Oracle EDR InfiniBand Switch and Virtualized I/O Systems Administration Guide

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Using This Documentation

- **Overview** – This document describes how to monitor and control chassis hardware and components of the Oracle InfiniBand Switch IS2-46, Oracle InfiniBand Switch IS2-254, and Oracle Fabric Interconnect F2-12.
- **Audience** – This document is intended for experienced technicians, system administrators, and Oracle-approved service personnel.
- **Required knowledge** – This document assumes the reader has advanced experience with managing data center and network switch and hosts, including, but not limited to, I/O modules and daughter cards, fans, PSUs/PDUs, and management modules. Knowledge of administering IB, Ethernet, and Fibre Channel networks is also required.

Collectively, the Oracle InfiniBand Switch IS2-46, Oracle InfiniBand Switch IS2-254, and Oracle Fabric Interconnect F2-12 products are called the Oracle EDR InfiniBand Switches and Virtualized I/O Systems. When cited in this document, these products are also known as the *leaf switch*, *spine switch*, and *virtualization switch*, respectively.

At the time of this document's publishing, the Oracle InfiniBand Switch IS2-46 and Oracle Fabric Interconnect F2-12 are available, so content in this document is focused on those switches.

Product Documentation Library

Documentation and resources for this product and related products are available at:

- Leaf switch: `http://www.oracle.com/goto/is2-46/docs`
- Virtualization switch: `http://www.oracle.com/goto/f2-12/docs`

Feedback

Provide feedback about this documentation at `http://www.oracle.com/goto/docfeedback`.

Understanding System Administration Resources

These topics provide an overview of Oracle ILOM and its implementation on the switch.

- "Switches Overview" on page 19
- "Switch Management Overview" on page 21
- "Oracle ILOM Overview" on page 22
- "SNMP Overview" on page 23
- "IPMI Overview" on page 23
- "Oracle Auto Service Request Software" on page 24

Related Information

- "Accessing the Switch" on page 27
- "Monitoring the Switch (Oracle ILOM CLI)" on page 35
- "Monitoring the Switch (Oracle ILOM Web)" on page 125
- "Understanding Oracle ILOM Targets" on page 165
- "Understanding SNMP MIB OIDs" on page 195
- "Understanding the EMS Module" on page 265
- "Controlling the Switch (Oracle ILOM CLI)" on page 301
- "Controlling the Switch (Oracle ILOM Web)" on page 427
- "Updating the Firmware" on page 533

Switches Overview

Oracle's EDR solution consists of different switches, HCAs, and host drivers to provide the EDR InfiniBand connectivity to hosts. These topics provide an overview of the switches.

- "Oracle InfiniBand Switch IS2-46" on page 20
- "Oracle Fabric Interconnect F2-12" on page 20

Related Information

- “Switch Management Overview” on page 21
- “Oracle ILOM Overview” on page 22
- “SNMP Overview” on page 23
- “IPMI Overview” on page 23
- “Oracle Auto Service Request Software” on page 24

Oracle InfiniBand Switch IS2-46

The Oracle InfiniBand Switch IS2-46 is a complete access switching and I/O platform that consolidates and virtualizes the switching infrastructure for servers deployed in high-performance enterprise clouds. In documentation, this switch is also called the *leaf switch*.

The switch features up to 38 4x IB ports supporting EDR speeds. Additionally, 4 12x IB ports, and 2 4x IB/40GbE combination ports provide both network and gateway capabilities. Eight 10GbE ports and 24 1GBASE-T ports offer Ethernet overlay networks, with the last two Ethernet ports supporting network management. A separate, dedicated, and optimized on-board SP and SCP manage chassis functionality, Ethernet traffic, and IB fabric respectively, through user-friendly CLIs and GUIs.

For more information, refer to the *Oracle InfiniBand Switch IS2-46 Installation Guide*.

Related Information

- “Oracle Fabric Interconnect F2-12” on page 20
- “Switch Management Overview” on page 21

Oracle Fabric Interconnect F2-12

The Fabric Interconnect is a complete access switching and I/O platform designed to consolidate and virtualize the switching infrastructure for server and storage systems deployed in high-performance enterprise clouds. In documentation, this switch is also called the *virtualization switch*.

The virtualization switch can be configured many ways, with up to 48 4x IB ports, 24 16Gb FC ports, 48 10GBASE-T ports, 48 40G Ethernet ports, or a mixture of these ports to provide network and gateway capabilities. Additionally, 4 12x IB ports, 4 1GBASE-T ports, and 2 4x IB/40GbE combination ports provide both network and gateway capabilities.

Separate, dedicated, and optimized on-board SP, ABD, and SCP manage chassis functionality, Ethernet traffic, and IB fabric respectively, through user-friendly CLIs and web interfaces.

The virtualization switch can be customized with Oracle F2 I/O modules that provide server connectivity to storage, Gigabit Ethernet, and IB resources through I/O modules that fit into any of the switch's 12 slots.

For more information, refer to the *Oracle Fabric Interconnect F2-12 Installation Guide*.

Related Information

- "Oracle InfiniBand Switch IS2-46" on page 20
- "Switch Management Overview" on page 21

Switch Management Overview

The switch has four management contexts, each of which is managed through specific software that runs on three different hardware chips. Some of these contexts are related to the switch and its hardware, and some are related to the IB fabric and Ethernet network to which the switch connects.

Management Context	Hardware Component	Details
Oracle Fabric OS (OFOS)	SCP	Controls the switch's IB fabric, supported IB-attached hosts, and configuration and management of IB features through CLI. Refer to the *Oracle Fabric OS Administration Guide 5.0.2* and *Oracle Fabric OS Command Reference1.0.2*.
Oracle Fabric Manager	SCP	Controls the switch's IB fabric, supported IB-attached hosts, and configuration and management of IB features through GUI or CLI. Refer to the *Oracle Fabric Manager User's Guide 5.0.2* and *Oracle Fabric Manager CLI User's Guide. 5.0.2*.
Sun Ethernet Fabric OS (SEFOS)	Ethernet management switch (EMS)	Controls the switch's Ethernet switch chip, Ethernet networking parameters, and configuration of Ethernet and IP features. This guide contains a summary of basic administration tasks you might use through the SEFOS functionality supported on the switch. See "Understanding the EMS Module" on page 265. For detailed information about SEFOS on the EMS switch, refer to the EMS module documentation library.
Oracle ILOM and SNMP	On-board Service Processor (SP) module	Controls system- and component-level hardware, chassis environmentals, and access to other management contexts through CLI and web interfaces.

Related Information

- "Switches Overview" on page 19

- "Oracle ILOM Overview" on page 22
- "SNMP Overview" on page 23
- "IPMI Overview" on page 23
- "Oracle Auto Service Request Software" on page 24

Oracle ILOM Overview

This document provides basic Oracle ILOM 3.2.6 information as it pertains to the switch.

Oracle ILOM is a means of remotely managing a hardware device through an SP. For the switch, the SP is the management controller within the switch. Oracle ILOM enables monitoring and controlling of users, hardware, services, protocols, and configuration. You can use Oracle ILOM to perform tasks that could otherwise be accomplished with the hardware commands.

Oracle ILOM has two primary interfaces:

- **Oracle ILOM CLI**. See "Oracle ILOM CLI Overview" on page 36.
- **Oracle ILOM Web**. See "Oracle ILOM Web Interface Overview" on page 126.

The Oracle ILOM web interface enables point-and-click administration of the Oracle ILOM components and services. You access these interfaces using the default root user account through Oracle ILOM. The root account is fully privileged to add, delete, create, enable, disable, and so on, the Oracle ILOM targets, components, and services.

Additionally, the Oracle ILOM implementation supports an industry-standard SNMP interface.

When you upgrade the management controller (SP) firmware to version 1.1.2 or higher, Oracle ILOM 3.2.*x* support is installed. An additional benefit of Oracle ILOM is that future SP and firmware upgrades are greatly simplified. For information about the Oracle ILOM, refer to the documentation at:

`http://docs.oracle.com/cd/E37444_01/index.html`

Related Information

- "Switches Overview" on page 19
- "Switch Management Overview" on page 21
- "SNMP Overview" on page 23
- "IPMI Overview" on page 23
- "Oracle Auto Service Request Software" on page 24

SNMP Overview

The Oracle ILOM implementation on the SP within the switch can communicate the state of and enable remote management of Oracle ILOM through SNMP.

An SNMP client is required to interface with the Oracle ILOM SNMP agent on the SP. The SNMP client must have the appropriate Oracle ILOM MIBs installed. These MIBs are included in the Oracle ILOM firmware package that you downloaded.

The MIBs are also available using the CLI or web interface. See "Download SNMP Service MIBs (Oracle ILOM CLI)" on page 409 or "Download SNMP Service MIBs (Oracle ILOM Web)" on page 518.

Using the SNMP protocol, the client sends requests in the form of object identifiers (OIDs) to the server on the SP. The tables in "Understanding SNMP MIB OIDs" on page 195 list object identifiers.

For more information about and use of SNMP with Oracle ILOM, refer to *Oracle ILOM Protocol Management Reference for SNMP and IPMI Firmware Release 3.2.x* at:

`http://docs.oracle.com/cd/E37444_01/index.html`

Related Information

- "Switches Overview" on page 19
- "Switch Management Overview" on page 21
- "Oracle ILOM Overview" on page 22
- "IPMI Overview" on page 23
- "Oracle Auto Service Request Software" on page 24

IPMI Overview

The Oracle ILOM implementation on the SP within the switch provides an IPMI server, which can communicate the state of the switch hardware through the Intelligent Platform Management Interface.

An IPMI client is required to interface with the Oracle ILOM IPMI stack on the SP. You must have administrator privileges to interface with the stack, and the IPMI service must be enabled on the switch.

The `ipmitool` utility is the IPMI client used in these topics and has this format:

```
$ ipmitool -v -I lan -H mc_IP -U user command option
```

where:

- *mc_IP* is the IP address of the SP.
- *user* is the user with administrative privileges. For example, `ilom-admin`.
- *command* is the command to be run on the SP.
- *option* is an optional argument or parameter to the *command*.

Note - After typing the `ipmitool` command line, you must type the password of the user for the utility to continue. For the `ilom-admin` user, the default password is `ilom-admin`.

For more information about and use of IPMI with Oracle ILOM, refer to the *Oracle ILOM Protocol Management Reference for SNMP and IPMI Firmware Release 3.2.x* , available online at:

`http://docs.oracle.com/cd/E37444_01/index.html`.

Related Information

- "Switches Overview" on page 19
- "Switch Management Overview" on page 21
- "Oracle ILOM Overview" on page 22
- "SNMP Overview" on page 23
- "Oracle Auto Service Request Software" on page 24

Oracle Auto Service Request Software

Oracle Auto Service Request (ASR) software provides the ability to report problems faster by automatically opening service requests for the switch and other qualified products when specific faults occur.

Oracle ASR securely transmits electronic fault telemetry data to Oracle to automatically help expedite fault diagnostics. Often, Oracle receives an ASR request and assigns engineers to resolve the issue even before you are aware the issue occurred.

Oracle ASR's one-way data transmission requires no Internet connections or remote access mechanism. Only the information needed to solve an issue is transmitted.

Oracle ASR is a feature of the Oracle hardware warranty, Oracle Premium Support for Systems, and Oracle Platinum Services.

Oracle ASR is integrated with My Oracle Support (https://support.oracle.com). To activate assets in the Oracle ASR system, use My Oracle Support.

Related Information

- “Switches Overview” on page 19
- “Switch Management Overview” on page 21
- “Oracle ILOM Overview” on page 22
- “SNMP Overview” on page 23
- “IPMI Overview” on page 23

Accessing the Switch

These topics describe how to access the switch.

- “User Roles and Permissions” on page 27
- “Access the Switch (SER MGT)” on page 28
- “Access Oracle ILOM From the CLI” on page 29
- “Access Oracle ILOM From the Web Interface” on page 29
- “Access SEFOS” on page 30
- “Access the Oracle Fabric OS” on page 31
- “Access the Oracle Fabric Manager CLI” on page 32

Related Information

- “Understanding System Administration Resources” on page 19
- “Monitoring the Switch (Oracle ILOM CLI)” on page 35
- “Monitoring the Switch (Oracle ILOM Web)” on page 125
- “Understanding Oracle ILOM Targets” on page 165
- “Understanding SNMP MIB OIDs” on page 195
- “Understanding the EMS Module” on page 265
- “Controlling the Switch (Oracle ILOM CLI)” on page 301
- “Controlling the Switch (Oracle ILOM Web)” on page 427
- “Updating the Firmware” on page 533

User Roles and Permissions

The switch uses Oracle's standard RBAC model of roles and their associated permissions, commonly known as `aucros`. The user roles are important because they control what each user can, and cannot, do on the switch.

Configure user roles and permissions for:

- Local user accounts on the switch

- User accounts for the switch's AD, DNS, LDAP, LDAP over SSL, and RADIUS clients

Role	Label	Permission
Administrator	a	Controls every feature on the switch.
User management	u	Controls user accounts on the switch.
Console	c	Controls switch console services, redirection.
Reset and host control	r	Controls resetting the switch and the hosts attached.
Read only/operator (default role)	o	Controls displaying, but not configuring, editing, or saving, information on the switch.
Service	s	Controls powering off hardware individual hardware components for replacement.

Related Information

- “Access the Switch (SER MGT)” on page 28
- “Access Oracle ILOM From the CLI” on page 29
- “Access Oracle ILOM From the Web Interface” on page 29
- “Access SEFOS” on page 30
- “Access the Oracle Fabric OS” on page 31
- “Access the Oracle Fabric Manager CLI” on page 32
- “Access the Oracle Fabric Manager GUI” on page 33

▼ Access the Switch (SER MGT)

Access to the switch is supported through the SER MGT port through a standard Telnet session.

1. **Open a terminal window.**
2. **Type:**

   `telnet` *console-connection telnet-port*

   where:

   console-connection is the Telnet connection number.

   telnet-port is the Telnet socket or port number.
3. **Press Enter.**

   The switch login prompts are displayed.
4. **Type the username and login for the switch and press Enter.**

If you have successfully logged in, the switch command prompt (->) is displayed, and you can begin administering the switch.

Related Information

- “Access Oracle ILOM From the CLI” on page 29
- “Access Oracle ILOM From the Web Interface” on page 29
- “Access SEFOS” on page 30
- “Access the Oracle Fabric OS” on page 31
- “Access the Oracle Fabric Manager CLI” on page 32
- “Access the Oracle Fabric Manager GUI” on page 33

Access Oracle ILOM From the CLI

1. **Using SSH or another common connection manager, start a session by specifying the SP's network address.**

2. **Log in with the `root` username, and type the default password `changeme` to access the Oracle ILOM CLI.**

   When the command prompt (->) is displayed, you are in the Oracle ILOM CLI. You can begin administering the switch by either controlling or monitoring switch properties. See “Controlling the Switch (Oracle ILOM CLI)” on page 301 or “Monitoring the Switch (Oracle ILOM CLI)” on page 35.

Related Information

- “Restart Oracle ILOM” on page 413
- “User Roles and Permissions” on page 27
- “Access the Switch (SER MGT)” on page 28
- “Access Oracle ILOM From the Web Interface” on page 29
- “Access SEFOS” on page 30
- “Access the Oracle Fabric OS” on page 31
- “Access the Oracle Fabric Manager CLI” on page 32
- “Access the Oracle Fabric Manager GUI” on page 33

Access Oracle ILOM From the Web Interface

1. **Open a web browser and connect to the Oracle ILOM web interface by specifying the SP's network address in the URL.**

   The Oracle ILOM login page is displayed.

Note - If the login page is not displayed or a 404 error is displayed, verify that the web interface is enabled. See to "Enable the HTTP Service (Oracle ILOM CLI)" on page 387 and "Enable the HTTPS Service (Oracle ILOM CLI)" on page 390 to enable the web interface from the CLI.

2. **Type the `root` username into the User Name field and the root user's password into the Password field.**

3. **Click Submit.**

   The Oracle ILOM web interface is displayed. You can begin administering the switch. See "Controlling the Switch (Oracle ILOM Web)" on page 427 or "Monitoring the Switch (Oracle ILOM Web)" on page 125.

Related Information

- "Restart Oracle ILOM" on page 413
- "User Roles and Permissions" on page 27
- "Access the Oracle Fabric OS" on page 31
- "Access the Oracle Fabric Manager CLI" on page 32
- "Access the Oracle Fabric Manager GUI" on page 33

Access SEFOS

The switch supports different management interfaces for configuring features in its Ethernet network. The switch's support for Ethernet occurs through the embedded management switch (EMS). Oracle's Sun Ethernet Fabric Operating System (SEFOS) runs on the EMS and controls the configuration and management of the switch's Ethernet features.

1. **Log in to the switch through the Oracle ILOM CLI.**

   See "Access Oracle ILOM From the CLI" on page 29.

2. **Start the EMS console.**

```
-> start /System/Networking/Switches/Switch_0/fs_cli
Are you sure you want to start /System/Networking/Switches/Switch_0/fs_cli
(y/n)? y

                Management Switch for Oracle InfiniBand Switch IS2-46

SEFOS login:
```

3. **Log in to SEFOS.**

```
SEFOS login: root
Password: password
SEFOS#
```

The default password is `admin123`. You are now in Privileged EXEC mode. For information about SEFOS' modes, see "EMS Module Overview" on page 266.

Related Information

- "User Roles and Permissions" on page 27
- "Access the Switch (SER MGT)" on page 28
- "Access Oracle ILOM From the CLI" on page 29
- "Access the Oracle Fabric OS" on page 31

Access the Oracle Fabric OS

The switch supports different management interfaces for configuring features in its IB fabric and Ethernet network. The Oracle Fabric OS controls the configuration and management of features in the IB fabric.

1. **Log in to the switch through the Oracle ILOM CLI.**

   See "Access Oracle ILOM From the CLI" on page 29.

2. **At the command prompt, type to access the Oracle Fabric OS console:**

   ```
   start /HOST/console
   Are you sure you want to start /HOST/console (y/n)? y

   Serial console started.  To stop, type ESC (

   Oracle Linux Server release 6.7
   Kernel 4.1.12-32.el6uek.x86_64 on an x86_64

   switchname login
   ```

   At this point, you can log in as either `admin` or `root`.

3. **Choose your method of access:**

   - **Log in as admin**

     ```
     host-name login: admin
     Password:
                                Welcome to OFOS Controller
     Copyright (c) 2012, 2016, Oracle and/or its affiliates.  All rights reserved.
     ```

where `password` is the default password for admin.

- **Log in as root, then change user to the `admin` user.**

```
host-name login: root
Password: changeme

[root@host-name ~]# su admin

                        Welcome to OFOS Controller
Copyright (c) 2012, 2016, Oracle and/or its affiliates.  All rights reserved.

             Enter "help" for information on available commands.
admin@switchname[OFOS]
```

When the command prompt displays `[OFOS]`, you have logged in to the Oracle Fabric Operating System on the switch.

Through the Oracle Fabric OS controller, you can begin configuration and management of IB fabric features. For detailed information, refer to the *Oracle Fabric OS 1.0.2 Administration Guide*.

Related Information

- "Restart Oracle Fabric OS" on page 413
- "User Roles and Permissions" on page 27
- "Access the Switch (SER MGT)" on page 28
- "Access Oracle ILOM From the CLI" on page 29
- "Access SEFOS" on page 30
- "Access the Oracle Fabric Manager CLI" on page 32

Access the Oracle Fabric Manager CLI

The switch supports different management interfaces for configuring features in its IB fabric and Ethernet network. Oracle Fabric Manager is a product that manages the EDR fabric, switches, and hosts. Oracle Fabric Manager offers a GUI and a CLI so that you can choose which method is appropriate for your deployment. The Oracle Fabric Manager CL comes preinstalled on each leaf, spine, or virtualization switch.

1. **Using Putty or another standard SSH connection manager, log in to the switch's SCP.**
2. **At the command prompt, type:**

```
cd /opt/xsigo/xms.bin
```

3. **Type:**

   ```
   ./ofmcli
   ```

   At the completion of this command, the Oracle Fabric Manager CLI begins. You can use this interface to configure features in the IB fabric. For information, refer to the *Oracle Fabric Manager CLI User's Guide*.

Related Information

- "User Roles and Permissions" on page 27
- "Access the Switch (SER MGT)" on page 28
- "Access the Oracle Fabric OS" on page 31
- "Access the Oracle Fabric Manager GUI" on page 33

Access the Oracle Fabric Manager GUI

The switch supports different management interfaces for configuring features in its IB fabric and Ethernet network. Oracle Fabric Manager manages the EDR fabric, switches, and hosts. Oracle Fabric Manager offers a GUI and a CLI so that you can choose which method is appropriate for your deployment. The Oracle Fabric Manager GUI comes preinstalled on each leaf, spine, or virtualization switch.

1. **Start a web browser.**

2. **In the URL field, type:**

   `https://`*switch-name-or-ip-address*`:8443/xms`**

   where *switch-name-or-IP-address* is the name or IP address of the switch. Oracle Fabric Manager can also run on a server, in which case enter the name or IP address of the server where Oracle Fabric Manager is installed.

3. **Complete the information required on the Login dialog, and click Login.**

   For more information, refer to the *Oracle Fabric Manager 5.0.2 User Guide*.

Related Information

- "User Roles and Permissions" on page 27
- "Access the Switch (SER MGT)" on page 28
- "Access Oracle ILOM From the CLI" on page 29
- "Access Oracle ILOM From the Web Interface" on page 29
- "Access SEFOS" on page 30
- "Access the Oracle Fabric OS" on page 31
- "Access the Oracle Fabric Manager CLI" on page 32

Monitoring the Switch (Oracle ILOM CLI)

These topics describe how to display various aspects of the switch from the Oracle ILOM CLI.

Description	Links
Familiarize yourself with the command syntax.	“Oracle ILOM CLI Overview” on page 36
Review help about the Oracle ILOM CLI.	“Getting Oracle ILOM Help (Oracle ILOM CLI)” on page 36
Monitor various elements of the switch and its configuration.	“Monitoring Switch Components and Identification (Oracle ILOM CLI)” on page 38
Monitor different clients that govern authentication and authorization.	“Monitoring Authentication and Access (Oracle ILOM CLI)” on page 84
Monitor the behavior of system events and alerts, and how they are logged.	“Monitoring Events and Logging (Oracle ILOM CLI)” on page 94
Monitor network properties for the SP and switch.	“Monitoring Management Networking (Oracle ILOM CLI)” on page 101
Monitor properties for connecting and logging in.	“Monitoring Management Connections to the Switch (Oracle ILOM CLI)” on page 105
Monitor different methods of interfacing with the switch and switch-interface behavior.	“Monitoring Switch Interface Methods (Oracle ILOM CLI)” on page 108
Monitor properties of getting support for the switch.	“Monitoring Switch Support Properties (Oracle ILOM CLI)” on page 116
Monitor user accounts and sessions.	“Monitoring User Accounts (Oracle ILOM CLI)” on page 118
Monitor additional aspects of the switch.	“Monitoring Additional Components and Services (Oracle ILOM CLI)” on page 122

Related Information

- “Understanding System Administration Resources” on page 19
- “Accessing the Switch” on page 27
- “Monitoring the Switch (Oracle ILOM Web)” on page 125
- “Understanding Oracle ILOM Targets” on page 165
- “Understanding SNMP MIB OIDs” on page 195
- “Understanding the EMS Module” on page 265
- “Controlling the Switch (Oracle ILOM CLI)” on page 301

- “Controlling the Switch (Oracle ILOM Web)” on page 427
- “Updating the Firmware” on page 533

Oracle ILOM CLI Overview

The Oracle ILOM CLI interface uses a set of commands that affect targets. The commands act like verbs, and the targets are analogous to nouns. The command line is like a rudimentary sentence. For example, to *display* the *event log*, the command line is:

```
-> show /SP/logs/event/list
```

where:

- `show` is the command (or verb).
- `/SP/logs/event/list` is the target (or noun).

Related Information

- “Getting Oracle ILOM Help (Oracle ILOM CLI)” on page 36
- “Switch Management Overview” on page 21
- “Access Oracle ILOM From the CLI” on page 29
- “Oracle ILOM Target Overview” on page 165
- “OID Tables Overview” on page 195

Getting Oracle ILOM Help (Oracle ILOM CLI)

These topics describe how to get help in the Oracle ILOM CLI.

- “Get Help on an Oracle ILOM Command (Oracle ILOM CLI)” on page 37
- “Get Help on an Oracle ILOM Target Property (Oracle ILOM CLI)” on page 37

Related Information

- “Oracle ILOM Target Overview” on page 165
- “Monitoring Switch Components and Identification (Oracle ILOM CLI)” on page 38
- “Monitoring Authentication and Access (Oracle ILOM CLI)” on page 84
- “Monitoring Events and Logging (Oracle ILOM CLI)” on page 94
- “Monitoring Management Networking (Oracle ILOM CLI)” on page 101

- "Monitoring Management Connections to the Switch (Oracle ILOM CLI)" on page 105
- "Monitoring Switch Interface Methods (Oracle ILOM CLI)" on page 108
- "Monitoring Switch Support Properties (Oracle ILOM CLI)" on page 116
- "Monitoring User Accounts (Oracle ILOM CLI)" on page 118
- "Monitoring Additional Components and Services (Oracle ILOM CLI)" on page 122

Get Help on an Oracle ILOM Command (Oracle ILOM CLI)

Online help is available for Oracle ILOM CLI commands by prefacing the command name with the keyword `help`.

- **Get help on a command.**

```
-> help -o verbose command
```

where *command* is the Oracle ILOM command for which you need help.
For example, to get help on the `exit` command, type:

```
-> help -o verbose exit
The exit command is used to terminate a session.
Usage: exit
Example:
  -> exit
  Connection to nyc-sp closed.
->
```

Related Information

- "Oracle ILOM CLI Overview" on page 36
- "Get Help on an Oracle ILOM Command (Oracle ILOM CLI)" on page 37
- "Get Help on an Oracle ILOM Target Property (Oracle ILOM CLI)" on page 37

Get Help on an Oracle ILOM Target Property (Oracle ILOM CLI)

Online help is available for specific targets in the Oracle ILOM CLI by prefacing the target and its property with the keyword `help`. Use this task to get help on a single property of an Oracle ILOM CLI target.

- **Get help on a target property.**

  -> **help** *target property*

  where:

  - *target* is the target and path to act upon.
  - *property* is the property of the *target* for which you need help.

  For example, to get help about the root user's `role` property, type:

```
-> help /SP/users/root
 /SP/users/root : Username
 User role required for create/delete = u
  Targets:
 ssh : SSH objects for user root
 Properties:
   role : Role of ilom-operator
   role : Possible values = Operator, Administrator, a, u, c, r, o, s
   role : User role required for set = u
->
```

Related Information

- “Oracle ILOM CLI Overview” on page 36
- “Get Help on an Oracle ILOM Command (Oracle ILOM CLI)” on page 37
- “Get Help on an Oracle ILOM Target Property (Oracle ILOM CLI)” on page 37

Monitoring Switch Components and Identification (Oracle ILOM CLI)

You can do most switch monitoring tasks any time after the switch is online. However, some basic switch tasks should be done before others each time the switch is powered on or restarted. This table shows the general order for these tasks.

Step	Task	Links
1.	Check for any faults.	“Display Faulted System Components (Oracle ILOM CLI)” on page 39
2.	Check the System LED.	“Display the Status LEDs States (Oracle ILOM CLI)” on page 50
3.	Check the date and time parameters.	“Display the Date and Timezone (Oracle ILOM CLI)” on page 43

Step	Task	Links
4.	Check the switch identification information.	“Display System Identification Properties (Oracle ILOM CLI)” on page 46
5.	Check the state of ASR.	“Display the ASR Client Status (Oracle ILOM CLI)” on page 117
6.	For virtualization switches, check modules.	“Displaying I/O Modules (Oracle ILOM CLI)” on page 73

Related Information

- “Monitoring Authentication and Access (Oracle ILOM CLI)” on page 84
- “Monitoring Events and Logging (Oracle ILOM CLI)” on page 94
- “Monitoring Management Networking (Oracle ILOM CLI)” on page 101
- “Monitoring Management Connections to the Switch (Oracle ILOM CLI)” on page 105
- “Monitoring Switch Interface Methods (Oracle ILOM CLI)” on page 108
- “Monitoring Switch Support Properties (Oracle ILOM CLI)” on page 116
- “Monitoring User Accounts (Oracle ILOM CLI)” on page 118
- “Monitoring Additional Components and Services (Oracle ILOM CLI)” on page 122

▼ Display Faulted System Components (Oracle ILOM CLI)

The switch adds any faulted targets to the `faultmgt` target, which you can query. If the switch sends a notification of an error, of if you suspect the switch hardware is having a problem, use this task to check for any faulted components.

1. Display any faulted components.

```
-> show -d targets /SP/faultmgmt/x
 /SP/faultmgmt
  Targets:
  x (faulted_target)
->
```

where:

- *x* is the target sequence number (starting at `0`).
- *faulted_target* is the Oracle ILOM target of the faulted component.

Note - If there are several faulted components, then their respective targets are listed with increasing target sequence numbers.

Note - If no number is displayed, there are no faulted components.

For example, type:

```
-> show -d targets /SP/faultmgmt
 /SP/faultmgmt
  Targets:
   0 (/SYS/PS0)
->
```

2. **Display details of the fault.**

```
-> show -d properties /SP/faultmgmt/x/faults/y
```

where:

- *x* is the target sequence number (starting at `0`).
- *y* is the fault sequence number (starting at `0`) for the target *x*.

For example, type:

```
-> show /SP/faultmgmt/0/faults/0
 /SP/faultmgmt/0/faults/0
  Properties:
   class = fault.chassis.tli.invalid
         sunw-msg-id = ILOM-8000-30
         component = /SYS
         uuid = f431abc4-192d-41c0-dc0a-feff5e043ec3
         timestamp = 2000-11-24/19:27:44
         fru_serial_number = unknown
         fru_part_number = unknown
         fru_name = unknown
         fru_manufacturer = Oracle Corporation
         system_component_manufacturer = Oracle Corporation
         system_component_name = unknown
         system_component_part_number = unknown
         system_component_serial_number = unknown
         chassis_manufacturer = Oracle Corporation
         chassis_name = unknown
         chassis_part_number = unknown
         chassis_serial_number = unknown

->
```

The `class` property provides a general reason for the fault.

Note - For more fault information, refer to the detecting and managing faults topic in your switch's service manual.

Related Information

- “Check for Open Problems (Oracle ILOM CLI)” on page 41
- “Display Switch Health (Oracle ILOM CLI)” on page 42
- “Display the Switch Uptime (Oracle ILOM CLI)” on page 43
- “Display the Oracle ILOM Audit Log (Oracle ILOM CLI)” on page 96
- “Display the Oracle ILOM Event Log (Oracle ILOM CLI)” on page 98
- “Display Module Faults (Oracle ILOM CLI)” on page 76

Displaying Switch Health Properties (Oracle ILOM CLI)

These topics describe how to display properties related to switch health.

- “Check for Open Problems (Oracle ILOM CLI)” on page 41
- “Display Switch Health (Oracle ILOM CLI)” on page 42

Related Information

- “Display the Status LEDs States (Oracle ILOM CLI)” on page 50
- “Display the Switch Temperatures (Oracle ILOM CLI)” on page 51
- “Displaying MBOM Information (Oracle ILOM CLI)” on page 52
- “Displaying Power Supply Power Information (Oracle ILOM CLI)” on page 54
- “Displaying Switch Power (Oracle ILOM CLI)” on page 63
- “Displaying Switch Cooling (Oracle ILOM CLI)” on page 69

▼ Check for Open Problems (Oracle ILOM CLI)

The switch keeps a tally of open problems. You can query for the number of open problems at any time.

- **Display the switch's reported problems (if any).**

```
-> show -d properties /System open_problems_count
 /System
  Properties:
   open_problems_count = 1
->
```

Related Information

- “Display Faulted System Components (Oracle ILOM CLI)” on page 39
- “Display Switch Health (Oracle ILOM CLI)” on page 42
- “Display the Switch Uptime (Oracle ILOM CLI)” on page 43
- “Display the Oracle ILOM Audit Log (Oracle ILOM CLI)” on page 96
- “Display the Oracle ILOM Event Log (Oracle ILOM CLI)” on page 98

▼ Display Switch Health (Oracle ILOM CLI)

1. **Display the overall switch health.**

   For example, type:

```
-> show -d properties /System health
 /System
  Properties:
   health = OK
->
```

2. **Display the detailed switch health.**

   For example, type:

```
-> show -d properties /System health_details_
 /System
  Properties:
   health_details = -
->
```

Related Information

- “Check for Open Problems (Oracle ILOM CLI)” on page 41
- “Display Faulted System Components (Oracle ILOM CLI)” on page 39
- “Display the Switch Uptime (Oracle ILOM CLI)” on page 43
- “Display the Oracle ILOM Audit Log (Oracle ILOM CLI)” on page 96
- “Display the Oracle ILOM Event Log (Oracle ILOM CLI)” on page 98

Display the Date and Timezone (Oracle ILOM CLI)

The switch has an internal clock processor for maintaining correct date, time, and timezone. Typically, the switch ships with a default date and timezone. Then, as part of installing the switch and bringing it online the first time, you set the date, time, and timezone.

Note - As an alternative, you can synchronize the system clock with an NTP server in use in your network.

- **Display the date.**

```
-> show /SP/clock datetime timezone
```

For example, type:

```
-> show /SP/clock datetime timezone
 /SP/clock
  Properties:
   datetime = Sun Jan 17 20:25:53 2016
   timezone = PDT (PST8PDT)
->
```

Related Information

- “Display the Switch Uptime (Oracle ILOM CLI)” on page 43
- “Display the NTP Servers (Oracle ILOM CLI)” on page 44
- “Configure the Date and Time (Oracle ILOM CLI)” on page 305
- “Configure the Time Zone (Oracle ILOM CLI)” on page 306
- “Configure the NTP Client (Oracle ILOM CLI)” on page 306

Display the Switch Uptime (Oracle ILOM CLI)

Switch uptime is the amount of time that the switch is online and operating. Uptime can be restarted due to errors, or planned system outages such as reboots and firmware or software upgrades. Use this task to display the amount of time that the switch has been running since its last reset.

- **Display the system uptime.**

```
-> show -d properties /SP/clock uptime
 /SP/clock
```

```
  Properties:
   uptime = 140 days, 02:24:11
->
```

Related Information

- “Display the Date and Timezone (Oracle ILOM CLI)” on page 43
- “Display the NTP Servers (Oracle ILOM CLI)” on page 44
- “Configure the Date and Time (Oracle ILOM CLI)” on page 305
- “Configure the Time Zone (Oracle ILOM CLI)” on page 306
- “Configure the NTP Client (Oracle ILOM CLI)” on page 306

▼ Display the NTP Servers (Oracle ILOM CLI)

The switch can be configured to use NTP instead of its internal system clock. When the switch is configured to use NTP and synchronized with your network's NTP servers, use this task to display the NTP servers to which the switch is connected.

1. **Display the IP addresses of the NTP servers.**

```
-> show /SP/clients/ntp/server/1 address
 /SP/clients/ntp/server/1
  Properties:
   address = 123.45.67.89

-> show /SP/clients/ntp/server/2 address
 /SP/clients/ntp/server/2
  Properties:
   address = 0.0.0.0
->
```

In the output, the IP address of NTP server 1 is `123.45.67.89`. The IP address of `0.0.0.0` for NTP server 2 means the server is not configured.

2. **Display the NTP server status.**

```
-> show /SP/clock usentpserver
 /SP/clock
  Properties:
   usentpserver = enabled
->
```

The value of the `usentpserver` property determines if the SP synchronizes time with the configured NTP servers. The value is either `enabled` or `disabled`.

Related Information

- “Display the Switch Uptime (Oracle ILOM CLI)” on page 43
- “Display the Date and Timezone (Oracle ILOM CLI)” on page 43
- “Configure the Date and Time (Oracle ILOM CLI)” on page 305
- “Configure the Time Zone (Oracle ILOM CLI)” on page 306
- “Configure the NTP Client (Oracle ILOM CLI)” on page 306

▼ Display the Switch Firmware Versions (Oracle ILOM CLI)

The switch has different types of firmware for various aspects of switch functionality, such as Oracle ILOM and switch BIOS.

