables access to the device via 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 SNMP access.
        0  = Disable access.
        1  = Enable access.

-ssh   Disables or enables SSH access.
        0  = Disable access.
        1  = Enable access.

Example

-> uiconfig -telnet 0
Successfully modified configuration.

<table>
<thead>
<tr>
<th>Option</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>-telnet</td>
<td>0</td>
</tr>
<tr>
<td>-http</td>
<td>1</td>
</tr>
<tr>
<td>-https</td>
<td>0</td>
</tr>
<tr>
<td>-sftp</td>
<td>1</td>
</tr>
<tr>
<td>-snmp</td>
<td>1</td>
</tr>
<tr>
<td>-ssh</td>
<td>1</td>
</tr>
</tbody>
</table>

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 may 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.

2.1.36  genPost

Displays General POST results and runs tests.

Syntax

genPost [{all | test}]

Options

call  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
```

<table>
<thead>
<tr>
<th>ID</th>
<th>Gen</th>
<th>POST Name</th>
<th>Result</th>
<th>ENA</th>
<th>DEM</th>
<th>PWR</th>
<th>Result-Ext</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>POST TEST CPU</td>
<td>NO-RUN</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>POST TEST MEM DRAM</td>
<td>NO-RUN</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>POST TEST BOOTROM IMG CHKSUM</td>
<td>NO-RUN</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>POST TEST JMP RAM</td>
<td>NO-RUN</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

all

Running: all

POST PROTO Parameters P1:1 P2:2 P3:3

<table>
<thead>
<tr>
<th>ID</th>
<th>Gen</th>
<th>POST Name</th>
<th>Result</th>
<th>ENA</th>
<th>DEM</th>
<th>PWR</th>
<th>Result-Ext</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>POST TEST CPU</td>
<td>NO-RUN</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>POST TEST MEM DRAM</td>
<td>NO-RUN</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>POST TEST BOOTROM IMG CHKSUM</td>
<td>NO-RUN</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>POST TEST JMP RAM</td>
<td>NO-RUN</td>
<td>Y</td>
<td>N</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

0

Notes

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

2.1.37 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
e-> 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
2.2.2 hwMonitor

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

Syntax

hwMonitor [slot] [onepass] [-all]

Options

slot  Slot number to display. Use 0 for current slot of the management board.

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 Family

```
--> 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
    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

Omni-Path Port Status

<table>
<thead>
<tr>
<th>Cable01</th>
<th>Down</th>
<th>Cable02</th>
<th>Active</th>
<th>Cable03</th>
<th>Down</th>
<th>Cable04</th>
<th>Down</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable05</td>
<td>Down</td>
<td>Cable06</td>
<td>Down</td>
<td>Cable07</td>
<td>Down</td>
<td>Cable08</td>
<td>Down</td>
</tr>
<tr>
<td>Cable09</td>
<td>Down</td>
<td>Cable10</td>
<td>Down</td>
<td>Cable11</td>
<td>Down</td>
<td>Cable12</td>
<td>Down</td>
</tr>
<tr>
<td>Cable13</td>
<td>Active</td>
<td>Cable14</td>
<td>Down</td>
<td>Cable15</td>
<td>Down</td>
<td>Cable16</td>
<td>Down</td>
</tr>
<tr>
<td>Cable17</td>
<td>Down</td>
<td>Cable18</td>
<td>Down</td>
<td>Cable19</td>
<td>Down</td>
<td>Cable20</td>
<td>Down</td>
</tr>
<tr>
<td>Cable21</td>
<td>Down</td>
<td>Cable22</td>
<td>Down</td>
<td>Cable23</td>
<td>Down</td>
<td>Cable24</td>
<td>Active</td>
</tr>
<tr>
<td>Cable25</td>
<td>Down</td>
<td>Cable26</td>
<td>Down</td>
<td>Cable27</td>
<td>Down</td>
<td>Cable28</td>
<td>Down</td>
</tr>
<tr>
<td>Cable29</td>
<td>Down</td>
<td>Cable30</td>
<td>Down</td>
<td>Cable31</td>
<td>Active</td>
<td>Cable32</td>
<td>Down</td>
</tr>
<tr>
<td>Cable33</td>
<td>Down</td>
<td>Cable34</td>
<td>Down</td>
<td>Cable35</td>
<td>Down</td>
<td>Cable36</td>
<td>Active</td>
</tr>
<tr>
<td>Cable37</td>
<td>Down</td>
<td>Cable38</td>
<td>Down</td>
<td>Cable39</td>
<td>Down</td>
<td>Cable40</td>
<td>Down</td>
</tr>
<tr>
<td>Cable41</td>
<td>Down</td>
<td>Cable42</td>
<td>Down</td>
<td>Cable43</td>
<td>Down</td>
<td>Cable44</td>
<td>Down</td>
</tr>
<tr>
<td>Cable45</td>
<td>Down</td>
<td>Cable46</td>
<td>Active</td>
<td>Cable47</td>
<td>Down</td>
<td>Cable48</td>
<td>Down</td>
</tr>
</tbody>
</table>

Notes

To exit monitoring, press the Enter key.

The slot may require a prefix. The Power Supply, Fan, and Chassis slots require a prefix since their slot numbers overlap with the Leaf, Spine, and Management Module slot numbers. (The Leaf, Spine, and Management Module slots do not require a prefix, however, they are listed for completeness.) Prefix values include:

- **Power Supply** = P
- **Fan** = F
- **Chassis** = C
- **Leaf** = L
- **Spine** = S
- **Management Module** = M

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 (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 (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 number 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)
```
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 number.
- **-slave** Displays the slave slot number.
- **slot** Slot number (numeric).
- **-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

-> chassisQuery
slots: 201 202

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

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power Supply 1</strong></td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Manufacturer Id: 001175</td>
<td></td>
</tr>
<tr>
<td>Manufacturer Name: Intel Corporation</td>
<td></td>
</tr>
<tr>
<td>Part Number: N/A</td>
<td></td>
</tr>
<tr>
<td>Product Name: Intel Omni-Path Edge Switch 100 Series Power Supply</td>
<td></td>
</tr>
<tr>
<td><strong>Power Supply 2</strong></td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Manufacturer Id: 001175</td>
<td></td>
</tr>
<tr>
<td>Manufacturer Name: Intel Corporation</td>
<td></td>
</tr>
<tr>
<td>Part Number: N/A</td>
<td></td>
</tr>
<tr>
<td>Product Name: Intel Omni-Path Edge Switch 100 Series Power Supply</td>
<td></td>
</tr>
<tr>
<td><strong>Fan Tray 1</strong></td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Manufacturer Id: 001175</td>
<td></td>
</tr>
<tr>
<td>Manufacturer Name: Intel Corporation</td>
<td></td>
</tr>
<tr>
<td>Part Number: N/A</td>
<td></td>
</tr>
<tr>
<td>Product Name: Intel Omni-Path Edge Switch 100 Series Fan Tray</td>
<td></td>
</tr>
<tr>
<td><strong>Intel Omni-Path Edge Switch 100 Series</strong></td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>GUID: 00117501ff5131bf</td>
<td></td>
</tr>
<tr>
<td>Manufacturer Id: 001175</td>
<td></td>
</tr>
<tr>
<td>Manufacturer Name: Intel Corporation</td>
<td></td>
</tr>
</tbody>
</table>
2.2.9 setBeacon

Modifies or displays the chassis beacon LED setting.

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

**Syntax**

```bash
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**

```bash
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 OOB (out of band) 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 OOB (out of band) management port.

Syntax

routeShow

Options

None.

Example

-> routeShow
INET route table - vr: 0, table: 254

<table>
<thead>
<tr>
<th>Destination</th>
<th>Gateway</th>
<th>Flags</th>
<th>Use</th>
<th>If</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0.0.0/0</td>
<td>10.228.208.1</td>
<td>UC</td>
<td>gei</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>10.228.208.0/22</td>
<td>WRS-Template</td>
<td>UC</td>
<td>gei</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

INET6 route table - vr: 0, table: 254

<table>
<thead>
<tr>
<th>Destination</th>
<th>Gateway</th>
<th>Flags</th>
<th>Use</th>
<th>If</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>localhost6</td>
<td>localhost6</td>
<td>UM</td>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>2002:aae4:8842</td>
<td>2002:aae4:615f::ae4:8842</td>
<td>UM</td>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>2002:aae4:8842</td>
<td>2002:aae4:615f::ae4:8842</td>
<td>UM</td>
<td>0</td>
<td>100</td>
<td>0</td>
</tr>
</tbody>
</table>

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

This routine spawns a process to send ping packets to the specified IP address. If **packetCount** is given, the process exits after that number of packets are sent. If **packetCount** is omitted, the number of packets defaults to 5.

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

This routine spawns a process to send ping packets to the specified IPv6 address. If `packetCount` is given, the process exits after that number of packets are sent. If `packetCount` is omitted, the number of packets defaults to 5.

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.

**Note:** If you are not using the console port, changing the chassis IP address drops the connection to the CLI, which may cause the device to become unreachable.

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
```

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**

Changing the chassis IPv6 address may drop the connection to the CLI if not using the console port, and may cause the device to become unreachable.

### 2.3.8 delChassisIpv6Addr

Deletes the user-configured chassis IPv6 address.

**Syntax**

```
delChassisIpv6Addr
```

**Options**

None.

**Example**

```
-> delChassisIpv6Addr
```

**Notes**

Deleting the chassis IPv6 address may drop the connection to the CLI if not using the console port, and may cause 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 45.

2.3.10 autoConfIPv6Enable

Enables IPv6 address autoconfiguration.

Syntax

autoConfIPv6Enable

Options

None.

Example

-> autoConfIPv6Enable

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 setting(s).

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
::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
ff02::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 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 OOB (out of band) management port to an external network.

2.3.15 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 OOB (out of band) management port to an external network.

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

Syntax

```
arpShow
```

Options

None.
Example

```plaintext
-> 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
```

### 2.3.17 hostShow

Displays the host name table.

**Syntax**

```
hostShow
```

**Options**

None.

**Example**

```plaintext
-> 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                                    
```

### 2.3.18 dhcpEnable

Enables DHCP on the Ethernet interface.

**Syntax**

```
dhcpEnable
```

**Options**

None.

**Example**

```plaintext
-> 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.

### 2.3.19 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.

2.3.20 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)

2.3.21 dnsParamsShow

Displays the stored domain name system (DNS) parameters.

Syntax

dnsParamsShow

Options

None.
Example

```bash
-> 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.

2.3.22 dnsParamsSet

Changes the DNS configuration parameters.

Syntax

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

Options

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

Example

```bash
-> 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.

2.3.23 IpoStlConfigShow

Displays the IPoSTL enable/disable setting.

**Note:** In this release, the term IpoIb is partially replaced by a temporary term IpoStl. Command names have been updated, however, the returned text may display IpoIb. This will be updated in a future release.
Syntax

IpoStlConfigShow

Options

None.

Example

-> IpoStlConfigShow
IpoIb feature is currently disabled

2.3.24 IpoStlConfigEnable

Enables the IpoStl feature.

Note: In this release, the term IpoIb is partially replaced by a temporary term IpoStl. Command names have been updated, however, the returned text may display IpoIb. This will be updated in a future release.

Syntax

IpoStlConfigEnable

Options

None.

Example

-> IpoStlConfigEnable

2.3.25 IpoStlConfigDisable

Disables the IpoStl feature.

Note: In this release, the term IpoIb is partially replaced by a temporary term IpoStl. Command names have been updated, however, the returned text may display IpoIb. This will be updated in a future release.

Syntax

IpoStlConfigDisable

Options

None.
2.3.26 **IpoStlAddressShow**

Displays the IPoSTL IP address and associated netmask settings.

*Note:* In this release, the term *IpoIb* is partially replaced by a temporary term *IpoStl*. Command names have been updated, however, the returned text may display *IpoIb*. This will be updated in a future release.

**Syntax**

```
IpoStlAddressShow
```

**Options**

None.

**Example**

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

**Notes**

IPoSTL must be enabled to display these fields.

2.3.27 **IpoStlAddressSet**

Changes the IPoSTL IP address and network mask settings.

*Note:* In this release, the term *IpoIb* is partially replaced by a temporary term *IpoStl*. Command names have been updated, however, the returned text may display *IpoIb*. This will be updated in a future release.

**Syntax**

```
IpoStlAddressSet -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**

```
-> IpoStlAddressSet -h 123.45.6.789
```
Notes
IPoSTL must be enabled to display these fields.

2.3.28 IpoStlAddressSetIPv6
Modifies the IPoStl IPv6 address and netmask.

Note: In this release, the term IpoIb is partially replaced by a temporary term IpoStl. Command names have been updated, however, the returned text may display IpoIb. This will be updated in a future release.

Syntax
IpoStlAddressSetIPv6 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
`-> IpoStlAddressSetIPv6 ipv6Address/netMaskLen`

2.3.29 IpoStlAddressShowIPv6
Displays the IPoStl IPv6 address and associated netmask settings.

Note: In this release, the term IpoIb is partially replaced by a temporary term IpoStl. Command names have been updated, however, the returned text may display IpoIb. This will be updated in a future release.

Syntax
IpoStlAddressShowIPv6

Options
None.

Example
`-> IpoStlAddressShowIPv6`
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.

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

**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**

```
-> fwUpdateSlot 1
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.pkg]
```

**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.
- **Mode 3** initiates a FTP transfer for a FPGA package file and updates the FPGA EEPROM.

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.
fwUpdateSlot

Updates the firmware on a specific card.

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

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 number 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 1
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.pkg]

fwUpdateChassis

Updates the firmware for all cards in a chassis or management card only.

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

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 \textit{moduletype} present in the chassis. You are also prompted whether to save the entered values as defaults for future firmware updates.