1. **Display the ILOM firmware version.**

```
-> show -d properties /System/Firmware/Other_Firmware/Firmware_0
```

For example, type:

```
-> show -d properties /System/Firmware/Other_Firmware/Firmware_0
/System/Firmware/Other_Firmware/Firmware_0
  Properties:
    component = ILOM
    type = ILOM Firmware
    version = 3.2.6.0
->
```

2. **Display the version of firmware loaded on the SP.**

```
-> version
SP firmware 3.2.0.0
SP firmware build number: 108582
SP firmware date:  Wed Mar 30 01:25:22 PDT 2016
SP filesystem version: 0.2.10
->
```

3. **Display the version of Ethernet switch firmware loaded on the switch.**

```
-> show -d properties /System/Firmware/Other_Firmware/Firmware_1
/System/Firmware/Other_Firmware/Firmware_1
```

```
  Properties:
   component =  SYS ETHSWITCH0
         type = Upgradeable FRU
         version = Not Available
         load_uri = (none)

->
```

Related Information

- “Updating the Firmware” on page 533
- “Reset the SP (Oracle ILOM CLI)” on page 315
- “Load Ethernet Switch Chip Firmware (Oracle ILOM CLI)” on page 318
- “Reset the Ethernet Switch Chip Functionality (Oracle ILOM CLI)” on page 317

▼ Display System Identification Properties (Oracle ILOM CLI)

The switch has identification properties for the overall system and its service processor to distinguish it from other Oracle switches in your deployment. Use this task to show either default, or custom, switch identification information.

1. **Display the SP properties.**

```
-> show -d properties /SP
 /SP
  Properties:
   check_physical_presence = true
         current_hostname = techpubs
         hostname = techpubs
         reset_to_defaults = none
         system_contact = (none)
         system_description = unknown, ILOM v3.2.6.0, r108582
         system_identifier = (none)
         system_location = (none)

->
```

2. **Display the switch properties.**

```
-> show -d properties /System
 /System
  Properties:
```

```
   health = OK
   health_details = -
   open_problems_count = 0
   type = Rack Mount
         model = Unknown
         qpart_id = Q12721
         part_number = Unknown
         serial_number = Unknown
         system_identifier = (none)
         system_fw_version = 3.2.6.0
         host_primary_mac_address = Not Supported
         ilom_address = 10.134.156.167
         ilom_mac_address = 00:03:BA:7A:A1:97
         locator_indicator = Off
         power_state = On
         actual_power_consumption = Unknown
         action = (none)

->
```

3. **Display additional switch properties.**

```
-> show -d properties /SYS
 /SYS
  Properties:
   type = Host System
   ipmi_name = SYS
   product_name = unknown
   product_part_number = unknown
   product_serial_number = unknown
   product_manufacturer = Oracle Corporation
   fault_state = OK
   clear_fault_action = (none)
   power_state = On
->
```

Related Information

- “Configure the System Identification Properties (Oracle ILOM CLI)” on page 307

Displaying the SP Properties (Oracle ILOM CLI)

These topics describe information about the SP.

- “Display SP Information (Oracle ILOM CLI)” on page 48
- “Display the SP CLI Behavior (Oracle ILOM CLI)” on page 49

Related Information

- “Display Faulted System Components (Oracle ILOM CLI)” on page 39
- “Display the Switch Firmware Versions (Oracle ILOM CLI)” on page 45
- “Display the Switch Uptime (Oracle ILOM CLI)” on page 43

▼ Display SP Information (Oracle ILOM CLI)

You can display information about the SP, including FRU information, and the types of controllers in use on the SP.

1. **Display the SP state.**

```
-> show -d properties /SYS/SP/OK
 /SYS/SP/OK
  Properties:
   type = Indicator
   ipmi_name = SP/OK
   value = On
->
```

2. **Display the SP details.**

```
-> show -d properties /SYS/SP
/SYS/SP
  Properties:
   type = Service Processor
         ipmi_name = SP
         fru_description = PCA,PILOT3 SP, OPUS
         fru_manufacturer = Oracle Corporation
         fru_part_number = 7096151
         fru_rev_level = 04
         fru_serial_number = 489089M+14516P002F
         fault_state = OK
         clear_fault_action = (none)


->
```

3. **Display additional SP details.**

```
-> show -d properties /SP/
 /SP/
  Properties:
   check_physical_presence = true
         current_hostname = techpubs
```

```
        hostname = techpubs
        reset_to_defaults = all
        system_contact = matlock
        system_description = unknown, ILOM v3.2.6.0, r108582
        system_identifier = leaf
        system_location = SCA21-lab

->
```

4. **Display the SP configuration.**

```
-> show -d properties /SP/config
 /SP/config
  Properties:
   dump_uri = (Cannot show property)
   include_faultdata = false
   load_uri = (Cannot show property)
   passphrase = (none)
->
```

Related Information

- "Display the SP CLI Behavior (Oracle ILOM CLI)" on page 49
- "Reset the SP (Oracle ILOM CLI)" on page 315
- "Control Checking for SP Physical Presence (Oracle ILOM CLI)" on page 319

▼ Display the SP CLI Behavior (Oracle ILOM CLI)

The SP has properties that govern Oracle ILOM CLI sessions, for example, the CLI session time-out for the CLI and whether a nondefault command prompt is configured.

- **Display the settings for the switch's CLI sessions.**

```
-> show -d properties /SP/CLI
 /SP/CLI
  Properties:
   legacy_targets = enabled
   prompt = (none)
   timeout = 100
->
```

Related Information

- "Display SP Information (Oracle ILOM CLI)" on page 48
- "Reset the SP (Oracle ILOM CLI)" on page 315
- "Control Checking for SP Physical Presence (Oracle ILOM CLI)" on page 319

Display the Switch Configuration Snapshot (Oracle ILOM CLI)

The switch has a snapshot service that enables the collection of pertinent information from the SP, including environmental data, log files, FRU IDs, and some error information for diagnostics. The information collected is called a dataset, and different datasets can be collected. Use this task to display the snapshot policy configured on the switch.

- **Display the current dataset for a snapshot.**

```
-> show -d properties /SP/diag/snapshot
 /SP/diag/snapshot
  Properties:
   dataset = normal
   dump_uri = (Cannot show property)
   encrypt_output = false
   result = (none)
->
```

Related Information

- “Create a Backup of the Switch Configuration (Oracle ILOM CLI)” on page 309
- “Backed Up Switch Configuration Information” on page 310
- “Restore the Configuration (Oracle ILOM CLI)” on page 311
- “Create a Snapshot of the Switch State (Oracle ILOM CLI)” on page 312
- “Snapshot Dataset Information (Oracle ILOM CLI)” on page 313

Display the Status LEDs States (Oracle ILOM CLI)

Switch status LEDs provide visual indicators of information. The switch has LEDs for power, overall switch state, and a locator LED for assisting service personnel find the correct switch. Use this task to display the status of the switch Status LEDs.

1. **Display the Locator LED state.**

```
-> show -d properties /System/ locator_indicator
 /System
  Properties:
   locator_indicator = Off
->
```

2. **Display the OK LED state.**

```
-> show -d properties /SYS/OK
 /SYS/OK
  Properties:
   type = Indicator
   ipmi_name = OK
   value = On
->
```

3. **Display the Service LED state.**

```
-> show -d properties /SYS/SERVICE
 /SYS/SERVICE
  Properties:
   type = Indicator
   ipmi_name = SERVICE
   value = Off
->
```

Related Information

- “Enable the Locator LED (Oracle ILOM CLI)” on page 314
- “Disable the Locator LED (Oracle ILOM CLI)” on page 315

▼ Display the Switch Temperatures (Oracle ILOM CLI)

The switch contains fan units consisting of individual fans. The switch's cooling subsystem enables querying for specific temperatures and thresholds for the overall chassis, fan units, and individual fans.

Use this task to display information about the system-level health of cooling and airflow for the switch.

1. **Display the ambient temperatures for different parts of the switch.**

   For example, to see the ambient temperature of the overall switch, type:

```
-> show -d properties /SYS/MB/T_AMB
 /SYS/MB/T_AMB
  Properties:
   type = Temperature
        ipmi_name = MB/T_AMB
```

```
        class = Threshold Sensor
        value = 33.000 degree C
        upper_nonrecov_threshold = N/A
        upper_critical_threshold = 43.000 degree C
        upper_noncritical_threshold = 38.000 degree C
        lower_noncritical_threshold = 8.000 degree C
        lower_critical_threshold = 3.000 degree C
        lower_nonrecov_threshold = N/A
        alarm_status = cleared
```

All three entities, the chassis, HCA, and IB switch chip, show the same type of information.

2. **Display the temperature of the air that is exiting the chassis.**

```
-> show -d properties /SYS/MB/T_OUT
 /SYS/MB/T_AMB
  Properties:
   type = Temperature
        ipmi_name = MB/T_OUT
        class = Threshold Sensor
        value = 38.000 degree C
        upper_nonrecov_threshold = N/A
        upper_critical_threshold = 48.000 degree C
        upper_noncritical_threshold = 43.000 degree C
        lower_noncritical_threshold = 8.000 degree C
        lower_critical_threshold = 3.000 degree C
        lower_nonrecov_threshold = N/A
        alarm_status = cleared

->
```

All three entities, the chassis, HCA, and IB switch chip, show the same type of information.

Related Information

- “Display the MBOM Temperature (Oracle ILOM CLI)” on page 53
- “Display Switch Cooling (Oracle ILOM CLI)” on page 70
- “Display Fan Information (Oracle ILOM CLI)” on page 70

Displaying MBOM Information (Oracle ILOM CLI)

These topics document how to display temperature and power information for the switch's MBOMs.

- “Display the MBOM Temperature (Oracle ILOM CLI)” on page 53

- “Display the MBOM Power Information (Oracle ILOM CLI)” on page 53

▼ Display the MBOM Temperature (Oracle ILOM CLI)

The switch contains MBOM units that enable the EDR connections to EDR-capable hosts. The switch supports a maximum of 13 MBOMs numbered from zero to 12. Valid operating temperatures for the MBOMs are programmed at the factory, so you can read the temperatures and event thresholds, but not set them.

- **Display the temperature of a specific MBOM.**

```
->  show -d properties /SYS/MB/T_MBOMX
```

where *x* is a number from `0` to `12` that corresponds to the MBOM for which you want to display information.

For example, to determine the current temperature for MBOM 1, type:

```
-> show -d properties /SYS/MB/T_MBOM1
/SYS/MB/T_MBOM1
 Properties:
  type = Temperature
  ipmi_name = /MB/T_MBOM1
  class = Threshold Sensor
  value = 44.000 degree C
  upper_nonrecov_threshold = 80.000 degree C
  upper_critical_threshold = 70.000 degree C
  upper_noncritical_threshold = 65.000 degree C
  lower_noncritical_threshold = N/A
  lower_critical_threshold = N/A
  lower_nonrecov_threshold = N/A
  alarm_status = cleared

->
```

Related Information

- “Display the MBOM Power Information (Oracle ILOM CLI)” on page 53

▼ Display the MBOM Power Information (Oracle ILOM CLI)

The switch contains MBOM units that enable the EDR connections to EDR-capable hosts. Valid operating power values for the MBOMs are programmed at the factory, so you can read the voltages and event thresholds, but not set them.

- **Display the 3.3-volt power conditions for the power supplied to all MBOMs.**

```
-> show -d properties /SYS/MB/V_+3V3_MBOMA
/SYS/MB/V_+3V3_MBOMA
 Properties:
  type = Voltage
  ipmi_name = MB/V_+3V3_MBOMA
  class = Threshold Sensor
  value = 3.256 Volts
  upper_nonrecov_threshold = 3.510 Volts
  upper_critical_threshold = 3.490 Volts
  upper_noncritical_threshold = 3.471 Volts
  lower_noncritical_threshold = 3.139 Volts
  lower_critical_threshold = 3.120 Volts
  lower_nonrecov_threshold = 3.101 Volts
  alarm_status = cleared

->
```

Related Information

- “Display the MBOM Temperature (Oracle ILOM CLI)” on page 53

Displaying Power Supply Power Information (Oracle ILOM CLI)

System power information is displayed for overall system power conditions as well as for individual power supplies. These tasks describe how to display information about power supplies.

- “Display a Power Supply's Health (Oracle ILOM CLI)” on page 55
- “Display Power Supply Details (Oracle ILOM CLI)” on page 55
- “Display a Power Supply's Input Power Conditions (Oracle ILOM CLI)” on page 56
- “Display a Power Supply's Output Power Conditions (Oracle ILOM CLI)” on page 58

Related Information

- “Display the Status LEDs States (Oracle ILOM CLI)” on page 50
- “Display the MBOM Power Information (Oracle ILOM CLI)” on page 53
- “Displaying Switch Power (Oracle ILOM CLI)” on page 63
- “Display Power Information for the IB Switch Chip (Oracle ILOM CLI)” on page 60
- “Display Power Information for HCAs (Oracle ILOM CLI)” on page 61

▼ Display a Power Supply's Health (Oracle ILOM CLI)

The switch has redundant power supply units (PSs) numbered 0 and 1 that you can monitor for overall health as well as detailed information.

1. **Discover the presence or absence of a specific PS.**

```
-> show -d properties /SYS/PSslot
```

where *slot* is either `0` or `1`, corresponding to the PS for which you want to display information.

2. **Display the state of the PS's Health LED.**

For example, to display the PS0 state, type:

```
-> show -d properties /SYS/PS0/PWROK
 /SYS/PS0/PWROK
  Properties:
   type = Power Supply
   ipmi_name = PS0/PWROK
   class = Discrete Sensor
   value = Asserted
   alarm_status = cleared
->
```

Related Information

- “Display Power Supply Details (Oracle ILOM CLI)” on page 55
- “Display a Power Supply's Input Power Conditions (Oracle ILOM CLI)” on page 56
- “Display a Power Supply's Output Power Conditions (Oracle ILOM CLI)” on page 58
- “Display Overall Switch Power Properties (Oracle ILOM CLI)” on page 63
- “Display Power Supply Information (Oracle ILOM CLI)” on page 64
- “Display the Battery Power Information (Oracle ILOM CLI)” on page 65
- “Display the Switch's Voltage Information (Oracle ILOM CLI)” on page 66
- “Display Power Information for the IB Switch Chip (Oracle ILOM CLI)” on page 60
- “Display Power Information for HCAs (Oracle ILOM CLI)” on page 61
- “Display the MBOM Power Information (Oracle ILOM CLI)” on page 53

▼ Display Power Supply Details (Oracle ILOM CLI)

The switch has redundant, load-sharing power supplies numbered either 0 or 1. You can display details, including the PS's FRU number, by displaying details for each PS.

1. **Discover the presence or absence of a specific PS.**

```
-> show -d properties /SYS/PSslot
```

where *slot* is either `0` or `1`, corresponding to the PS for which you want to display information.

2. **Display the details for a specific PS.**

For example, to display the details for PS 0.

```
-> show -d properties /SYS/PS0
 /SYS/PS0
  Properties:
   type = Power Supply
   ipmi_name = PS0
   fru_manufacturer = Delta Electronics
   fru_part_number = 7065505-01
   fru_serial_number = C94928
   fault_state = OK
   clear_fault_action = (none)
->
```

Related Information

- “Display a Power Supply's Health (Oracle ILOM CLI)” on page 55
- “Display a Power Supply's Input Power Conditions (Oracle ILOM CLI)” on page 56
- “Display a Power Supply's Output Power Conditions (Oracle ILOM CLI)” on page 58
- “Display Overall Switch Power Properties (Oracle ILOM CLI)” on page 63
- “Display Power Supply Information (Oracle ILOM CLI)” on page 64
- “Display the Battery Power Information (Oracle ILOM CLI)” on page 65
- “Display the Switch's Voltage Information (Oracle ILOM CLI)” on page 66
- “Display Power Information for the IB Switch Chip (Oracle ILOM CLI)” on page 60
- “Display Power Information for HCAs (Oracle ILOM CLI)” on page 61
- “Display the MBOM Power Information (Oracle ILOM CLI)” on page 53

▼ Display a Power Supply's Input Power Conditions (Oracle ILOM CLI)

The switch has redundant power supply units (PSs) numbered 0 and 1 that you can monitor for input power conditions. Use this task to monitor information for an individual PS.

1. **Display a PS's aggregate input wattage.**

For example, to display the PS 0 input power information, type:

```
-> show -d properties /SYS/PS0/INPUT_POWER
 /SYS/PS0/INPUT_POWER
  Properties:
  type = Power Unit
  ipmi_name = PS0/IN_POWER
  class = Threshold Sensor
  value = 117.936 Watts
  upper_nonrecov_threshold = N/A
  upper_critical_threshold = N/A
  upper_noncritical_threshold = N/A
  lower_noncritical_threshold = N/A
  lower_critical_threshold = N/A
  lower_nonrecov_threshold = N/A
  alarm_status = cleared

->
```

2. **Display a PS's input amperage of electrical current.**
   For example, to display the PS 0 input current information, type:

```
-> show -d properties /SYS/PS0/I_IN
 /SYS/PS0/I_IN
  Properties:
   type = Current
   ipmi_name = PS0/I_IN
   class = Threshold Sensor
   value = 1.008 Amps
         upper_nonrecov_threshold = 8.946 Amps
         upper_critical_threshold = 7.938 Amps
         upper_noncritical_threshold = 7.497 Amps
         lower_noncritical_threshold = N/A
         lower_critical_threshold = N/A
         lower_nonrecov_threshold = N/A
   alarm_status = cleared
->
```

3. **Display a PS's input voltage.**
   For example, to display the PS 0 input voltage information, type:

```
-> show -d properties /SYS/PS0/V_IN
 /SYS/PS0/V_IN
  Properties:
   type = Voltage
   ipmi_name = PS0/V_IN
   class = Threshold Sensor
   value = 210.00 Volts
   upper_nonrecov_threshold = 255.000 Volts
```

```
   upper_critical_threshold = 252.000 Volts
         upper_noncritical_threshold = N/A
         lower_noncritical_threshold = N/A
   lower_critical_threshold = 100.000 Volts
   lower_nonrecov_threshold = 90.000 Volts
   alarm_status = cleared
->
```

Related Information

- “Display a Power Supply's Health (Oracle ILOM CLI)” on page 55
- “Display Power Supply Details (Oracle ILOM CLI)” on page 55
- “Display a Power Supply's Output Power Conditions (Oracle ILOM CLI)” on page 58
- “Display Overall Switch Power Properties (Oracle ILOM CLI)” on page 63
- “Display Power Supply Information (Oracle ILOM CLI)” on page 64
- “Display the Battery Power Information (Oracle ILOM CLI)” on page 65
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- “Display Power Information for the IB Switch Chip (Oracle ILOM CLI)” on page 60
- “Display Power Information for HCAs (Oracle ILOM CLI)” on page 61
- “Display the MBOM Power Information (Oracle ILOM CLI)” on page 53

▼ Display a Power Supply's Output Power Conditions (Oracle ILOM CLI)

The switch has redundant power supply units (PSs) numbered 0 and 1 that you can monitor for output power conditions. Use this task to monitor information about an individual PS.

1. **Display a PS's aggregate output wattage.**

```
-> show -d properties /SYS/PS0/OUTPUT_POWER
 /SYS/PS0/OUTPUT_POWER
  Properties:
   type = Power Unit
   ipmi_name = PS0/OUTPUT_POWER
   class = Threshold Sensor
   value = Disabled
         upper_nonrecov_threshold = N/A
         upper_critical_threshold = N/A
         upper_noncritical_threshold = N/A
         lower_noncritical_threshold = N/A
         lower_critical_threshold = N/A
         lower_nonrecov_threshold = N/A
   alarm_status = indeterminate
->
```

2. **Display a PS's output amperage of electrical current.**

```
-> show -d properties /SYS/PS0/I_OUT
 /SYS/PS0/I_OUT
  Properties:
   type = Current
   ipmi_name = PS0/I_OUT
   class = Threshold Sensor
   value = 14. 750 Amps
   upper_nonrecov_threshold = N/A
   upper_critical_threshold = N/A
   upper_noncritical_threshold = N/A
   lower_noncritical_threshold = N/A
         lower_critical_threshold = N/A
         lower_nonrecov_threshold = N/A
   alarm_status = cleared
->
```

3. **Display a PS's output voltage.**

```
-> show -d properties /SYS/PS0/V_OUT
 /SYS/PS0/V_OUT
  Properties:
   type = Voltage
   ipmi_name = PS0/V_OUT
   class = Threshold Sensor
   value = 12.00 Volts
   upper_nonrecov_threshold = 20.000 Volts
   upper_critical_threshold = 14.000 Volts
   upper_noncritical_threshold = 50.000 Amps
         lower_noncritical_threshold = N/A
         lower_critical_threshold = N/A
         lower_nonrecov_threshold = N/A
   lower_critical_threshold = 10.000 Volts
   alarm_status = cleared
->
```

Related Information

- “Display a Power Supply's Health (Oracle ILOM CLI)” on page 55
- “Display Power Supply Details (Oracle ILOM CLI)” on page 55
- “Display a Power Supply's Input Power Conditions (Oracle ILOM CLI)” on page 56
- “Display Overall Switch Power Properties (Oracle ILOM CLI)” on page 63
- “Display Power Supply Information (Oracle ILOM CLI)” on page 64
- “Display the Battery Power Information (Oracle ILOM CLI)” on page 65
- “Display the Switch's Voltage Information (Oracle ILOM CLI)” on page 66
- “Display Power Information for the IB Switch Chip (Oracle ILOM CLI)” on page 60

- "Display Power Information for HCAs (Oracle ILOM CLI)" on page 61
- "Display the MBOM Power Information (Oracle ILOM CLI)" on page 53

▼ Display Power Information for the IB Switch Chip (Oracle ILOM CLI)

The switch has an internal IB switch that supports EDR connections throughout the switch. You can display the power consumption for the IB switch chip uses as well as event thresholds for power supplied to the IB switch chip.

1. **Display the .85-volt power supplied to the IB switch.**

```
-> show /SYS/MB/V_+0V85_IBSW

/SYS/MB/V_+0V85_IBSW
 Properties:
  type = Voltage
  ipmi_name = MB/V_+0V85_IBSW
  class = Threshold Sensor
  value = 0.842 Volts
  upper_nonrecov_threshold = 0.941 Volts
  upper_critical_threshold = 0.931 Volts
  upper_noncritical_threshold = 0.921 Volts
  lower_noncritical_threshold = 0.833 Volts
  lower_critical_threshold = 0.823 Volts
  lower_nonrecov_threshold = 0.813 Volts
  alarm_status = cleared

->
```

2. **Display the 1.05-volt power supplied to the IB switch.**

```
-> show /SYS/MB/V_+1V05_IBSW

/SYS/MB/V_+1V05_IBSW
 Properties:
  type = Voltage
  ipmi_name = MB/V_+1V05_IBSW
  class = Threshold Sensor
  value = 1.030 Volts
  upper_nonrecov_threshold = 1.137 Volts
  upper_critical_threshold = 1.127 Volts
  upper_noncritical_threshold = 1.117 Volts
  lower_noncritical_threshold = 1.019 Volts
  lower_critical_threshold = 1.000 Volts
  lower_nonrecov_threshold = 0.980 Volts
```

```
  alarm_status = cleared

->
```

Related Information

- “Display Power Information for HCAs (Oracle ILOM CLI)” on page 61
- “Display the MBOM Power Information (Oracle ILOM CLI)” on page 53

▼ Display Power Information for HCAs (Oracle ILOM CLI)

The switch has internal HCAs for EDR connectivity. You can display the power consumption for each type of power the HCA uses as well as event thresholds for power supplied to the HCAs.

1. **Display the .85-volt power supplied to the HCA.**

```
-> show /SYS/MB/V_+0V85_HCA
 Properties:
        type = Voltage
        ipmi_name = MB/V_+0V85_HCA
        class = Threshold Sensor
        value = 0.847 Volts
        upper_nonrecov_threshold = 0.941 Volts
        upper_critical_threshold = 0.931 Volts
        upper_noncritical_threshold = 0.921 Volts
        lower_noncritical_threshold = 0.833 Volts
        lower_critical_threshold = 0.823 Volts
        lower_nonrecov_threshold = 0.813 Volts
        alarm_status = cleared

->
```

2. **Display the 1.05-volt power supplied to the HCA.**

```
-> show /SYS/MB/V_+1V05_HCA

/SYS/MB/V_+1V05_
 Properties:
        type = Voltage
        ipmi_name = MB/V_+1V05_HCA
        class = Threshold Sensor
        value = 1.091 Volts
        upper_nonrecov_threshold = 1.137 Volts
```

```
        upper_critical_threshold = 1.127 Volts
        upper_noncritical_threshold = 1.117 Volts
        lower_noncritical_threshold = 1.019 Volts
        lower_critical_threshold = 1.000 Volts
        lower_nonrecov_threshold = 0.980 Volts
        alarm_status = cleared

->
```

Related Information

- “Display Power Information for the IB Switch Chip (Oracle ILOM CLI)” on page 60
- “Display the MBOM Power Information (Oracle ILOM CLI)” on page 53

▼ Display the Switch Syslog Clients (Oracle ILOM CLI)

The switch has a Syslog utility that supports standard communication with remote Syslog clients that act as a repositories for all Syslog communication from the switch.

1. **Display the Syslog clients configured for the switch.**

```
-> show -d properties /SP/clients/syslog/X
->
```

where *X* is 1 or 2 for the Syslog client.

2. **Display the Syslog client configuration.**

For example, to display Syslog client 1's configuration, type:

```
-> show -d properties /SP/clients/syslog/1
 /SP/clients/syslog/1
  Properties:
   address = 123.45.67.89
->
```

Related Information

- “Display the Remote Log Hosts (Oracle ILOM CLI)” on page 100
- “Configure the Remote Log Host (Oracle ILOM CLI)” on page 373
- “Clear a Log (Oracle ILOM CLI)” on page 372

Displaying Switch Power (Oracle ILOM CLI)

These topics describe how to display additional power information for the switch and PSs.

- "Display Overall Switch Power Properties (Oracle ILOM CLI)" on page 63
- "Display Power Supply Information (Oracle ILOM CLI)" on page 64
- "Display the Battery Power Information (Oracle ILOM CLI)" on page 65
- "Display the Switch's Voltage Information (Oracle ILOM CLI)" on page 66

Related Information

- "Displaying Power Supply Power Information (Oracle ILOM CLI)" on page 54
- "Display the Status LEDs States (Oracle ILOM CLI)" on page 50
- "Display the MBOM Power Information (Oracle ILOM CLI)" on page 53
- "Display Power Information for the IB Switch Chip (Oracle ILOM CLI)" on page 60
- "Display Power Information for HCAs (Oracle ILOM CLI)" on page 61

▼ Display Overall Switch Power Properties (Oracle ILOM CLI)

Use this task to get switch-level information about power health, the power supply inventory in the switch, and power usage.

● **Display the power conditions for the overall switch.**

```
-> show -d properties /System/Power
 /System/Power
  Properties:
   health = OK
   health_details = -
   actual_power_consumption = Unknown
   max_permitted_power = Unknown
   installed_power_supplies = 2
   max_power_supplies = 2
->
```

Related Information

- "Display a Power Supply's Health (Oracle ILOM CLI)" on page 55
- "Display Power Supply Details (Oracle ILOM CLI)" on page 55
- "Display a Power Supply's Input Power Conditions (Oracle ILOM CLI)" on page 56
- "Display Power Supply Information (Oracle ILOM CLI)" on page 64

- “Display the Battery Power Information (Oracle ILOM CLI)” on page 65
- “Display the Switch's Voltage Information (Oracle ILOM CLI)” on page 66
- “Display Power Information for the IB Switch Chip (Oracle ILOM CLI)” on page 60
- “Display Power Information for HCAs (Oracle ILOM CLI)” on page 61
- “Display the MBOM Power Information (Oracle ILOM CLI)” on page 53

▼ Display Power Supply Information (Oracle ILOM CLI)

Use this task to query the presence and position of either of the switch's two PSs.

1. **Discover the presence or absence of a specific PS.**

```
-> show -d properties /SYS/PSslot/PRSNT
```

where *slot* is either `0` or `1` that corresponds to the PS for which you want to display information. For example, to determine the presence of PS 0, type:

```
-> show -d properties /SYS/PS0/PRSNT
 /SYS/PS0/PRSNT
  Properties:
   type = Entity Presence
   ipmi_name = PS0/PRSNT
   class = Discrete Sensor
   value = Present
   alarm_status = cleared
->
```

2. **Display the FRU information for the PS.**

```
-> show -d properties /SYS/PS0/
 /SYS/PSO
  Properties:
   type = Power Supply
   ipmi_name = PS0
   fru_manufacturer = Delta Electronics
   fru_part_number = 7065505-01
   fault_state = OK
   clear_fault_action = (none)
->
```

3. **Display the power supply FRU information.**

where *slot* is the slot of the power supply (`0` or `1`).

```
-> show -d properties /System/Power/Power_Supplies/Power_Supply_slot
```

For example, type:

```
-> show -d properties /System/Power/Power_Supplies/Power_Supply_0
 /System/Power/Power_Supplies/Power_Supply_0
  Properties:
   health = OK
   health_details = -
   part_number = 7065505-01
   serial_number = C94928
   manufacturer = Delta Electronics
   location = PS0 (Power Supply 0)
   input_power = Present
   output_power = 93 watts
->
```

Related Information

- “Display a Power Supply's Health (Oracle ILOM CLI)” on page 55
- “Display Power Supply Details (Oracle ILOM CLI)” on page 55
- “Display a Power Supply's Input Power Conditions (Oracle ILOM CLI)” on page 56
- “Display Overall Switch Power Properties (Oracle ILOM CLI)” on page 63
- “Display the Battery Power Information (Oracle ILOM CLI)” on page 65
- “Display the Switch's Voltage Information (Oracle ILOM CLI)” on page 66
- “Display Power Information for the IB Switch Chip (Oracle ILOM CLI)” on page 60
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- “Display the MBOM Power Information (Oracle ILOM CLI)” on page 53

▼ Display the Battery Power Information (Oracle ILOM CLI)

The switch contains a battery that provides standby power in conditions where the switch does not have constant power from the facility, for example, when the switch is powered off or resetting.

- **Display the voltage information for the switch's battery.**

```
-> show -d properties /SYS/MB/V_VBAT
 /SYS/MB/V_VBAT
  Properties:
   type = Voltage
   ipmi_name = MB/V_VBAT
   class = Threshold Sensor
   value = 3.047 Volts
```

```
   lower_noncritical_threshold = 2.548 Volts
   upper_nonrecov_threshold = N/A
         upper_critical_threshold = N/A
         upper_noncritical_threshold = N/A
         lower_noncritical_threshold = 2.548 Volts
         lower_critical_threshold = N/A
         lower_nonrecov_threshold = N/A
   alarm_status = cleared
->
```

Related Information

- “Display a Power Supply's Health (Oracle ILOM CLI)” on page 55
- “Display Power Supply Details (Oracle ILOM CLI)” on page 55
- “Display a Power Supply's Input Power Conditions (Oracle ILOM CLI)” on page 56
- “Display Overall Switch Power Properties (Oracle ILOM CLI)” on page 63
- “Display Power Supply Information (Oracle ILOM CLI)” on page 64
- “Display the Switch's Voltage Information (Oracle ILOM CLI)” on page 66
- “Display Power Information for the IB Switch Chip (Oracle ILOM CLI)” on page 60
- “Display Power Information for HCAs (Oracle ILOM CLI)” on page 61
- “Display the MBOM Power Information (Oracle ILOM CLI)” on page 53

▼ Display the Switch's Voltage Information (Oracle ILOM CLI)

The switch has many subsystems, and each uses different voltages of power from the PSs. You can display the various levels of power supplied to the switch as well as the event thresholds for that power.

1. **Display the one-volt power conditions for the switch.**

```
-> show /SYS/MB/V_+1V0
/SYS/MB/V_+1V0
 Properties:
  type = Voltage
  ipmi_name = MB/V_+1V0
  class = Threshold Sensor
  value = 0.983 Volts
  upper_nonrecov_threshold = 1.068 Volts
  upper_critical_threshold = 1.058 Volts
  upper_noncritical_threshold = 1.049 Volts
  lower_noncritical_threshold = 0.941 Volts
  lower_critical_threshold = 0.931 Volts
  lower_nonrecov_threshold = 0.921 Volts
  alarm_status = cleared
```

```
->
```

2. **Display the 1.2-volt power conditions for the switch.**

```
-> show /SYS/MB/V_+1V2
/SYS/MB/V_+1V2
 Properties:
  type = Voltage
  ipmi_name = MB/V_+1V2
  class = Threshold Sensor
  value = 1.179 Volts
  upper_nonrecov_threshold = 1.284 Volts
  upper_critical_threshold = 1.274 Volts
  upper_noncritical_threshold = 1.264 Volts
  lower_noncritical_threshold = 1.137 Volts
  lower_critical_threshold = 1.127 Volts
  lower_nonrecov_threshold = 1.117 Volts
  alarm_status = cleared

->
```

3. **Display the 1.5-volt power conditions for the switch.**

```
-> show -d properties /SYS/MB/V_+1V5
/SYS/MB/V_+1V5
 Properties:
  type = Voltage
  ipmi_name = MB/V_+1V5
  class = Threshold Sensor
  value = 1.474 Volts
  upper_nonrecov_threshold = 1.676 Volts
  upper_critical_threshold = 1.646 Volts
  upper_noncritical_threshold = 1.578 Volts
  lower_noncritical_threshold = 1.421 Volts
  lower_critical_threshold = 1.352 Volts
  lower_nonrecov_threshold = 1.323 Volts
  alarm_status = cleared

->
```

4. **Display the 1.8-volt power conditions for the switch.**

```
-> show -d properties /SYS/MB/V_+1V8
/SYS/MB/V_+1V8
 Properties:
  type = Voltage
  ipmi_name = MB/V_+1V8
  class = Threshold Sensor
  value = 1.823 Volts
```

```
  upper_nonrecov_threshold = 1.921 Volts
  upper_critical_threshold = 1.911 Volts
  upper_noncritical_threshold = 1.891 Volts
  lower_noncritical_threshold = 1.705 Volts
  lower_critical_threshold = 1.686 Volts
  lower_nonrecov_threshold = 1.676 Volts
  alarm_status = cleared

->
```

5. **Display the 2.5-volt power conditions for the switch.**

```
-> show -d properties /SYS/MB/V_+2V5
/SYS/MB/V_+2V5
 Properties:
  type = Voltage
  ipmi_name = MB/V_+2V5
  class = Threshold Sensor
  value = 3.660 Volts
  upper_nonrecov_threshold = 2.671 Volts
  upper_critical_threshold = 2.652 Volts
  upper_noncritical_threshold = 2.632 Volts
  lower_noncritical_threshold = 2.379 Volts
  lower_critical_threshold = 2.359 Volts
  lower_nonrecov_threshold = 2.340 Volts
  alarm_status = critical

->
```

6. **Display the 3.3-volt power conditions for the switch.**

```
-> show -d properties /SYS/MB/V_+3V3
/SYS/MB/V_+3V3
 Properties:
  type = Voltage
  ipmi_name = MB/V_+3V3
  class = Threshold Sensor
  value = 3.256 Volts
  upper_nonrecov_threshold = 3.510 Volts
  upper_critical_threshold = 3.490 Volts
  upper_noncritical_threshold = 3.471 Volts
  lower_noncritical_threshold = 3.139 Volts
  lower_critical_threshold = 3.120 Volts
  lower_nonrecov_threshold = 3.101 Volts
  alarm_status = cleared

->
```

7. **Display the 3.3-volt standby power conditions for the switch.**

```
-> show -d properties  /SYS/MB/V_+3V3_STDBY
/SYS/MB/V_+3V3_STDBY
 Properties:
  type = Voltage
  ipmi_name = MB/V_+3V3_STDBY
  class = Threshold Sensor
  value = 3.246 Volts
  upper_nonrecov_threshold = 3.510 Volts
  upper_critical_threshold = 3.490 Volts
  upper_noncritical_threshold = 3.471 Volts
  lower_noncritical_threshold = 3.139 Volts
  lower_critical_threshold = 3.120 Volts
  lower_nonrecov_threshold = 3.101 Volts
  alarm_status = cleared

->
```

Related Information

- “Display a Power Supply's Health (Oracle ILOM CLI)” on page 55
- “Display Power Supply Details (Oracle ILOM CLI)” on page 55
- “Display a Power Supply's Input Power Conditions (Oracle ILOM CLI)” on page 56
- “Display Overall Switch Power Properties (Oracle ILOM CLI)” on page 63
- “Display Power Supply Information (Oracle ILOM CLI)” on page 64
- “Display the Battery Power Information (Oracle ILOM CLI)” on page 65
- “Display Power Information for the IB Switch Chip (Oracle ILOM CLI)” on page 60
- “Display Power Information for HCAs (Oracle ILOM CLI)” on page 61
- “Display the MBOM Power Information (Oracle ILOM CLI)” on page 53

Displaying Switch Cooling (Oracle ILOM CLI)

The switch contains fan units consisting of individual fans. These topics describe how to display the switch temperatures and cooling subsystem.

- “Display Switch Cooling (Oracle ILOM CLI)” on page 70
- “Display Fan Information (Oracle ILOM CLI)” on page 70

Related Information

- “Display Faulted System Components (Oracle ILOM CLI)” on page 39
- “Display the Switch Temperatures (Oracle ILOM CLI)” on page 51

- “Display the MBOM Temperature (Oracle ILOM CLI)” on page 53

▼ Display Switch Cooling (Oracle ILOM CLI)

The switch reports overall cooling health for the entire system, including an inventory of the fans installed, and the temperature entering and exiting the chassis.