\textit{moduletype}  Type of card to update. Values include:

\begin{itemize}
    \item \texttt{all} Updates all cards in the chassis.
    \item \texttt{management} Updates the management card.
\end{itemize}

\texttt{--noprompt}  When entered, the system does not prompt for FTP information, it uses the saved values.

\texttt{reboot}  Upon successful completion, reboots the updated cards.

\textbf{Example}

\begin{verbatim}
-> fwUpdateChassis all reboot
\end{verbatim}

\subsection{2.4.4 \texttt{fwListFiles}}
Lists the contents of the firmware directory.

\textbf{Syntax}

\begin{verbatim}
fwListFiles
\end{verbatim}

\textbf{Options}

None.

\textbf{Example}

\begin{verbatim}
-> 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/
\end{verbatim}

\textbf{Notes}

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

\subsection{2.4.5 \texttt{fwShowUpdateParams}}
Displays the default update firmware settings.

\textbf{Syntax}

\begin{verbatim}
fwShowUpdateParams
\end{verbatim}
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

```
```

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
- \textit{key feature} Displays information for a particular feature.

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

Example

\texttt{-> showCapability}
\texttt{fwPush: 1}
\texttt{slaveCli: 1}
\texttt{smConfig: 1}

2.4.8 \texttt{showLastScpRetCode}

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

Syntax

\texttt{showLastScpRetCode [slot] [-all]}

Options

\texttt{slot} The slot number in the chassis.

\texttt{-all} All slots in the chassis.

Example

\texttt{-> showLastScpRetCode 101}
\texttt{SCP: Slot 101 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 \texttt{fwVersion}

Displays the firmware versions for a unit.

Syntax

\texttt{fwVersion [slot]}

Options

\texttt{slot} Slot number.
Example

```shell
-> 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

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

### Options

- `slot`  
  Slot number.

- `-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

```shell
-> bootQuery 0 -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 boot next.

### Syntax

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

### Options

- `slot`  
  The slot number 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 0
Currently installed firmware versions
index : alias : version
--------------------------
  1 : image1 : :10.0.0.0.322;
 *#  2 : image2 : :0usha.011215.0839;

 * - 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.

2.5 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

```bash
-> 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 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 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 forgotten if the SM is restarted or the chassis is rebooted. To make persistent changes, 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 Card(s).

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

### 2.5.7 smPKeys

Displays partition keys (PKeys) in the PKey table.

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

### Syntax

```
smPKeys
```
**Options**

None.

**Example**

```
-> smPKeys
Virtual Fabric: Default  PKey: 0xffff
Virtual Fabric: Networking PKey: 0x1234
```

### 2.5.8 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 70, `smLogMode` on page 71, and `smLogMask` on page 71.

### 2.5.9 smResetCounters

Resets various statistics and counters maintained by the subnet manager.

**Syntax**

```
smResetCounters
```

**Options**

None.

**Example**

```
-> smResetCounters
```

### 2.5.10 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.

2.5.11 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 forgotten if the SM is restarted or the chassis is rebooted. To make persistent changes, edit the Fabric Manager XML configuration file.

2.5.12 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 forgotten if the SM is restarted or the chassis is rebooted. To make persistent changes, edit the Fabric Manager XML configuration file.

2.5.13 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: 0x1ff

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 forgotten if the SM is restarted or the chassis is rebooted. To make persistent changes, edit the Fabric Manager XML configuration file.

2.5.14  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.
2.5.15  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.

2.5.16  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 FastFabric commands on the management node:

- `opasaquery`
- `opareport`

**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
    0x00066a01a0000015d F  0x00066a00a000003a F  0x00066a00a0000035a F  0x00066a00a0000035a F  0x00066a00a0000035a F  0x00066a00a0000035a 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 FastFabric command on the management node:

- `opashowmc`
2.5.18  **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 FastFabric command on the management node:

- `opasaquery -o service`

2.5.19  **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 FastFabric command on the management node:

- `opasaquery -o inform`

2.5.20  **smShowCounters**  
Displays various statistics and counters maintained by the subnet manager.
Syntax

smShowCounters

Options

None.

Example

```bash
-> smShowCounters
```

<table>
<thead>
<tr>
<th>COUNTER:</th>
<th>THIS SWEEP</th>
<th>LAST SWEEP</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>SM State transition to DISCOVERY</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>SM State transition to MASTER</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>SM State transition to STANDBY</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>SM State transition to INACTIVE</td>
<td></td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Total transmitted SMA Packets</td>
<td>123</td>
<td>711</td>
<td>2181</td>
</tr>
<tr>
<td>Direct Routed SMA Packets</td>
<td></td>
<td></td>
<td>2122</td>
</tr>
<tr>
<td>LID Routed SMA Packets</td>
<td></td>
<td></td>
<td>40</td>
</tr>
<tr>
<td>SMA Query Retransmits</td>
<td></td>
<td></td>
<td>18</td>
</tr>
<tr>
<td>SMA Query Retransmits Exhausted</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>SM TX GET(NodeDescription)</td>
<td></td>
<td></td>
<td>148</td>
</tr>
<tr>
<td>SM TX GET(NodeInfo)</td>
<td></td>
<td></td>
<td>148</td>
</tr>
<tr>
<td>SM TX GET(SwitchInfo)</td>
<td></td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

Notes

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

2.5.21 smShowLidMap

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

Syntax

smShowLidMap

Options

None.

Example

```bash
-> smShowLidMap
```

Lid 0x0001: guid = 0x00066aa0000600013c, pass = 341, Intel 12300
GUID=0x00066aa00da000100 172.26.2.2 Spine 1, Ch
Lid 0x0002: guid = 0x00066aa00070000170, pass = 341, Intel 12300
GUID=0x00066aa00da000100 172.26.2.2 Leaf 4, Ch
Lid 0x0003: guid = 0x00066aa100600013c, pass = 341, Intel 12300
GUID=0x00066aa00da000100 172.26.2.2 Spine 1, Ch
Lid 0x0006: guid = 0x00066aa0000000248, pass = 229
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 FastFabric command on the management node:

- opasaquery
- opareport -o lids

2.5.22 smShowTopology

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

Syntax

```
smShowTopology
```

Options

None.

2.5.23 smShowVFInfo

Displays Virtual Fabric (VF) information.

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

Syntax

```
smShowVFInfo
```

Options

None.

2.5.24 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.
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.

2.5.25  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.

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.

2.5.26  smLooptestStop

Stops the SM Loop Test.

Syntax

smLooptestStop

Options

None.

Example

-> smLooptestStop
Waiting for SM to complete shutdown|2011/09/15 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|2011/09/15 14:21:46.500U: Thread "esm_Start" (0x85738dd8)

MSG:NOTICE|SM:Intel 12200 GUID=0x00066a00e3002711:port 0|COND:#7 SM
shutdown|NODE:Intel 12200 GUID=0x00066a00e3002711:port 0:0x00066a00e3002711

.........|2011/09/15 14:21:54.720U: Thread "INVALID" (0xcca13ac8)

MSG:NOTICE|SM:Intel 12200 GUID=0x00066a00e3002711:port 0|COND:#13 SM
state
to inactive|NODE:Intel 12200 GUID=0x00066a00e3002711:port
0:0x00066a00e3002711|DETAIL:transition from MASTER to NOTACTIVE
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.

2.5.27 **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
```