- **Display the condition of cooling and ventilation for the overall switch.**

```
-> show -d properties /System/Cooling
 /System/Cooling
  Properties:
   health = OK
   health_details = -
   installed_chassis_fans = 8
   max_chassis_fans = 8
   installed_power_supply_fans = Not Supported
   max_power_supply_fans = Not Supported
   inlet_temp = 33 degrees C
   exhaust_temp = 38 degrees C
->
```

Related Information

- “Display Fan Information (Oracle ILOM CLI)” on page 70
- “Display the Switch Temperatures (Oracle ILOM CLI)” on page 51
- “Display the MBOM Temperature (Oracle ILOM CLI)” on page 53

▼ Display Fan Information (Oracle ILOM CLI)

The switch has a total of eight fans numbered zero to seven, with two fans in each of four fan modules. Fan modules are numbered zero to three, so fans zero and one would be in the first fan module (`FM0`), fans two and three would be in the second fan module (`FM1`), and so on.

1. **Discover the presence or absence of a specific fan module.**

```
-> show -d properties /SYS/FM_slot/PRSNT
```

where *slot* is the slot of the fan (`0` to `3`) for which you want to display information.

For example, to determine the presence of fan module 0, type:

```
-> show -d properties /SYS/FM0/PRSNT
/SYS/FM0/PRSNT
  Properties:
   type = Entity Presence
   ipmi_name = FM0/PRSNT
   class = Discrete Sensor
   value = Present
   alarm_status = cleared
->
```

2. **Display the fan module's Health LED state.**

```
-> show /SYS/FM0/SERVICE
/SYS/FM0/SERVICE
  Properties:
   type = Indicator
         ipmi_name = FM0/SERVICE
         value = Off

->
```

3. **Display properties for a fan module.**

```
-> show -d properties /SYS/FM0
 /System/Cooling/Fans/Fan_0
  Properties:
   type = Fan Module
   ipmi_name = FM0
   fault_state = OK
   clear_fault_action = (none)
->
```

4. **Display the fault properties of an individual fan.**

```
-> show -d properties /SYS/FM0/Fan_X
```

where *X* is the number of the fan (`0` to `1` for `FM0`) for which you want to display information.

For example, to display information for fan 1:

```
-> show -d properties /SYS/FM0/FAN1
 /SYS/FM0/FAN1
  Properties:
   type = Fan Module
   ipmi_name = FM0/FAN1
   fault_state = OK
   clear_fault_action = (none)
->
```

5. **Display the health and location of an individual fan.**

```
-> show -d properties /System/Cooling/Fans/Fan_X
```

where *X* is the number of the fan (`0` through `7`). Fan information displayed is for the chassis cooling subsystem, not for component cooling such as power-supply fans.

For example, type:

```
-> show -d properties /System/Cooling/Fans/Fan_1
 /System/Cooling/Fans/Fan_1
  Properties:
   health = OK
   health_details = -
   part_number = Unknown
   serial_number = Unknown
   location = FM0 (Fan Module 0)
   fan_percentage = 33%
->
```

6. **Check the speed in RPMs of an individual fan.**

```
-> show -d properties /SYS/FMY/FANX/TACH
```

where *X* is the number of the fan you want to display for a specific fan module *Y*.

```
-> show -d properties /SYS/FM0/FAN1/TACH
 /SYS/FM0/FAN1/TACH
  Properties:
   type = Fan
   ipmi_name = FM0/FAN1/TACH
   class = Threshold Sensor
   value = 10000.000 RPM
   upper_nonrecov_threshold = 25000.000 RPMN
   upper_critical_threshold = 25000.0000 RPM
   upper_noncritical_threshold = 24000.000 RPM
   lower_noncritical_threshold = 6300.000 RPM
   lower_critical_threshold = 6000.000 RPM
   lower_nonrecov_threshold = 0.000 RPM
   alarm_status = cleared
->
```

Related Information

- “Display Switch Cooling (Oracle ILOM CLI)” on page 70
- “Display the Switch Temperatures (Oracle ILOM CLI)” on page 51
- “Display the MBOM Temperature (Oracle ILOM CLI)” on page 53

Displaying I/O Modules (Oracle ILOM CLI)

Note - This topic is not applicable to the Oracle InfiniBand Switch IS2-46 (leaf switch).

The Oracle Fabric Interconnect F2-12 (virtualization switch) contains I/O modules to customize connectivity in your datacenter. For information about the modules, refer to the user's guide for the appropriate module. User's guides are available at: `http://www.oracle.com/goto/f2-io-mod/docs`.

Module slots in the virtualization switch are numbered from 0 to 11, starting with the leftmost slot.

These topics describe how to display information for the virtualization switch's I/O modules:

- "Oracle ILOM Module Targets Overview" on page 73
- "Display Module Type (Oracle ILOM CLI)" on page 74
- "Display Module Faults (Oracle ILOM CLI)" on page 76
- "Display Module Power Information (Oracle ILOM CLI)" on page 78
- "Display Module Temperatures (Oracle ILOM CLI)" on page 80
- "Display Module FRU Information (Oracle ILOM CLI)" on page 82

Related Information

- "Display Faulted System Components (Oracle ILOM CLI)" on page 39
- "Stop a Module (Oracle ILOM CLI)" on page 320
- "Start a Module (Oracle ILOM CLI)" on page 321
- "Clear Module Faults (Oracle ILOM CLI)" on page 323
- "Reset a Module (Oracle ILOM CLI)" on page 325

Oracle ILOM Module Targets Overview

Oracle ILOM provides a generic target for all I/O modules and does not distinguish between different I/O modules. On each I/O module, Oracle ILOM monitors sensors that report information in either of the following ways:

- As a **discrete sensor**, either true (`state asserted`) or false (`state deasserted`)
- As a **threshold sensor**, which as numerical value for an appropriate unit of measurement, for example a number of degrees of temperature.

This table shows the Oracle ILOM Targets for I/O modules.

Sensor	Condition
Voltage OK	■ State Asserted indicates the voltage sensor is OK. ■ State Deasserted indicates that the voltage sensor is not OK.
Booted	■ State Asserted indicates the module has booted successfully. ■ State Deasserted indicates that the module has not booted successfully.
Fault	This sensor can report different types of information depending on the I/O module type. ■ State Asserted indicates the module is in a fault state. ■ State Deasserted indicates that the module is not in a fault state.
Power On	■ State Asserted indicates the module has powered on successfully. ■ State Deasserted indicates that the module has not powered on successfully.
Critical Temperature	■ State Asserted indicates the temperature on the I/O module is too high. ■ State Deasserted indicates that the voltage sensor is not OK.
Module Temperature	This threshold sensor displays the current module temperature and any applicable temperature thresholds, for example a temperature warning threshold.

Related Information

- “Display Module Type (Oracle ILOM CLI)” on page 74
- “Display Module Faults (Oracle ILOM CLI)” on page 76
- “Clear Module Faults (Oracle ILOM CLI)” on page 323
- “Display Module Temperatures (Oracle ILOM CLI)” on page 80
- “Display Module FRU Information (Oracle ILOM CLI)” on page 82

▼ Display Module Type (Oracle ILOM CLI)

The virtualization switch supports modules of different connection types. The table shows the different I/O module types and their string as displayed by the virtualization switch.

Module	String
Oracle F2 Dual Port 16Gb Fibre Channel	`FIBRE CHANNEL, IO MODULE`
Oracle F2 10GBASE-T	`10GBASE-T,IO MODULE`
Oracle F2 10G/40G Ethernet Module	`40GE/4x10GE,IO MODULE`

Module	String
Oracle InfiniBand Long Range	`IB LR,IO MODULE`

1. **Display the installed modules.**

```
-> show /SYS/MODULES/

 /SYS/MODULES
    Targets:
        MODULE0
        MODULE1
        MODULE3
        MODULE5
        MODULE6
        MODULE10
```

I/O modules in the virtualization switch are numbered 0 to 11 with Module 0 occupying the first (left most) physical slot.

2. **Display the module type.**

```
show /SYS/MODULES/MODULEX fru_description
```

where *X* is a number between `0` or `11` that corresponds to the module slot for which you want to display information.

For example, to display the module type for module 3, type:

```
-> show /SYS/MODULES/MODULE3 fru_description

  /SYS/MODULES/MODULE3
    Properties:
        fru_description = PCBA,10GBASE-T,IO MODULE
```

Related Information

- “Oracle ILOM Module Targets Overview” on page 73
- “Display Module Faults (Oracle ILOM CLI)” on page 76
- “Display Module Power Information (Oracle ILOM CLI)” on page 78
- “Display Module Temperatures (Oracle ILOM CLI)” on page 80
- “Display Module FRU Information (Oracle ILOM CLI)” on page 82

▼ Display Module Faults (Oracle ILOM CLI)

Sensors detect fault conditions on each module. If a fault occurs, an alarm is raised. Use this task to display the presence or absence of a fault condition on a module.

1. **Display the installed modules.**

```
-> show /SYS/MODULES/

 /SYS/MODULES
    Targets:
        MODULE0
        MODULE1
        MODULE3
        MODULE5
        MODULE6
        MODULE10
```

I/O modules in the virtualization switch are numbered 0 to 11 with Module 0 occupying the first (left most) physical slot.

2. **Display the overall health of a module.**

```
show /System/Networking/Modules/Module_X health
```

where *X* is a number between `0` or `11` that corresponds to the module slot for which you want to display information.

For example, to display the health for module 3, type:

```
->  show /System/Networking/Modules/Module_3 health

  /System/Networking/Modules/Module_3
    Properties:
        health = OK
```

3. **Display the detailed health of a module.**

```
show /System/Networking/Modules/Module_X health
```

where *X* is a number between `0` or `11` that corresponds to the module slot for which you want to display information.

For example, to display the detailed health for module 3, type:

```
-> show /System/Networking/Modules/Module_3/ health_details

 /System/Networking/Modules/Module_3
   Properties:
       health_details = -
```

Between the module `health` and `health_state`, you can determine if the module is operating correctly. In this example, the absence of specific values indicates that the module is operating in a healthy state.

4. **Display the presence or absence of a fault condition on a module.**

```
show /SYS/MODULES/MODULEX/FAULT
```

where *X* is a number between `0` or `11` that corresponds to the module slot for which you want to display information.

For example, to display the fault state for module 3, type:

```
-> show /SYS/MODULES/MODULE3/FAULT

/SYS/MODULES/MODULE3/FAULT
   Targets:

   Properties:
       type = Module
       ipmi_name = MODULE3/FAULT
       class = Discrete Sensor
       value = State Deasserted
       alarm_status = cleared
```

In this example, the module sensor is in `Deasserted` state, so the module is not experiencing a fault condition. For information about module sensor states, see “Oracle ILOM Module Targets Overview” on page 73.

Related Information

- “Display Module Type (Oracle ILOM CLI)” on page 74
- “Clear Module Faults (Oracle ILOM CLI)” on page 323
- “Display Module Power Information (Oracle ILOM CLI)” on page 78
- “Display Module Temperatures (Oracle ILOM CLI)” on page 80
- “Display Module FRU Information (Oracle ILOM CLI)” on page 82

▼ Display Module Power Information (Oracle ILOM CLI)

Modules installed in the virtualization switch should be operational while the switch is powered on and running. Modules can be in a different state than the overall switch power state. Use this task to display the power information for individual modules in the virtualization switch.

1. **Display the installed modules.**

```
-> show /SYS/MODULES/

 /SYS/MODULES
    Targets:
        MODULE0
        MODULE1
        MODULE3
        MODULE5
        MODULE6
        MODULE10
```

I/O modules in the virtualization switch are numbered 0 to 11 with Module 0 occupying the first (left most) physical slot in the virtualization switch.

2. **Display power state for a specific I/O module.**

```
-> show /SYS/MODULES/MODULEX power_state
```

where *X* is a number between `0` or `11` that corresponds to the module slot for which you want to display information.

For example, to display the power state for module 3, type:

```
-> show /SYS/MODULES/MODULE3 power_state

  /SYS/MODULES/MODULE3
    Properties:
        power_state = On
```

3. **Display the 0V85 power information for the module.**

```
-> show /SYS/MODULES/MODULE3/0V85_OK/

 /SYS/MODULES/MODULE3/0V85_OK
    Targets:

    Properties:
```

```
type = Voltage
ipmi_name = MODULE3/0V85_OK
class = Discrete Sensor
value = State Asserted
alarm_status = cleared
```

4. **Display 1-volt power information from module sensors.**

   a. **Display the 1V0 power sensor information.**

```
-> show /SYS/MODULES/MODULE3/1V0_OK/

 /SYS/MODULES/MODULE3/1V0_OK
    Targets:

    Properties:
        type = Voltage
        ipmi_name = MODULE3/1V0_OK
        class = Discrete Sensor
        value = State Asserted
        alarm_status = cleared
```

   b. **Display the 1V2 power sensor information.**

```
-> show /SYS/MODULES/MODULE3/1V2_OK

 /SYS/MODULES/MODULE3/1V2_OK
    Targets:

    Properties:
        type = Voltage
        ipmi_name = MODULE3/1V2_OK
        class = Discrete Sensor
        value = State Asserted
        alarm_status = cleared
```

   c. **Display the 1V8 power sensor information.**

```
-> show /SYS/MODULES/MODULE3/1V8_OK/

 /SYS/MODULES/MODULE3/1V8_OK
    Targets:

    Properties:
        type = Voltage
        ipmi_name = MODULE3/1V8_OK
        class = Discrete Sensor
```

```
            value = State Asserted
            alarm_status = cleared
```

5. **Display the 2V5 power information for the module.**

```
-> show /SYS/MODULES/MODULE3/2V5_OK/

 /SYS/MODULES/MODULE3/2V5_OK
    Targets:

    Properties:
        type = Voltage
        ipmi_name = MODULE3/2V5_OK
        class = Discrete Sensor
        value = State Asserted
        alarm_status = cleared
```

6. **Display the 3V3 power information for the module.**

```
-> show /SYS/MODULES/MODULE3/3V3_OK/

 /SYS/MODULES/MODULE3/3V3_OK
    Targets:

    Properties:
        type = Voltage
        ipmi_name = MODULE3/3V3_OK
        class = Discrete Sensor
        value = State Asserted
        alarm_status = cleared
```

Related Information

- “Oracle ILOM Module Targets Overview” on page 73
- “Display Module Type (Oracle ILOM CLI)” on page 74
- “Display Module Faults (Oracle ILOM CLI)” on page 76
- “Clear Module Faults (Oracle ILOM CLI)” on page 323
- “Display Module Temperatures (Oracle ILOM CLI)” on page 80
- “Display Module FRU Information (Oracle ILOM CLI)” on page 82

▼ Display Module Temperatures (Oracle ILOM CLI)

Each module has temperature sensors that register the ambient temperature of air moving across the module. Module temperature sensors raise an alarm if the temperature passes defined thresholds.

1. **Display the installed modules.**

```
-> show /SYS/MODULES/

 /SYS/MODULES
    Targets:
        MODULE0
        MODULE1
        MODULE3
        MODULE5
        MODULE6
        MODULE10
```

I/O modules in the virtualization switch are numbered 0 to 11 with Module 0 occupying the first (left most) physical slot.

2. **Display critical temperature sensor information for a specific I/O module.**

```
-> show /SYS/MODULES/MODULEX/T_CRITICAL
```

where *X* is a number between `0` or `11` that corresponds to the module slot for which you want to display information.

For example, to display the current temperature for module 3, type:

```
-> show /SYS/MODULES/MODULE3/T_CRITICAL/

 /SYS/MODULES/MODULE3/T_CRITICAL
    Targets:

    Properties:
        type = Temperature
        class = Discrete Sensor
        value = State Deasserted
        alarm_status = cleared
```

In this example, the sensor state is `Deasserted`, so the module temperature is in an acceptable range. For information about sensor states, see "Oracle ILOM Module Targets Overview" on page 73.

3. **Display the temperatures recorded for a specific I/O module.**

```
-> show /SYS/MODULES/MODULEX/T_MOD
```

where *X* is a number between `0` or `11` that corresponds to the module slot for which you want to display information.

For example, to display the current temperature for module 3, type:

```
-> show /SYS/MODULES/MODULE3/T_MOD/

 /SYS/MODULES/MODULE3/T_MOD
    Targets:

    Properties:
        type = Temperature
        class = Threshold Sensor
        value = 0.000 degree C
        upper_nonrecov_threshold = 105.000 degree C
        upper_critical_threshold = 100.000 degree C
        upper_noncritical_threshold = 95.000 degree C
        lower_noncritical_threshold = N/A
        lower_critical_threshold = -1.000 degree C
        lower_nonrecov_threshold = N/A
        alarm_status = cleared
```

Related Information

- “Display Module Type (Oracle ILOM CLI)” on page 74
- “Display Module Faults (Oracle ILOM CLI)” on page 76
- “Clear Module Faults (Oracle ILOM CLI)” on page 323
- “Display Module Power Information (Oracle ILOM CLI)” on page 78
- “Display Module FRU Information (Oracle ILOM CLI)” on page 82

▼ Display Module FRU Information (Oracle ILOM CLI)

Each module in the virtualization switch has its own FRU information. Use this task to retrieve important information such as serial number, part number, and so on.

1. **Display the installed modules.**

```
-> show /SYS/MODULES/

 /SYS/MODULES
    Targets:
        MODULE0
        MODULE1
        MODULE3
        MODULE5
```

```
MODULE6
MODULE10
```

I/O modules in the virtualization switch are numbered 0 to 11 with Module 0 occupying the first (left most) physical slot.

2. **Display manufacturer information for a specific module.**

show /SYS/MODULES/MODULE*X* **fru_manufacturer**

where *X* is a number between `0` or `11` that corresponds to the module slot for which you want to display information.

For example, to display the manufacturer for module 3, type:

```
-> show /SYS/MODULES/MODULE3 fru_manufacturer

  /SYS/MODULES/MODULE3
    Properties:
        fru_manufacturer = Oracle Corporation
```

3. **Display the part number for the module.**

```
-> show /SYS/MODULES/MODULE3 fru_part_number

  /SYS/MODULES/MODULE3
    Properties:
        fru_part_number = 7089440
```

4. **Display the revision level of the module.**

```
-> show /SYS/MODULES/MODULE3 fru_rev_level

  /SYS/MODULES/MODULE3
    Properties:
        fru_rev_level = 03
```

5. **Display the serial number of the module.**

```
-> show /SYS/MODULES/MODULE3 fru_serial_number

  /SYS/MODULES/MODULE3
    Properties:
        fru_serial_number = 489089M+1543D20034
```

6. **Display the MAC address of the module.**

```
-> show /SYS/MODULES/MODULE3 fru_macaddress

  /SYS/MODULES/MODULE3
    Properties:
        fru_macaddress = 00:10:e0:96:96:fa
```

Related Information

- "Oracle ILOM Module Targets Overview" on page 73
- "Display Module Type (Oracle ILOM CLI)" on page 74
- "Display Module Faults (Oracle ILOM CLI)" on page 76
- "Clear Module Faults (Oracle ILOM CLI)" on page 323
- "Display Module Power Information (Oracle ILOM CLI)" on page 78
- "Display Module Temperatures (Oracle ILOM CLI)" on page 80

Monitoring Authentication and Access (Oracle ILOM CLI)

These topics describe how to display information about the various methods of authentication and accessing the switch through the Oracle ILOM CLI.

- "Display the Switch's AD Client Information (Oracle ILOM CLI)" on page 85
- "Display the DNS Client Status (Oracle ILOM CLI)" on page 88
- "Display the Oracle ILOM LDAP Client Information (Oracle ILOM CLI)" on page 89
- "Display the Oracle ILOM LDAP over SSL Client Information (Oracle ILOM CLI)" on page 89
- "Display LDAP over SSL Properties (Oracle ILOM CLI)" on page 90
- "Display the Oracle ILOM RADIUS Client Information (Oracle ILOM CLI)" on page 93
- "Display the State of Single Sign-On (Oracle ILOM CLI)" on page 94

Related Information

- "Oracle ILOM Target Overview" on page 165
- "Getting Oracle ILOM Help (Oracle ILOM CLI)" on page 36
- "Monitoring Switch Components and Identification (Oracle ILOM CLI)" on page 38
- "Monitoring Events and Logging (Oracle ILOM CLI)" on page 94
- "Monitoring Management Networking (Oracle ILOM CLI)" on page 101

- “Monitoring Management Connections to the Switch (Oracle ILOM CLI)” on page 105
- “Monitoring Switch Interface Methods (Oracle ILOM CLI)” on page 108
- “Monitoring Switch Support Properties (Oracle ILOM CLI)” on page 116
- “Monitoring User Accounts (Oracle ILOM CLI)” on page 118
- “Monitoring Additional Components and Services (Oracle ILOM CLI)” on page 122

▼ Display the Switch's AD Client Information (Oracle ILOM CLI)

The switch hosts an AD client that supports management of AD users, including roles, servers and ports, groups, locator properties, certificates, search properties, and credentials.

1. **Display the AD client properties configured for the switch.**

```
-> show -d properties /SP/clients/activedirectory
/SP/clients/activedirectory
  Properties:
   address = 0.0.0.0
   defaultrole = Operator
   dnslocatormode = disabled
   expsearchmode = disabled
   logdetail = none
   port = 0
   state = disabled
   strictcertmode = disabled
   strictcredentialerrormode = disabled
   timeout = 4
->
```

2. **Display the configured AD administrator groups.**

```
-> show -d properties /SP/clients/activedirectory/admingroups/X
->
```

where *X* is 1 through 5 for the admin group.

For example, to display admin group 1's properties, type:

```
-> show -d properties /SP/clients/activedirectory/admingroups/1
/SP/clients/activedirectory/admingroups/1
  Properties:
   name = (none)
->
```

3. **Display the configured AD custom groups.**

```
-> show -d properties /SP/clients/activedirectory/customgroups/X
->
```

where *X* is 1 through 5 for the custom group.

For example, to display custom group 1's properties, type:

```
-> show -d properties /SP/clients/activedirectory/customgroups/1
/SP/clients/activedirectory/customgroups/1
  Properties:
   name = (none)
   roles = (none)
->
```

4. **Display the configured AD operator groups.**

```
-> show -d properties /SP/clients/activedirectory/opergroups/X
->
```

where *X* is 1 through 5 for the operator group.

For example, to display operator group 1's properties, type:

```
-> show -d properties /SP/clients/activedirectory/opergroups/1
/SP/clients/activedirectory/opergroups/1
  Properties:
   name = (none)
->
```

5. **Display the configured AD user domains.**

```
-> show -d properties /SP/clients/activedirectory/userdomains/X
->
```

where *X* is 1 through 5 for the user domain.

For example, to show user domain 1's properties, type:

```
-> show -d properties /SP/clients/activedirectory/userdomains/1
/SP/clients/activedirectory/userdomains/1
  Properties:
   name = (none)
->
```

6. **Display the configured AD alternate servers.**

```
-> show -d properties /SP/clients/activedirectory/alternateservers/X
->
```

where *X* is 1 through 5 for the alternate server.

For example, to display alternate server 1's properties, type:

```
-> show -d properties /SP/clients/activedirectory/alternateservers/1
/SP/clients/activedirectory/alternateservers/1
  Properties:
   address = (none)
   port = 0
->
```

7. Display the certificates configured for the switch's alternate AD servers.

```
-> show -d properties /SP/clients/activedirectory/alternateservers/X/cert
->
```

where *X* is 1 through 5 for the alternate server.

For example, to display alternate server 1's certificate, type:

```
-> show -d properties /SP/clients/activedirectory/alternateservers/1/cert
/SP/clients/ldapssl/activedirectory/1/cert
  Properties:
   certstatus = certificate not present
   clear_action = (Cannot show property)
   issuer = (none)
   load_uri = (Cannot show property)
   serial_number = (none)
   subject = (none)
   valid_from = (none)
   valid_until = (none)
   version = (none)
->
```

8. Display the configured AD DNS locator queries.

```
-> show -d properties /SP/clients/activedirectory/dnslocatorqueries/X/cert
->
```

where *X* is 1 through 5 for the locator query.

For example, to display locator query 1's properties, type:

```
-> show -d properties /SP/clients/activedirectory/dnslocatorqueries
/SP/clients/activedirectory/dnslocatorqueries/1
  Properties:
   service = _ldap._tcp.gc._msdcs.DOMAIN.PORT:3269
->
```

Different locator queries can be configured for different ports of the same service and domain, or for entirely different services or domains.

Related Information

- “Enable the AD Client (Oracle ILOM CLI)” on page 328
- “Configure AD Properties (Oracle ILOM CLI)” on page 329
- “Configure DNS Locator Queries (Oracle ILOM CLI)” on page 331
- “Manage an AD Server's Certificate (Oracle ILOM CLI)” on page 332
- “Configure an Alternate AD Server (Oracle ILOM CLI)” on page 333

▼ Display the DNS Client Status (Oracle ILOM CLI)

The switch hosts a DNS client that supports domain name services such as name lookup and resolution. DNS support can be manually specified or supported through auto DNS.

- **Display the DNS status.**

```
-> show -d properties /SP/clients/dns
 /SP/clients/dns
  Properties:
   auto_dns = enabled
   nameserver = 10.11.12.13, 10.11.12.14
   retries = 1
   searchpath = xx.company-domain.com
   timeout = 5
->
```

Related Information

- “Configure the DNS Client (Oracle ILOM CLI)” on page 342

Display the Oracle ILOM LDAP Client Information (Oracle ILOM CLI)

The switch hosts an LDAP client that supports management of LDAP users including roles, servers and ports, searchbases, and distinguished names (DNs).

- **Display the LDAP client settings configured for the switch.**

```
->show /SP/clients/ldap/
```

For example, type:

```
-> show /SP/clients/ldap/
 Targets:

  Properties:
   address = 0.0.0.0
   binddn = (none)
   bindpw = (none)
   defaultrole = Operator
   port = 389
   searchbase = (none)
   state = disabled
->
```

Related Information

- “Configure the LDAP Client (Oracle ILOM CLI)” on page 343

Display the Oracle ILOM LDAP over SSL Client Information (Oracle ILOM CLI)

The switch hosts an LDAP over SSL client that supports management of LDAP users, including roles, searchbases, servers, groups, and SSL certificates.

- **Display the LDAP over SSL client properties configured for the switch.**

```
->show /SP/clients/ldapssl/
```

For example, type:

```
-> show /SP/clients/ldapssl/
 Targets:

  Properties:
   address = 0.0.0.0
   defaultrole = (none)
   port = 0
   state = disabled
   strictcertmode = disabled
         timeout = 4
->
```

Related Information

- “Enable the LDAP over SSL Client (Oracle ILOM CLI)” on page 345
- “Configure LDAP over SSL Client Properties (Oracle ILOM CLI)” on page 346
- “Manage an LDAP over SSL Server's Certificate (Oracle ILOM CLI)” on page 348

▼ Display LDAP over SSL Properties (Oracle ILOM CLI)

LDAP over SSL properties can be displayed for various groups, user domains, user mappings, alternate LDAP over SSL servers, and certificates on alternate servers. For each, a maximum of 5 instances is supported.

1. **Display the configured LDAP over SSL administrator groups.**

```
-> show -d properties /SP/clients/ldapssl/admingroups/X
->
```

where *X* is 1 through 5 for the administrator group.

For example, to display administrator group 1's properties, type:

```
-> show -d properties /SP/clients/ldapssl/admingroups/1
/SP/clients/ldapssl/admingroups/1
  Properties:
   name = (none)
->
```

2. **Display the configured LDAP over SSL custom groups.**

```
-> show -d properties /SP/clients/ldapssl/customgroups/X
->
```

where *X* is 1 through 5 for the custom group.

For example, to display custom group 1's properties, type:

```
-> show -d properties /SP/clients/ldapssl/customgroups/1
/SP/clients/ldapssl/customgroups/1
  Properties:
   name = (none)
   roles = (none)
->
```

3. **Display the configured LDAP over SSL operator groups.**

```
-> show -d properties /SP/clients/ldapssl/opergroups/X
->
```

where *X* is 1 through 5 for the operator group.

For example, to display operator group 1's properties, type:

```
-> show -d properties /SP/clients/ldapssl/opergroups/1
/SP/clients/ldapssl/opergroups/1
  Properties:
   name = (none)
->
```

4. **Display the configured LDAP over SSL user domains.**

```
-> show -d properties /SP/clients/ldapssl/userdomains/X
->
```

where *X* is 1 through 5 for the user domain.

For example, to show user domain 1's properties, type:

```
-> show -d properties /SP/clients/ldapssl/userdomains/1
/SP/clients/ldapssl/userdomains/1
  Properties:
   domain = (none)
->
```

5. **Display the configured LDAP over SSL alternate servers.**

```
-> show -d properties /SP/clients/ldapssl/alternateservers/X
->
```

where *X* is 1 through 5 for the alternate server.

For example, to display alternate server 1's properties, type:

```
-> show -d properties /SP/clients/ldapssl/alternateservers/1
/SP/clients/ldapssl/alternateservers/1
  Properties:
   address = (none)
   port = 0
->
```

6. **Display the certificates configured for the LDAP over SSL alternate servers.**

```
-> show -d properties /SP/clients/ldapssl/alternateservers/X/cert
->
```

where *X* is 1 through 5 for the alternate server.

For example, to display alternate server 1's certificate, type:

```
-> show -d properties /SP/clients/ldapssl/alternateservers/1/cert
/SP/clients/ldapssl/alternateservers/x/cert
  Properties:
   certstatus = certificate not present
   clear_action = (Cannot show property)
   issuer = (none)
   load_uri = (Cannot show property)
   serial_number = (none)
   subject = (none)
   valid_from = (none)
   valid_until = (none)
   version = (none)
->
```

7. **(Optional) Display the configured LDAP over SSL optional user mappings.**

```
-> show -d properties /SP/clients/ldapssl/optionalUserMapping
/SP/clients/ldapssl/optionalUserMapping
  Properties:
   attributeInfo = (none)
   binddn = (none)
   bindpw = (none)
   searchbase = (none)
   state = disabled
->
```

Related Information

- “Enable the LDAP over SSL Client (Oracle ILOM CLI)” on page 345
- “Configure LDAP over SSL Client Properties (Oracle ILOM CLI)” on page 346
- “Manage an LDAP over SSL Server's Certificate (Oracle ILOM CLI)” on page 348

▼ Display the Oracle ILOM RADIUS Client Information (Oracle ILOM CLI)

The switch hosts a RADIUS client that supports management of RADIUS users including roles, servers and ports, and shared secrets.

1. **Display the RADIUS client properties configured for the switch.**

```
-> show -d properties /SP/clients/radius
/SP/clients/radius
  Properties:
   address = 0.0.0.0
   defaultrole = Operator
   port = 1812
   secret = (none)
   state = disabled
->
```

2. **Display the alternate RADIUS servers.**

```
-> show -d properties /SP/clients/radius/alternateservers/X/
->
```

where *X* is 1 through 5 for the alternate server.

For example, type:

```
-> show -d properties /SP/clients/radius/alternateservers/1
/SP/clients/radius/alternateservers/1
  Properties:
   address = 0.0.0.0
   port = 1812
   secret = (none)
->
```

Related Information

- “Enable the RADIUS Client (Oracle ILOM CLI)” on page 361

- “Configure RADIUS Properties (Oracle ILOM CLI)” on page 361
- “Configure a RADIUS Alternate Server (Oracle ILOM CLI)” on page 362
- “Disable the RADIUS Client (Oracle ILOM CLI)” on page 364

▼ Display the State of Single Sign-On (Oracle ILOM CLI)

The switch supports a single sign-on feature (SSO), which enables transportability for a user's credentials after being successfully authenticated. Credentials are stored and translated across multiple, different systems so that you are not always prompted for additional logins and passwords.

- **Display the SSO state.**

```
-> show -d properties /SP/services/sso
 /SP/services/sso
  Properties:
   state = enabled
->
```

Related Information

- “Enable SSO (Oracle ILOM CLI)” on page 365
- “Disable SSO (Oracle ILOM CLI)” on page 365

Monitoring Events and Logging (Oracle ILOM CLI)

These topics describe how to configure the state and properties of events, notifications, and event logging through the Oracle ILOM CLI.

- “Display the SMTP Client Status (Oracle ILOM CLI)” on page 95
- “Display the Alert Properties (Oracle ILOM CLI)” on page 96
- “Display the Oracle ILOM Audit Log (Oracle ILOM CLI)” on page 96
- “Display the Oracle ILOM Event Log (Oracle ILOM CLI)” on page 98
- “Oracle ILOM Log Entry Filters” on page 99
- “Display the Remote Log Hosts (Oracle ILOM CLI)” on page 100

Related Information

- “Monitoring Switch Components and Identification (Oracle ILOM CLI)” on page 38
- “Monitoring Authentication and Access (Oracle ILOM CLI)” on page 84
- “Monitoring Management Networking (Oracle ILOM CLI)” on page 101
- “Monitoring Management Connections to the Switch (Oracle ILOM CLI)” on page 105
- “Monitoring Switch Interface Methods (Oracle ILOM CLI)” on page 108
- “Monitoring Switch Support Properties (Oracle ILOM CLI)” on page 116
- “Monitoring User Accounts (Oracle ILOM CLI)” on page 118
- “Monitoring Additional Components and Services (Oracle ILOM CLI)” on page 122

▼ Display the SMTP Client Status (Oracle ILOM CLI)

The switch contains an SMTP email client that is used to email notification and alerts to a specified email address. The email address can be an alias or individual recipient's email, for example, the switch administrator. Use this task to configure Oracle ILOM as an SMTP client.

Note - To send messages, the SMTP client must be enabled and configured for email alert rules. See “Enable an Alert to Send Email Alerts (Oracle ILOM CLI)” on page 369.

- **Display the SMTP client status.**

```
-> show -d properties /SP/clients/smtp
 /SP/clients/smtp
  Properties:
   address = 123.45.67.89
   custom_sender = ilom-gw1@hostname
   port = 25
   send_test_email_to = (Cannot show property)
   state = disabled
->
```

This example shows that the SMTP client is not enabled.

Related Information

- “Configure the SMTP Client (Oracle ILOM CLI)” on page 366
- “Enable an Alert to Send Email Alerts (Oracle ILOM CLI)” on page 369

▼ Display the Alert Properties (Oracle ILOM CLI)

Alerts can provide advance notice of a system failure. The Oracle ILOM implementation in the SP supports 15 alert rules, which configure alert properties. Supported alert types are SNMP traps, IPMI PETs, and email alerts. For SNMP traps and PETs, the alert destination must have the relevant Oracle ILOM MIBs installed and must support SNMP traps.

- **Display the alert properties.**

```
-> show -d properties /SP/alertmgmt/rules/alert
```

where *alert* is the number of the alert to display from `1` to `15`.

For example, to display the properties for alert 1, type:

```
-> show -d properties /SP/alertmgmt/rules/1
 /SP/alertmgmt/rules/1
  Properties:
   type = snmptrap
   level = disable
   destination = 0.0.0.0
   destination_port = 0
   community_or_username = public
   snmp_version = 1
   testrule = (Cannot show property)
->
```

In the output, alert 1 is not configured to send any alerts.

Related Information

- “Enable an Alert to Send SNMP Traps (Oracle ILOM CLI)” on page 367
- “Enable an Alert to Send Email Alerts (Oracle ILOM CLI)” on page 369
- “Enable an Alert to Send PETs (Oracle ILOM CLI)” on page 370
- “Disable an Alert (Oracle ILOM CLI)” on page 371

▼ Display the Oracle ILOM Audit Log (Oracle ILOM CLI)

The Oracle ILOM audit log displays user actions that result in a configuration change. User actions such as logins, commands, command parameters, and command success or failure are tracked.

Note - You can filter the audit log to display information for specific types of commands or changes. See "Oracle ILOM Log Entry Filters" on page 99.

1. **Choose how to display the Oracle ILOM audit log:**

   - **Display the Oracle ILOM audit log unfiltered.**

```
-> show /SP/logs/audit/list

Audit
ID     Date/Time                 Class     Type      Severity
-----  ------------------------  --------  --------  --------
299    Fri Jan 12 03:41:16 2001  Audit     UI        minor
       root : Open Session : object = "/SP/sessions/1700/type" : value =
       "shell" : success
298    Fri Jan 12 02:13:18 2001  Audit     UI        minor
       root : Close Session : object = "/SP/sessions/1004/type" : value =
       "shell" : success
297    Thu Jan 11 04:55:41 2001  Audit     UI        minor
       root : Close Session : object = "/SP/sessions/1551/type" : value = "www"
       : success
Paused: press any key to continue, or 'q' to quit

->
```

   - **Display the Oracle ILOM audit log filtered for a specific Class and Type of event.**

     -> **show /SP/logs/audit/list Class==***class* **Type==***type*

     For example, to display the minor UI audit log events, type:

```
-> show /SP/logs/event/list Class==Audit Type==minor
Event
ID     Date/Time                 Class     Type      Severity
-----  ------------------------  --------  --------  --------
388    Sun Oct 11 12:38:38 2015  Audit     UI        minor
       root : Set : object = "/SYS/LOCATE/value" : value = "on" : error
387    Sun Oct 11 12:36:40 2015  Audit     UI        minor
       root : Set : object = "/SP/clients/smtp/state" : value = "enabled" :
       success
Paused: press any key to continue, or 'q' to quit

->
```

2. **Press any key to scroll to the next screen of output.**

   The Q key quits.