2.5.28 **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
```
2.5.29 **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,
umPackets=2
The SM Loop Test will inject packets every sweep
```

2.5.30 **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
```

2.5.31 **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

2.5.32 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: 0x00066a00e3002711 Desc Intel 12200 GUID=0x00066a00e3002711
--------------------------------------------------------------------------
<table>
<thead>
<tr>
<th>Node</th>
<th>Node</th>
<th>Node</th>
<th>Path</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idx</td>
<td>Lid</td>
<td>GUID</td>
<td>#Ports</td>
</tr>
<tr>
<td>-------</td>
<td>-------</td>
<td>--------</td>
<td>----------</td>
</tr>
<tr>
<td>0</td>
<td>0x0001</td>
<td>0x00066a00e3002711</td>
<td>36</td>
</tr>
<tr>
<td>0</td>
<td>0x0001</td>
<td>0x00066a00e3002711</td>
<td>36</td>
</tr>
</tbody>
</table>

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

2.5.33 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

```bash
-> smLooptestShowSwitchLft
Node[0000] LID=0x0001 GUID=0x00066a00e3002711 [Intel 12200
GUID=0x00066a00e3002711] 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
```

2.5.34 smLooptestShowTopology

Displays the topology for the SM Loop Test.

Syntax

smLooptestShowTopology

Options

None.

Example

```bash
-> smLooptestShowTopology
sm_state = MASTER   count = 481   LMC = 0, Topology Pass count = 4, Priority = 0,
Mkey = 0x0000000000000000
```

Intel® Omni-Path Fabric—Groups and Commands

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2.5.35 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.
### logClear

Deletes all entries in the log file.

**Syntax**

```
logClear [-noprompt]
```

**Options**

- **-noprompt**  
  Delete all log messages without prompting.

#### Example

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

### 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.

Syntax

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

Options

-h hostname or ip_address  Sets the syslog server hostname or IP address in dotted decimal format (xxx.xxx.xxx.xxx).
-p port  The host port number on which the syslog server is listening, in xxxx format.
-f facility  The syslog facility to use in the messages. Values include:

0  kern
1  user
2  mail
3  daemon
4  auth
5  syslog
6  lpr
7  news
8  uucp
-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
```

**Notes**

Additional configuration may be necessary to fully configure the log system.

If configured, the device can forward its log messages to a syslog host. This command allows a user to configure the host and port to send messages to and the facility to use in the messages.

**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|X|X|X|X| |
5   : Syslog     : |X|X|X|X|X|X|X|X|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

```plaintext
-> 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 message(s) to registered Syslog servers.

2.7 Interconnect Switch Management (ISM)

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

2.7.1 ismPortStats

Displays link error information associated with each switch port.

`ismPortStats` does not return meaningful information until three things have occurred:

1. The SM has configured a LID for the switches in the chassis.
2. The chassis software has discovered that the switches have been assigned a LID and has polled for port statistic information.
3. The management leaf is down or not installed.

Syntax

```
ismPortStats [-clear] [-noprompt] [-cols columns] [-port port]
```

Options

-`-clear` Clears the statistics. Statistics are displayed first, then cleared.
-`-noprompt` Does not provide a Continue prompt for each page of display.
-`-cols columns` Sets the number of columns to be displayed per line.
-`-port port` Specifies a port to display.

Example

```plaintext
-> 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
```

```plaintext
Name            Cable04      Cable05      Cable06
```
**2.7.2 ismPortCounters**

Displays a table comparison of transmit, receive, and error counters corresponding to each port of the switch. Optionally displays link error statistics associated with each port of the switch.

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

**Syntax**

```plaintext
```

**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 receive symbol errors.
- `-potential` Displays only the counters for ports with active link or width under their maximum supported value.
- `-stats` Shows the optional link error counters associated with each switch port.
- `-noprompt` Does not provide a Continue prompt for each page of display.

**Example**

```plaintext
-> ismPortCounters
```

```
<table>
<thead>
<tr>
<th>Name</th>
<th>Packets</th>
<th>Transmit</th>
<th>Words</th>
<th>Discard</th>
<th>Receive</th>
<th>Words</th>
<th>Symbol</th>
<th>Speed</th>
<th>Width</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable01</td>
<td>3951205094</td>
<td>280564672046</td>
<td>9</td>
<td>4154378847</td>
<td>301971168836</td>
<td>0</td>
<td>25Gbps</td>
<td>4X</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Cable02</td>
<td>8933888342</td>
<td>5766795757108</td>
<td>0</td>
<td>9315042983</td>
<td>551825518834</td>
<td>0</td>
<td>25Gbps</td>
<td>4X</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Cable03</td>
<td>6868061425</td>
<td>4318743698062</td>
<td>0</td>
<td>8561944708</td>
<td>5264142620113</td>
<td>0</td>
<td>25Gbps</td>
<td>4X</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Cable04</td>
<td>8262016890</td>
<td>50462649429836</td>
<td>0</td>
<td>6808558252</td>
<td>4310874103990</td>
<td>0</td>
<td>25Gbps</td>
<td>4X</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Cable05</td>
<td>8546977594</td>
<td>5227761475800</td>
<td>0</td>
<td>6942410928</td>
<td>43315259837656</td>
<td>0</td>
<td>25Gbps</td>
<td>4X</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Cable06</td>
<td>8350835339</td>
<td>5037891440794</td>
<td>0</td>
<td>6958776589</td>
<td>4337087233138</td>
<td>0</td>
<td>25Gbps</td>
<td>4X</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Cable07</td>
<td>7021157994</td>
<td>4402588606177</td>
<td>0</td>
<td>8546345859</td>
<td>5122253460113</td>
<td>0</td>
<td>25Gbps</td>
<td>4X</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Cable08</td>
<td>3101749244</td>
<td>2075661300855</td>
<td>0</td>
<td>3857201801</td>
<td>2634667882552</td>
<td>0</td>
<td>25Gbps</td>
<td>4X</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Cable09</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0Gbps</td>
<td>0X</td>
<td>0%</td>
</tr>
<tr>
<td>Cable10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0Gbps</td>
<td>0X</td>
<td>0%</td>
</tr>
<tr>
<td>Cable11</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0Gbps</td>
<td>0X</td>
<td>0%</td>
</tr>
<tr>
<td>Cable12</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0Gbps</td>
<td>0X</td>
<td>0%</td>
</tr>
<tr>
<td>Cable13</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0Gbps</td>
<td>0X</td>
<td>0%</td>
</tr>
<tr>
<td>Cable14</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0Gbps</td>
<td>0X</td>
<td>0%</td>
</tr>
<tr>
<td>Cable15</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0Gbps</td>
<td>0X</td>
<td>0%</td>
</tr>
<tr>
<td>Cable16</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0Gbps</td>
<td>0X</td>
<td>0%</td>
</tr>
<tr>
<td>Cable17</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0Gbps</td>
<td>0X</td>
<td>0%</td>
</tr>
<tr>
<td>Cable18</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0Gbps</td>
<td>0X</td>
<td>0%</td>
</tr>
<tr>
<td>Cable19</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0Gbps</td>
<td>0X</td>
<td>0%</td>
</tr>
<tr>
<td>Cable20</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0Gbps</td>
<td>0X</td>
<td>0%</td>
</tr>
<tr>
<td>Cable21</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0Gbps</td>
<td>0X</td>
<td>0%</td>
</tr>
<tr>
<td>Cable22</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.0Gbps</td>
<td>0X</td>
<td>0%</td>
</tr>
</tbody>
</table>

Continue? [Y] n
```
Notes
The system prompts to continue the output after each group of ports are displayed.

Port counter descriptions:
• Transmit
  — Packets - Number of packets transmitted by the port.
  — Words - Number of data words transmitted by the port.
  — Discard - Number of transmit packets discarded by the port due to congestion or errors.
• Receive
  — Packets - Number of data packets received by the port.
  — Words - Number of data words received by the port.
• Active
  — Speed - Active link speed of the port.
  — Width - Active link width of the port.
  — Potential - Port utilization based on the maximum supported link speed and maximum supported link width.

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 = 0x0):

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:
   c000       0 (EnhPrt0)  2 (Cable02)  3 (Cable03)  4 (Cable04)  5 (Cable05)  6 (Cable06)  7 (Cable07)  8 (Cable08)  9 (Cable09)  10 (Cable10)  11 (Cable11)  12 (Cable12)  13 (Cable13)  14 (Cable14)  15 (Cable15)  16 (Cable16)  17 (Cable17)  18 (Cable18)  19 (Cable19)  20 (Cable20)  21 (Cable21)  22 (Cable22)  23 (Cable23)  24 (Cable24)  25 (Cable25)  26 (Cable26)  27 (Cable27)  28 (Cable28)  29 (Cable29)  30 (Cable30)  31 (Cable31)  32 (Cable32)  33 (Cable33)  34 (Cable34)  35 (Cable35)  36 (Cable36)
   c001       0 (EnhPrt0)  2 (Cable02)  3 (Cable03)  4 (Cable04)  5 (Cable05)  6 (Cable06)  7 (Cable07)  8 (Cable08)  9 (Cable09)  10 (Cable10)  11 (Cable11)  12 (Cable12)  13 (Cable13)  14 (Cable14)  15 (Cable15)  16 (Cable16)  17 (Cable17)  18 (Cable18)  19 (Cable19)  20 (Cable20)  21 (Cable21)  22 (Cable22)  23 (Cable23)  24 (Cable24)  25 (Cable25)  26 (Cable26)  27 (Cable27)  28 (Cable28)  29 (Cable29)  30 (Cable30)  31 (Cable31)  32 (Cable32)  33 (Cable33)  34 (Cable34)  35 (Cable35)  36 (Cable36)
   c002       0 (EnhPrt0)  2 (Cable02)  3 (Cable03)  4 (Cable04)  5 (Cable05)  6 (Cable06)  7 (Cable07)  8 (Cable08)  9 (Cable09)  10 (Cable10)  11 (Cable11)  12 (Cable12)  13 (Cable13)  14 (Cable14)  15 (Cable15)  16 (Cable16)  17 (Cable17)  18 (Cable18)  19 (Cable19)  20 (Cable20)  21 (Cable21)  22 (Cable22)  23 (Cable23)  24 (Cable24)  25 (Cable25)  26 (Cable26)  27 (Cable27)  28 (Cable28)  29 (Cable29)  30 (Cable30)  31 (Cable31)  32 (Cable32)  33 (Cable33)  34 (Cable34)  35 (Cable35)  36 (Cable36)
   c003       0 (EnhPrt0)  2 (Cable02)  3 (Cable03)  4 (Cable04)  5 (Cable05)  6 (Cable06)  7 (Cable07)  8 (Cable08)  9 (Cable09)  10 (Cable10)  11 (Cable11)  12 (Cable12)  13 (Cable13)  14 (Cable14)  15 (Cable15)  16 (Cable16)  17 (Cable17)  18 (Cable18)  19 (Cable19)  20 (Cable20)  21 (Cable21)  22 (Cable22)  23 (Cable23)  24 (Cable24)  25 (Cable25)  26 (Cable26)  27 (Cable27)  28 (Cable28)  29 (Cable29)  30 (Cable30)  31 (Cable31)  32 (Cable32)  33 (Cable33)  34 (Cable34)  35 (Cable35)  36 (Cable36)
   c020       0 (EnhPrt0)  2 (Cable02)  3 (Cable03)  4 (Cable04)  5 (Cable05)  6 (Cable06)  7 (Cable07)  8 (Cable08)  9 (Cable09)  10 (Cable10)  11 (Cable11)  12 (Cable12)  13 (Cable13)  14 (Cable14)  15 (Cable15)  16 (Cable16)  17 (Cable17)  18 (Cable18)  19 (Cable19)  20 (Cable20)  21 (Cable21)  22 (Cable22)  23 (Cable23)  24 (Cable24)  25 (Cable25)  26 (Cable26)  27 (Cable27)  28 (Cable28)  29 (Cable29)  30 (Cable30)  31 (Cable31)  32 (Cable32)  33 (Cable33)  34 (Cable34)  35 (Cable35)  36 (Cable36)
   c021       0 (EnhPrt0)  2 (Cable02)  3 (Cable03)  4 (Cable04)  5 (Cable05)  6 (Cable06)  7 (Cable07)  8 (Cable08)  9 (Cable09)  10 (Cable10)  11 (Cable11)  12 (Cable12)  13 (Cable13)  14 (Cable14)  15 (Cable15)  16 (Cable16)  17 (Cable17)  18 (Cable18)  19 (Cable19)  20 (Cable20)  21 (Cable21)  22 (Cable22)  23 (Cable23)  24 (Cable24)  25 (Cable25)  26 (Cable26)  27 (Cable27)  28 (Cable28)  29 (Cable29)  30 (Cable30)  31 (Cable31)  32 (Cable32)  33 (Cable33)  34 (Cable34)  35 (Cable35)  36 (Cable36)
   c022       0 (EnhPrt0)  2 (Cable02)  3 (Cable03)  4 (Cable04)  5 (Cable05)  6 (Cable06)  7 (Cable07)  8 (Cable08)  9 (Cable09)  10 (Cable10)  11 (Cable11)  12 (Cable12)  13 (Cable13)  14 (Cable14)  15 (Cable15)  16 (Cable16)  17 (Cable17)  18 (Cable18)  19 (Cable19)  20 (Cable20)  21 (Cable21)  22 (Cable22)  23 (Cable23)  24 (Cable24)  25 (Cable25)  26 (Cable26)  27 (Cable27)  28 (Cable28)  29 (Cable29)  30 (Cable30)  31 (Cable31)  32 (Cable32)  33 (Cable33)  34 (Cable34)  35 (Cable35)  36 (Cable36)
   c023       0 (EnhPrt0)  2 (Cable02)  3 (Cable03)  4 (Cable04)  5 (Cable05)  6 (Cable06)  7 (Cable07)  8 (Cable08)  9 (Cable09)  10 (Cable10)  11 (Cable11)  12 (Cable12)  13 (Cable13)  14 (Cable14)  15 (Cable15)  16 (Cable16)  17 (Cable17)  18 (Cable18)  19 (Cable19)  20 (Cable20)  21 (Cable21)  22 (Cable22)  23 (Cable23)  24 (Cable24)  25 (Cable25)  26 (Cable26)  27 (Cable27)  28 (Cable28)  29 (Cable29)  30 (Cable30)  31 (Cable31)  32 (Cable32)  33 (Cable33)  34 (Cable34)  35 (Cable35)  36 (Cable36)
...
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
ismPortInfoLid 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**