Related Information

- "Display the Oracle ILOM Event Log (Oracle ILOM CLI)" on page 98

▼ Display the Oracle ILOM Event Log (Oracle ILOM CLI)

The Oracle ILOM event log contains Oracle ILOM events that happened to or were initiated by the SP. Example events include user login, sensor state change, configuring of `syslog` servers, and so on. You can view these events using the Oracle ILOM `show` command for the `/SP/logs/event/list` target.

Note - You can filter the event log to display information for specific types of commands or changes. See "Oracle ILOM Log Entry Filters" on page 99.

---

1. **Choose how you want to display the Oracle ILOM event log:**

Note - The most recent events are listed at the top of the log.

- **Display the Oracle ILOM event log unfiltered.**

```
-> show /SP/logs/event/list

Event
ID     Date/Time                Class     Type      Severity
-----  -----------------------  --------  --------  --------
94     Tue Oct  9 01:15:13 2012  Audit     Log       minor
       root : Open Session : object = /session/type : value = shell : success
93     Tue Oct  9 01:13:51 2012  Audit     Log       minor
       test : Close Session : object = /session/type : value = www : success
92     Tue Oct  9 00:59:44 2012  Audit     Log       minor
Paused: press any key to continue, or 'q' to quit

->
```

The output columns are:

- Event `ID` – Sequence number of the event, starting with 1.
- `Date/Time` – Day and time the event occurred.

- `Class` – Can be `Audit`, `IPMI`, `Chassis`, or `Fault`.
- `Type` – Can be `Log`, `State`, `Action`, `Fault`, or `Repair`.
- `Severity` – Can be `Debug`, `Down`, `Critical`, `Major`, or `Minor`.

- **Display the Oracle ILOM event log filtered for a particular class and type of entry.**

  ```
  -> show /SP/logs/event/list Class==class Type==type
  ```

  For example, to display the IPMI log events, type:

```
-> show /SP/logs/event/list Class==IPMI Type==Log
Event
ID     Date/Time                 Class     Type      Severity
-----  ------------------------  --------  --------  --------
61600  Mon Jan 14 14:36:55 2013  IPMI      Log       critical
       ID = 16cf : 01/14/2013 : 14:36:55 : OEM sensor : CABLE_CONN_STAT : State
       Deasserted
61599  Mon Jan 14 14:36:45 2013  IPMI      Log       critical
       ID = 16ce : 01/14/2013 : 14:36:45 : OEM sensor : CABLE_CONN_STAT : State
       Asserted
61594  Wed Jan  9 11:29:03 2013  IPMI      Log       critical
       ID = 16cd : 01/09/2013 : 11:29:03 : OEM sensor : PSU0/ALERT : State Deasserted
Paused: press any key to continue, or 'q' to quit

->
```

Note - Refer to the detecting and managing faults topic in your switch's service manual, for more information about filtering the Oracle ILOM event log for fault information.

2. **Press the Spacebar to scroll to the next screen of output.**
   The Q key quits.

Related Information

- “Display the Oracle ILOM Audit Log (Oracle ILOM CLI)” on page 96

Oracle ILOM Log Entry Filters

When you display the Oracle ILOM logs, you can filter the output to specific classes and types of entries using combinations of the `Class` and `Type` parameters. See either “Display the Oracle ILOM Audit Log (Oracle ILOM CLI)” on page 96 or “Display the Oracle ILOM Event Log (Oracle ILOM CLI)” on page 98.

Parameters	Entries Displayed
`Class==Audit Type==Log`	Commands that result in a configuration change. Description includes user, command, command parameters, and success or failure.
`Class==IPMI Type==Log`	Any event that is placed in the IPMI SEL is also put into the management log.
`Class==Chassis Type==Action`	Hot-insertion and removal of components.
`Class==Fault Type==Fault`	Fault management faults. Description gives the time fault was detected and the suspect component.
`Class==Fault Type==Repair`	Fault management repairs. Description gives the component repaired.

The output can be further filtered with one of the `Severity` parameters:

- `Debug`
- `Down`
- `Critical`
- `Major`
- `Minor`

For example, to display only log entries indicating a minor change to the system inventory, type:

```
-> show /SP/logs/event/list Class==Chassis Type==State Severity==Minor
```

Related Information

- “Display the Oracle ILOM Audit Log (Oracle ILOM CLI)” on page 96
- “Display the Oracle ILOM Event Log (Oracle ILOM CLI)” on page 98

▼ Display the Remote Log Hosts (Oracle ILOM CLI)

The switch has a Syslog utility that supports standard communication with remote Syslog servers that act as a repositories for all Syslog communication from the switch. Use this task to display the primary and secondary Syslog servers, numbered 1 and 2 respectively.

- **Display the remote log hosts.**

```
-> show /SP/clients/syslog/number address
```

where *number* is the number of the host, either 1 or 2.

For example, to display the IP address of remote host 1, type:

```
-> show /SP/clients/syslog/1 address
 /SP/clients/syslog/1
  Properties:
   address = 0.0.0.0
->
```

Note - The address of `0.0.0.0` or `(none)` indicates that remote host 1 functionality is not configured.

Related Information

- “Configure the Remote Log Host (Oracle ILOM CLI)” on page 373

Monitoring Management Networking (Oracle ILOM CLI)

These topics describe how to display the switch's network configuration and individual network controllers through the Oracle ILOM CLI.

- “Display Ethernet Switch Properties (Oracle ILOM CLI)” on page 102
- “Display the IPv6 Management Network Properties (Oracle ILOM CLI)” on page 103
- “Display IB Switch Properties (Oracle ILOM CLI)” on page 103
- “Display the Management Network Configuration (Oracle ILOM CLI)” on page 104

Related Information

- “Oracle ILOM Target Overview” on page 165
- “Getting Oracle ILOM Help (Oracle ILOM CLI)” on page 36
- “Monitoring Switch Components and Identification (Oracle ILOM CLI)” on page 38
- “Monitoring Authentication and Access (Oracle ILOM CLI)” on page 84
- “Monitoring Events and Logging (Oracle ILOM CLI)” on page 94
- “Monitoring Management Connections to the Switch (Oracle ILOM CLI)” on page 105
- “Monitoring Switch Interface Methods (Oracle ILOM CLI)” on page 108
- “Monitoring Switch Support Properties (Oracle ILOM CLI)” on page 116

- “Monitoring User Accounts (Oracle ILOM CLI)” on page 118
- “Monitoring Additional Components and Services (Oracle ILOM CLI)” on page 122

▼ Display Ethernet Switch Properties (Oracle ILOM CLI)

The switch has an Ethernet switch that chip contains the SEFOS operating system and provides Ethernet networking functionality. Use this task to display the properties for the Ethernet switch chip, including the switch health and firmware version installed.

1. **Display properties for the switch's internal Ethernet switch chip.**

```
-> show -d properties /System/Networking/Switches/Switch_0
 /System/Networking/Switches/Switch_0
  Properties:
   health = OK
   health_details = -
   type = Ethernet
   firmware_version = Unknown
   location = ETHSWITCH0 (Network Switch 0)
   action = (none)
   load_uri = (none)
->
```

2. **Display the Ethernet switch firmware version.**

```
-> show -d properties /System/Firmware/Other_Firmware/Firmware_1
 /System/Firmware/Other_Firmware/Firmware_1
  Properties:
   component =  SYS ETHSWITCH0
   type = Upgradeable FRU
   version = 1.0.1
   load_uri = (none)
->
```

Related Information

- “Display the Switch Firmware Versions (Oracle ILOM CLI)” on page 45
- “Configure the Management Network Parameters (Oracle ILOM CLI)” on page 374
- “Enable IPv4 (Oracle ILOM CLI)” on page 376
- “Configure IPv4 Routing Properties (Oracle ILOM CLI)” on page 377
- “Enable IPv6 Management Network Routing (Oracle ILOM CLI)” on page 379

- “Configure IPv6 Management Network Properties (Oracle ILOM CLI)” on page 379

Display the IPv6 Management Network Properties (Oracle ILOM CLI)

The switch supports standard IPv6 routing for the network management interface.

- **If IPv6 routing is configured for the switch, display the IPv6 routing configuration.**

```
-> show -d properties /SP/network/ipv6
 /SP/network/ipv6
  Properties:
   state = disabled
   autoconfig = stateless
   dhcpv6_server_duid = (none)
   link_local_ipaddress = fe80::203:baff:fe7a:a197/64
   static_ipaddress = ::/128
   ipgateway = fe80::21a:a1ff:fe85:b83f
   static_ipgateway = ::
   pending_static_ipaddress = ::/128
   pending_static_ipgateway = ::
         dynamic_ipaddress_1 = 2606:b400:418:277b:203:baff:fe7a:a197/64

->
```

Related Information

- “Display Ethernet Switch Properties (Oracle ILOM CLI)” on page 102
- “Display the Switch Firmware Versions (Oracle ILOM CLI)” on page 45
- “Configure the Management Network Parameters (Oracle ILOM CLI)” on page 374
- “Enable IPv4 (Oracle ILOM CLI)” on page 376
- “Configure IPv4 Routing Properties (Oracle ILOM CLI)” on page 377
- “Enable IPv6 Management Network Routing (Oracle ILOM CLI)” on page 379
- “Configure IPv6 Management Network Properties (Oracle ILOM CLI)” on page 379

Display IB Switch Properties (Oracle ILOM CLI)

The switch has an IB switch chip that is networking switch 1. By default, this switch is brought online whenever the switch is powered on.

- **Display the properties of the IB switch.**

```
-> show -d properties /System/Networking/Switches/Switch_1
 /System/Networking/Switches/Switch_1
  Properties:
   health = OK
   health_details = -
   type = Infiniband
   firmware_version = 1.0.860
   location = IBSWITCH0 (Network Switch 0)
   action = (none)
->
```

Related Information

- “Display Ethernet Switch Properties (Oracle ILOM CLI)” on page 102
- “Display the Switch Firmware Versions (Oracle ILOM CLI)” on page 45
- “Configure the Management Network Parameters (Oracle ILOM CLI)” on page 374
- “Enable IPv4 (Oracle ILOM CLI)” on page 376
- “Configure IPv4 Routing Properties (Oracle ILOM CLI)” on page 377
- “Enable IPv6 Management Network Routing (Oracle ILOM CLI)” on page 379
- “Configure IPv6 Management Network Properties (Oracle ILOM CLI)” on page 379

▼ Display the Management Network Configuration (Oracle ILOM CLI)

Use this task to display the current settings for the SP and network management interface, including IP networking properties, gateway, SP MAC address and assigned IP addresses.

- **Display the network management configuration.**

```
-> show -d properties /SP/network
```

For example, type:

```
-> show -d properties /SP/network
 /SP/network
  Properties:
   commitpending = (Cannot show property)
   dhcp_clientid = none
   dhcp_server_ip = 10.11.12.13
   ipaddress = 10.11.12.70
```

```
   ipdiscovery = dhcp
   ipgateway = 10.11.12.1
   ipnetmask = 255.255.255.0
   macaddress = 00:E0:4B:28:00:8E
   pendingipaddress = 10.11.12.70
   pendingipdiscovery = dhcp
   pendingipgateway = 10.11.12.1
   pendingipnetmask = 255.255.255.0
   state = enabled
->
```

Related Information

- “Display Ethernet Switch Properties (Oracle ILOM CLI)” on page 102
- “Display the Switch Firmware Versions (Oracle ILOM CLI)” on page 45
- “Configure the Management Network Parameters (Oracle ILOM CLI)” on page 374
- “Enable IPv4 (Oracle ILOM CLI)” on page 376
- “Configure IPv4 Routing Properties (Oracle ILOM CLI)” on page 377
- “Enable IPv6 Management Network Routing (Oracle ILOM CLI)” on page 379
- “Configure IPv6 Management Network Properties (Oracle ILOM CLI)” on page 379

Monitoring Management Connections to the Switch (Oracle ILOM CLI)

These topics describe how to display connections to the switch through the Oracle ILOM CLI interface.

- “Display the System Banner Messages (Oracle ILOM CLI)” on page 106
- “Display the Serial Connection Properties (Oracle ILOM CLI)” on page 106
- “Display the Host Console Connection Settings (Oracle ILOM CLI)” on page 107

Related Information

- “Monitoring Switch Components and Identification (Oracle ILOM CLI)” on page 38
- “Monitoring Authentication and Access (Oracle ILOM CLI)” on page 84
- “Monitoring Events and Logging (Oracle ILOM CLI)” on page 94
- “Monitoring Management Networking (Oracle ILOM CLI)” on page 101
- “Monitoring Switch Interface Methods (Oracle ILOM CLI)” on page 108
- “Monitoring Switch Support Properties (Oracle ILOM CLI)” on page 116
- “Monitoring User Accounts (Oracle ILOM CLI)” on page 118
- “Monitoring Additional Components and Services (Oracle ILOM CLI)” on page 122

Display the System Banner Messages (Oracle ILOM CLI)

The switch supports banner messages that are displayed as users connect to, or log in to, the switch.

1. **Display the banner connection messages.**

```
-> show -d properties /SP/preferences/banner/connect
 /SP/preferences/banner/connect
  Properties:
   dump_uri = (Cannot show property)
   load_uri = (Cannot show property)
   message = (none)
->
```

2. **Display the banner login message.**

```
-> show -d properties /SP/preferences/banner/login
 /SP/preferences/banner/login
  Properties:
   dump_uri = (Cannot show property)
   load_uri = (Cannot show property)
   message = (none)
   message_acceptance = disabled
->
```

Related Information

- “Configure Connection Message Properties (Oracle ILOM CLI)” on page 385
- “Configure Login Message Properties (Oracle ILOM CLI)” on page 385

Display the Serial Connection Properties (Oracle ILOM CLI)

The switch supports connection to a management terminal through a serial connection.

The serial connection must have the same properties on the switch and host at the end of the connection. Use this task to display the serial connection properties, such as flow control and connection baud rate, for the switch's end of the connection.

1. **Display the properties for connection to external devices.**

```
-> show -d properties /SP/serial/external
 /SP/serial/external
  Properties:
   commitpending = (Cannot show property)
   flowcontrol = software
   pendingflowcontrol = software
   pendingspeed = 115200
   speed = 115200
->
```

2. **Display the switch's properties for serial connection.**

```
-> show -d properties /SP/serial/host
 /SP/serial/host
  Properties:
   commitpending = (Cannot show property)
   flowcontrol = software
   pendingflowcontrol = software
   pendingspeed = 115200
   speed = 115200
->
```

3. **Display which entity controls the serial connection.**

```
-> show -d properties /SP/serial/portsharing
 /SP/serial/portsharing
  Properties:
   owner = sp
->
```

Related Information

- “Display the Host Console Connection Settings (Oracle ILOM CLI)” on page 107
- “Configure External Serial Connection Properties (Oracle ILOM CLI)” on page 382
- “Configure Host Serial Connection Properties (Oracle ILOM CLI)” on page 383
- “Configure Port Sharing (Oracle ILOM CLI)” on page 384

▼ Display the Host Console Connection Settings (Oracle ILOM CLI)

- **Display the current settings for the switch console connections.**

```
-> show -d properties /HOST/console
 /HOST/console
  Properties:
   line_count = 0
   logging = enabled
   pause_count = 0
   start_from = end
->
```

Related Information

- “Configure External Serial Connection Properties (Oracle ILOM CLI)” on page 382
- “Configure Host Serial Connection Properties (Oracle ILOM CLI)” on page 383
- “Configure Port Sharing (Oracle ILOM CLI)” on page 384

Monitoring Switch Interface Methods (Oracle ILOM CLI)

These topics describe how to use the Oracle ILOM CLI to display various methods of interfacing with the switch.

- “Checking the Status of SNMP Services (Oracle ILOM CLI)” on page 109
- “Display the IPMI Service Status (Oracle ILOM CLI)” on page 111
- “Display the SSH Properties (Oracle ILOM CLI)” on page 112
- “Checking the Status of Web Services (Oracle ILOM CLI)” on page 113

Related Information

- “Oracle ILOM Target Overview” on page 165
- “Getting Oracle ILOM Help (Oracle ILOM CLI)” on page 36
- “Monitoring Switch Components and Identification (Oracle ILOM CLI)” on page 38
- “Monitoring Authentication and Access (Oracle ILOM CLI)” on page 84
- “Monitoring Events and Logging (Oracle ILOM CLI)” on page 94
- “Monitoring Management Networking (Oracle ILOM CLI)” on page 101
- “Monitoring Management Connections to the Switch (Oracle ILOM CLI)” on page 105
- “Monitoring Switch Support Properties (Oracle ILOM CLI)” on page 116
- “Monitoring User Accounts (Oracle ILOM CLI)” on page 118
- “Monitoring Additional Components and Services (Oracle ILOM CLI)” on page 122

Checking the Status of SNMP Services (Oracle ILOM CLI)

The switch contains a preinstalled SNMP agent that supports Oracle ILOM functions only, not standard SNMP network management functions. These topics document how to display the switch's SNMP service and its properties through the Oracle ILOM CLI.

- "Display the SNMP Service Status (Oracle ILOM CLI)" on page 109
- "Display the SNMP User Accounts (Oracle ILOM CLI)" on page 110
- "Display the SNMP Service Communities (Oracle ILOM CLI)" on page 110

Related Information

- "Display the IPMI Service Status (Oracle ILOM CLI)" on page 111
- "Display the SSH Properties (Oracle ILOM CLI)" on page 112
- "Display the HTTPS Service Status (Oracle ILOM CLI)" on page 113
- "Display the HTTP Service Status (Oracle ILOM CLI)" on page 115

▼ Display the SNMP Service Status (Oracle ILOM CLI)

- **Type:**

```
-> show -d properties /SP/services/snmp
 /SP/services/snmp
  Properties:
   engineid = (none)
   port = 161
   servicestate = enabled
   sets = disabled
   v1 = disabled
   v2c = disabled
   v3 = enabled
->
```

Related Information

- "Display the SNMP Service Status (Oracle ILOM CLI)" on page 109
- "Display the SNMP User Accounts (Oracle ILOM CLI)" on page 110
- "Display the SNMP Service Communities (Oracle ILOM CLI)" on page 110
- "Managing SNMP Services (Oracle ILOM CLI)" on page 398

▼ Display the SNMP User Accounts (Oracle ILOM CLI)

Use this task to display the SNMP v3 user accounts configured on the switch.

1. **Display the SNMP users.**

```
-> show -d targets /SP/services/snmp/users
```

For example, type:

```
-> show -d targets /SP/services/snmp/users
 /SP/services/snmp/users
  Targets:
  snmpuser
->
```

2. **Display the snmpuser user properties.**

```
-> show -d properties /SP/services/snmp/users/snmpuser
 /SP/services/snmp/users/snmpuser
  Properties:
   authenticationpassword = (Cannot show property)
   authenticationprotocol = MD5
   permission = ro
   privacypassword = (Cannot show property)
   privacyprotocol = none
->
```

Related Information

- “Display the SNMP Service Status (Oracle ILOM CLI)” on page 109
- “Display the SNMP User Accounts (Oracle ILOM CLI)” on page 110
- “Display the SNMP Service Communities (Oracle ILOM CLI)” on page 110
- “Managing SNMP Services (Oracle ILOM CLI)” on page 398

▼ Display the SNMP Service Communities (Oracle ILOM CLI)

Use this task to display the SNMP v1 and v2c communities configured on the switch.

1. **Display the SNMP communities.**

```
-> show -d targets /SP/services/snmp/communities
```

```
 /SP/services/snmp/communities
  Targets:
   private
   public
->
```

2. **Display the public community properties.**

```
-> show -d properties /SP/services/snmp/communities/public
 /SP/services/snmp/communities/public
  Properties:
   permission = ro
->
```

3. **Display the private community properties.**

```
-> show -d properties /SP/services/snmp/communities/private
 /SP/services/snmp/communities/private
  Properties:
   permission = rw
->
```

Related Information

- “Display the SNMP Service Status (Oracle ILOM CLI)” on page 109
- “Display the SNMP User Accounts (Oracle ILOM CLI)” on page 110
- “Display the SNMP Service Communities (Oracle ILOM CLI)” on page 110
- “Managing SNMP Services (Oracle ILOM CLI)” on page 398

▼ Display the IPMI Service Status (Oracle ILOM CLI)

The switch runs a service that supports IPMI management of the switch. The switch's IPMI service supports both IPMI versions 1.5 and 2.0. IPMI version 2.0 is the default, and is more secure, so it is enabled by default.

- **Display the IPMI status.**

```
-> show -d properties /SP/services/ipmi
 /SP/services/ipmi
  Properties:
   servicestate = enabled
   v1_5_sessions = disabled
->
```

Related Information

- “Managing IPMI Services (Oracle ILOM CLI)” on page 410
- “Enable an Alert to Send PETs (Oracle ILOM CLI)” on page 370

▼ Display the SSH Properties (Oracle ILOM CLI)

The switch has an SSH server that enables system administrators to configure the properties for SSH management access and generate new RSA and DSA SSH keys on demand.

1. **Display the status of the SSH server supported on the switch.**

```
-> show -d properties /SP/services/ssh
 /SP/services/ssh
  Properties:
   generate_new_key_action = (Cannot show property)
   generate_new_key_type = none
   restart_sshd_action = (Cannot show property)
   state = enabled
->
```

2. **Display the SSH DSA key if present.**

```
-> show -d properties /SP/services/ssh/keys/dsa
 /SP/services/ssh/keys/dsa
  Properties:
  fingerprint = 3b:8e:0a:00:c6:71:64:ca:2a:7d:5c:69:6c:95:50:44
  length = 1024
  privatekey = (Cannot show property)
  publickey =  AAAAB3NzaC1kc3MAAACBAN2rXIB47zdO6DMCmMMKpNw3Lr8EAyN3GlNLZag4
   VCgrcr/yk81t/U16DjRpqThX6mRNRG2gu+73Arn2RhMwpv0tA3htbtY3O2pg
   1sr8qZUFzPx5dZxomby7Q8mlHPUYMRdhY07xBu7wpfV3/FuBTOi06BpqAZMu
   Ce8Go1XAZqfFAAAAFQDfA46H1r5V+r0DYaxteuupoiR9CwAAAIBOhiBPQ1I2
   QON7aOZM2CiNBoUlaazWlbBAFdSKAfK91H4EzfbAD0bS1KrsevSRZ5pwFrIH
   1azCYHeYqK4eg56k99tIcrfHhA1OalFv+4re5ZXES0kq3J/rVjr/pPwegTF0
   /a6KHpi8XntitLzQC80JlysMaPq7CI3N32+TsIzVQAAAAIBHVjoiSY1MuTR5
   NCJzyU2Ovkxyt50lI1NBDBqRH0pey6uRwAUbU2U6muiYmEZDv1ws7JdoMXGJ
   gejsc+4uaqjODsqJt4vnKYWmAd8NUCOmK/ceNmoR6TtzYbiNaxwuJijtJCGd
   q6oc33MCAGTwtqnrfVoXkQVdUsgpJjqWuZYrXQ==
->
```

3. **Display the SSH DSA key if present.**

```
-> show -d properties /SP/services/ssh/keys/rsa
```

```
 /SP/services/ssh/keys/rsa
  Properties:
  fingerprint = 4f:e8:83:22:50:8f:a2:d0:e3:c5:a3:8b:fa:28:0c:52
  length = 1024
  privatekey = (Cannot show property)
  publickey =  AAAAB3NzaC1yc2EAAAADAQABAAAAgQCq8UO5bLGSCyrGea8svQ0JXgdUitTn
   BfTwTRNqmFJie/HI9OyxC5XJjV6M9Ytjs3K155/iPSL8Mzl/wtGKYaGw2fHR
   xeyKHHnnAkqrADCWmf5bx7Rn5VA+Hf46Sqz/ptw4AH1xS5sgtLI4ZT842OOT
   rHUiykb0jxx4YK9nDlZ3VQ==
->
```

Related Information

- “Enable the SSH Service (Oracle ILOM CLI)” on page 395
- “Configure SSH Properties (Oracle ILOM CLI)” on page 396
- “Generate New Keys (Oracle ILOM CLI)” on page 396
- “Restart the SSH Daemon (Oracle ILOM CLI)” on page 397
- “Disable the SSH Service (Oracle ILOM CLI)” on page 397

Checking the Status of Web Services (Oracle ILOM CLI)

The switch runs both HTTPS and HTTP services to supports web access for your network environment. These topics describe how to configure the switch's HTTP service.

- “Display the HTTPS Service Status (Oracle ILOM CLI)” on page 113
- “Display the HTTPS Server SSL Certificates (Oracle ILOM CLI)” on page 114
- “Display the HTTP Service Status (Oracle ILOM CLI)” on page 115

Related Information

- “Checking the Status of SNMP Services (Oracle ILOM CLI)” on page 109
- “Display the IPMI Service Status (Oracle ILOM CLI)” on page 111
- “Display the SSH Properties (Oracle ILOM CLI)” on page 112

▼ Display the HTTPS Service Status (Oracle ILOM CLI)

The switch runs an HTTPS service that supports web access and SSL-based encryption. Use this task to display the HTTPS service properties, certificate information, and allowed versions of SSL and TLS.

- **Display the HTTPS status.**

```
-> show -d properties /SP/services/https
 /SP/services/https
  Properties:
   port = 443
   servicestate = enabled
   sessiontimeout = 15
   tslv1 = enabled
   tslv1_1 = enabled
   tslv1_2 = enabled
->
```

Related Information

- "Display the HTTPS Server SSL Certificates (Oracle ILOM CLI)" on page 114
- "Managing the HTTPS Service (Oracle ILOM CLI)" on page 390
- "Display the HTTP Service Status (Oracle ILOM CLI)" on page 115
- "Managing the HTTP Service (Oracle ILOM CLI)" on page 387

▼ Display the HTTPS Server SSL Certificates (Oracle ILOM CLI)

The switch runs an HTTP service that supports web access. Use this task to display the HTTP service properties, including certificate information.

1. **Display the SSL status.**

```
-> show -d properties /SP/services/https/ssl
 /SP/services/https/ssl
  Properties:
   cert_status = Using Default (No custom certificate or private key loaded)
->
```

2. **Display the properties of the `default_cert` certificate.**

```
-> show -d properties /SP/services/https/ssl/default_cert
 /SP/services/https/ssl/default_cert
  Properties:
  issuer = /C=US/ST=California/L=Redwood Shores/O=Oracle America, Inc./CN=Oracle Integrated Lights Out
 Manager
  subject = /C=US/ST=California/L=Redwood Shores/O=Oracle America, Inc./CN=Oracle Integrated Lights Out
 Manager
  valid_from = Jun 12 15:29:01 2014 GMT
  valid_until = Jun  7 15:29:01 2034 GMT
->
```

3. **Display the properties of a custom certificate.**

```
-> show -d properties /SP/services/https/ssl/custom_cert
 /SP/services/https/ssl/custom_cert
  Properties:
  clear_action = (Cannot show property)
  issuer = (none)
  load_uri = (Cannot show property)
  subject = (none)
  valid_from = (none)
  valid_until = (none)
->
```

4. **(Optional) Display the custom key.**

```
-> show -d properties /SP/services/https/ssl/custom_key
 /SP/services/https/ssl/custom_key
  Properties:
  clear_action = (Cannot show property)
  key_present = false
  load_uri = (Cannot show property)
->
```

Related Information

- “Managing the HTTPS Service (Oracle ILOM CLI)” on page 390
- “Display the HTTP Service Status (Oracle ILOM CLI)” on page 115
- “Managing the HTTP Service (Oracle ILOM CLI)” on page 387

▼ Display the HTTP Service Status (Oracle ILOM CLI)

By default, HTTP is not enabled. If HTTP is enabled, use this task to display the configured HTTP properties.

- **Display the HTTP status.**

```
-> show -d properties /SP/services/http
 /SP/services/http
  Properties:
   port = 80
   secureredirect = disabled
   servicestate = enabled
   sessiontimeout = 15
->
```

Related Information

- “Display the HTTPS Server SSL Certificates (Oracle ILOM CLI)” on page 114
- “Managing the HTTPS Service (Oracle ILOM CLI)” on page 390
- “Managing the HTTP Service (Oracle ILOM CLI)” on page 387

Monitoring Switch Support Properties (Oracle ILOM CLI)

These topics describe how to display the properties related to service and support of the switch.

- “Display the Switch FRU ID (Oracle ILOM CLI)” on page 116
- “Display the ASR Client Status (Oracle ILOM CLI)” on page 117
- “Display the Service Tag Information (Oracle ILOM CLI)” on page 118

Related Information

- “Oracle ILOM Target Overview” on page 165
- “Getting Oracle ILOM Help (Oracle ILOM CLI)” on page 36
- “Monitoring Switch Components and Identification (Oracle ILOM CLI)” on page 38
- “Monitoring Authentication and Access (Oracle ILOM CLI)” on page 84
- “Monitoring Events and Logging (Oracle ILOM CLI)” on page 94
- “Monitoring Management Networking (Oracle ILOM CLI)” on page 101
- “Monitoring Management Connections to the Switch (Oracle ILOM CLI)” on page 105
- “Monitoring Switch Interface Methods (Oracle ILOM CLI)” on page 108
- “Monitoring User Accounts (Oracle ILOM CLI)” on page 118
- “Monitoring Additional Components and Services (Oracle ILOM CLI)” on page 122

▼ Display the Switch FRU ID (Oracle ILOM CLI)

Use this task to display the switch motherboard's FRU information, which includes information such as the MAC address and serial number.

- **Display the switch FRU information.**

```
-> show -d properties /SYS/MB
 /SYS/MB
  Properties:
   type = Motherboard
```

```
   ipmi_name = MB
   fru_description = PCBA, W/MECHANICALS, NM3, LEAF SWITCH
   fru_manufacturer = Oracle Corporation
   fru_part_number = 7092208
   fru_rev_level = 06
   fru_serial_number = 489089M+1507RP0005
   fru_mac_address = 00:10:e0:56:83:85
   fault_state = OK
   clear_fault_action = (none)
->
```

Related Information

- “Display Faulted System Components (Oracle ILOM CLI)” on page 39
- “Check for Open Problems (Oracle ILOM CLI)” on page 41
- “Display Switch Health (Oracle ILOM CLI)” on page 42
- “Display the ASR Client Status (Oracle ILOM CLI)” on page 117
- “Display the Service Tag Information (Oracle ILOM CLI)” on page 118

▼ Display the ASR Client Status (Oracle ILOM CLI)

The switch supports the Oracle ASR service to facilitate rapid analysis and response to issues and potential issues with the switch. For information about Oracle ASR, see “Oracle Auto Service Request Software” on page 24.

- **Display the status of the ASR client supported on the switch.**
  For example, type:

```
-> show -d properties /SP/clients/asr
 /SP/services/asr
  Properties:
   endpoint = https://transport.oracle.com
   password = *****
   proxy-host = (none)
   proxy-password = *****
   proxy-user = (none)
   send-event = (Cannot show property)
   state = enabled
   status = disabled
   username = (none)
->
```

Related Information

- “Display Faulted System Components (Oracle ILOM CLI)” on page 39

- "Check for Open Problems (Oracle ILOM CLI)" on page 41
- "Display Switch Health (Oracle ILOM CLI)" on page 42
- "Display the Service Tag Information (Oracle ILOM CLI)" on page 118

▼ Display the Service Tag Information (Oracle ILOM CLI)

- **Type:**

```
-> show -d properties /SP/services/servicetag
 /SP/services/servicetags
  Properties:
   passphrase = none
   servicetag_urn = Q12721
   state = enabled
->
```

Related Information

- "Display Faulted System Components (Oracle ILOM CLI)" on page 39
- "Check for Open Problems (Oracle ILOM CLI)" on page 41
- "Display Switch Health (Oracle ILOM CLI)" on page 42
- "Display the ASR Client Status (Oracle ILOM CLI)" on page 117

Monitoring User Accounts (Oracle ILOM CLI)

These topics describe how to use the Oracle ILOM CLI to monitor user accounts.

- "Display the Oracle ILOM Sessions (Oracle ILOM CLI)" on page 119
- "Display the Oracle ILOM Password Policy for Local Users (Oracle ILOM CLI)" on page 120
- "Display the Oracle ILOM Root User Properties (Oracle ILOM CLI)" on page 121

Related Information

- "Monitoring Switch Components and Identification (Oracle ILOM CLI)" on page 38
- "Monitoring Authentication and Access (Oracle ILOM CLI)" on page 84

- "Monitoring Events and Logging (Oracle ILOM CLI)" on page 94
- "Monitoring Management Networking (Oracle ILOM CLI)" on page 101
- "Monitoring Management Connections to the Switch (Oracle ILOM CLI)" on page 105
- "Monitoring Switch Interface Methods (Oracle ILOM CLI)" on page 108
- "Monitoring Switch Support Properties (Oracle ILOM CLI)" on page 116
- "Monitoring Additional Components and Services (Oracle ILOM CLI)" on page 122

▼ Display the Oracle ILOM Sessions (Oracle ILOM CLI)

Oracle ILOM sessions can be through either the Oracle ILOM web or Oracle ILOM CLI. Regardless of the session type, you can use this task to display the Oracle ILOM sessions active on the SP.

1. **Display all active Oracle ILOM sessions.**

```
-> show /SP/sessions
```

For example, type:

```
-> show /SP/sessions
 /SP/sessions
  Targets:
   133 (current)
->
```

2. **Display the properties for a specific session.**

For example, to display properties for session 133, type:

```
-> show -d properties /SP/sessions/133
 /SP/sessions
  Properties:
   username = root
   role = aucro
   starttime = Wed Dec 12 03:48:06 2012
   type = shell
   mode = normal
->
```

Note - The `type` property indicates whether the user is using the CLI (`shell`) or web (`web`) interface.

Related Information

- “Display the Oracle ILOM Sessions (Oracle ILOM CLI)” on page 119
- “Display the Oracle ILOM Password Policy for Local Users (Oracle ILOM CLI)” on page 120
- “Display the Oracle ILOM Root User Properties (Oracle ILOM CLI)” on page 121
- “Managing Oracle ILOM User Accounts (Oracle ILOM CLI)” on page 419
- “Delete a Session (Oracle ILOM CLI)” on page 424

Display the Oracle ILOM Password Policy for Local Users (Oracle ILOM CLI)

The passwords used to log in to the switch can be configured with different requirements. For example, password policy might require at least one capital letter, one number, and one special character. Use this task to display the current requirements for passwords.

- **Display the active Oracle ILOM sessions.**

```
->show /SP/preferences/password_policy/
```

For example, type:

```
-> show /SP/preferences/password_policy/
 Targets:

  Properties:
   policy = 8.
   min_length = 8
   uppercase = no restrictions
   lowercase = no restrictions
   numbers = no restrictions
   symbols = no restrictions
   history = no restrictions
->
```

Related Information

- “Display the Oracle ILOM Sessions (Oracle ILOM CLI)” on page 119
- “Display the Oracle ILOM Password Policy for Local Users (Oracle ILOM CLI)” on page 120
- “Display the Oracle ILOM Root User Properties (Oracle ILOM CLI)” on page 121
- “Managing Oracle ILOM User Accounts (Oracle ILOM CLI)” on page 419

- “Delete a Session (Oracle ILOM CLI)” on page 424

▼ Display the Oracle ILOM Root User Properties (Oracle ILOM CLI)

The `root` user is configured like standard local user accounts. As with local user accounts, you can display the properties for the `root` user, such as its assigned role and privilege, and SSH keys.

1. **Display the `root` user's role.**

```
-> show /SP/users/root
 /SP/users/ilom-admin
  Properties:
   role = aucro
   role = *****
->
```

2. **Display the SSH keys associated with the root user.**

```
-> show /SP/users/root/ssh/keys/X
```

where *X* is a number from `1` to `5` indicating the SSH key.

For example, so display the first SSH key associated with `root`, type:

```
-> show /SP/users/root/ssh/keys/1
 /SP/users/root/ssh/keys/1
  Properties:
   fingerprint = (none)
   algorithm = (none)
   embedded_comment = (none)
   bit_length = (none)
   load_uri = (Cannot show property)
   clear_action = (Cannot show property)
->
```

Related Information

- “Display the Oracle ILOM Sessions (Oracle ILOM CLI)” on page 119
- “Display the Oracle ILOM Password Policy for Local Users (Oracle ILOM CLI)” on page 120
- “Display the Oracle ILOM Root User Properties (Oracle ILOM CLI)” on page 121

- "Managing Oracle ILOM User Accounts (Oracle ILOM CLI)" on page 419
- "Delete a Session (Oracle ILOM CLI)" on page 424

Monitoring Additional Components and Services (Oracle ILOM CLI)

These topics describe how to display information about additional services that might be required in your network.