```plaintext
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**

```plaintext
ismPortSetWidth portName [linkWidth] [-bounce] [-verbose]
```

**Options**

`portName`  Valid entries for `portName` depend on the chassis type. Use the command `ismPortStats` to see the current `portName` definitions.

**On edge systems,** an example cable `portName` is:

`Cable01`, that is, Cable Port 1.

**On director class systems,** an example cable `portName` is:

`L101P01`, that is, Leaf 101 Port 1.

**On director class systems,** an example interswitch link name is:

`S105AP18L104AP36`, that is, Spine 105 chip A port 18.

**The option** `portName` **is case-sensitive.**

**If** `portName` **contains spaces,** **it must be bounded by quotation marks.**

**For example,** `ismPortSetWidth "Cable 1", 1`.

`linkWidth`  Options include:

- 1  1X
- 2  2X
- 3  2X_1X
- 4  3X
- 5  3X_1X
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

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

Notes

If only the `portName` 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**

```bash
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

```bash
-> 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**

```bash
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 Switch 100 Family.

**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
-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 portName [LinkWidthDownGradeSupported] [-bounce] [-verbose]
```

Options

`portName`
Valid entries for `portName` depend on the chassis type. Use the command `ismPortStats` to see the current `portName` definitions.

On edge systems, an example cable `portName` is:

`Cable01`, that is, Cable Port 1.

On director class systems, an example cable `portName` is:

`L101P01`, that is, Leaf 101 Port 1.

On director class systems, an example interswitch link name is:

`S105AP18L104AP36`, that is, Spine 105 chip A port 18.

The option `portName` is case-sensitive.
If `portName` contains spaces, it must be bounded by quotation marks. For example, `ismPortSetWidth "Cable 1", 1`.

**LinkWidthDownGradeSupported** Options include:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1X</td>
</tr>
<tr>
<td>2</td>
<td>2X</td>
</tr>
<tr>
<td>3</td>
<td>2X_1X</td>
</tr>
<tr>
<td>4</td>
<td>3X</td>
</tr>
<tr>
<td>5</td>
<td>3X_1X</td>
</tr>
<tr>
<td>6</td>
<td>3X_2X</td>
</tr>
<tr>
<td>7</td>
<td>3X_2X_1X</td>
</tr>
<tr>
<td>8</td>
<td>4X</td>
</tr>
<tr>
<td>9</td>
<td>4X_1X</td>
</tr>
<tr>
<td>10</td>
<td>4X_2X</td>
</tr>
<tr>
<td>11</td>
<td>4X_2X_1X</td>
</tr>
<tr>
<td>12</td>
<td>4X_3X</td>
</tr>
<tr>
<td>13</td>
<td>4X_3X_1X</td>
</tr>
<tr>
<td>14</td>
<td>4X_3X_2X</td>
</tr>
<tr>
<td>15</td>
<td>4X_3X_2X_1X</td>
</tr>
</tbody>
</table>

**-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 `portName` option displays the current values.

2.7.14 ismChassisSetLWDS

Displays or modifies the LinkWidthDowngrade.Supported 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
-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
Brings the active links down and back up if a new value is set.

Calling this function with the \(-\text{bounce}\) 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 LinkWidthDowngradeSupported (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 Switch 100 Family.

Syntax

```
ismIslSetLWDS [LinkWidthDownGradeSupported] [-bounce] [-verbose]
```

Options

`LinkWidthDownGradeSupported` Options include:

```
1  1X
```
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 portName [fmEnabled] [-bounce] [-verbose]
Options

**portName**

Valid entries for *portName* depend on the chassis type. Use the command `ismPortStats` to see the current *portName* definitions.

On edge systems, an example cable *portName* is:

Cable01, that is, Cable Port 1.

On director class systems, an example cable *portName* is:

L101P01, that is, Leaf 101 Port 1.

On director class systems, an example interswitch link name is:

S105AP18L104AP36, that is, Spine 105 chip A port 18.

The option *portName* is case-sensitive.

If *portName* contains spaces, it must be bounded by quotation marks. For example, `ismPortSetWidth "Cable 1", 1`.

**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 *portName* 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 portName [crcMode] [-bounce] [-verbose]
```

**Options**

- **portName**
  Valid entries for `portName` depend on the chassis type. Use the command `ismPortStats` to see the current `portName` definitions.

  On edge systems, an example cable `portName` is:
  
  Cable01, that is, Cable Port 1.

  On director class systems, an example cable `portName` is:
  
  L101P01, that is, Leaf 101 Port 1.

  On director class systems, an example interswitch link name is:
  
  S105AP18L104AP36, that is, Spine 105 chip A port 18.
**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**

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

**Notes**

Calling this function with only the `portName` option displays its current values.

---

**2.7.20  ismChassisSetCrcMode**

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

**Syntax**

```bash
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 ismIslSetCrcMode
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 Switch 100 Family.

Syntax

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

Options

crcMode Options include:

0 16b
1 14b_or_16b
2.7.23 ismPortSetVCU

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

Syntax

ismPortSetVCU portName [vcu] [-bounce] [-verbose]

Options

portName Valid entries for portName depend on the chassis type. Use the command ismPortStats to see the current portName definitions.

On edge systems, an example cable portName is:

Cable01, that is, Cable Port 1.

On director class systems, an example cable portName is:

L101P01, that is, Leaf 101 Port 1.

On director class systems, an example interswitch link name is:

S105AP18L104P36, that is, Spine 105 chip A port 18.

The option portName is case-sensitive.
If `portName` contains spaces, it must be bounded by quotation marks. For example, `ismPortSetWidth "Cable 1", 1`.

**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

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

### Notes

If only the `portName` is entered, the current settings are displayed.

### 2.7.24 ismChassisSetVCU

Displays or modifies the VCU (Virtual lane Credit Units) 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.

2.7.25 ismModuleSetVCU
Displays or modifies the VCU (Virtual lane Credit Units) 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.

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

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

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.

### 2.7.27 `ismChassisSetMtu`

Displays, sets, and unsets 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 VL(s) 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.

2.7.28  ismModuleSetMtu

Displays, sets, and unsets 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 VL(s) for the selected mtuCap. Options include:

1  VL0
2  VL0-VL1
3  VL0-VL2
VL0-VL3
VL0-VL4
VL0-VL5
VL0-VL6
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.

2.7.29 ismPortEnable

Enables a port.

Syntax

```
ismPortEnable portName [-verbose]
```

Options

portName

Valid entries for portName depend on the chassis type. Use the command ismPortStats to see the current portName definitions.

On edge systems, an example cable portName is:

Cable01, that is, Cable Port 1.

On director class systems, an example cable portName is:

L101P01, that is, Leaf 101 Port 1.

On director class systems, an example interswitch link name is:
S105AP18L104AP36, that is, Spine 105 chip A port 18.

The option \texttt{portName} is case-sensitive.

If \texttt{portName} contains spaces, it must be bounded by quotation marks.

For example, \texttt{ismPortSetWidth "Cable 1", 1}.

\textbf{--verbose} Verbose output mode.

\textbf{Example}

\begin{verbatim}
-> ismPortEnable Cable01 --verbose
Enabled port Cable01!
\end{verbatim}

\textbf{2.7.30 \texttt{ismChassisSetEnable}}

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

\textbf{Syntax}

\texttt{ismChassisSetEnable [enable]}

\textbf{Options}

\texttt{enable} Options include:

\begin{itemize}
\item 0 Disable
\item 1 Enable
\end{itemize}

\textbf{Example}

\begin{verbatim}
-> ismChassisSetEnable
Cable01 is ENABLED
Cable02 is ENABLED
Cable03 is ENABLED
...\end{verbatim}

\textbf{Notes}

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

When disabling ports, only cable ports are disabled.

\textbf{2.7.31 \texttt{ismModuleSetEnable}}

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

\textbf{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.

**2.7.32 ismPortDisable**

Disables a port.

**Syntax**

ismPortDisable portName [-verbose]

**Options**

`portName` Valid entries for `portName` depend on the chassis type. Use the command `ismPortStats` to see the current `portName` definitions.

On edge systems, an example cable `portName` is:

Cable01, that is, Cable Port 1.

On director class systems, an example cable `portName` is:

L101P01, that is, Leaf 101 Port 1.

On director class systems, an example interswitch link name is:

S105AP18L104AP36, that is, Spine 105 chip A port 18.

The option `portName` is case-sensitive.

If `portName` contains spaces, it must be bounded by quotation marks. For example, `ismPortSetWidth "Cable 1", 1`.

`-verbose` Verbose output mode.

**2.7.33 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
...

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.

2.7.34 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.

2.7.35 ismIslSetSpeed
Displays or modifies the LinkSpeedSupported setting for all inter-switch ports in the chassis.

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

Syntax

```plaintext
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.

2.7.36 ismPortSetSpeed
Displays or modifies the LinkSpeedSupported setting for a port.

Syntax

```plaintext
ismPortSetSpeed portName [linkSpeed] [-bounce]
```

Options

`portName` Valid entries for `portName` depend on the chassis type. Use the command `ismPortStats` to see the current `portName` definitions.
On edge systems, an example cable `portName` is:
Cable01, that is, Cable Port 1.

On director class systems, an example cable `portName` is:

L101P01, that is, Leaf 101 Port 1.

On director class systems, an example interswitch link name is:

S105AP18L104AP36, that is, Spine 105 chip A port 18.

The option `portName` is case-sensitive.

If `portName` contains spaces, it must be bounded by quotation marks.

For example, `ismPortSetWidth "Cable 1", 1`.

`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.

**2.7.37 ismPortSetBeacon**

Displays or modifies the LED beacon indicator for a port.

**Syntax**

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

**Options**

- `portName` Valid entries for `portName` depend on the chassis type. Use the command `ismPortStats` to see the current `portName` definitions.

On edge systems, an example cable `portName` is:

Cable01, that is, Cable Port 1.

On director class systems, an example cable `portName` is:
On director class systems, an example interswitch link name is:

S105AP18L104AP36, that is, Spine 105 chip A port 18.

The option portName is case-sensitive.
If portName contains spaces, it must be bounded by quotation marks.
For example, ismPortSetWidth "Cable 1", 1.

The option portName is case-sensitive.
If portName contains spaces, it must be bounded by quotation marks.
For example, ismPortSetWidth "Cable 1", 1.

{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

2.7.38 ismPortQsfpInfo
Displays information from the installed QSFPs.

Syntax

ismPortQsfpInfo [({all | Lxxx | LxxxPyy | Cableyy})] [-verbose]

Options

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

all Displays info for all installed QSFPs in chassis.
Lxxx Displays info for all installed QSFPs on the specified leaf.
LxxxPyy Displays info for QSFP installed on the specified leaf and port.
Cableyy Displays info for QSFP installed on the specified port.

Note: This option is only available on Intel® Omni-Path Edge Switch 100 Family models.

-verbose Verbose output mode.
Example

```
-> ismPortQsfpInfo Cable01
<table>
<thead>
<tr>
<th>Port Name</th>
<th>Vendor Type</th>
<th>Xmit Tech</th>
<th>Link Length</th>
<th>IB Tech</th>
<th>Part Number</th>
<th>Rev</th>
<th>Serial Number</th>
<th>EEPROM Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable01</td>
<td>FCI Electronics</td>
<td>Copper</td>
<td>1 meter</td>
<td>EDR</td>
<td>10131941-2010LF</td>
<td>2</td>
<td>CN1449FA102L0027</td>
<td>Valid</td>
</tr>
</tbody>
</table>

Total number of QSFPs found: 1
```

```
-> ismPortQsfpInfo Cable01 -verbose

Port Name : Cable01
Vendor Name : FCI Electronics
Vendor OUI : FC-7C-E7
Vendor P/N : 10131941-2010LF
Vendor Rev : 2
Vendor S/N : CN1449FA102L0027
Date Code : 12-04-2014
Xmitter Tech : Copper Cable unequalized
Cable Length : 1 meter
Attenuation : 0dB @ 2.5GHz, 5dB @ 5.0GHz
```