- "Display the FIPS Service Status (Oracle ILOM CLI)" on page 122
- "Displaying Keyboard, Video, Mouse, and Storage Configuration (Oracle ILOM CLI)" on page 123

Related Information

- "Monitoring Switch Components and Identification (Oracle ILOM CLI)" on page 38
- "Monitoring Authentication and Access (Oracle ILOM CLI)" on page 84
- "Monitoring Events and Logging (Oracle ILOM CLI)" on page 94
- "Monitoring Management Networking (Oracle ILOM CLI)" on page 101
- "Monitoring Management Connections to the Switch (Oracle ILOM CLI)" on page 105
- "Monitoring Switch Interface Methods (Oracle ILOM CLI)" on page 108
- "Monitoring Switch Support Properties (Oracle ILOM CLI)" on page 116
- "Monitoring User Accounts (Oracle ILOM CLI)" on page 118

▼ Display the FIPS Service Status (Oracle ILOM CLI)

FIPs is the Federal Information Processing Standard protocol, which provides a high-level of encryption and security to certain data when it is transmitted and received. When FIPS is enabled, LDAP, RADIUS, and IPMI 1.5 sessions cannot be enabled.

- **Display the status of the FIPS service supported on the switch.**

```
-> show -d properties /SP/services/fips
 /SP/services/fips
  Properties:
   state = enabled
```

```
   status = enabled
->
```

Related Information

- “Configure the FIPS Service (Oracle ILOM CLI)” on page 425
- “Configure the LDAP Client (Oracle ILOM CLI)” on page 343
- “Disable the RADIUS Client (Oracle ILOM CLI)” on page 364
- “Disable IPMI 1.5 Sessions (Oracle ILOM CLI)” on page 412

Displaying Keyboard, Video, Mouse, and Storage Configuration (Oracle ILOM CLI)

The switch contains and embedded keyboard, video, mouse, storage (KVMS) and serial redirection service. These topics describe how to display information for the switch's KVMS service.

- “Display the KVMS Properties (Oracle ILOM CLI)” on page 123
- “Display the Host Storage Device Properties (Oracle ILOM CLI)” on page 124

▼ Display the KVMS Properties (Oracle ILOM CLI)

The KVMS and Serial Redirection Service enables interaction with the switch through a redirected management session.

- **Display the configuration for the KVMS service running on the switch.**

```
-> show -d properties /SP/services/kvms
 /SP/services/kvms
  Properties:
   custom_lock_key = (none)
   custom_lock_modifiers = (none)
   lockmode = disabled
   max_session_count = 4
   mousemode = absolute
   servicestate = enabled
->
```

Related Information

- “Display the Host Storage Device Properties (Oracle ILOM CLI)” on page 124

▼ Display the Host Storage Device Properties (Oracle ILOM CLI)

Use this task to display the host storage device for the KVMS service.

- **Display the configuration of the host storage device for the KVMS service.**

```
-> show -d properties /SP/services/kvms/host_storage_device
 /SP/services/kvms/host_storage_device
  Properties:
   mode = disabled
   status = disabled
->
```

Related Information

- “Display the KVMS Properties (Oracle ILOM CLI)” on page 123

Monitoring the Switch (Oracle ILOM Web)

These topics describe how to display various aspects of the switch from the Oracle ILOM web interface.

Description	Links
Familiarize yourself with the web interface.	“Oracle ILOM Web Interface Overview” on page 126
Review help about the Oracle ILOM targets.	“Get Help on Oracle ILOM Targets (Oracle ILOM Web)” on page 128
Monitor various elements of the switch and its configuration.	“Monitoring Switch Components and Identification (Oracle ILOM Web)” on page 129
Monitor different clients that govern authentication and authorization.	“Monitoring Authentication and Access (Oracle ILOM Web)” on page 143
Monitor the behavior of system events and alerts, and how they are logged.	“Monitoring Events and Logging (Oracle ILOM Web)” on page 147
Monitor network properties for the SP and switch.	“Monitoring Management Networking (Oracle ILOM Web)” on page 151
Monitor properties for connecting and logging in.	“Monitoring Management Connections to the Switch (Oracle ILOM Web)” on page 153
Monitor different methods of interfacing with the switch and switch-interface behavior.	“Monitoring Switch Interface Methods (Oracle ILOM Web)” on page 156
Monitor properties of getting support for the switch.	“Display the ASR Service Status (Oracle ILOM Web)” on page 160
Monitor user accounts and sessions.	“Monitoring User Accounts (Oracle ILOM Web)” on page 161
Monitor additional aspects of the switch.	“Monitoring Additional Services (Oracle ILOM Web)” on page 163

Related Information

- “Understanding System Administration Resources” on page 19
- “Accessing the Switch” on page 27
- “Monitoring the Switch (Oracle ILOM CLI)” on page 35
- “Understanding Oracle ILOM Targets” on page 165
- “Understanding SNMP MIB OIDs” on page 195
- “Understanding the EMS Module” on page 265

- “Controlling the Switch (Oracle ILOM CLI)” on page 301
- “Controlling the Switch (Oracle ILOM Web)” on page 427
- “Updating the Firmware” on page 533

Oracle ILOM Web Interface Overview

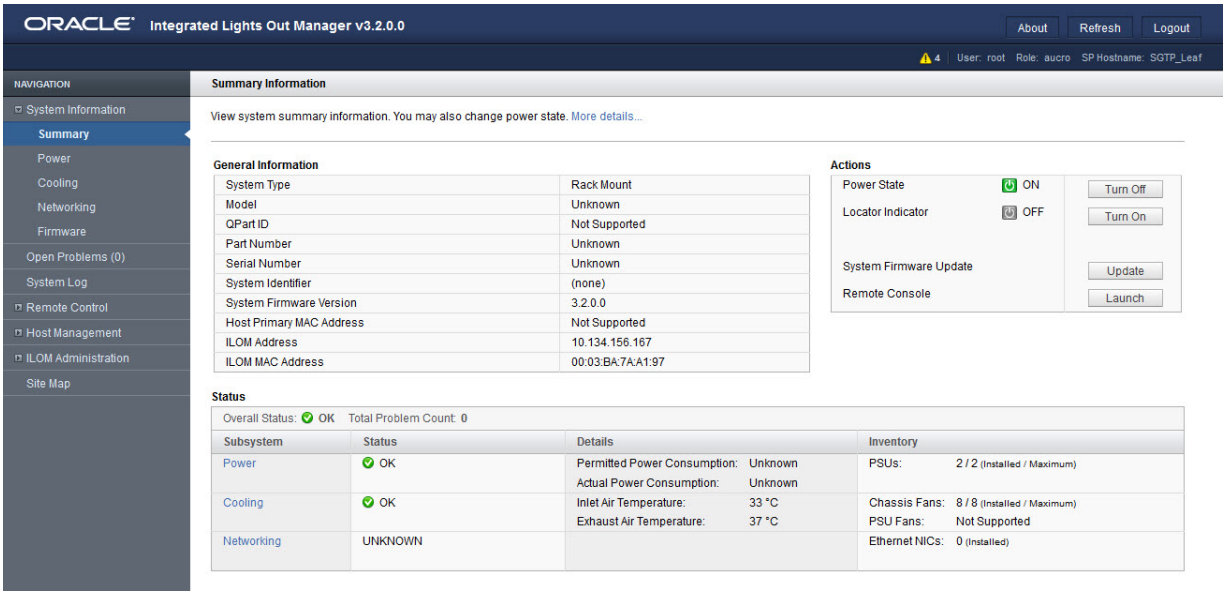
Note - The Oracle ILOM web interface is only supported with the Microsoft Internet Explorer and Mozilla Firefox web browsers.

You can use the Oracle ILOM web interface navigation pane to start some tasks, but more commonly to navigate to a destination page. Each page has a work space, where you can display current settings, provide information, set parameters, or access other management elements.

Some pages have a tabbed display of additional functionality across the top of a work space. Clicking the tab displays the work space for the corresponding functionality where you manage that functionality.

Some pages have drop-down menus and buttons that support configuring additional features. Choosing menu items or clicking buttons might display additional pop-up windows where you continue your management tasks.

By default, the system summary dashboard is displayed. The dashboard provides quick, at-a-glance information for overall switch and subsystem operation. For example, the switch's power subsystem information is displayed, so you can see quickly if power conditions are normal. Some management tasks are also available through the subsystems displayed on the dashboard, but this document assumes the navigation panel as the starting point for all management tasks.



Links	Sub-links	Description
System Information	Summary	Displays at-a-glance information about the operational state of the switch and important hardware subsystems. Also, provides quick ways to perform a few common switch-management tasks from the top level of the Oracle ILOM web interface.
	Power	Displays the switch's power health and the health of each of the power supplies.
	Cooling	Displays the switch's cooling health, the health of each of the fans, and the fan module that contains each fan.
	Networking	Displays the switch's networking health and the health of individual network interfaces.
	Firmware	Displays the firmware version running on the switch's SP, network switch chip, and IB network switch chip.
Open Problems		Displays any recognized problems or faulted components.
System Logs		Displays the system log entries for the switch's SP.
Remote Control	Redirection	Displays the state of console and video redirection for remote management of the switch.
	KVMS	Displays the settings and behavior of the keyboard, video, mouse, storage, and serial redirection service for remote management of the switch.
	Host Storage Device	Displays the current settings for the switch's local or remotely attached storage device.
Host Management	Power Control	Displays the switch's current power state, and enables shutting down, resetting, and power cycling the switch.

Links	Sub-links	Description
ILOM Administration	Identification	Displays and enables the configuration of the switch's identification elements, such as host name and location.
	Logs	Displays and enables the configuration of the Oracle ILOM event and audit logs.
	Management Access	Displays and enables the configuration of various methods of switch management, such as Web Server, SNMP, and IPMI.
	User Management	Displays and enables the configuration of various methods of user access to the switch, such as local user accounts, LDAP, AD, and RADIUS.
	Connectivity	Displays and enables the configuration of methods of access to the SP, such as network and serial connection.
	Configuration Management	Displays and enables the switch configuration, including backing up and restoring the switch configuration, and resetting the switch to its default state.
	Notifications	Displays and enables various types of system notifications, including alerts, Syslog, and the ASR and SMTP clients.
	Date and Time	Displays and enables the configuration of the system clock, timezone, and NTP parameters.
	Maintenance	Enables common switch-maintenance tasks. such updating SP firmware, resetting the SP, and configuring snapshot datasets.
Site Map		Displays a table containing link to all the pages supported in the Oracle ILOM web interface.

Related Information

- “Get Help on Oracle ILOM Targets (Oracle ILOM Web)” on page 128
- “Monitoring Switch Components and Identification (Oracle ILOM Web)” on page 129
- “Display the Serial Port Configuration (Oracle ILOM Web)” on page 143
- “Monitoring Authentication and Access (Oracle ILOM Web)” on page 143
- “Monitoring Events and Logging (Oracle ILOM Web)” on page 147
- “Monitoring Management Networking (Oracle ILOM Web)” on page 151
- “Monitoring Management Connections to the Switch (Oracle ILOM Web)” on page 153
- “Monitoring Switch Interface Methods (Oracle ILOM Web)” on page 156
- “Monitoring User Accounts (Oracle ILOM Web)” on page 161
- “Display the ASR Service Status (Oracle ILOM Web)” on page 160
- “Monitoring Additional Services (Oracle ILOM Web)” on page 163

▼ Get Help on Oracle ILOM Targets (Oracle ILOM Web)

Help text is displayed on some pages of the Oracle ILOM web interface. Use this task to display help text for Oracle ILOM commands.

1. **Follow the links and tabs available on the navigation panel until you have located the topic for which you want help.**

2. **Locate the help text at the top of the page, and click More Details to display a window that contains the full help text.**

   The help window contains information not only about the Oracle ILOM target, but its individual properties.

Related Information

- “Oracle ILOM Web Interface Overview” on page 126
- “Monitoring Switch Components and Identification (Oracle ILOM Web)” on page 129
- “Display the Serial Port Configuration (Oracle ILOM Web)” on page 143
- “Monitoring Authentication and Access (Oracle ILOM Web)” on page 143
- “Monitoring Events and Logging (Oracle ILOM Web)” on page 147
- “Monitoring Management Networking (Oracle ILOM Web)” on page 151
- “Monitoring Management Connections to the Switch (Oracle ILOM Web)” on page 153
- “Monitoring Switch Interface Methods (Oracle ILOM Web)” on page 156
- “Monitoring User Accounts (Oracle ILOM Web)” on page 161
- “Display the ASR Service Status (Oracle ILOM Web)” on page 160
- “Monitoring Additional Services (Oracle ILOM Web)” on page 163

Monitoring Switch Components and Identification (Oracle ILOM Web)

You can do most switch monitoring tasks any time after the switch is online. However, some basic switch tasks should be done before others each time the switch is powered on or restarted. As a general guideline, check for operational state, then check for any error conditions. When the switch is operating correctly, then check for additional information.

Step	Task	Links
1.	Verify Switch Operational State	“Display the Switch Status LEDs States (Oracle ILOM Web)” on page 132 “Display System-Level Power Information (Oracle ILOM Web)” on page 132
2.	Check for Error Conditions	“Display Switch Warnings (Oracle ILOM Web)” on page 130 “Display Faulted System Components (Oracle ILOM Web)” on page 131

Step	Task	Links
3.	Display Switch Identification	"Checking Switch Chassis Information (Oracle ILOM Web)" on page 136
4.	Display Additional information	"Checking System Firmware Information (Oracle ILOM Web)" on page 135 "Display Power Information for PSs (Oracle ILOM Web)" on page 133 "Checking Switch Cooling and Ventilation (Oracle ILOM Web)" on page 134 "Display the Host Power-Control Settings (Oracle ILOM Web)" on page 142

Related Information

- "Oracle ILOM Web Interface Overview" on page 126
- "Get Help on Oracle ILOM Targets (Oracle ILOM Web)" on page 128
- "Display the Serial Port Configuration (Oracle ILOM Web)" on page 143
- "Monitoring Authentication and Access (Oracle ILOM Web)" on page 143
- "Monitoring Events and Logging (Oracle ILOM Web)" on page 147
- "Monitoring Management Networking (Oracle ILOM Web)" on page 151
- "Monitoring Management Connections to the Switch (Oracle ILOM Web)" on page 153
- "Monitoring Switch Interface Methods (Oracle ILOM Web)" on page 156
- "Monitoring User Accounts (Oracle ILOM Web)" on page 161
- "Display the ASR Service Status (Oracle ILOM Web)" on page 160
- "Monitoring Additional Services (Oracle ILOM Web)" on page 163

▼ Display Switch Warnings (Oracle ILOM Web)

Any general switch warnings are displayed through the warning icon on the toolbar, which also displays the number of warnings detected.

1. **Check the warning icon on the toolbar.**

   If the warning icon shows a number greater than zero, the switch has system warnings.

2. **Click the warning icon.**

   A pop-up window displays information about each warning, and when possible, additional actions to help resolve warnings.

3. **Click OK.**

4. **Take the necessary actions to resolve the warnings.**

Related Information

- "Display Faulted System Components (Oracle ILOM Web)" on page 131
- "Display the Switch Status LEDs States (Oracle ILOM Web)" on page 132
- "Display the Switch System Log (Oracle ILOM Web)" on page 147
- "Display the Oracle ILOM Event Log (Oracle ILOM Web)" on page 149
- "Display the Oracle ILOM Audit Log (Oracle ILOM Web)" on page 150

▼ Display Faulted System Components (Oracle ILOM Web)

Any faulted switch components are displayed in the Open Problems table, which contains links that display additional information.

1. **Choose Open Problems.**

   If a number greater than zero is shown as part of the link, the switch has open problems.

2. **Consider your next steps:**

   - **To display component fault status, click the link in the Components column.**

     The Component Status table displays the component names (targets), type, and fault status.

   - **To display subsystem fault information and status, click the link in the Subsystem column.**

     The Subsystem table, and the component names (targets) and type are listed.

3. **Click a target link in either the Component Status table or Subsystem table.**

   A pop-up window displays additional information about the faulted component.

4. **Click Close.**

Related Information

- "Display the Switch System Log (Oracle ILOM Web)" on page 147
- "Display the Oracle ILOM Event Log (Oracle ILOM Web)" on page 149
- "Display the Oracle ILOM Audit Log (Oracle ILOM Web)" on page 150
- "Clear Faulted System Components (Oracle ILOM Web)" on page 477

Display the Switch Status LEDs States (Oracle ILOM Web)

The switch has LEDs for power status and switch location.

1. **Choose System Information → Summary.**

   The Summary dashboard is displayed. The dashboard is divided into sections, each of which displays at-a-glance information about the operational state of part of the switch.

2. **Check the Actions section.**

   - For the Power State LED, when the indicator is green, the switch is powered on. When the LED is gray, the switch is powered off.
   - For the Locator LED, when the indicated is green, the LED on the switch's chassis is glowing. When the LED is gray, the LED on the switch's chassis is unlit.

Related Information

- "Display Faulted System Components (Oracle ILOM Web)" on page 131
- "Display the Switch System Log (Oracle ILOM Web)" on page 147
- "Display the Oracle ILOM Event Log (Oracle ILOM Web)" on page 149
- "Display the Oracle ILOM Audit Log (Oracle ILOM Web)" on page 150
- "Enable the Locator LED (Oracle ILOM Web)" on page 430
- "Disable the Locator LED (Oracle ILOM Web)" on page 430

Display System-Level Power Information (Oracle ILOM Web)

System power information is displayed for overall system power conditions as well as for discrete power supplies.

1. **Choose System Information → Power.**

   The pane displays information such as the switch's power health, details about the switch's power health (if available), the actual and maximum power consumption, and the number of power supplies installed and allowed in the chassis.

Note - You can also get a quick summary of the system-level power information through the Summary dashboard's Status table.

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2. **(Optional) Check the Power Supplies table for a summary of the operational state of each PS.**

   If you want additional information for each PS, see “Display Power Information for PSs (Oracle ILOM Web)” on page 133.

Related Information

- “Display System-Level Power Information (Oracle ILOM Web)” on page 132
- “Power Down the Switch (Oracle ILOM Web)” on page 439
- “Restart the Switch (Oracle ILOM Web)” on page 439
- “Power On the Switch (Oracle ILOM Web)” on page 440
- “Display System-Level Power Information (Oracle ILOM Web)” on page 132

▼ Display Power Information for PSs (Oracle ILOM Web)

The switch has redundant power supply units (PSs) numbered 0 and 1 that you can monitor for overall health, as well as for detailed information.

1. **Choose System Information → Power.**

2. **In the Power Supplies table, review the general information for each PS in the table.**

3. **In the Power Supply Details column, click Details.**

   A pop-up window for the respective PS displays the PS's health and health details (if available), the PS's part number, serial number, and manufacturer, the PS slot in the chassis, and the input and output power (if available).

   Note - You can also see the number of PSs installed through the Summary dashboard's Status table.

4. **Click Close.**

Related Information

- “Display System-Level Power Information (Oracle ILOM Web)” on page 132
- “Power Down the Switch (Oracle ILOM Web)” on page 439
- “Restart the Switch (Oracle ILOM Web)” on page 439
- “Power On the Switch (Oracle ILOM Web)” on page 440
- “Display System-Level Power Information (Oracle ILOM Web)” on page 132

Checking Switch Cooling and Ventilation (Oracle ILOM Web)

The switch's fan units contain individual fans. These topics describe how to display the switch temperature and cooling subsystem.

- "Display Switch Cooling Health (Oracle ILOM Web)" on page 134
- "Display the Cooling Information for Individual Fans (Oracle ILOM Web)" on page 134

Related Information

- "Display Switch Warnings (Oracle ILOM Web)" on page 130
- "Display Faulted System Components (Oracle ILOM Web)" on page 131
- "Display the Fan FRU ID Information (Oracle ILOM Web)" on page 138

▼ Display Switch Cooling Health (Oracle ILOM Web)

1. **Choose System Information → Cooling.**

   The pane displays information such as the switch's cooling health, details about the switch's cooling health (if available), the number of fans installed and the maximum number of fans allowed in the chassis, the number of installed PS fans and the maximum number of PS fans allowed (if available), and the air temperature at inlet to, and exhaust from, the switch.

2. **(Optional) Check the Fans table for a summary of operational state of each installed fan.**

   See "Display the Cooling Information for Individual Fans (Oracle ILOM Web)" on page 134.

Related Information

- "Display Switch Cooling Health (Oracle ILOM Web)" on page 134
- "Display the Cooling Information for Individual Fans (Oracle ILOM Web)" on page 134

▼ Display the Cooling Information for Individual Fans (Oracle ILOM Web)

A fully populated switch has eight fans numbered 0 through 7 that provide airflow through the switch to keep it cool while operating.

1. **Choose System Information → Cooling.**

2. **In the Fans table, review the general information displayed for each fan.**

3. **In the Fan Details column, click Details.**
   A pop-up window for the respective fan displays the fan's health and health details (if available), the fan's part number and serial number, the fan's location in the chassis, and the percentage of maximum RPMs at which the fan is currently spinning.

4. **Click Close.**

Related Information

- "Display Switch Cooling Health (Oracle ILOM Web)" on page 134
- "Display the Cooling Information for Individual Fans (Oracle ILOM Web)" on page 134

Checking System Firmware Information (Oracle ILOM Web)

The switch has different types of firmware that support functionality such as Oracle ILOM, BIOS, and Ethernet networking.

- "Display the Oracle ILOM Firmware Version (Oracle ILOM Web)" on page 135
- "Display the Switch BIOS Version (Oracle ILOM Web)" on page 136
- "Display the Ethernet Switch Firmware (Oracle ILOM Web)" on page 136

Related Information

- "Updating the Firmware" on page 533

▼ Display the Oracle ILOM Firmware Version (Oracle ILOM Web)

The switch has an Oracle ILOM that provides management through a CLI and a web interface. Each interface uses the same firmware, which is different than other types of firmware required by other subsystems on the switch.

1. **Choose System Information → Firmware.**

2. **In the Other Firmware table, review the Oracle ILOM information.**
   The table displays the firmware type and version (if available) for the Oracle ILOM component.

Related Information

- "Display the Switch BIOS Version (Oracle ILOM Web)" on page 136

- “Display the Ethernet Switch Firmware (Oracle ILOM Web)” on page 136

▼ Display the Switch BIOS Version (Oracle ILOM Web)

The switch has a BIOS that requires its own firmware.

1. **Choose System Information → Firmware.**
2. **In the Other Firmware table, review the BIOS information.**
   The table displays the switch BIOS, firmware type, and version (if available).

Related Information

- “Display the Oracle ILOM Firmware Version (Oracle ILOM Web)” on page 135
- “Display the Ethernet Switch Firmware (Oracle ILOM Web)” on page 136

▼ Display the Ethernet Switch Firmware (Oracle ILOM Web)

The switch has Ethernet functionality that requires its own firmware.

1. **Choose System Information → Firmware.**
2. **Locate the Other Firmware table.**
3. **In the Other Firmware table, review the BIOS information.**
   The table displays the firmware type and version (if available) for the component `Sys EthSwitch`*n*,where *n* is the number of the switch chip.

Related Information

- “Display the Oracle ILOM Firmware Version (Oracle ILOM Web)” on page 135
- “Display the Switch BIOS Version (Oracle ILOM Web)” on page 136

Checking Switch Chassis Information (Oracle ILOM Web)

These topics describe how to display various aspects of the switch's chassis information through the Oracle ILOM web interface.

- “Display the Switch FRU ID Information (Oracle ILOM Web)” on page 137

- "Display the Power Supply FRU ID Information (Oracle ILOM Web)" on page 137
- "Display the Fan FRU ID Information (Oracle ILOM Web)" on page 138
- "Display System Identification Properties (Oracle ILOM Web)" on page 138
- "Display the Date (Oracle ILOM Web)" on page 139
- "Display the Time Zone (Oracle ILOM Web)" on page 139
- "Display the System SSL Certificate and Private Key Information (Oracle ILOM Web)" on page 140
- "Display the Custom CLI Prompt (Oracle ILOM Web)" on page 140

Related Information

- "Display Switch Warnings (Oracle ILOM Web)" on page 130
- "Display the NTP Servers (Oracle ILOM Web)" on page 140
- "Display System-Level Power Information (Oracle ILOM Web)" on page 132
- "Display the Host Power-Control Settings (Oracle ILOM Web)" on page 142

▼ Display the Switch FRU ID Information (Oracle ILOM Web)

The Oracle InfiniBand Switch IS2-46 does not explicitly display FRU ID information for the switch. However, the FRU ID information consists of the following product information, which is available on the switch:

- part number
- model number
- serial number

- **Choose System Information → Summary, then find the product information.**

Related Information

- "Display the Power Supply FRU ID Information (Oracle ILOM Web)" on page 137
- "Display the Fan FRU ID Information (Oracle ILOM Web)" on page 138
- "Display System Identification Properties (Oracle ILOM Web)" on page 138
- "Set the System Identification Properties (Oracle ILOM Web)" on page 434

▼ Display the Power Supply FRU ID Information (Oracle ILOM Web)

The Oracle InfiniBand Switch IS2-46 does not explicitly display FRU ID information for PSs. However, PS information which consists of the following is available on the switch:

- part number
- serial number
- manufacturer

1. **Choose System Information → Power, then find the PS in the Power Supplies table.**
2. **Click Details and note the product information.**

Related Information

- “Display the Switch FRU ID Information (Oracle ILOM Web)” on page 137
- “Display the Fan FRU ID Information (Oracle ILOM Web)” on page 138
- “Display System Identification Properties (Oracle ILOM Web)” on page 138
- “Set the System Identification Properties (Oracle ILOM Web)” on page 434

▼ Display the Fan FRU ID Information (Oracle ILOM Web)

The Oracle InfiniBand Switch IS2-46 does not explicitly display FRU ID information for fans. However, fan information which consists of the following is available on the switch:

- part number
- serial number

1. **Choose System Information → Cooling, then find the fan in the Fans table.**
2. **Click Details and note the product information.**

Related Information

- “Display the Switch FRU ID Information (Oracle ILOM Web)” on page 137
- “Display the Power Supply FRU ID Information (Oracle ILOM Web)” on page 137
- “Display System Identification Properties (Oracle ILOM Web)” on page 138
- “Set the System Identification Properties (Oracle ILOM Web)” on page 434

▼ Display System Identification Properties (Oracle ILOM Web)

You can configure information about the system and its service processor to distinguish it from other Oracle switches in your deployment.

- **Choose ILOM Administration → Identification.**

The pane shows the host name, system identifier, system contact, system location, and system description.

Related Information

- "Display the Switch FRU ID Information (Oracle ILOM Web)" on page 137
- "Display the Power Supply FRU ID Information (Oracle ILOM Web)" on page 137
- "Display the Fan FRU ID Information (Oracle ILOM Web)" on page 138
- "Set the System Identification Properties (Oracle ILOM Web)" on page 434

▼ Display the Date (Oracle ILOM Web)

The switch has an internal clock processor for maintaining correct date and time. As an alternative, the system clock can be synchronized with an NTP server in use in your network.

- **Choose ILOM Administration → Date and Time, and then click the Clock tab.**
  The pane displays the current date, time, and system uptime, as well as NTP parameters (if NTP is configured).

Related Information

- "Display the Time Zone (Oracle ILOM Web)" on page 139
- "Display the NTP Servers (Oracle ILOM Web)" on page 140
- "Set the Date and Time (Oracle ILOM Web)" on page 436
- "Set the Time Zone (Oracle ILOM Web)" on page 436
- "Configure the NTP Client (Oracle ILOM Web)" on page 435

▼ Display the Time Zone (Oracle ILOM Web)

The switch time zone is configured as part of installing the switch and bringing it online the first time.

- **Choose ILOM Administration → Date and Time, and then click the Timezone tab.**
  The pane displays the current date and time including the local time zone.

Related Information

- "Display the Date (Oracle ILOM Web)" on page 139
- "Display the NTP Servers (Oracle ILOM Web)" on page 140
- "Set the Date and Time (Oracle ILOM Web)" on page 436
- "Set the Time Zone (Oracle ILOM Web)" on page 436

- “Configure the NTP Client (Oracle ILOM Web)” on page 435

Display the System SSL Certificate and Private Key Information (Oracle ILOM Web)

Through Oracle ILOM, the switch receives a default self-signed SSL certificate and corresponding keys. As an alternative, you can upload a nondefault SSL certificate and its paired private key in PEM format.

- **Choose ILOM Administration → Management Access, and then click the SSL Certificate tab.**
  The pane displays the certificate status, default certificate, custom certificate, and private key installed on the switch.

Related Information

- “Oracle ILOM Web Interface Overview” on page 126
- “Get Help on Oracle ILOM Targets (Oracle ILOM Web)” on page 128

Display the Custom CLI Prompt (Oracle ILOM Web)

The switch has a default command prompt, which can be changed to a custom prompt.

- **Choose ILOM Administration → Management Access, and then click the CLI tab.**
  If the Custom Prompt checkbox and Custom Prompt field are filled, the pane displays the custom prompt.

Related Information

- “Enable a Custom CLI Prompt (Oracle ILOM Web)” on page 437
- “Set a Custom CLI Prompt (Oracle ILOM Web)” on page 437
- “Disable a Custom CLI Prompt (Oracle ILOM Web)” on page 438

Display the NTP Servers (Oracle ILOM Web)

The switch can be configured to use NTP instead of its internal system clock. When the switch is configured to use NTP and synchronized with your network's NTP servers, use this task to display the switch's NTP information.

- **Choose ILOM Administration → Date and Time, and then click the Clock tab.**

The pane displays the Network Time Protocol status and server IP addresses.

Related Information

- “Display the Date (Oracle ILOM Web)” on page 139
- “Display the Time Zone (Oracle ILOM Web)” on page 139
- “Set the Date and Time (Oracle ILOM Web)” on page 436
- “Set the Time Zone (Oracle ILOM Web)” on page 436
- “Configure the NTP Client (Oracle ILOM Web)” on page 435

▼ Display the Policy for Resetting the SP to Defaults (Oracle ILOM Web)

If the SP is reset, user-configured information on the SP is affected differently depending on the reset policy configured:

- All returns Oracle ILOM properties to their default settings at the next SP reset, but does not erase Oracle ILOM log files.
- Factory returns Oracle ILOM properties to their default settings at the next SP reset and erases the Oracle ILOM log files.
- None does not affect Oracle ILOM properties or log files, but is useful for cancelling either All or Factory policies before the SP is reset.

- **Choose ILOM Administration → Configuration Management, and then click the Reset Defaults tab.**

  The pane displays the state of resetting the SP to default values.

Related Information

- “Reset the SP (Oracle ILOM Web)” on page 429

▼ Display the Backup and Restore Policy (Oracle ILOM Web)

The switch configuration can be backed up and restored as needed to save and recover the switch configuration.

- **Choose ILOM Administration → Configuration Management, and then click the Backup/Restore tab.**

The pane displays the current settings for configuration back up and restore are displayed, including a passphrase to encrypt sensitive data.

Related Information

- “Display the Snapshot Policy (Oracle ILOM Web)” on page 142
- “Back Up the Configuration (Oracle ILOM Web)” on page 431
- “Restore the Configuration (Oracle ILOM Web)” on page 432
- “Create a Snapshot of the Switch State (Oracle ILOM Web)” on page 433
- “Snapshot Dataset Information (Oracle ILOM Web)” on page 434

▼ Display the Snapshot Policy (Oracle ILOM Web)

The switch has a snapshot service that enables the collection of pertinent information from the SP, including environmental data, log files, FRU IDs, and some error information for diagnostics.

- **Choose ILOM Administration → Maintenance, and then click the Snapshot tab.**

  The pane displays the current properties for the snapshot service, including what data sets to gather, whether to only gather the log files from the data sets, whether to encrypt the snapshot information, and what method is used to transfer the snapshot.

Related Information

- “Display the Backup and Restore Policy (Oracle ILOM Web)” on page 141
- “Back Up the Configuration (Oracle ILOM Web)” on page 431
- “Restore the Configuration (Oracle ILOM Web)” on page 432
- “Create a Snapshot of the Switch State (Oracle ILOM Web)” on page 433
- “Snapshot Dataset Information (Oracle ILOM Web)” on page 434

▼ Display the Host Power-Control Settings (Oracle ILOM Web)

Through Oracle ILOM, you can display and control host power by using the switch. If host power control is enabled, use this task to display power state of hosts.

- **Choose Host Management → Power Control.**

  The text below Settings indicates the switch's current power state.

Related Information

- “Display the Serial Port Configuration (Oracle ILOM Web)” on page 143
- “Set the Serial Port Properties (Oracle ILOM Web)” on page 440

▼ Display the Serial Port Configuration (Oracle ILOM Web)

The serial port is a connection between the host server and the switch's SP. Through this connection, the switch can access the host serial console.

- **Choose the ILOM Administration → Connectivity, and then click the Serial Port tab.**

  Individual section display the settings for serial port sharing, the host serial port baud rate and flow control, and the external serial port baud rate and flow control.

Related Information

- “Display the Host Power-Control Settings (Oracle ILOM Web)” on page 142
- “Set the Serial Port Properties (Oracle ILOM Web)” on page 440

Monitoring Authentication and Access (Oracle ILOM Web)

These topics describe how to display information about the various methods of authentication and accessing the switch through the Oracle ILOM web interface.

- “Display the SMTP Client Status (Oracle ILOM Web)” on page 144
- “Display the DNS Client Status (Oracle ILOM Web)” on page 144
- “Display the LDAP Client Information (Oracle ILOM Web)” on page 145
- “Display the LDAP over SSL Client (Oracle ILOM Web)” on page 145
- “Display the RADIUS Client Information (Oracle ILOM Web)” on page 146
- “Display the AD Client (Oracle ILOM Web)” on page 146

Related Information

- “Monitoring Switch Components and Identification (Oracle ILOM Web)” on page 129
- “Display the Serial Port Configuration (Oracle ILOM Web)” on page 143
- “Monitoring Events and Logging (Oracle ILOM Web)” on page 147

- "Monitoring Management Networking (Oracle ILOM Web)" on page 151
- "Monitoring Management Connections to the Switch (Oracle ILOM Web)" on page 153
- "Monitoring Switch Interface Methods (Oracle ILOM Web)" on page 156
- "Monitoring User Accounts (Oracle ILOM Web)" on page 161
- "Display the ASR Service Status (Oracle ILOM Web)" on page 160
- "Monitoring Additional Services (Oracle ILOM Web)" on page 163

▼ Display the SMTP Client Status (Oracle ILOM Web)

The switch hosts an SMTP email client that supports forwarding events and notifications through email.

- **Choose ILOM Administration → Notifications, and then click the SMTP tab.**

Related Information

- "Configure the SMTP Client (Oracle ILOM Web)" on page 472
- "Enable Alerts to Send Email Alerts (Oracle ILOM Web)" on page 474

▼ Display the DNS Client Status (Oracle ILOM Web)

The switch hosts a DNS client that supports domain name services such as name lookup and resolution. DNS support can be manually specified or supported through auto DNS.

- **Choose ILOM Administration → Connectivity, and the click the DNS tab.**

  The pane displays the DNS client configuration settings.

Note - If Auto DNS via DHCP is enabled, then the Name Server and Search Path fields are grayed out.

Related Information

- "Configure the DNS Client (Oracle ILOM Web)" on page 452
- "Set the DNS Locator Queries (Oracle ILOM Web)" on page 451
- "Enable AD (Oracle ILOM Web)" on page 442
- "Set the AD User's Role and Privileges (Oracle ILOM Web)" on page 443
- "Load Certificate Information for an AD Server (Oracle ILOM Web)" on page 444

▼ Display the LDAP Client Information (Oracle ILOM Web)

The switch hosts an LDAP client that supports management of LDAP users including roles, servers and ports, searchbases, and distinguished names (DNs).

- **Choose ILOM Administration → User Management, and then click the LDAP tab.**
  The pane displays the LDAP state, roles, LDAP server address, port, searchbase, bind DN, and bind password.

Related Information

- “Enable LDAP User Access Through Oracle ILOM (Oracle ILOM Web)” on page 453
- “Configure Roles for LDAP Users (Oracle ILOM Web)” on page 454
- “Disable LDAP User Access Through Oracle ILOM (Oracle ILOM Web)” on page 455

▼ Display the LDAP over SSL Client (Oracle ILOM Web)

The switch hosts an LDAP over SSL client that supports management of LDAP users including roles, searchbases, servers, groups, and SSL certificates.

- **Choose ILOM Administration → User Management, and then click the LDAP over SSL tab.**
  The pane displays the LDAP over SSL settings, certificates, administrator groups, operator groups, custom groups, user domains, and alternate servers.