```
-> ismPortQsfpInfo all

<table>
<thead>
<tr>
<th>Port Name</th>
<th>Vendor Type</th>
<th>Xmit Tech</th>
<th>Link Length</th>
<th>IB Tech</th>
<th>Part Number</th>
<th>Rev</th>
<th>Serial Number</th>
<th>EEPROM Checksum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable01</td>
<td>FCI Electronics</td>
<td>Copper</td>
<td>1 meter</td>
<td>EDR</td>
<td>10131941-2010LF</td>
<td>2</td>
<td>CN1449FA102L0027</td>
<td>Valid</td>
</tr>
<tr>
<td>Cable02</td>
<td>FCI Electronics</td>
<td>Copper</td>
<td>1 meter</td>
<td>EDR</td>
<td>10131941-2010LF</td>
<td>2</td>
<td>CN1515FA102L0314</td>
<td>Valid</td>
</tr>
<tr>
<td>Cable03</td>
<td>FCI Electronics</td>
<td>Copper</td>
<td>1 meter</td>
<td>EDR</td>
<td>10131941-2010LF</td>
<td>2</td>
<td>CN1449FA102L0149</td>
<td>Valid</td>
</tr>
<tr>
<td>Cable04</td>
<td>FCI Electronics</td>
<td>Copper</td>
<td>1 meter</td>
<td>EDR</td>
<td>10131941-2010LF</td>
<td>2</td>
<td>CN1449FA102L0288</td>
<td>Valid</td>
</tr>
<tr>
<td>Cable05</td>
<td>FCI Electronics</td>
<td>Copper</td>
<td>1 meter</td>
<td>EDR</td>
<td>10131941-2010LF</td>
<td>2</td>
<td>CN1449FA102L0285</td>
<td>Valid</td>
</tr>
<tr>
<td>Cable06</td>
<td>FCI Electronics</td>
<td>Copper</td>
<td>1 meter</td>
<td>EDR</td>
<td>10131941-2010LF</td>
<td>2</td>
<td>CN1449FA102L0311</td>
<td>Valid</td>
</tr>
<tr>
<td>Cable07</td>
<td>FCI Electronics</td>
<td>Copper</td>
<td>1 meter</td>
<td>EDR</td>
<td>10131941-2010LF</td>
<td>2</td>
<td>CN1515FA102L0075</td>
<td>Valid</td>
</tr>
<tr>
<td>Cable08</td>
<td>FCI Electronics</td>
<td>Copper</td>
<td>1 meter</td>
<td>EDR</td>
<td>10131941-2010LF</td>
<td>2</td>
<td>CN1449FA102L0254</td>
<td>Valid</td>
</tr>
</tbody>
</table>

Total number of QSFPs found: 8
```

### 2.7.39 ismChassisBounce

Bounces enabled ports for an entire chassis.

**Syntax**

```
ismChassisBounce [-verbose]
```

**Options**

- `-verbose`  
  Verbose output mode.

### 2.7.40 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.
2.7.41 ismIslBounce

Bounces all enabled inter-switch-link ports in the chassis.

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

Syntax

    ismIslBounce [-verbose]

Options

-verbose   Verbose output mode.

2.7.42 ismPortBounce

Bounces enabled ports.

Syntax

    ismPortBounce portName [-verbose]

Options

portName Valid entries for portName depend on the chassis type. Use the command ismPortStats to see the current portName definitions.

On edge systems, an example cable portName is:

    Cable01, that is, Cable Port 1.

On director class systems, an example cable portName is:

    L101P01, that is, Leaf 101 Port 1.

On director class systems, an example interswitch link name is:

    S105AP18L104AP36, that is, Spine 105 chip A port 18.

The option portName is case-sensitive.

If portName contains spaces, it must be bounded by quotation marks. For example, ismPortSetWidth "Cable 1", 1.

-verbose   Verbose output mode.

2.7.43 ismRemoveStateDump

Removes switch ASIC state dump files.
Syntax

ismRemoveStateDump

Options

None.

2.7.44 ismShowStateDump

Displays contents of switch ASIC state dump files.

Syntax

ismShowStateDump [all]

Options

all Displays the contents of all switch ASIC state dump files.

2.7.45 ismTakeStateDump

Captures switch ASIC state dump information.

Syntax

ismTakeStateDump [-lid lid]

Options

lid lid Specifies the LID of the unmanaged switch on which to capture ASIC state
dump information.

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.

2.7.46 ismShowArConfig

Displays adaptive routing info for a specific switch chip or entire chassis.
Syntax

`ismShowArConfig [switch]`

Options

*switch*  Switch index.

Example

```
-> ismShowArConfig

<table>
<thead>
<tr>
<th>Switch Name</th>
<th>Ena</th>
<th>Pau</th>
<th>LRO</th>
<th>Algo</th>
<th>Freq</th>
<th>Thresh</th>
<th>Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch 1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
```

### 2.747 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 hh:mm:ss[mm/dd/yyyy]]`

Options

- `-S ipaddr`  Sets the NTP Server IP address.
- `-T hh:mm:ss[mm/dd/yyyy]`  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 should use 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
End which, valid options include:
1  1st
2  2nd
3  3rd
4  4th
5  5th

End day, valid options include:
1  Sunday
2  Monday
3  Tuesday
4  Wednesday
5  Thursday
6  Friday
7  Saturday

End month, valid options include:
3  March
4  April
5  May
6  June
7  July
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 via 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**

- **show** Displays the contents of the snmpTargetAddrTable.
- **add** Adds a row to the snmpTargetAddrTable.
- **edit** Modifies an existing row in the snmpTargetAddrTable.
- **delete** Removes an existing row of the snmpTargetAddrTable.
- **-n name** Name. A unique name used to identify a row. Any name with a space (for example, xxx v3) must be surrounded by double quotes (" ").
- **-a addr** The target machine IP address in dotted decimal form.
- **-p port** The target port to send traps and information.
- **-t timeout** The time to wait for an information response.
- **-r retry_count** Retry count. The number of re-send attempts for information.
- **-l tag_list** Tag list. Indicates the traps and information that is sent.
- **-v parameters** Parameters. This maps to an entry in the snmpTargetAddrTable.
- **-s storage_type** Storage type. Determines whether the entry is saved in flash memory.
  - Options include: volatile or nonVolatile (string).
- **-i status** Status. Options include:
  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)0.0.0.0 (port)0000
  rfc2573t:snmpTargetAddrTAddress: nms v2 : (ip addr)0.0.0.0 (port)0000
  rfc2573t:snmpTargetAddrTAddress: nms v3 : (ip addr)0.0.0.0 (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: p : [no value]
rfc1907:sysName: p : Intel 12800-040-254
rfc1907:sysLocation: p : 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**

- **add username** Adds an entry to the V3 user table.
- **show username** Shows entries in the V3 user table.
- **edit username** Modifies an entry in the V3 user table.
- **delete username** Removes an entry in the V3 user table.
- **-a algo** Authentication algorithm and key. Options include:
  - **MD5 key** MD5 authentication algorithm is used.
  - **SHA key** SHA authentication algorithm is used.
  - **NONE** No authentication algorithm is used.

**Example**

```
-> snmpUsrSec
User : initialmd5
Auth : MD5
Auth Key: 0x047b473f93211a17813ce5fff290066b
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.

**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 captureSnmp

Displays SNMP information for this device.

Syntax

captureSnmp

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.