Related Information

- “Enable LDAP over SSL (Oracle ILOM Web)” on page 456
- “(Optional) Configure LDAP over SSL User Mappings (Oracle ILOM Web)” on page 457
- “Set the LDAP over SSL User's Role and Privileges (Oracle ILOM Web)” on page 458
- “Load Certificate Information for an LDAP over SSL Server (Oracle ILOM Web)” on page 459
- “Remove a Certificate From an LDAP over SSL Server (Oracle ILOM Web)” on page 460
- “Disable LDAP over SSL (Oracle ILOM Web)” on page 461
- “Add LDAP over SSL Administrator Groups (Oracle ILOM Web)” on page 462
- “Add LDAP over SSL Operator Groups (Oracle ILOM Web)” on page 463

- "Add LDAP over SSL Custom Groups (Oracle ILOM Web)" on page 464
- "Add LDAP over SSL User Domains (Oracle ILOM Web)" on page 465
- "Add Alternate LDAP over SSL Servers (Oracle ILOM Web)" on page 466

Display the RADIUS Client Information (Oracle ILOM Web)

The switch hosts a RADIUS client that supports management of RADIUS users including roles, servers and ports, and shared secrets.

- **Choose ILOM Administration → User Management, and then click the RADIUS User tab.**
  The pane displays RADIUS server settings, the user roles for users authenticated through RADIUS, and protocol settings.

Related Information

- "Enable RADIUS User Access through Oracle ILOM (Oracle ILOM Web)" on page 468
- "(Optional) Set the RADIUS Shared Secret (Oracle ILOM Web)" on page 469
- "Add Alternate RADIUS Servers (Oracle ILOM Web)" on page 470
- "Configure Roles for RADIUS Users (Oracle ILOM Web)" on page 470
- "Disable RADIUS User Access Through Oracle ILOM (Oracle ILOM Web)" on page 471

Display the AD Client (Oracle ILOM Web)

The switch hosts an AD client that supports management of AD users including roles, servers and ports, groups, locator properties, certificates, search properties, and credentials.

- **Choose ILOM Administration → User Management, and then click the Active Directory link.**
  The pane displays AD settings, certificate information, admin groups, operator groups, custom groups, user domains, alternate servers, and DNS Locator queries.

Related Information

- "Enable AD (Oracle ILOM Web)" on page 442
- "Set the AD User's Role and Privileges (Oracle ILOM Web)" on page 443
- "Load Certificate Information for an AD Server (Oracle ILOM Web)" on page 444

- "Remove a Certificate From an AD Server (Oracle ILOM Web)" on page 445
- "Disable AD (Oracle ILOM Web)" on page 446
- "Add AD Admin Groups (Oracle ILOM Web)" on page 446
- "Add AD Operator Groups (Oracle ILOM Web)" on page 447
- "Add AD Custom Groups (Oracle ILOM Web)" on page 448
- "Add AD User Domains (Oracle ILOM Web)" on page 449
- "Add Alternate AD Servers (Oracle ILOM Web)" on page 450
- "Set the DNS Locator Queries (Oracle ILOM Web)" on page 451

Monitoring Events and Logging (Oracle ILOM Web)

These topics describe how to display the state and properties of events, notifications, and event logging through the Oracle ILOM web interface.

- "Display the Switch System Log (Oracle ILOM Web)" on page 147
- "Display the Alert Properties (Oracle ILOM Web)" on page 148
- "Display the Syslog Hosts (Oracle ILOM Web)" on page 149
- "Display the Oracle ILOM Event Log (Oracle ILOM Web)" on page 149
- "Display the Oracle ILOM Audit Log (Oracle ILOM Web)" on page 150

Related Information

- "Monitoring Switch Components and Identification (Oracle ILOM Web)" on page 129
- "Display the Serial Port Configuration (Oracle ILOM Web)" on page 143
- "Monitoring Authentication and Access (Oracle ILOM Web)" on page 143
- "Monitoring Management Networking (Oracle ILOM Web)" on page 151
- "Monitoring Management Connections to the Switch (Oracle ILOM Web)" on page 153
- "Monitoring Switch Interface Methods (Oracle ILOM Web)" on page 156
- "Monitoring User Accounts (Oracle ILOM Web)" on page 161
- "Display the ASR Service Status (Oracle ILOM Web)" on page 160
- "Monitoring Additional Services (Oracle ILOM Web)" on page 163

▼ Display the Switch System Log (Oracle ILOM Web)

The system log contains SP events that occur for specific subsystems or event types. When an event occurs, it is posted to the system log, where it is kept until the log rolls or is explicitly cleared.

1. **Choose System Log.**
   For each SP event, the table displays an ID, the date, time, and a brief description of the event, the event type, and the affected subsystem and parent component.
2. **(Optional) Use the control buttons on the bottom toolbar to move through a multipage table.**
   - **Click the Go to First Page button to display the first page of the table.**
   - **Click the Previous Page button to display the previous page of the table.**
   - **Click the Next Page button to display the next page of the table.**
   - **Click the Last Page button to display the last page of the table.**
3. **(Optional) Use the Filter dropdown menu to sort the table based on pre-set conditions or create a custom filter.**
   You can filter the log by affected subsystem or event type.

Related information

- "Display the Oracle ILOM Event Log (Oracle ILOM Web)" on page 149
- "Display the Oracle ILOM Audit Log (Oracle ILOM Web)" on page 150
- "Set the Number of System Log Entries per Page (Oracle ILOM Web)" on page 484
- "Filter the System Log by Using Predefined Conditions (Oracle ILOM Web)" on page 485
- "Create a Custom Filter for the System Log (Oracle ILOM Web)" on page 485
- "Clear the System Log (Oracle ILOM Web)" on page 486

▼ Display the Alert Properties (Oracle ILOM Web)

Alerts can provide advance notice of a system failure. The Oracle ILOM implementation in the SP supports 15 alert rules, which configure alert properties. Supported alert types are SNMP traps, IPMI PETs, and email alerts. For SNMP traps and PETs, the alert destination must have the relevant Oracle ILOM MIBs installed and must support SNMP traps.

- **Choose ILOM Administration → Notifications, and then click the Alerts tab.**
  The table displays the alert ID, level, alert type, and destination summary for each alert.

Related Information

- "Enable Alerts to Send SNMP Traps (Oracle ILOM Web)" on page 473

- "Enable Alerts to Send Email Alerts (Oracle ILOM Web)" on page 474
- "Enable Alerts to Send PETs (Oracle ILOM Web)" on page 475
- "Disable Alerts (Oracle ILOM Web)" on page 476

▼ Display the Syslog Hosts (Oracle ILOM Web)

The switch has a Syslog utility that supports standard communication with remote Syslog servers that act as a repositories for all Syslog communication from the switch.

- **Choose ILOM Administration → Notifications, and then click the Syslog tab.**

  The pane displays the remote Syslog host IP addresses.

Related Information

- "Oracle ILOM Web Interface Overview" on page 126
- "Get Help on Oracle ILOM Targets (Oracle ILOM Web)" on page 128

▼ Display the Oracle ILOM Event Log (Oracle ILOM Web)

The Oracle ILOM Event Log displays all system hardware-related events logged to the SP. The Oracle ILOM Event log is filterable based on pre-set conditions in a dropdown menu.

Note - You can filter the event log to display Oracle ILOM fault events based on a pre-selected set of conditions.

---

1. **Choose ILOM Administration → Logs, and then click the Event tab.**

   The drop-down menu filters events by class, type, and severity.

2. **(Optional) Select conditions from the Filter drop-down menu to view fault events or create a custom filter.**

Related Information

- "Display the Oracle ILOM Audit Log (Oracle ILOM Web)" on page 150
- "Set the Number of Oracle ILOM Log Entries Per Page (Oracle ILOM Web)" on page 478

- "Display an Oracle ILOM Log in a Single Page (Oracle ILOM Web)" on page 479
- "Filter the Oracle ILOM Event Log by Using Predefined Conditions (Oracle ILOM Web)" on page 480
- "Filter the Oracle ILOM Audit Log By Using Predefined Conditions (Oracle ILOM Web)" on page 481
- "Create a Custom Filter for an Oracle ILOM Log (Oracle ILOM Web)" on page 482
- "Clear an Oracle ILOM Log (Oracle ILOM Web)" on page 483

▼ Display the Oracle ILOM Audit Log (Oracle ILOM Web)

The Oracle ILOM Audit Log displays user actions that result in a configuration change. User actions such as logins, commands, command parameters, and command success or failure are tracked.

Note - You can filter the audit log to display user-issued commands, including specific types of commands or changes that result in a configuration change.

1. **Choose System Information → Logs, and then click the Audit tab.**

   The drop-down menu filters events by type and severity.

2. **(Optional) Select conditions from the Filter drop-down menu to view audit events or create a custom filter.**

Related Information

- "Display the Oracle ILOM Event Log (Oracle ILOM Web)" on page 149
- "Set the Number of Oracle ILOM Log Entries Per Page (Oracle ILOM Web)" on page 478
- "Display an Oracle ILOM Log in a Single Page (Oracle ILOM Web)" on page 479
- "Filter the Oracle ILOM Event Log by Using Predefined Conditions (Oracle ILOM Web)" on page 480
- "Filter the Oracle ILOM Audit Log By Using Predefined Conditions (Oracle ILOM Web)" on page 481
- "Create a Custom Filter for an Oracle ILOM Log (Oracle ILOM Web)" on page 482
- "Clear an Oracle ILOM Log (Oracle ILOM Web)" on page 483

Monitoring Management Networking (Oracle ILOM Web)

These topics describe how to display the switch's IPv4 and IPv6 management network configuration and individual network controllers through the Oracle ILOM web interface.

- "Display the Management Network Configuration (Oracle ILOM Web)" on page 151
- "Checking the Switch's Network Controllers (Oracle ILOM Web)" on page 152

Related Information

- "Oracle ILOM Web Interface Overview" on page 126
- "Get Help on Oracle ILOM Targets (Oracle ILOM Web)" on page 128
- "Monitoring Switch Components and Identification (Oracle ILOM Web)" on page 129
- "Display the Serial Port Configuration (Oracle ILOM Web)" on page 143
- "Monitoring Authentication and Access (Oracle ILOM Web)" on page 143
- "Monitoring Events and Logging (Oracle ILOM Web)" on page 147
- "Monitoring Management Connections to the Switch (Oracle ILOM Web)" on page 153
- "Monitoring Switch Interface Methods (Oracle ILOM Web)" on page 156
- "Monitoring User Accounts (Oracle ILOM Web)" on page 161
- "Display the ASR Service Status (Oracle ILOM Web)" on page 160
- "Monitoring Additional Services (Oracle ILOM Web)" on page 163

▼ Display the Management Network Configuration (Oracle ILOM Web)

The switch supports both IPv4 and IPv6 networking on its management network.

- **Choose ILOM Administration → Connectivity, and then click the Network tab.**

  - The pane displays the network status, MAC address, and VLAN configuration.
  - For IPv4, the pane displays the IP discovery mode, IP address, netmask, and gateway.
  - For IPv6, the pane displays the protocol state, autoconfig setting, DHCPv6 autoconfig setting, IPv6 address, and IPv6 gateway information.

Related Information

- "Display the System-Level Health of Management Networking (Oracle ILOM Web)" on page 152
- "Set the Network Management Parameters (Oracle ILOM Web)" on page 487

- “Set Network Management Properties (Oracle ILOM Web)” on page 488
- “Set the Switch's IPv4 Management Network Properties (Oracle ILOM Web)” on page 489
- “Set the Switch's IPv4 Management Network Dynamic Addresses (Oracle ILOM Web)” on page 490
- “Set the Switch's IPv6 Management Network Properties (Oracle ILOM Web)” on page 491
- “Test the Management Network Configuration (Oracle ILOM Web)” on page 492

Checking the Switch's Network Controllers (Oracle ILOM Web)

The switch has embedded network controllers for Ethernet and IB networks. You can check the overall health of networking on the switch and get some detailed information about Ethernet networking provided by the switch.

- “Display the System-Level Health of Management Networking (Oracle ILOM Web)” on page 152
- “Display Ethernet NIC Information (Oracle ILOM Web)” on page 153

Related Information

- “Display the System-Level Health of Management Networking (Oracle ILOM Web)” on page 152
- “Display the Ethernet Switch Firmware (Oracle ILOM Web)” on page 136
- “Display the Management Network Configuration (Oracle ILOM Web)” on page 151

▼ Display the System-Level Health of Management Networking (Oracle ILOM Web)

Use this task to display the health of Ethernet and IB management networking on the switch.

1. **Choose System Information → Networking.**
   The pane displays the health of all networking on the switch, any health details (if available), a link to the Open Problems pane that describes any networking problem (if one exists), and displays the total number of NICs in the switch.

2. **(Optional) Check the Ethernet NICs table for additional information about the installed Ethernet NICs.**
   See “Display Ethernet NIC Information (Oracle ILOM Web)” on page 153.

Related Information

- “Display the Management Network Configuration (Oracle ILOM Web)” on page 151
- “Set the Network Management Parameters (Oracle ILOM Web)” on page 487
- “Set Network Management Properties (Oracle ILOM Web)” on page 488
- “Set the Switch's IPv4 Management Network Properties (Oracle ILOM Web)” on page 489
- “Set the Switch's IPv4 Management Network Dynamic Addresses (Oracle ILOM Web)” on page 490
- “Set the Switch's IPv6 Management Network Properties (Oracle ILOM Web)” on page 491
- “Test the Management Network Configuration (Oracle ILOM Web)” on page 492

▼ Display Ethernet NIC Information (Oracle ILOM Web)

The switch has Ethernet NICs installed to support networks that use 1Gb, 10Gb, and 40Gb speeds.

1. **Choose System Information → Networking.**
2. **In the Ethernet NICs table, review the general information for each installed NIC.**
3. **In the Ethernet NIC Details column, click Details to get information specific to a NIC (if available).**

Note - You can also get a quick summary of the status, health, and number of installed Ethernet NICs through the Summary dashboard's Status table.

Related Information

- “Display the Management Network Configuration (Oracle ILOM Web)” on page 151
- “Display the System-Level Health of Management Networking (Oracle ILOM Web)” on page 152
- “Set the Network Management Parameters (Oracle ILOM Web)” on page 487

Monitoring Management Connections to the Switch (Oracle ILOM Web)

These topics describe how to display management connections to the switch through the Oracle ILOM Web interface.

- "Displaying Remote Session Settings (Oracle ILOM Web)" on page 154
- "Display the System Banner Messages (Oracle ILOM Web)" on page 155
- "Display the CLI Session Timeout (Oracle ILOM Web)" on page 156

Related Information

- "Oracle ILOM Web Interface Overview" on page 126
- "Get Help on Oracle ILOM Targets (Oracle ILOM Web)" on page 128
- "Monitoring Switch Components and Identification (Oracle ILOM Web)" on page 129
- "Display the Serial Port Configuration (Oracle ILOM Web)" on page 143
- "Monitoring Authentication and Access (Oracle ILOM Web)" on page 143
- "Monitoring Events and Logging (Oracle ILOM Web)" on page 147
- "Monitoring Management Networking (Oracle ILOM Web)" on page 151
- "Monitoring Switch Interface Methods (Oracle ILOM Web)" on page 156
- "Monitoring User Accounts (Oracle ILOM Web)" on page 161
- "Display the ASR Service Status (Oracle ILOM Web)" on page 160
- "Monitoring Additional Services (Oracle ILOM Web)" on page 163

Displaying Remote Session Settings (Oracle ILOM Web)

The switch can be managed remotely by a local machine if remote session properties are configured for serial redirection, for example, keyboard, video, mouse, and storage (KVMS) properties.

- "Display the Redirection Information (Oracle ILOM Web)" on page 154
- "Display the Host Storage Device Settings (Oracle ILOM Web)" on page 155

Related Information

- "Display the Serial Port Configuration (Oracle ILOM Web)" on page 143

▼ Display the Redirection Information (Oracle ILOM Web)

The switch supports a redirection services for video and serial connections.

- **Choose Remote Control → Redirection.**

  The pane displays the current state of using video and serial redirection, and the HTTP and HTTPs ports that the KVMS redirection service is using.

Related Information

- “Display the Host Storage Device Settings (Oracle ILOM Web)” on page 155
- “Enable Serial Redirection (Oracle ILOM Web)” on page 494

▼ Display the Host Storage Device Settings (Oracle ILOM Web)

A host storage device is a remote storage image that can be mounted through NFS or SAMBA to behave through the Serial Redirection Service like a directly attached storage device.

- **Choose Remote Control → Host Storage Device.**

  The pane displays the current status and mode of the host storage device, the URI of the mounted NFS or SAMBA server, and the SAMBA user name and password required for authentication.

Related Information

- “Display the Redirection Information (Oracle ILOM Web)” on page 154

▼ Display the System Banner Messages (Oracle ILOM Web)

The switch supports banner messages that are displayed as users connect to, or log in to, the switch.

- **Choose ILOM Administration → Management Access, and then click the Banner Messages tab.**

  The pane displays the banner messages for connection and login, as well as the state of login message acceptance.

Related Information

- “Display the CLI Session Timeout (Oracle ILOM Web)” on page 156
- “Set the Connection Banner Message (Oracle ILOM Web)” on page 496

▼ Display the CLI Session Timeout (Oracle ILOM Web)

The switch supports an inactivity timer that closes any open CLI sessions after a configured number of minutes. A timeout value of zero (0) indicates that the timeout is disabled, and inactive CLI session remain open indefinitely.

- **Choose ILOM Administration → Management Access, and then click the CLI tab.**

  The pane displays the CLI session timeout. If the timeout shows a zero (0), the CLI session timeout is disabled, so sessions remain open until explicitly closed.

Related Information

- "Display the System Banner Messages (Oracle ILOM Web)" on page 155
- "Set the Oracle ILOM CLI Session Timeout (Oracle ILOM Web)" on page 495

Monitoring Switch Interface Methods (Oracle ILOM Web)

These topics describe how to use the Oracle ILOM Web to display various methods of interfacing with the switch.

- "Display the HTTPS Service Status (Oracle ILOM Web)" on page 157
- "Display the HTTP Service Status (Oracle ILOM Web)" on page 157
- "Checking the Status of SNMP Services (Oracle ILOM Web)" on page 158
- "Display the SSH Server Status (Oracle ILOM Web)" on page 159
- "Display the IPMI Service Status (Oracle ILOM Web)" on page 160

Related Information

- "Oracle ILOM Web Interface Overview" on page 126
- "Get Help on Oracle ILOM Targets (Oracle ILOM Web)" on page 128
- "Monitoring Switch Components and Identification (Oracle ILOM Web)" on page 129
- "Display the Serial Port Configuration (Oracle ILOM Web)" on page 143
- "Monitoring Authentication and Access (Oracle ILOM Web)" on page 143
- "Monitoring Events and Logging (Oracle ILOM Web)" on page 147
- "Monitoring Management Networking (Oracle ILOM Web)" on page 151
- "Monitoring Management Connections to the Switch (Oracle ILOM Web)" on page 153
- "Monitoring User Accounts (Oracle ILOM Web)" on page 161

- "Display the ASR Service Status (Oracle ILOM Web)" on page 160
- "Monitoring Additional Services (Oracle ILOM Web)" on page 163

▼ Display the HTTPS Service Status (Oracle ILOM Web)

The switch runs an HTTPS service that supports web access and SSL-based encryption, including support for different versions of TLS.

- **Choose ILOM Administration → Management Access, and then click the Web Server tab.**
  The pane displays the web server status, port, and session timeout for HTTPs, and the TLS version.

Related Information

- "Display the HTTP Service Status (Oracle ILOM Web)" on page 157
- "Enable the HTTPS Service (Oracle ILOM Web)" on page 499
- "Install a Custom SSL Certificate and Key (Oracle ILOM Web)" on page 499
- "Enable the HTTP Service (Oracle ILOM Web)" on page 503
- "Disable the HTTPS Service (Oracle ILOM Web)" on page 502

▼ Display the HTTP Service Status (Oracle ILOM Web)

The switch runs an HTTP service that supports web access.

- **Choose ILOM Administration → Management Access, and then click the Web Server tab.**
  The pane displays web server status, port, and session timeout for HTTP.

Related Information

- "Display the HTTPS Service Status (Oracle ILOM Web)" on page 157
- "Enable the HTTPS Service (Oracle ILOM Web)" on page 499
- "Install a Custom SSL Certificate and Key (Oracle ILOM Web)" on page 499
- "Enable the HTTP Service (Oracle ILOM Web)" on page 503
- "Disable the HTTPS Service (Oracle ILOM Web)" on page 502

Checking the Status of SNMP Services (Oracle ILOM Web)

The switch contains an preinstalled SNMP agent that supports Oracle ILOM functions only, not standard SNMP network management functions. These topics describe how to display the switch's SNMP service and its properties through the Oracle ILOM Web interface.

- "Display the SNMP Service Status (Oracle ILOM Web)" on page 158
- "Display the SNMP Service User Accounts (Oracle ILOM Web)" on page 158
- "Display the SNMP Service Communities (Oracle ILOM Web)" on page 159

▼ Display the SNMP Service Status (Oracle ILOM Web)

- **Choose ILOM Administration → Management Access, and then click the SNMP tab.**
  The pane displays service status and operating parameters for SNMP.

Related Information

- "Display the SNMP Service User Accounts (Oracle ILOM Web)" on page 158
- "Display the SNMP Service Communities (Oracle ILOM Web)" on page 159
- "SNMP Client Overview (Oracle ILOM Web)" on page 510
- "Enable the SNMP Service (Oracle ILOM Web)" on page 511
- "Add SNMP Service User Accounts (Oracle ILOM Web)" on page 512
- "Add SNMP Service Communities (Oracle ILOM Web)" on page 515
- "Disable the SNMP Service (Oracle ILOM Web)" on page 518

▼ Display the SNMP Service User Accounts (Oracle ILOM Web)

Use this task to display SNMP v3 user accounts.

1. **Choose ILOM Administration → Management Access, and then click the SNMP tab.**
2. **Click the SNMP Users link.**
   The page scrolls to the SNMP Users table, which displays the configured SNMP v3 users and their authentication protocols, permissions, and privacy protocols.

Related Information

- "Display the SNMP Service Status (Oracle ILOM Web)" on page 158

- "Display the SNMP Service Communities (Oracle ILOM Web)" on page 159
- "SNMP Client Overview (Oracle ILOM Web)" on page 510
- "Enable the SNMP Service (Oracle ILOM Web)" on page 511
- "Add SNMP Service User Accounts (Oracle ILOM Web)" on page 512
- "Add SNMP Service Communities (Oracle ILOM Web)" on page 515
- "Disable the SNMP Service (Oracle ILOM Web)" on page 518

▼ Display the SNMP Service Communities (Oracle ILOM Web)

SNMPv1 and v2c is supported on the switch, but not as secure as SNMP v3. If your network requires SNMP v1 or v2c, use this task to display the SNMP v1 and v2c communities configured on the switch.

1. **Choose ILOM Administration → Management Access, and then click the SNMP tab.**

2. **Click the Communities link.**

   The page scrolls to the SNMP Communities table, which displays the configured SNMP v1 and v2c communities and permissions.

Related Information

- "Display the SNMP Service Status (Oracle ILOM Web)" on page 158
- "Display the SNMP Service User Accounts (Oracle ILOM Web)" on page 158
- "SNMP Client Overview (Oracle ILOM Web)" on page 510
- "Enable the SNMP Service (Oracle ILOM Web)" on page 511
- "Add SNMP Service User Accounts (Oracle ILOM Web)" on page 512
- "Add SNMP Service Communities (Oracle ILOM Web)" on page 515
- "Disable the SNMP Service (Oracle ILOM Web)" on page 518

▼ Display the SSH Server Status (Oracle ILOM Web)

The switch has an SSH server that enables system administrators to configure the properties for SSH management access and generate new RSA and DSA SSH keys on demand.

- **Choose ILOM Administration → Management Access, and then click the SSH Server tab.**

  The pane displays the state of the SSH service and weak ciphers, the RSA key fingerprint, key length, and public key, and the DSA fingerprint, key length, and public key.

Related Information

- "Enable SSH (Oracle ILOM Web)" on page 505
- "Generate SSH Keys (Oracle ILOM Web)" on page 505
- "Disable SSH (Oracle ILOM Web)" on page 506

▼ Display the IPMI Service Status (Oracle ILOM Web)

The switch runs a service that supports IPMI management of the switch. The switch's IPMI service supports both IPMI version 1.5 and 2.0.

- **Choose ILOM Administration → Management Access, and then click the IPMI tab.**

  The pane displays the status of the IPMI service.

Related Information

- "Enable the IPMI Service (Oracle ILOM Web)" on page 507
- "Disable the IPMI Service (Oracle ILOM Web)" on page 508
- "Enable IPMI Version 1.5 Sessions (Oracle ILOM Web)" on page 508
- "Disable IPMI Version 1.5 Sessions (Oracle ILOM Web)" on page 509

▼ Display the ASR Service Status (Oracle ILOM Web)

The switch supports the Oracle ASR service to facilitate rapid analysis and response to issues and potential issues with the switch.

- **Choose ILOM Administration → Notifications, and then click the ASR Client tab.**

  The pane displays the status, state, endpoint, user name, password, and proxy information of the ASR client.

Related Information

- "Monitoring Switch Components and Identification (Oracle ILOM Web)" on page 129
- "Display the Serial Port Configuration (Oracle ILOM Web)" on page 143
- "Monitoring Authentication and Access (Oracle ILOM Web)" on page 143
- "Monitoring Events and Logging (Oracle ILOM Web)" on page 147
- "Monitoring Management Networking (Oracle ILOM Web)" on page 151
- "Monitoring Management Connections to the Switch (Oracle ILOM Web)" on page 153

- "Monitoring Switch Interface Methods (Oracle ILOM Web)" on page 156
- "Monitoring User Accounts (Oracle ILOM Web)" on page 161
- "Monitoring Additional Services (Oracle ILOM Web)" on page 163

Monitoring User Accounts (Oracle ILOM Web)

These tasks describe how to display information through the Oracle ILOM Web interface about the ILOM user accounts and sessions on the switch.

- "Display the Oracle ILOM Sessions (Oracle ILOM Web)" on page 161
- "Display the Oracle ILOM User Accounts (Oracle ILOM Web)" on page 162
- "Display the Password Policy for Local Users (Oracle ILOM Web)" on page 162

Related Information

- "Monitoring Switch Components and Identification (Oracle ILOM Web)" on page 129
- "Display the Serial Port Configuration (Oracle ILOM Web)" on page 143
- "Monitoring Authentication and Access (Oracle ILOM Web)" on page 143
- "Monitoring Events and Logging (Oracle ILOM Web)" on page 147
- "Monitoring Management Networking (Oracle ILOM Web)" on page 151
- "Monitoring Management Connections to the Switch (Oracle ILOM Web)" on page 153
- "Monitoring Switch Interface Methods (Oracle ILOM Web)" on page 156
- "Display the ASR Service Status (Oracle ILOM Web)" on page 160
- "Monitoring Additional Services (Oracle ILOM Web)" on page 163

▼ Display the Oracle ILOM Sessions (Oracle ILOM Web)

Oracle ILOM sessions can be active through either the Oracle ILOM Web or Oracle ILOM CLI. Regardless of the session type, Oracle ILOM sessions are tracked through the Active Sessions table.

- **Choose ILOM Administration → User Management, and then click the Active Sessions tab.**

  The table displays the session's user name, the user's role, the session start time, and the session type and mode.

Related Information

- “Display the Oracle ILOM User Accounts (Oracle ILOM Web)” on page 162

▼ Display the Oracle ILOM User Accounts (Oracle ILOM Web)

Oracle ILOM local user accounts must be configured on the switch to allow Oracle ILOM access to the SP. Oracle ILOM local users are limited to a maximum of 10.

1. **Choose ILOM Administration → User Management, and then click the User Accounts tab.**
2. **Click the Users link.**

   The page scrolls to the Users table, which displays each user's name and role.
3. **(Optional) Click the SSH Keys link.**

   The SSH key information, if any, is displayed for the associated user.

Related Information

- “Display the Password Policy for Local Users (Oracle ILOM Web)” on page 162
- “Display the Oracle ILOM Sessions (Oracle ILOM Web)” on page 161
- “Add an Oracle ILOM User Account (Oracle ILOM Web)” on page 522
- “Change an Oracle ILOM User's Password or Role (Oracle ILOM Web)” on page 523
- “Add SSH Keys to Oracle ILOM User Accounts (Oracle ILOM Web)” on page 524
- “Delete an Oracle ILOM User Account (Oracle ILOM Web)” on page 525
- “Set the Switch Password Policy for Local Users (Oracle ILOM Web)” on page 526

▼ Display the Password Policy for Local Users (Oracle ILOM Web)

The passwords used to login to the switch can be configured with different requirements.

- **Choose ILOM Administration → User Management, and then click the Password Policy tab.**

  The pane displays requirements for password length, alphabetic and numeric characters, special characters, and password reuse.

Related Information

- “Display the Oracle ILOM Sessions (Oracle ILOM Web)” on page 161
- “Display the Oracle ILOM User Accounts (Oracle ILOM Web)” on page 162
- “Add an Oracle ILOM User Account (Oracle ILOM Web)” on page 522
- “Change an Oracle ILOM User's Password or Role (Oracle ILOM Web)” on page 523
- “Add SSH Keys to Oracle ILOM User Accounts (Oracle ILOM Web)” on page 524
- “Delete an Oracle ILOM User Account (Oracle ILOM Web)” on page 525
- “Set the Switch Password Policy for Local Users (Oracle ILOM Web)” on page 526

Monitoring Additional Services (Oracle ILOM Web)

These topics describe how to display information about additional services that might be required in your network.

- “Display the FIPS Service Status (Oracle ILOM Web)” on page 163
- “Display Information for Keyboard, Video, Mouse, Storage, and Serial Redirection Service (Oracle ILOM Web)” on page 164

Related Information

- “Monitoring Switch Components and Identification (Oracle ILOM Web)” on page 129
- “Display the Serial Port Configuration (Oracle ILOM Web)” on page 143
- “Monitoring Authentication and Access (Oracle ILOM Web)” on page 143
- “Monitoring Events and Logging (Oracle ILOM Web)” on page 147
- “Monitoring Management Networking (Oracle ILOM Web)” on page 151
- “Monitoring Management Connections to the Switch (Oracle ILOM Web)” on page 153
- “Monitoring Switch Interface Methods (Oracle ILOM Web)” on page 156
- “Monitoring User Accounts (Oracle ILOM Web)” on page 161
- “Display the ASR Service Status (Oracle ILOM Web)” on page 160

▼ Display the FIPS Service Status (Oracle ILOM Web)

FIPs is the Federal Information Processing Standard protocol, which provides a high-level of encryption and security to certain data when it is transmitted and received. While FIPS is enabled, LDAP, RADIUS, and IPMI 1.5 cannot be enabled.

- **Choose ILOM Administration → Management Access, and then click the FIPS tab.**

  The pane displays the status and operational state of FIPS.

Related Information

- "Enable FIPS (Oracle ILOM Web)" on page 530
- "Disable FIPS (Oracle ILOM Web)" on page 531
- "Disable LDAP User Access Through Oracle ILOM (Oracle ILOM Web)" on page 455
- "Disable RADIUS User Access Through Oracle ILOM (Oracle ILOM Web)" on page 471
- "Disable IPMI Version 1.5 Sessions (Oracle ILOM Web)" on page 509

▼ Display Information for Keyboard, Video, Mouse, Storage, and Serial Redirection Service (Oracle ILOM Web)

The KVMS and Serial Redirection Service enables interaction with the switch through a redirected management session.

- **Choose Remote Control → KVMS.**

  The pane displays the current state of the Serial Redirection service, the maximum number of client sessions allowed, the mode for mouse operation, and the lock settings for the host OS when management through redirection is complete.

Related Information

- "Display the Host Power-Control Settings (Oracle ILOM Web)" on page 142

Understanding Oracle ILOM Targets

These topics describe the Oracle ILOM targets, as seen in the CLI interface.

- "Oracle ILOM Target Overview" on page 165
- "Managing Oracle ILOM Targets" on page 166
- "Understanding Oracle ILOM Targets and Properties" on page 172

Related Information

- "Understanding System Administration Resources" on page 19
- "Accessing the Switch" on page 27
- "Monitoring the Switch (Oracle ILOM CLI)" on page 35
- "Monitoring the Switch (Oracle ILOM Web)" on page 125
- "Understanding SNMP MIB OIDs" on page 195
- "Understanding the EMS Module" on page 265
- "Controlling the Switch (Oracle ILOM CLI)" on page 301
- "Controlling the Switch (Oracle ILOM Web)" on page 427
- "Updating the Firmware" on page 533

Oracle ILOM Target Overview

Oracle ILOM targets represent all software and hardware components and services managed by Oracle ILOM. Targets are identified by a hierarchical path very similar to the directories and files of a file system. Each target has properties and commands that can affect it.

Target properties are of three types:

- **Read-only**. Display the value of these properties with the `show` command. You cannot set or change these properties directly with the `set` command. A serial number is a typical read-only property.

- **Read-and-write**. Display the value of these properties with the `show` command. Change the properties with the `set` command. An IP address is a typical read-and-write property.
- **Write-only**. You cannot display the value of these properties with the `show` command. The value is typically displayed as `(Cannot show property)`. When you set the property value with the `set` command, it initiates a one-time action. For example, when the `commitpending` property is set to `true`, it copies the pending network properties into the standard network properties. The `commitpending` property then returns to `(Cannot show property)`.

Target commands are specific to the permissions of the user who wants to affect the target.

Related Information

- “Managing Oracle ILOM Targets” on page 166
- “Understanding Oracle ILOM Targets and Properties” on page 172

Managing Oracle ILOM Targets

These topics describe how to display and configure targets and properties.

- “Display Characteristics of One Oracle ILOM Target” on page 166
- “Display a Specific Property and Value of an Oracle ILOM Target” on page 167
- “Display All Oracle ILOM Targets With a Specific Property” on page 168
- “Display Help for a Specific Property of an Oracle ILOM Target” on page 169
- “Configure One Property of an Oracle ILOM Target” on page 170
- “Configure Multiple Properties of an Oracle ILOM Target” on page 171

Related Information

- “Oracle ILOM Target Overview” on page 165
- “Understanding Oracle ILOM Targets and Properties” on page 172

▼ Display Characteristics of One Oracle ILOM Target

- **Access the Oracle ILOM CLI and display just one target and all characteristics of that target.**

```
-> show target
```

where *target* is any target provided in "Understanding Oracle ILOM Targets and Properties" on page 172. For example, to display all characteristics of the `/HOST` target, type:

```
-> show /HOST

 /HOST
  Targets:
   console

  Properties:
   boot_device = default

  Commands:
   cd
   set
   show
->
```

In the output, there is a subtarget for `/HOST`, `console`. There is one property, `boot_device`, and its current value is `default`. The commands that can be exercised on this target are `cd`, `set`, and `show`.

Related Information

- "Display a Specific Property and Value of an Oracle ILOM Target" on page 167
- "Display All Oracle ILOM Targets With a Specific Property" on page 168
- "Display Help for a Specific Property of an Oracle ILOM Target" on page 169
- "Configure One Property of an Oracle ILOM Target" on page 170
- "Configure Multiple Properties of an Oracle ILOM Target" on page 171
- "Oracle ILOM Target Overview" on page 165
- "Understanding Oracle ILOM Targets and Properties" on page 172

▼ Display a Specific Property and Value of an Oracle ILOM Target

- **Access the Oracle ILOM CLI and display a specific property and value of just one target.**

```
-> show target property
```

where:

- *target* is any target provided in "Understanding Oracle ILOM Targets and Properties" on page 172.
- *property* is a valid property for that target.

For example, to display the value of the `power_state` property of the `/System` target, type:

```
-> show /System power_state

 /System
  Properties:
   power_state = On
->
```

In the output, the power state is on.

Related Information

- "Display Characteristics of One Oracle ILOM Target" on page 166
- "Display All Oracle ILOM Targets With a Specific Property" on page 168
- "Display Help for a Specific Property of an Oracle ILOM Target" on page 169
- "Configure One Property of an Oracle ILOM Target" on page 170
- "Configure Multiple Properties of an Oracle ILOM Target" on page 171
- "Oracle ILOM Target Overview" on page 165
- "Understanding Oracle ILOM Targets and Properties" on page 172

▼ Display All Oracle ILOM Targets With a Specific Property

- **Access the Oracle ILOM CLI and display a table of all targets having a specific property.**

```
-> show target_root -t property
```

where:

- *target_root* is the parent target of type. These targets are `/`, `/HOST`, `/SP`, `/SYS`, and `/System`.
- *property* is a valid property for that target. See "Understanding Oracle ILOM Targets and Properties" on page 172 for valid properties for specific targets.

Note - This use of the `show` command performs a filtering operation, and takes longer than simpler `show` command uses.

For example, to display a table of all targets that have a `clear_fault_action` property (manual reset) under the target root of `/SYS`, type:

```
-> show /SYS -t clear_fault_action
Target              | Property              | Value
--------------------+-----------------------+---------------------
/SYS                | clear_fault_action    | (none)
/SYS/FM0            | clear_fault_action    | (none)
/SYS/FM0/FAN0       | clear_fault_action    | (none)
/SYS/FM0/FAN1       | clear_fault_action    | (none)
/SYS/FM1            | clear_fault_action    | (none)
...
/SYS/FM3/FAN1       | clear_fault_action    | (none)
/SYS/MB             | clear_fault_action    | (none)
/SYS/PS0            | clear_fault_action    | (none)
/SYS/PS1            | clear_fault_action    | (none)
/SYS/SP             | clear_fault_action    | (none)
->
```

Related Information

- “Display Characteristics of One Oracle ILOM Target” on page 166
- “Display a Specific Property and Value of an Oracle ILOM Target” on page 167
- “Display Help for a Specific Property of an Oracle ILOM Target” on page 169
- “Configure One Property of an Oracle ILOM Target” on page 170
- “Configure Multiple Properties of an Oracle ILOM Target” on page 171
- “Oracle ILOM Target Overview” on page 165
- “Understanding Oracle ILOM Targets and Properties” on page 172

▼ Display Help for a Specific Property of an Oracle ILOM Target

- **Access the Oracle ILOM CLI and display help for a specific property of just one target.**

```
-> help target property
```

where:

- *target* is any target provided in “Understanding Oracle ILOM Targets and Properties” on page 172.
- *property* is a valid property for that target.

Note - If the instance is already at the *target*, then you do not need to include the *target* in the `help` command.

For example, to display help for the `load_uri` property of the `/SP/firmware` target, type:

```
-> help /SP/firmware load_uri
 Properties:
 load_uri : Firmware load
   URI syntax and examples:
    ftp://user[:password]@host//absolute-file-path
    ftp://user[:password]@host/relative-file-path
    sftp://user[:password]@host/absolute-file-path
    ex:  sftp://jane@192.0.2.254/tmp/file.pkg
 load_uri : Possible values = tftp, ftp, sftp, scp, http, https
 load_uri : User role required for set = a
->
```

In the output, examples of the *value* for the property are displayed.

Related Information

- “Display Characteristics of One Oracle ILOM Target” on page 166
- “Display a Specific Property and Value of an Oracle ILOM Target” on page 167
- “Display All Oracle ILOM Targets With a Specific Property” on page 168
- “Configure One Property of an Oracle ILOM Target” on page 170
- “Configure Multiple Properties of an Oracle ILOM Target” on page 171
- “Oracle ILOM Target Overview” on page 165
- “Understanding Oracle ILOM Targets and Properties” on page 172

▼ Configure One Property of an Oracle ILOM Target

- **Access the Oracle ILOM CLI and configure one property of a target.**

```
-> set target property=value
```

where:

- *target* is any target provided in “Understanding Oracle ILOM Targets and Properties” on page 172.
- *property* is a valid property for that target.
- *value* is a valid value for that property.

For example, to clear the `/SP/logs/audit` target (Oracle ILOM audit log), type:

```
-> set /SP/logs/audit clear=true
Are you sure you want to clear /SP/logs/audit (y/n)? y
Set 'clear' to 'true'
->
```

Related Information

- "Display Characteristics of One Oracle ILOM Target" on page 166
- "Display a Specific Property and Value of an Oracle ILOM Target" on page 167
- "Display All Oracle ILOM Targets With a Specific Property" on page 168
- "Display Help for a Specific Property of an Oracle ILOM Target" on page 169
- "Configure Multiple Properties of an Oracle ILOM Target" on page 171
- "Oracle ILOM Target Overview" on page 165
- "Understanding Oracle ILOM Targets and Properties" on page 172

▼ Configure Multiple Properties of an Oracle ILOM Target

- **Access the Oracle ILOM CLI and configure several properties of a target.**

-> **set** *target property=value property=value property=value* ...

where:

- *target* is any target provided in "Understanding Oracle ILOM Targets and Properties" on page 172.
- *property* is a valid property for that target.
- *value* is a valid value for that property.

For example, to configure basic network management properties of the `/SP/network` target, type:

```
-> set /SP/network pendingipaddress=123.45.67.89 pendingipgateway=123.45.67.1
 pendingipnetmask=255.255.255.0 commitpending=true
Set 'pendingipaddress' to '123.45.67.89'
Set 'pendingipgateway' to '123.45.67.1'
Set 'pendingipnetmask' to '255.255.255.0'
Set 'commitpending' to 'true'
->
```

Related Information

- “Display Characteristics of One Oracle ILOM Target” on page 166
- “Display a Specific Property and Value of an Oracle ILOM Target” on page 167
- “Display All Oracle ILOM Targets With a Specific Property” on page 168
- “Display Help for a Specific Property of an Oracle ILOM Target” on page 169
- “Configure One Property of an Oracle ILOM Target” on page 170
- “Oracle ILOM Target Overview” on page 165
- “Understanding Oracle ILOM Targets and Properties” on page 172

Understanding Oracle ILOM Targets and Properties

This table describes Oracle ILOM targets whose properties can be displayed or configured.

Description	Links
Targets for the host, host console, and console output.	“/HOST Targets and Properties” on page 173
Targets for the Active Directory client.	“/SP Active Directory Client Targets and Properties” on page 173
Targets for clients that connect to external services. These clients include ASR, DNS, LDAP, NTP, RADIUS, SMTP, and system log.	“/SP General Client Targets and Properties” on page 175
Targets for the LDAP over SSL client.	“/SP LDAP over SSL Client Targets and Properties” on page 177
Targets for general aspects of the switch. These aspects include alerts, backup and restore, date and time, logs, network management, preferences, serial communication, sessions, snapshot, and users.	“/SP General Targets and Properties” on page 178
Targets for services provided by the switch. These services include FIPS, HTTP, HTTPS, IPMI, KVMS, Service Tag, SNMP, SSH, and SSO.	“/SP Service Targets and Properties” on page 181
Targets for general chassis components. These components include the chassis, fan modules, LEDs, the SCP, and switch chips.	“/SYS General Chassis Targets and Properties” on page 184
Targets for the switch main board.	“/SYS Main Board Chassis Targets and Properties” on page 186
Targets for the switch power supplies.	“/SYS Power Supply Chassis Targets and Properties” on page 188
Targets for Oracle Fabric Interconnect F2-12 I/O modules.	“/SYS Oracle F2 I/O Module Targets and Properties” on page 190
Targets for systems within the chassis. These systems include cooling, firmware, log, networking, open problems, and power. For Oracle Fabric Interconnect F2-12, the Oracle F2 I/O module target is also included.	“/System Systemic Targets and Properties” on page 192

Related Information

- “Oracle ILOM Target Overview” on page 165

- “Managing Oracle ILOM Targets” on page 166

/HOST Targets and Properties

Use the show and set commands on the /HOST targets to display information about and configure the host console.

Note - Properties indicated as Not Supported or N/A are not listed.

Oracle ILOM Target	Properties	Description
/HOST	■ boot_device = default	Host configuration.
/HOST/console	■ line_count = 0 ■ logging = enabled ■ pause_count = 0 ■ start_from = end	Host console configuration.
/HOST/console/history	No properties.	Visual record of console output.

Related Information

- “/SP Active Directory Client Targets and Properties” on page 173
- “/SP General Client Targets and Properties” on page 175
- “/SP LDAP over SSL Client Targets and Properties” on page 177
- “/SP General Targets and Properties” on page 178
- “/SP Service Targets and Properties” on page 181
- “/SYS General Chassis Targets and Properties” on page 184
- “/SYS Main Board Chassis Targets and Properties” on page 186
- “/SYS Power Supply Chassis Targets and Properties” on page 188
- “/System Systemic Targets and Properties” on page 192
- “Oracle ILOM Target Overview” on page 165
- “Managing Oracle ILOM Targets” on page 166

/SP Active Directory Client Targets and Properties

Use the show and set commands on the /SP/clients/activedirectory targets to display information about and configure the AD client.

Note - Properties indicated as `Not Supported` or `N/A` are not listed.

Oracle ILOM Target	Properties	Description
`/SP/clients/activedirectory`	■ `address = 0.0.0.0` ■ `defaultrole = (none)` ■ `dnslocatormode = disabled` ■ `expsearchmode = disabled` ■ `logdetail = none` ■ `port = 0` ■ `state = disabled` ■ `strictcertmode = disabled` ■ `strictcredentialerrormode = disabled` ■ `timeout = 4`	AD client configuration.
`/SP/clients/activedirectory/admingroups/`*x*	■ `name = (none)`	AD client administrative group configuration.
`/SP/clients/activedirectory/alternateservers/`*x*	■ `address = (none)` ■ `port = 0`	AD client alternate server configuration.
`/SP/clients/activedirectory/alternateservers/`*x*`/cert`	■ `certstatus = certificate not present` ■ `clear_action = (Cannot show property)` ■ `issuer = (none)` ■ `load_uri = (Cannot show property)` ■ `serial_number = (none)` ■ `subject= (none)` ■ `valid_from = (none)` ■ `valid_until = (none)` ■ `version = (none)`	AD client alternate server certificate configuration.
`/SP/clients/activedirectory/cert`	■ `certstatus = certificate not present` ■ `clear_action = (Cannot show property)` ■ `issuer = (none)` ■ `load_uri = (Cannot show property)` ■ `serial_number = (none)` ■ `subject= (none)` ■ `valid_from = (none)` ■ `valid_until = (none)` ■ `version = (none)`	AD client certificate configuration.
`/SP/clients/activedirectory/customgroups/`*x*	■ `name = (none)` ■ `roles = (none)`	AD client custom group configuration.
`/SP/clients/activedirectory/dnslocatorqueries/`*x*	■ `service = _ldap._tcp.gc._msdcs.`*DOMAIN.PORT:636*	AD client DNS configuration.

Oracle ILOM Target	Properties	Description
/SP/clients/activedirectory/opergroups/*x*	■ name = (none)	AD client operator group configuration.
/SP/clients/activedirectory/userdomains/*x*	■ domain = (none)	AD client user domain configuration.

Related Information

- "/HOST Targets and Properties" on page 173
- "/SP General Client Targets and Properties" on page 175
- "/SP LDAP over SSL Client Targets and Properties" on page 177
- "/SP General Targets and Properties" on page 178
- "/SP Service Targets and Properties" on page 181
- "/SYS General Chassis Targets and Properties" on page 184
- "/SYS Main Board Chassis Targets and Properties" on page 186
- "/SYS Power Supply Chassis Targets and Properties" on page 188
- "/System Systemic Targets and Properties" on page 192
- "Oracle ILOM Target Overview" on page 165
- "Managing Oracle ILOM Targets" on page 166

/SP General Client Targets and Properties

Use the show and set commands on these /SP/clients targets to display information about and configure the switch clients.

Note - Properties indicated as Not Supported or N/A are not listed.

Oracle ILOM Target	Properties	Description
/SP/clients	No properties.	Clients that connect to external services.
/SP/clients/asr	■ endpoint = https://transport. oracle.com ■ password = ***** ■ proxy_host = (none) ■ proxy-password = **** ■ proxy-user = (none) ■ send-event = (Cannot show property) ■ state = disabled ■ status = unregistered	ASR client configuration.

Oracle ILOM Target	Properties	Description
	■ username = (none)	
/SP/clients/dns	■ auto_dns = (none) ■ nameserver = 10.209.76.197 ■ retries = 1 ■ searchpath = us.oracle.com ■ timeout = 5	DNS client configuration.
/SP/clients/ldap	■ address = 0.0.0.0 ■ binddn = (none) ■ bindpw = (none) ■ defaultrole = Operator ■ port = 369 ■ searchbase = (none) ■ state = disabled	LDAP client configuration.
/SP/clients/ntp	No properties.	NTP client configuration.
/SP/clients/ntp/server/*x*	■ address = 0.0.0.0	NTP client server configuration.
/SP/clients/radius	■ address = 0.0.0.0 ■ defaultrole = Operator ■ port = 1812 ■ secret = (none) ■ state = enabled	RADIUS client communication configuration.
/SP/clients/radius/alternateservers/*x*	■ address = (none) ■ port = 0 ■ secret = (none)	RADIUS client alternate server configuration.
/SP/clients/smtp	■ address = 0.0.0.0 ■ custom_sender = (none) ■ port = 25 ■ send_test_email_to = (Cannot show property) ■ state = disabled	SMTP email client configuration.
/SP/clients/syslog/*x*	■ address = 0.0.0.0	Syslog client configuration.

Related Information

- "/HOST Targets and Properties" on page 173
- "/SP Active Directory Client Targets and Properties" on page 173
- "/SP LDAP over SSL Client Targets and Properties" on page 177
- "/SP General Targets and Properties" on page 178
- "/SP Service Targets and Properties" on page 181
- "/SYS General Chassis Targets and Properties" on page 184
- "/SYS Main Board Chassis Targets and Properties" on page 186
- "/SYS Power Supply Chassis Targets and Properties" on page 188
- "/System Systemic Targets and Properties" on page 192

- "Oracle ILOM Target Overview" on page 165
- "Managing Oracle ILOM Targets" on page 166

/SP LDAP over SSL Client Targets and Properties

Use the `show` and `set` commands on the `/SP/clients/ldapssl` targets to display information about and configure the LDAP SSL client.

Note - Properties indicated as `Not Supported` or `N/A` are not listed.

Oracle ILOM Target	Properties	Description
`/SP/clients/ldapssl`	■ `address = 0.0.0.0` ■ `defaultrole = os` ■ `logdetail = none` ■ `port = 0` ■ `state = disabled` ■ `strictcertmode = disabled` ■ `timeout = 4`	LDAP over SSL client configuration.
`/SP/clients/ldapssl/admingroups/`*x*	■ `name = (none)`	LDAP over SSL client administration group configuration.
`/SP/clients/ldapssl/alternateservers/`*x*	■ `address = (none)` ■ `port = 0`	LDAP over SSL client alternate server configuration.
`/SP/clients/ldapssl/alternateservers/`*x*`/cert`	■ `certstatus = certificate not present` ■ `clear_action = (Cannot show property)` ■ `issuer = (none)` ■ `load_uri = (Cannot show property)` ■ `serial_number = (none)` ■ `subject = (none)` ■ `valid_from = (none)` ■ `valid_until = (none)` ■ `version = (none)`	LDAP over SSL client alternate server certificate configuration.
`/SP/clients/ldapssl/cert`	■ `certstatus = certificate not present` ■ `clear_action = (Cannot show property)` ■ `issuer = (none)` ■ `load_uri = (Cannot show property)` ■ `serial_number = (none)` ■ `subject = (none)` ■ `valid_from = (none)` ■ `valid_until = (none)` ■ `version = (none)`	LDAP over SSL client certificate configuration.

Oracle ILOM Target	Properties	Description
/SP/clients/ldapssl/customgroups/*x*	■ name = (none) ■ roles = (none)	LDAP over SSL client custom group configuration.
/SP/clients/ldapssl/opergroups/*x*	■ name = (none)	LDAP over SSL client operator group configuration.
/SP/clients/ldapssl/optionalUserMapping	■ attributeInfo = (none) ■ binddn = (none) ■ bindpw = (none) ■ searchbase = (none) ■ state = disabled	LDAP over SSL client optional user mapping configuration.
/SP/clients/ldapssl/userdomains/*x*	■ domain = (none)	LDAP over SSL client user domain configuration.

Related Information

- "/HOST Targets and Properties" on page 173
- "/SP Active Directory Client Targets and Properties" on page 173
- "/SP General Client Targets and Properties" on page 175
- "/SP General Targets and Properties" on page 178
- "/SP Service Targets and Properties" on page 181
- "/SYS General Chassis Targets and Properties" on page 184
- "/SYS Main Board Chassis Targets and Properties" on page 186
- "/SYS Power Supply Chassis Targets and Properties" on page 188
- "/System Systemic Targets and Properties" on page 192
- "Oracle ILOM Target Overview" on page 165
- "Managing Oracle ILOM Targets" on page 166

/SP General Targets and Properties

Use the show and set commands on these /SP targets to display information about and configure general switch properties.

Note - Properties indicated as Not Supported or N/A are not listed.

Oracle ILOM Target	Properties	Description
/SP	■ check_physical_presence = true ■ current_hostname = ORACLESP-1 ■ hostname = us-gw-1 ■ reset_to_defaults = none	Management controller or host.

Oracle ILOM Target	Properties	Description
	■ system_contact = (none) ■ system_description = unknown, ILOM v3.2.0.0, r102282 ■ system_identifier = (none) ■ system_location = (none)	
/SP/alertmgmt/rules/*x*	■ type = snmptrap ■ level = disable ■ community_or_username = public ■ destination = 123.45.67.89 ■ destination_port = 0 ■ snmp_version = 2c ■ testrule = (Cannot show property)	Alert rules.
/SP/cli	■ legacy_targets = disabled ■ prompt = (none) ■ timeout = 0	CLI configuration.
/SP/clock	■ datetime = Thu Oct 8 05:19:52 2015 ■ timezone = GMT (GMT) ■ uptime = 348 days, 17:32:17 ■ usentpserver = disabled	Clock configuration.
/SP/config	■ dump_uri = (Cannot show property) ■ include_faultdata = false ■ load_uri = (Cannot show property) ■ passphrase = none	Configuration backup and restore settings.
/SP/diag/snapshot	■ dataset = normal ■ dump_uri = (Cannot show property) ■ encrypt_output = false ■ result = (none)	State of switch snapshot.
/SP/firmware	■ load_uri = (Cannot show property)	System firmware management.
/SP/logs/audit	■ clear = (Cannot show property)	Audit log management.
/SP/logs/audit/list	No properties.	Audit log itself.
/SP/logs/event	■ clear = (Cannot show property)	Event log management.
/SP/logs/event/list	No properties.	Event log itself.
/SP/network	■ commitpending = (Cannot show property) ■ dhcp_clientid = sysid ■ dhcp_server_ip = none ■ ipaddress = 0.0.0.0 ■ ipdiscovery = static ■ ipgateway = 123.45.67.1 ■ ipnetmask = 255.255.255.0 ■ macaddress = 00:AB:CD:EF:AB:CD ■ pendingipaddress = 123.45.67.89 ■ pendingipdiscovery = static ■ pendingipgateway = 123.45.67.1 ■ pendingipnetmask = 255.255.255.0	External network interface.

Oracle ILOM Target	Properties	Description
	■ pendingvlan_id = (none) ■ state = ipv4-only ■ vlan_id = (none)	
/SP/network/ipv6	■ state = disabled ■ autoconfig = stateless ■ dhcpv6_server_duid = (none) ■ link_local_addresss = fe80:203:baff:fe7a:a197/64 ■ static_ipaddress = ::128 ■ ipgateway = :: ■ static_ipgateway = :: ■ pending_static_ipaddress = ::128 ■ pending_static_ipgateway = ::	IPv6 protocol configuration.
/SP/network/test	■ ping = (Cannot show property) ■ ping6 = (Cannot show property)	Ping test.
/SP/preferences/banner/connect	■ dump_uri = (Cannot show property) ■ load_uri = (Cannot show property) ■ message = (none)	System banner connection message.
/SP/preferences/banner/login	■ dump_uri = (Cannot show property) ■ load_uri = (Cannot show property) ■ message = (none) ■ message_acceptance = disabled	System banner login message.
/SP/preferences/password_policy	■ policy = 8 ■ min_length = 8 ■ uppercase = no restrictions ■ lowercase = no restrictions ■ symbols = no restrictions ■ numbers = no restrictions ■ history = no restrictions	System password configuration.
/SP/serial/external	■ commitpending = (Cannot show property) ■ flowcontrol = software ■ pendingflowcontrol = software ■ pendingspeed = 115200 ■ speed=115200	Serial port connection configuration.
/SP/serial/host	■ commitpending = (Cannot show property) ■ flowcontrol = software ■ pendingflowcontrol = software ■ pendingspeed = 115200 ■ speed = 115200	Serial host communication configuration.
/SP/serial/portsharing	■ owner = sp	Serial port sharing configuration.
/SP/sessions	No properties.	Active sessions.
/SP/sessions/*x*	■ username = root ■ role = aucro ■ starttime = Fri Oct 9 23:58:15 2015	Monitor active user sessions.

Oracle ILOM Target	Properties	Description
	■ type = console ■ mode = normal	
/SP/users	No properties.	User configuration.
/SP/users/root	■ role = aucro ■ password = *****	User root role and password.
/SP/users/root/ssh/keys/*x*	■ fingerprint = (none) ■ algorithm = (none) ■ embedded_comment = (none) ■ bit_length = (none) ■ load_uri = (Cannot show property) ■ clear_action = (Cannot show property)	User root SSH authentication and key configuration.

Related Information

- "/HOST Targets and Properties" on page 173
- "/SP Active Directory Client Targets and Properties" on page 173
- "/SP General Client Targets and Properties" on page 175
- "/SP LDAP over SSL Client Targets and Properties" on page 177
- "/SP Service Targets and Properties" on page 181
- "/SYS General Chassis Targets and Properties" on page 184
- "/SYS Main Board Chassis Targets and Properties" on page 186
- "/SYS Power Supply Chassis Targets and Properties" on page 188
- "/System Systemic Targets and Properties" on page 192
- "Oracle ILOM Target Overview" on page 165
- "Managing Oracle ILOM Targets" on page 166

/SP Service Targets and Properties

Use the show and set commands on the /SP/services targets to display information about and configure switch management and security services.

Note - Properties indicated as Not Supported or N/A are not listed.

Oracle ILOM Target	Properties	Description
/SP/services/fips	■ state = disabled ■ status = disabled	FIPS service management.
/SP/services/http	■ port = 80 ■ securedirect = enabled	HTTP service configuration.

Oracle ILOM Target	Properties	Description
	■ servicestate = enabled ■ sessiontimeout = 15	
/SP/services/https	■ port = 443 ■ servicestate = enabled ■ sessiontimeout = 15 ■ sslv2 = disabled ■ sslv3 = disabled ■ tlsv1 = enabled ■ tlsv1_1 = enabled ■ tlsv1_2 = enabled ■ weak_ciphers = disabled	HTTPS service configuration.
/SP/services/https/ssl	■ cert_status = Using Default (No custom certificate or private key loaded)	HTTPS service SSL certificate configuration.
/SP/services/https/ssl/custom_cert	■ clear_action = (Cannot show property) ■ issuer = (none) ■ load_uri = (Cannot show property) ■ subject = (none) ■ valid_from = (none) ■ valid_until = (none)	HTTPS service custom SSL certificate settings.
/SP/services/https/ssl/custom_key	■ clear_action = (Cannot show property) ■ key_present = false ■ load_uri = (Cannot show property) ■ issuer = /C=US/ST-California/L-Redwood Shores/O=Oracle America, Inc./CN=Oracle Integrated Lights Out Manager) ■ subject = /C=US/ST-California/L-Redwood Shores/O=Oracle America, Inc./CN=Oracle Integrated Lights Out Manager) ■ valid_from = (none) ■ valid_until = (none)	HTTPS service custom SSL private key settings.
/SP/services/https/ssl/default_cert	■ issuer = /C=US/ST-California/L-Redwood Shores/O=Oracle America, Inc./CN=Oracle Integrated Lights Out Manager) ■ subject = /C=US/ST-California/L-Redwood Shores/O=Oracle America, Inc./CN=Oracle Integrated Lights Out Manager) ■ valid_from = Jun 12 15:29:01 2014 GMT ■ valid_until = Jun 7 15:29:01 2034 GMT	HTTPS service default SSL certificate settings.
/SP/services/ipmi	■ servicestate = enabled ■ v1_5 sessions = disabled	IPMI service configuration.
/SP/services/kvms	■ custom_lock_key = (none) ■ custom_lock_modifiers = (none) ■ lock_mode = disabled ■ max_session_count= 4 ■ mousemode = absolute	KVMS service configuration.

Oracle ILOM Target	Properties	Description
	■ servicestate = enabled ■ mode = disabled	
/SP/services/kvms/host_storage_device	■ status = disabled ■ password = (none)	KVMS service storage devices management.
/SP/services/kvms/host_storage_device/remote	■ password = (none) ■ server_URI = (none) ■ username = (none)	KVMD service remote storage device configuration.
/SP/services/servicetag	■ passphrase = none ■ servicetag_urn = Undefined ■ state = enabled	Service Tag configuration.
/SP/services/snmp	■ engineid = (none) ■ port = 161 ■ servicestate = enabled ■ sets = disabled ■ v1 = disabled ■ v2c = disabled ■ v3 = enabled	SNMP service agent service configuration.
/SP/services/snmp/communities/private	■ permission = rw	SNMP service private community configuration.
/SP/services/snmp/communities/public	■ permission = ro	SNMP service public community configuration.
/SP/services/snmp/mibs	■ permission = ro	SNMP service MIBs downloadable.
/SP/services/snmp/users	No properties.	SNMP service user configuration.
/SP/services/ssh	■ generate_new_key_action = (Cannot show property) ■ generate_new_key_type = none ■ restart_sshd_action = (Cannot show property) ■ state = enabled ■ weak_ciphers = disabled	SSH service authentication and communication configuration.
/SP/services/ssh/keys/dsa	■ fingerprint = 3b7e:0d:60:c6:71:64:ca:2a:7d ■ length = 1024 ■ privatekey = (Cannot show property) ■ publickey = AAAAB3NzaC1kc3MAAACBAN2rXIB47ZX11RX7Q38	SSH service DSA key configuration.
/SP/services/ssh/keys/rsa	■ fingerprint = 4f:e8:83:22:50:4f:a2:d0:4f:7d ■ length = 1024 ■ privatekey = (Cannot show property) ■ publickey = AAAAB3NzaC1yc2EAAAADAQABAAAAgABBAabacab7	SSH service RSA key configuration.
/SP/services/sso	■ state = enabled	SSO service configuration.

Related Information

- "/HOST Targets and Properties" on page 173

- "/SP Active Directory Client Targets and Properties" on page 173
- "/SP General Client Targets and Properties" on page 175
- "/SP LDAP over SSL Client Targets and Properties" on page 177
- "/SP General Targets and Properties" on page 178
- "/SYS General Chassis Targets and Properties" on page 184
- "/SYS Main Board Chassis Targets and Properties" on page 186
- "/SYS Power Supply Chassis Targets and Properties" on page 188
- "/System Systemic Targets and Properties" on page 192
- "Oracle ILOM Target Overview" on page 165
- "Managing Oracle ILOM Targets" on page 166

/SYS General Chassis Targets and Properties

Use the `show` command on these `/SYS` targets to display information about and status for the chassis components. Use the `set` command to configure the `clear_fault_action`, `load_uri`, and `value` properties to manually clear a fault, load firmware, or turn on the Locate LED, respectfully.

Note - Properties indicated as `Not Supported` or `N/A` are not listed.

Oracle ILOM Target	Properties	Description
`/SYS`	■ `type = Host System` ■ `ipmi_name = SYS` ■ `product_name = unknown` ■ `product_part_number = unknown` ■ `product_serial_number = unknown` ■ `product_manufacturer = Oracle Corporation` ■ `fault state = OK` ■ `clear_fault_action = (none)` ■ `power_state = On`	Sensors and FRU information.
`/SYS/FM`*x*	■ `type = Fan Module` ■ `ipmi_name = FM`*x* ■ `fault state = OK` ■ `clear_fault_action = (none)`	Fan module *x* management.
`/SYS/FM`*x*`/FAN`*y*	■ `type = Fan Module` ■ `ipmi_name = FM`*x*`/FAN`*y* ■ `fault state = OK` ■ `clear_fault_action = (none)`	Fan *y* management for fan module *x*.

Oracle ILOM Target	Properties	Description
/SYS/FM*x*/FAN*y*/TACH	■ type = Fan ■ ipmi_name = FM*x*/FAN*y*/TACH ■ class = Threshold Sensor ■ value = 6900.00 RPM	Fan *y* speed in fan module *x*.
/SYS/FM*x*/PRSNT	■ type = Entity Presence ■ ipmi_name = FM*x*/PRSNT ■ class = Discrete Sensor ■ value = Present ■ alarm status = cleared	Presence and alarm status of fan module *x*.
/SYS/OK	■ type = Indicator ■ ipmi_name = OK ■ value = On	OK LED information.
/SYS/SERVICE	■ type = Indicator ■ ipmi_name = SERVICE ■ value = Off	Service LED information.
/SYS/SP	■ type = Service Processor ■ ipmi_name = SERVICE ■ fru_description = PCA, PILOT3 SP, OPUS ■ fru_manufacturer = Oracle Corporation ■ fru_part_number = 7096151 ■ fru_rev_level = 04 ■ fru_serial_number = 489090M+14516P002F ■ fault_state = OK ■ clear_fault_action = (none)	Service processor information.
/SYS/SP/OK	■ type = Indicator ■ ipmi_name = SP/OK ■ value = On	SP LED information.

Related Information

- "/HOST Targets and Properties" on page 173
- "/SP Active Directory Client Targets and Properties" on page 173
- "/SP General Client Targets and Properties" on page 175
- "/SP LDAP over SSL Client Targets and Properties" on page 177
- "/SP General Targets and Properties" on page 178
- "/SP Service Targets and Properties" on page 181
- "/SYS Main Board Chassis Targets and Properties" on page 186
- "/SYS Power Supply Chassis Targets and Properties" on page 188
- "/System Systemic Targets and Properties" on page 192
- "Oracle ILOM Target Overview" on page 165

- "Managing Oracle ILOM Targets" on page 166

/SYS Main Board Chassis Targets and Properties

Use the show command on the /SYS/MB targets to display information about and status for the main board. Use the set command to configure the clear_fault_action property to manually clear a main board fault.

Note - Properties indicated as Not Supported or N/A are not listed.

Oracle ILOM Target	Properties	Description
/SYS/MB	■ type = Motherboard ■ ipmi_name = MB ■ fru_description = PCBA, W/MECHANICALS, NM3, LEAF ■ fru_manufacturer = Oracle Corporation ■ fru_part_number = 7092208 ■ fru_rev_level = 06 ■ fru_serial_number = 489090M+1507RP0005 ■ fru_macaddress = 00:10:e0:56:83:85 ■ fault_state = OK ■ clear_fault_action = (none)	Main board management.
/SYS/MB/T_AMB	■ type = Temperature ■ ipmi_name = MB/T_AMB ■ class = Threshold Sensor ■ value = 32.000 degree C ■ upper_critical_threshold = 40.000 degree C ■ lower_critical_threshold = 0.000 degree C ■ lower_nonrecov_threshold = -10.000 degree C ■ alarm_status = cleared	Main board ambient temperature information.
/SYS/MB/T_HCA	■ type = Temperature ■ ipmi_name = MB/T_HCA ■ class = Threshold Sensor ■ value = 74.000 degree C ■ upper_nonrecov_threshold = 110.000 degree C ■ upper_critical_threshold = 100.000 degree C ■ upper_noncritical_threshold = 90.000 degree C ■ lower_critical_threshold = 0.000 degree C ■ alarm_status = cleared	IB HCA ambient temperature information.
/SYS/MB/T_IBSWITCH	■ type = Temperature ■ ipmi_name = MB/T_IBSWITCH	IB switch ambient temperature information.

Oracle ILOM Target	Properties	Description
	■ class = Threshold Sensor ■ value = 81.000 degree C ■ upper_nonrecov_threshold = 110.000 degree C ■ upper_critical_threshold = 100.000 degree C ■ upper_noncritical_threshold = 90.000 degree C ■ lower_noncritical_threshold = N/A ■ lower_critical_threshold = 0.000 degree C ■ alarm_status = cleared	
/SYS/MB/T_OUT	■ type = Temperature ■ ipmi_name = MB/T_OUT ■ class = Threshold Sensor ■ value = 36.000 degree C ■ upper_nonrecov_threshold = 75.000 degree C ■ upper_critical_threshold = 65.000 degree C ■ upper_noncritical_threshold = 50.000 degree C ■ lower_critical_threshold = 0.000 degree C ■ lower_nonrecov_threshold = -10.000 ■ alarm_status = cleared	Main board outflow temperature information.
/SYS/MB/V_BAT	■ type = Voltage ■ ipmi_name = MB/V_BAT ■ class = Threshold Sensor ■ value = 2.988 Volts ■ lower_noncritical_threshold = 2.548 Volts ■ alarm_status = cleared	Main board battery voltage information.

Related Information

- "/HOST Targets and Properties" on page 173
- "/SP Active Directory Client Targets and Properties" on page 173
- "/SP General Client Targets and Properties" on page 175
- "/SP LDAP over SSL Client Targets and Properties" on page 177
- "/SP General Targets and Properties" on page 178
- "/SP Service Targets and Properties" on page 181
- "/SYS General Chassis Targets and Properties" on page 184
- "/SYS Power Supply Chassis Targets and Properties" on page 188
- "/System Systemic Targets and Properties" on page 192
- "Oracle ILOM Target Overview" on page 165
- "Managing Oracle ILOM Targets" on page 166

/SYS Power Supply Chassis Targets and Properties

Use the `show` command on the `/SYS/PS`*x* targets to display information about and status for the power supplies. Use the `set` command to configure the `clear_fault_action` property to manually clear a power supply fault.

Note - Properties indicated as `Not Supported` or `N/A` are not listed.

Oracle ILOM Target	Properties	Description
`/SYS/PS`*x*	■ `type = Power Supply` ■ `ipmi_name = PS`*x* ■ `fru_manufacturer = Delta Electronics` ■ `fru_part_number = 7065505-01` ■ `fru_serial_number = C94928` ■ `fault_state = OK` ■ `clear_fault_action = (none)`	Power supply *x* information.
`/SYS/PS`*x*`/INPUT_POWER`	■ `type = Power Unit` ■ `ipmi_name = PS`*x*`/IN_POWER` ■ `class = Threshold Sensor` ■ `value = 209.916 Watts` ■ `alarm_status = cleared`	Power supply *x* input power information.
`/SYS/PS`*x*`/I_IN`	■ `type = Current` ■ `ipmi_name = PS`*x*`/I_IN` ■ `class = Threshold Sensor` ■ `value = 1.827 Amps` ■ `alarm_status = cleared`	Power supply *x* input current information.
`/SYS/PS`*x*`/I_OUT`	■ `type = Current` ■ `ipmi_name = PS`*x*`/I_OUT` ■ `class = Threshold Sensor` ■ `value = 16.00 Amps` ■ `alarm_status = cleared`	Power supply *x* output current information.
`/SYS/PS`*x*`/OUTPUT_POWER`	■ `type = Power Unit` ■ `ipmi_name = PS`*x*`/OUT_POWER` ■ `class = Threshold Sensor` ■ `value = 180.000 Watts` ■ `alarm_status = cleared`	Power supply *x* output power information.
`/SYS/PS`*x*`/PRSNT`	■ `type = Entity Presence` ■ `ipmi_name = PS`*x*`/PRSNT` ■ `class = Discrete Sensor` ■ `value = Present` ■ `alarm status = cleared`	Presence and alarm status of power supply *x*.

Oracle ILOM Target	Properties	Description
/SYS/PS*x*/PWROK	■ type = Power Supply ■ ipmi_name = PS*x*/PRSNT ■ class = Discrete Sensor ■ value = State Asserted ■ alarm status = cleared	Power supply *x* power state.
/SYS/PS*x*/V_IN	■ type = Voltage ■ ipmi_name = PS*x*/V_IN ■ class = Threshold Sensor ■ value = 119.000 Volts ■ upper_nonrecov_threshold = 255.000 Volts ■ upper_critical_threshold = 252.000 Volts ■ lower_critical_threshold = 100.000 Volts ■ lower_nonrecov_threshold = 90.000 Volts ■ alarm_status = cleared	Power supply *x*input voltage information.
/SYS/PS*x*/V_OUT	■ type = Voltage ■ ipmi_name = PS*x*/V_OUT ■ class = Threshold Sensor ■ value = 12.000 Volts ■ upper_nonrecov_threshold = 20.000 Volts ■ upper_critical_threshold = 14.000 Volts ■ lower_critical_threshold = 10.000 Volts ■ alarm_status = cleared	Power supply *x*output voltage information.
/SYS/PS_3V3	■ type = Voltage ■ class = Threshold Sensor ■ value = 3.412 Volts ■ upper_nonrecov_threshold = 3.783 Volts ■ upper_critical_threshold = 3.685 Volts ■ upper_noncritical_threshold = 3.471 Volts ■ lower_noncritical_threshold = 3.120 Volts ■ lower_critical_threshold = 2.944 Volts ■ lower_nonrecov_threshold = 2.789 Volts ■ alarm_status = cleared	3.3 Volt power information.

Related Information

- "/HOST Targets and Properties" on page 173
- "/SP Active Directory Client Targets and Properties" on page 173
- "/SP General Client Targets and Properties" on page 175
- "/SP LDAP over SSL Client Targets and Properties" on page 177
- "/SP General Targets and Properties" on page 178
- "/SP Service Targets and Properties" on page 181
- "/SYS General Chassis Targets and Properties" on page 184

- "/SYS Main Board Chassis Targets and Properties" on page 186
- "/System Systemic Targets and Properties" on page 192
- "Oracle ILOM Target Overview" on page 165
- "Managing Oracle ILOM Targets" on page 166

/SYS Oracle F2 I/O Module Targets and Properties

The Oracle Fabric Interconnect F2-12 supports numerous types of Oracle F2 I/O modules to customize the switch for your deployment. The Oracle F2 I/O modules are not supported in the leaf switch.

Use the show command on the /SYS/MODULES/MODULE*x* targets to display information about and status for the Oracle F2 I/O modules installed in your virtualization switch.

Note - Properties indicated as Not Supported or N/A are not listed in the table. Also, different types of module exist. One module type is used as an example, so some of the properties listed will be different depending on the type of module that Oracle ILOM is querying.

Oracle ILOM Target	Properties	Description
/SYS/MODULES/MODULE*x*	■ type = Network Module ■ ipmi_name = /MODULE*x* ■ fru_description = PCBA,NM3 Module ■ fru_manufacturer = Oracle Corporation ■ fru_part_number = 7097301 ■ fru_rev_level = 03 ■ fru_serial_number = 489089M+1549R0003A ■ fru_mac_address = 00:10:e0:97:f3:68 ■ fault_state = OK ■ clear_fault_action = (none) ■ power_state = on	Module *x* information.
/SYS/MODULES/MODULE*x*/0V85_OK/	■ type = Voltage ■ ipmi_name = MODULE/0V85_OK ■ class = Discrete Sensor ■ value = State Asserted ■ alarm_status = cleared	Module *x* 0v85 voltage information.
/SYS/MODULES/MODULE*x*/1V0_OK/	■ type = Voltage ■ ipmi_name = MODULE/1V0_OK ■ class = Discrete Sensor ■ value = State Asserted ■ alarm_status = cleared	Module *x* 1V0 voltage information.

Oracle ILOM Target	Properties	Description
/SYS/MODULES/ MODULE*x*/1V2_OK/	■ type = Voltage ■ ipmi_name = MODULE/1V2_OK ■ class = Discrete Sensor ■ value = State Asserted ■ alarm_status = cleared	Module *x* 1V2 voltage information.
/SYS/MODULES/ MODULE*x*/1V8_OK/	■ type = Voltage ■ ipmi_name = MODULE/1V8_OK ■ class = Discrete Sensor ■ value = State Asserted ■ alarm_status = cleared	Module *x* 1V8 voltage information.
/SYS/MODULES/ MODULE*x*/2V5_OK/	■ type = Voltage ■ ipmi_name = MODULE/1V2_OK ■ class = Discrete Sensor ■ value = State Asserted ■ alarm_status = cleared	Module *x* 2V5 voltage information. .
/SYS/MODULES/ MODULE*x*/3V3_OK/	■ type = Voltage ■ ipmi_name = MODULE/3V3_OK ■ class = Discrete Sensor ■ value = State Asserted ■ alarm_status = cleared	Module *x* 3V3 voltage information.
/SYS/MODULES/MODULE*x*/BOOTED	■ type = Boot ■ class = Discrete Sensor ■ value = State Deasserted ■ alarm_status = cleared	Module *x* boot up information.
/SYS/MODULES/MODULE*x*/FAULT	■ type = Module ■ ipmi_name = MODULEX/FAULT ■ class = Discrete Sensor ■ value = State Deasserted ■ alarm_status = cleared	Module *x* fault information.
/SYS/MODULES/ MODULE*x*/T_CRITICAL	■ type = Module ■ class = Discrete Sensor ■ value = State Deasserted ■ alarm_status = cleared	Module *x* critical temperature information.
/SYS/MODULES/MODULE*x*/T_MOD	■ type = Temperature ■ class = Threshold Sensor ■ value = 0.000 degree C ■ upper_nonrecov_threshold = 105.000 degree C ■ upper_critical_threshold = 100.000 degree C ■ upper_noncritical_threshold = 95.000 degree C ■ lower_critical_threshold = -1.000 degree C ■ alarm_status = cleared	Module *x* temperature threshold information.

Related Information

- "/HOST Targets and Properties" on page 173
- "/SP Active Directory Client Targets and Properties" on page 173
- "/SP General Client Targets and Properties" on page 175
- "/SP LDAP over SSL Client Targets and Properties" on page 177
- "/SP General Targets and Properties" on page 178
- "/SP Service Targets and Properties" on page 181
- "/SYS General Chassis Targets and Properties" on page 184
- "/SYS Main Board Chassis Targets and Properties" on page 186
- "/System Systemic Targets and Properties" on page 192
- "Oracle ILOM Target Overview" on page 165
- "Managing Oracle ILOM Targets" on page 166

/System Systemic Targets and Properties

Use the show command on the /System targets to display information and general health of the systems within the chassis. Use the set command to configure the action, clear, and load_uri property to reset switches, clear logs, and load firmware respectively.

Note - Properties indicated as Not Supported or N/A are not listed.

Oracle ILOM Target	Properties	Description
/System	■ health = OK ■ health_details = - ■ open_problems_count = 0 ■ type = Rack Mount ■ model = Unknown ■ part_number= Unknown ■ serial_number = Unknown ■ system_identifier = (none) ■ system_fw_version = 3.2.0.0 ■ ilom_address = 0.0.0.0 ■ ilom_mac_address = 00:00:AB:1C:D2:34 ■ locator_indicator = Off ■ power_state = On ■ actual_power_consumption = Unknown ■ action = (none)	System configuration and common equipment information.
/System/Open_Problems	No properties.	Problematic components.
/System/Power	■ health = OK	Power system information.

Oracle ILOM Target	Properties	Description
	■ health_details = - ■ actual_power_consumption = Unknown ■ max_permitted_power = Unknown ■ installed_power_supplies = 2 ■ max_power_supplies = 2	
/System/Power/ Power_Supplies/ Power_Supply_*x*	■ health = OK ■ health_details = - ■ part_number = 7065505-01 ■ serial_number = C94928 ■ manufacturer = Delta Electronics ■ location = PSO (Power Supply 0)	Power supply information.
/System/Cooling	■ health = OK ■ health_details = - ■ installed_chassis_fans = 8 ■ max_chassis_fans = 8 ■ inlet_temp = 32 degrees C ■ exhaust_temp = 36 degrees C	Cooling system information.
/System/Cooling/Fans/Fan_*x*	■ health = OK ■ health_details = - ■ part_number = Unknown ■ serial_number = Unknown ■ location = FMO (Fan Module 0) ■ fan_percentage = 30%	Fan information.
/System/Networking	■ health = Unknown ■ health_details = - ■ installed_eth_nics = 0 ■ installed_ethernet_switches = 1 ■ max_ethernet_switches = 1 ■ installed_infiniband_switches = 1 ■ max_infiniband_switches = 1	Ethernet switch and switch-chip information.
/System/Networking/Modules/ Module_*X*	■ health = OK ■ health_details = - ■ type = InfiniBand ■ location = MODULE*X* (Network Module 0) ■ action = (none)	Oracle F2 I/O modules for virtualization switch. Oracle F2 I/O modules have various sensors. See "Oracle ILOM Module Targets Overview" on page 73.
/System/Networking/ Switches/Switch_0	■ health = Unknown ■ health_details = - ■ type = Ethernet ■ firmware_version = Unknown ■ location = ETHSWITCH0 (Network Switch 0) ■ action = (none) ■ load_uri = (none)	Ethernet switch information.

Oracle ILOM Target	Properties	Description
/System/Networking/Switches/0/fs_cli	■ action = (none)	Ethernet switch CLI interface control.
/System/Networking/Switches/0/sefos	■ action = (none)	Ethernet switch SEFOS interface control.
/System/Networking/Switches/Switch_1	■ health = OK ■ health_details = - ■ type = Infiniband ■ firmware_version = 1.0.0 BUILD-20150827-686 ■ location = IBSWITCH0 (Network Switch 0) ■ action = (none)	IB switch information.
/System/Firmware	■ system_fw_version = 3.2.0.0	System firmware information.
/System/Firmware/Other_Firmware/Firmware_0	■ component = ILOM ■ type = ILOM Firmware ■ version = 3.2.0.0	Oracle ILOM firmware information.
/System/Firmware/Other_Firmware/Firmware_1	■ component = BIOS ■ type = System BIOS ■ version = Unknown	BIOS firmware information.
/System/Firmware/Other_Firmware/Firmware_2	■ component = SYS ETHSWITCH0 ■ type = Upgradeable FRU ■ version = Not Available ■ load_uri = (none)	System Ethernet switch firmware information.
/System/Log	■ clear = (none)	System log management.
/System/Log/list	No properties.	System log itself.

Related Information

- "/HOST Targets and Properties" on page 173
- "/SP Active Directory Client Targets and Properties" on page 173
- "/SP General Client Targets and Properties" on page 175
- "/SP LDAP over SSL Client Targets and Properties" on page 177
- "/SP General Targets and Properties" on page 178
- "/SP Service Targets and Properties" on page 181
- "/SYS General Chassis Targets and Properties" on page 184
- "/SYS Main Board Chassis Targets and Properties" on page 186
- "/SYS Power Supply Chassis Targets and Properties" on page 188
- "Oracle ILOM Target Overview" on page 165
- "Managing Oracle ILOM Targets" on page 166

Understanding SNMP MIB OIDs

These topics provide tables of object identifiers (OIDs) for their respective management information bases (MIBs) in the switch.

- "OID Tables Overview" on page 195
- "Understanding the SUN-HW-CTRL-MIB MIB OIDs" on page 196
- "Understanding the SUN-HW-TRAP-MIB MIB OIDs" on page 200
- "Understanding the SUN-ILOM-CONTROL-MIB MIB OIDs" on page 209
- "Understanding the SUN-ILOM-SYSTEM-MIB MIB OIDs" on page 238
- "Understanding the SUN-PLATFORM-MIB MIB OIDs" on page 243
- "Understanding the ENTITY-MIB MIB OIDs" on page 260

Related Information

- "Understanding System Administration Resources" on page 19
- "Accessing the Switch" on page 27
- "Monitoring the Switch (Oracle ILOM CLI)" on page 35
- "Monitoring the Switch (Oracle ILOM Web)" on page 125
- "Understanding Oracle ILOM Targets" on page 165
- "Understanding the EMS Module" on page 265
- "Controlling the Switch (Oracle ILOM CLI)" on page 301
- "Controlling the Switch (Oracle ILOM Web)" on page 427
- "Updating the Firmware" on page 533

OID Tables Overview

Each OID table has three columns of information. From left to right, the columns are:

- **Description of Task or Activity** – The text under this heading describes what you want to do or information you want to see.

- **Action** – The verbs under this heading describe the action respective to the SNMP client software interface. For example, a verb of `read` means to use the `snmpget`, `snmpwalk`, or `snmptable` command in the NetSNMP CLI client.
- **MIB OID** – The string under this heading is the object identifier of the respective MIB that is used to accomplish the task or activity.

Note - The OID provided in the right column might not be complete. You might need to appended the OID with a `.0` if the OID is a scalar OID or a *.x* (where *x* is `1` to a maximum value) if the OID is a tabular OID.

A table OID has a `Table` suffix, and the OIDs listed beneath it are most likely columns of that table.

An index OID has an `Index` suffix, and while the OID is not directly accessible, the OID is still used to return a specific row of a table OID.

Related Information

- "SNMP Overview" on page 23
- "Understanding the SUN-HW-CTRL-MIB MIB OIDs" on page 196
- "Understanding the SUN-HW-TRAP-MIB MIB OIDs" on page 200
- "Understanding the SUN-ILOM-CONTROL-MIB MIB OIDs" on page 209
- "Understanding the SUN-ILOM-SYSTEM-MIB MIB OIDs" on page 238
- "Understanding the SUN-PLATFORM-MIB MIB OIDs" on page 243
- "Understanding the ENTITY-MIB MIB OIDs" on page 260

Understanding the SUN-HW-CTRL-MIB MIB OIDs

These topics provide tables of the hardware control object identifiers and the traps.

- "Power Management OIDs" on page 197
- "Trusted Platform Module (TPM) OIDs" on page 200

Related Information

- "SNMP Overview" on page 23
- "OID Tables Overview" on page 195
- "Understanding the SUN-HW-TRAP-MIB MIB OIDs" on page 200
- "Understanding the SUN-ILOM-CONTROL-MIB MIB OIDs" on page 209

- "Understanding the SUN-ILOM-SYSTEM-MIB MIB OIDs" on page 238
- "Understanding the SUN-PLATFORM-MIB MIB OIDs" on page 243
- "Understanding the ENTITY-MIB MIB OIDs" on page 260

Power Management OIDs

This table lists power management object identifiers supported by the SUN-HW-TRAP-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set the total number of reserved PSs.	read write	sunHwCtrlReservedPSU
Display the total number of PSs.	read	sunHwCtrlTotalPSU
Display table listing additional power management properties.	not accessible	sunHwCtrlPowerMgmtTable
Display an entry for a power management property.	not accessible	sunHwCtrlPowerMgmtEntry
Display an index for sunHwCtrlPowerMgmtTable .	not accessible	sunHwCtrlPowerMgmtID
Display the name of the power management property.	read	sunHwCtrlPowerMgmtName
Display the units for the value of the power management property.	read	sunHwCtrlPowerMgmtUnits
Display value of the power management property.	read	sunHwCtrlPowerMgmtValue
Display the total input power consumed in Watts. ■ On a rackmount server, total power consumption is the input power consumed by the server. ■ On a blade, this is the input power consumed just by the blade (not including any power consumed by shared components).	read	sunHwCtrlPowerMgmtActualPower
Display the maximum input power consumption in Watts. ■ On a rackmount server, the maximum power consumption is the maximum input power the server guarantees it will consume at any instant. ■ On a blade, this is the maximum input power a blade guarantees it will consume, not including its power load on shared components.	read	sunHwCtrlPowerMgmtPermittedPower
Display the maximum input power capacity in Watts. Power capacity is the maximum input power the power supplies are capable of consuming.	read	sunHwCtrlPowerMgmtAvailablePower
Display the desired power management policy.	read	sunHwCtrlPowerMgmtPolicy
Display the power allocated in Watts to all power consuming components in the system (includes power permanently allocated for unmanaged hot-pluggable components such as I/O and fans).	read	sunHwCtrlPowerMgmtAllocatedPower
Display or set the current state of sunHwCtrlPowerMgmtBudgetMinPowerlimit, sunHwCtrlPowerMgmtBudgetPowerlimit, sunHwCtrlPowerMgmtBudgetTimelimit, and sunHwCtrlPowerMgmtBudgetTimelimitActions. Also, returns state value	read write	sunHwCtrlPowerMgmtBudget

Description of Task or Activity	Action	MIB OID
of enabled or disabled, and when possible, returns power budget values for the objects.		
Display the minimum value sunHwCtrlPowerMgmtBudgetPowerlimit can be set to. Power consumption can be controlled to fit within as little as this amount of power when the system is powered on.	read	sunHwCtrlPowerMgmtBudgetMinPowerlimit
Display the maximum power consumption in Watts.	read	sunHwCtrlPowerMgmtBudgetPowerlimit
Display the grace period for exceeding the power limit once the power limit has been achieved, in milliseconds.	read	sunHwCtrlPowerMgmtBudgetTimelimit
Display a list of actions that will occur if the power limit is exceeded and cannot be controlled within the time limit.	read	sunHwCtrlPowerMgmtBudgetTimelimitActions
Display the state of the power budget based on reading and comparing the sunHwCtrlPowerMgmtBudget ,sunHwCtrlPowerMgmtBudget, and sunHwCtrlPowerMgmtBudgetPowerlimit objects.	read	sunHwCtrlPowerMgmtBudgetOK
Display or commit any pending values for sunHwCtrlPowerMgmtBudgetPendingPowerlimit, sunHwCtrlPowerMgmtBudgetPendingTimelimit, and sunHwCtrlPowerMgmtBudgetPendingTimelimitActions objects.	read write	sunHwCtrlPowerMgmtBudgetCommitPending
Display or commit the value applied to sunHwCtrlPowerMgmtBudgetPowerlimit.	read write	sunHwCtrlPowerMgmtBudgetPendingPowerlimit
Display or commit the value applied to sunHwCtrlPowerMgmtBudgetTimelimit.	read write	sunHwCtrlPowerMgmtBudgetPendingTimelimit
Display or commit the value applied to sunHwCtrlPowerMgmtBudgetTimelimitActions.	read write	sunHwCtrlPowerMgmtBudgetPendingTimelimitActions
Display or commit up to two threshold values that determine if Oracle ILOM threshold events get generated based on the value of the system power consumption sensor (typically /SYS/VPS).	read write	sunHwCtrlPowerMgmtConsumptionThresholds
Display or set a sampling period, in seconds, over which sunHwCtrlPowerMgmtSamplingMinimumPower, sunHwCtrlPowerMgmtSamplingMaximumPower, and sunHwCtrlPowerMgmtSamplingAveragePower are calculated and reported.	read write	sunHwCtrlPowerMgmtSamplingPeriod
Display the date and time at which the power consumption values were calculated.	read	sunHwCtrlPowerMgmtSamplingTimestamp
Display or set the minimum measured power consumption during the most recent sampling period, in Watts.	read write	sunHwCtrlPowerMgmtSamplingMinimumPower
Display the minimum measured power consumption during the most recent sampling period, in Watts.	read	sunHwCtrlPowerMgmtSamplingMinimumPower
Display the maximum measured power consumption during the most recent sampling period, in Watts.	read	sunHwCtrlPowerMgmtSamplingMaximumPower
Display or set the average measured power consumption during the most recent sampling period, in Watts.	read write	sunHwCtrlPowerMgmtSamplingAveragePower
Display the counterpart for sunHwCtrlPowerMgmtActualPower for multidomain.	read	sunHwCtrlDomainPowerMgmtActualPower

Description of Task or Activity	Action	MIB OID
Display the counterpart for sunHwCtrlPowerMgmtPermittedPower for multidomain.	read	sunHwCtrlDomainPowerMgmtPermittedPower
Display the counterpart for sunHwCtrlPowerMgmtAvailablePower for multidomain.	read	sunHwCtrlDomainPowerMgmtAvailablePower
Display or set the counterpart for sunHwCtrlPowerMgmtPolicy for multidomain.	read write	sunHwCtrlDomainPowerMgmtPolicy
Display the counterpart for sunHwCtrlPowerMgmtAllocatedPower for multidomain.	read	sunHwCtrlDomainPowerMgmtAllocatedPower
Display or set the counterpart for sunHwCtrlPowerMgmtBudget for multidomain.	read write	sunHwCtrlDomainPowerMgmtBudget
Display the counterpart for sunHwCtrlPowerMgmtBudgetMinPowerlimit for multidomain.	read	sunHwCtrlDomainPowerMgmtBudgetMinPowerLimit
Display the counterpart for sunHwCtrlPowerMgmtBudgetTimelimit for multidomain.	read	sunHwCtrlDomainPowerMgmtBudgetTimeLimit
Display the counterpart for sunHwCtrlPowerMgmtBudgetTimelimitActions for multidomain.	read	sunHwCtrlDomainPowerMgmtBudgetTimeLimitActions
Display the counterpart for sunHwCtrlPowerMgmtBudgetOK for multidomain.	read	sunHwCtrlDomainPowerMgmtBudgetOK
Display or set the counterpart for sunHwCtrlPowerMgmtBudgetCommitPending for multidomain.	read write	sunHwCtrlDomainPowerMgmtBudgetCommitPending
Display or set the counterpart for sunHwCtrlPowerMgmtBudgetPendingPowerlimit for multidomain.	read write	sunHwCtrlDomainPowerMgmtBudgetPendingPowerLimit
Display or set the counterpart for sunHwCtrlPowerMgmtBudgetPendingTimelimit for multidomain.	read write	sunHwCtrlDomainPowerMgmtBudgetPendingTimeLimit
Display or set the counterpart for sunHwCtrlPowerMgmtBudgetPendingTimeLimitActions for multidomain.	read write	sunHwCtrlDomainPowerMgmtBudgetPendingTimeLimitActions
Display or set the counterpart for sunHwCtrlPowerMgmtBudgetPendingPowerlimit for multidomain.	read write	sunHwCtrlDomainPowerMgmtBudgetPendingPowerLimit
Display or set the counterpart for sunHwCtrlPowerMgmtBudgetPendingPowerlimit for multidomain.	read write	sunHwCtrlDomainPowerMgmtBudgetPendingPowerLimit
Display the counterpart for sunHwCtrlPowerMgmtBudgetPendingTimelimit for multidomain.	read	sunHwCtrlDomainPowerMgmtBudgetPendingPowerLimit
Display or set the counterpart for sunHwCtrlPowerMgmtBudgetPendingTimelimitActions for multidomain.	read write	sunHwCtrlDomainPowerMgmtBudgetPendingTimeLimitActions
Display the counterpart for sunHwCtrlPowerMgmtConsumptionThreshold for multidomain. Can be up to two threshold objects.	read	sunHwCtrlDomainPowerMgmtConsumptionThreshold*X*

Related Information

- "OID Tables Overview" on page 195

Trusted Platform Module (TPM) OIDs

This table lists the TPM objects identifiers supported by the SUN-HW-TRAP-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set values for the principal control for any action being taken to change the access modes of the TPM device.	read write	sunHwCtrlTpmEnable
Display or set enabled state when sunHwCtrlTpmActivate and sunHwCtrlTpmEnable are true and a host is powered on.	read write	sunHwCtrlTpmActivate
Display or set purge state when sunHwCtrlTpmForceClear and sunHwCtrlTpmEnable are true and a host is powered on.	read write	sunHwCtrlTpmForceClear
Display or set the counterpart of sunHwCtrlTpmMode for multidomain.	read write	sunHwCtrlDomainTpmMode
Display or set the counterpart of sunHwCtrlTpmForceClear for multidomain.	read write	sunHwCtrlDomainTpmForceClear
Display or set purge state when sunHwCtrlTpmForceClear and sunHwCtrlTpmEnable are true and a host is powered on.	read write	sunHwCtrlTpmForceClear

Related Information

- "OID Tables Overview" on page 195

Understanding the SUN-HW-TRAP-MIB MIB OIDs

These topics provide tables of the hardware trap object identifiers and the traps.

- "Diagnosed Fault Suspect Trap OIDs" on page 201
- "Hardware Trap Configuration OIDs" on page 202
- "Hardware Traps" on page 204
- "Hardware Fault Traps" on page 208

Related Information

- "SNMP Overview" on page 23
- "OID Tables Overview" on page 195
- "Understanding the SUN-HW-CTRL-MIB MIB OIDs" on page 196
- "Understanding the SUN-ILOM-CONTROL-MIB MIB OIDs" on page 209
- "Understanding the SUN-ILOM-SYSTEM-MIB MIB OIDs" on page 238
- "Understanding the SUN-PLATFORM-MIB MIB OIDs" on page 243
- "Understanding the ENTITY-MIB MIB OIDs" on page 260

Diagnosed Fault Suspect Trap OIDs

This table lists diagnosed fault suspect trap object identifiers supported by the SUN-HW-TRAP-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the percentage likelihood that the FRU is the source of the problem.	accessible-for-notify	sunHwTrapSuspectFruFaultCertainty
Display a hierarchical classification string indicating the type of problem detected, as reported by the fault management subsystem, such as, for instance the Oracle Solaris fault manager.	accessible-for-notify	sunHwTrapSuspectFruFaultClass
Display the name of the suspect FRU.	accessible-for-notify	sunHwTrapSuspectFruName
Display the location of the suspect FRU.	accessible-for-notify	sunHwTrapSuspectFruLocation
Display the serial number of the chassis containing the suspect FRU.	accessible-for-notify	sunHwTrapSuspectFruChassisId
Display the name of the manufacturer of this FRU or CRU.	accessible-for-notify	sunHwTrapSuspectFruManufacturer
Display a number used to order a FRU or CRU (for example, 501-7324-06).	accessible-for-notify	sunHwTrapSuspectFruPn
Display the 18-character FRU serial number for this FRU or CRU (for example, 1005LCB-0725ZG01JE).	accessible-for-notify	sunHwTrapSuspectFruSn
Display a revision level of a FRU.	accessible-for-notify	sunHwTrapSuspectFruRevision
Display the status of a FRU.	accessible-for-notify	sunHwTrapSuspectFruStatus

Related Information

- "OID Tables Overview" on page 195

Hardware Trap Configuration OIDs

This table lists hardware trap configuration object identifiers supported by the SUN-HW-TRAP-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the text string used to identify the source of the trap, typically the host name.	accessible-for-notify	sunHwTrapSystemIdentifier
Display the name of the component that is the source of the trap.	accessible-for-notify	sunHwTrapComponentName
Display the threshold type that the sensor is reporting.	accessible-for-notify	sunHwTrapThresholdType
Display the threshold value that has been exceeded.	accessible-for-notify	sunHwTrapThresholdValue
Display the threshold sensor's reading at the time of the trap.	accessible-for-notify	sunHwTrapSensorValue
Display the name of a component that is suspected of causing a fault.	accessible-for-notify	sunHwTrapSuspectComponentName
Display a hierarchical classification string indicating the type of problem detected, as reported by the fault management subsystem, such as, for example, the Oracle Solaris fault manager.	accessible-for-notify	sunHwTrapFaultClass
Display the percentage likelihood that the component is the source of the problem.	accessible-for-notify	sunHwTrapFaultCertainty
Display an optional textual description that provides additional information relevant to this notification.	accessible-for-notify	sunHwTrapAdditionalInfo
Display the object in the entPhysicalTable to which the notification applies.	accessible-for-notify	sunHwTrapAssocObjectId
Display the new value of the high availability state after a high availability state change has occurred.	accessible-for-notify	sunHwTrapNewHAState
Display the old value of the high availability state after a high availability state change has occurred.	accessible-for-notify	sunHwTrapOldHAState
Display an indication of the severity of the notification.	accessible-for-notify	sunHwTrapSeverity
Display the text string containing the chassis serial number.	accessible-for-notify	sunHwTrapChassisId
Display the text string containing the product name.	accessible-for-notify	sunHwTrapProductName
Display an indication as to why the component was disabled.	accessible-for-notify	sunHwTrapDisableReason
Display the states a hard drive can be in when hard drive status is reported.	accessible-for-notify	sunHwTrapHardDriveState
Display the message ID that can be used to get additional information about the problem from Oracle's knowledge article database.	accessible-for-notify	sunHwTrapFaultMessageID

Description of Task or Activity	Action	MIB OID
Display the universal unique identifier that was assigned to this fault.	accessible-for-notify	sunHwTrapFaultUUID
Display the message used by the test trap.	accessible-for-notify	sunHwTrapTestMessage
Display the probable cause for hard drive error.	accessible-for-notify	sunHwTrapHardDriveProbableCause
Display the probable cause for drive controller error.	accessible-for-notify	sunHwTrapDriveControllerProbableCause
Display the probable cause for storage volume error.	accessible-for-notify	sunHwTrapStorageVolumeProbableCause
Display the time stamp for when the fault occurred.	accessible-for-notify	sunHwTrapEventTime
Display the name and version of the software component that generated this fault event.	accessible-for-notify	sunHwTrapDiagEntity
Display a textual description of the fault.	accessible-for-notify	sunHwTrapFaultDescription
Display a knowledge article URL.	accessible-for-notify	sunHwTrapKaUrl
Display the number of suspected faults diagnosed as the cause of given set of reported hardware errors.	accessible-for-notify	sunHwTrapSuspectCnt
Display the hostname of the SP or system.	accessible-for-notify	sunHwTrapHostname
Display the product manufacturer.	accessible-for-notify	sunHwTrapProductManufacturer
Display the product serial number.	accessible-for-notify	sunHwTrapProductSn
Display the product part number.	accessible-for-notify	sunHwTrapProductPn
Display a text string containing the chassis manufacturer, which might differ from the sunHwTrapProductManufacturer.	accessible-for-notify	sunHwTrapChassisManufacturer
Display a text string containing the chassis name, which might differ from the sunHwTrapProductName.	accessible-for-notify	sunHwTrapChassisName
Display a text string containing the chassis serial number, which might differ from the sunHwTrapProductSn.	accessible-for-notify	sunHwTrapChassisSn
Display a text string containing the chassis part number, which might differ from the sunHwTrapProductPn.	accessible-for-notify	sunHwTrapChassisPn
Display a text string containing the top-level product manufacturer, which might differ from the sunHwTrapChassisManufacturer.	accessible-for-notify	sunHwTrapTopProductManufacturer
Display a text string containing the top-level product name, which might differ from the sunHwTrapChassisName.	accessible-for-notify	sunHwTrapTopProductName
Display a text string containing the top-level product serial number, which might differ from the sunHwTrapChassisSn.	accessible-for-notify	sunHwTrapTopProductSn

Description of Task or Activity	Action	MIB OID
Display a text string containing the top-level product part number, which might differ from the sunHwTrapChassisPn.	accessible-for-notify	sunHwTrapTopProductPn
Display a text string containing the simple data model component location.	accessible-for-notify	sunHwTrapSystemComponentLocation
Display a text string containing the simple data model subsystem name.	accessible-for-notify	sunHwTrapSubSystem
Display a text string containing a fully-qualified path for a simple data model component.	accessible-for-notify	sunHwTrapSystemComponentPath
Display a text string containing the Oracle ILOM firmware version.	accessible-for-notify	sunHwTrapFirmwareVersion
Display a text string containing the Oracle ILOM firmware build number.	accessible-for-notify	sunHwTrapFirmwareBuild
Display a text string containing the Oracle ILOM firmware build date.	accessible-for-notify	sunHwTrapFirmwareDate
Display a text string containing the BIOS version.	accessible-for-notify	sunHwTrapBIOSVersion
Display a text string containing the Oracle ILOM version.	accessible-for-notify	sunHwTrapILOMVersion

Related Information

- “OID Tables Overview” on page 195
- “Hardware Traps” on page 204
- “Hardware Fault Traps” on page 208

Hardware Traps

This table lists the hardware traps supported by the SUN-HW-TRAP-MIB MIB.

Note - For all threshold traps, the sunHwTrapThresholdType object indicates whether the threshold is an upper threshold or a lower threshold.

Trap or Notification	Description
sunHwTrapComponentEnabled	Trap is generated when the component operational state has changed or is changing to enabled.
sunHwTrapComponentDisabled	Trap is generated when the component operational state has changed or is changing to disabled.
sunHwTrapComponentError	Trap is generated when a generic type sensor detects an error. The sunHwTrapComponentName and sunHwTrapAdditionalInfo objects provide more information on the sensor and its value.

Trap or Notification	Description
sunHwTrapComponentOk	Trap is generated when a generic-type sensor returns to its normal state. The sunHwTrapComponentName and sunHwTrapAdditionalInfo objects provide more information on the sensor and its value.
sunHwTrapDriveControllerError	Trap is generated when a drive controller sensor has detected an error.
sunHwTrapDriveControllerOk	Trap is generated when a drive controller has returned to its normal state.
sunHwTrapElectricalCurrentFatalThresholdExceeded	Trap is generated when current sensor reports that its value has gone above an upper fatal threshold value.
sunHwTrapElectricalCurrentFatalThresholdDeasserted	Trap is generated when current sensor reports that its value has gone below a lower fatal threshold value.
sunHwTrapElectricalCurrentCritThresholdExceeded	Trap is generated when current sensor reports that its value has gone above an upper critical threshold value.
sunHwTrapElectricalCurrentCritThresholdDeasserted	Trap is generated when current sensor reports that its value has gone below a lower critical threshold value.
sunHwTrapElectricalCurrentNonCritThresholdExceeded	Trap is generated when current sensor reports that its value has gone above an upper noncritical threshold value.
sunHwTrapElectricalCurrentOk	Trap is generated when current sensor reports that its value is in the normal operating range.
sunHwTrapFanSpeedFatalThresholdExceeded	Trap is generated when a fan speed sensor's value goes above an upper fatal threshold setting or below a lower fatal threshold value.
sunHwTrapFanSpeedFatalThresholdDeasserted	Trap is generated when a fan speed sensor's value goes below an upper fatal threshold setting or above a lower fatal threshold value.
sunHwTrapFanSpeedCritThresholdExceeded	Trap is generated when a fan speed sensor's value goes above an upper critical threshold setting or below a lower critical threshold value.
sunHwTrapFanSpeedCritThresholdDeasserted	Trap is generated when a fan speed sensor's value goes below an upper critical threshold setting or above a lower critical threshold value.
sunHwTrapFanSpeedNonCritThresholdExceeded	Trap is generated when a fan speed sensor's value goes above an upper noncritical threshold setting or below a lower noncritical threshold value.
sunHwTrapFanSpeedOk	Trap is generated when a fan speed sensor's value returns to its normal operating range.
sunHwTrapFanError	Trap is generated when a fan sensor has detected an error.
sunHwTrapFanOk	Trap is generated when a fan sensor has returned to its normal state.
sunHwTrapFruInserted	Trap is generated when a FRU such as a power supply or fan module is inserted into the system.
sunHwTrapFruRemoved	Trap is generated when a FRU such as a power supply or fan module is removed from the system.
sunHwTrapHardDriveError	Trap is generated when a hard drive sensor has detected an error.
sunHwTrapHAStateChange	Trap is generated when the high availability component identified by sunHwTrapSystemIdentifier has changed state.
sunHwTrapHardDriveOk	Trap is generated when a hard drive sensor has returned to its normal state.

Trap or Notification	Description
sunHwTrapHardDriveStatus	Trap is generated when a hard drive sensor has returned to its normal state.
sunHwTrapHeartbeat	Trap is generated when a heartbeat is used to verify the SNMP trap configuration.
sunHwTrapHostState	Trap is generated when host state has changed.
sunHwTrapHostPowerOnDenied	Trap is generated when a request to power on the host has been denied.
sunHwTrapHostPowerButtonDisabled	Trap is generated when a request to power on the host is being ignored because the button is disabled.
sunHwTrapHostPowerBootError	Trap is generated when a request to power on the host has failed due to a boot error.
sunHwTrapHostPowerOffLimitExceeded	Trap is generated when a shutdown initiated do to power limit being exceeded.
sunHwTrapHostPowerAction	Trap is generated when a state change in host power has taken place.
sunHwTrapIOError	Trap is generated when an I/O sensor has detected an error.
sunHwTrapIOOk	Trap is generated when an I/O sensor has returned to its normal state.
sunHwTrapMemoryError	Trap is generated when a memory sensor has detected an error.
sunHwTrapMemoryOk	Trap is generated when a memory sensor has returned to its normal state.
sunHwTrapPreOSError	Trap is generated when an error has been detected in the period before the OS has taken control of the system.
sunHwTrapPowerSupplyError	Trap is generated when a power supply sensor has detected an error.
sunHwTrapPowerSupplyOk	Trap is generated when power supply sensor has returned to its normal state.
sunHwTrapProcessorError	Trap is generated when a processor sensor has detected an error.
sunHwTrapProcessorOk	Trap is generated when a processor sensor has returned to its normal state.
sunHwTrapPowerConsumptionThresholdExceeded	Trap is generated when a power consumption threshold has been exceeded.
sunHwTrapPowerConsumptionThresholdDeasserted	Trap is generated when a power consumption threshold has been deasserted.
sunHwTrapPsuRedundancyLost	Trap is generated when PS redundancy is lost.
sunHwTrapPsuRedundancyRestored	Trap is generated when PS redundancy has been restored.
sunHwTrapSecurityIntrusion	Trap is generated when a intrusion sensor has detected that someone might have physically tampered with the system.
sunHwTrapSensorFatalThresholdExceeded	Trap is generated when a sensor reports that its value has gone above an upper critical threshold setting or below a lower critical threshold setting.
sunHwTrapSensorFatalThresholdDeasserted	Trap is generated when a sensor reports that its value has gone below an upper critical threshold setting or above a lower critical threshold setting.
sunHwTrapSensorCritThresholdExceeded	Trap is generated when a sensor reports that its value has gone above an upper critical threshold setting or below a lower critical threshold setting.

Trap or Notification	Description
sunHwTrapSensorCritThresholdDeasserted	Trap is generated when a sensor reports that its value has gone below an upper critical threshold setting or above a lower critical threshold setting.
sunHwTrapSensorNonCritThresholdExceeded	Trap is generated when a sensor reports that its value has gone above an upper noncritical threshold setting or below a lower noncritical threshold setting.
sunHwTrapSensorThresholdOk	Trap is generated when a sensor reports that its value is in the normal operating range.
sunHwTrapSlotOrConnectorError	Trap is generated when a sensor associated with a slot or connector has detected an error.
sunHwTrapSlotOrConnectorOk	Trap is generated when a sensor associated with a slot or connector has returned to its normal state.
sunHwTrapStorageVolumeError	Trap is generated when a storage volume sensor has detected an error.
sunHwTrapStorageVolumeOk	Trap is generated when a storage volume has returned to its normal state.
sunHwTrapTempFatalThresholdExceeded	Trap is generated when a temperature sensor's value goes above an upper fatal threshold setting or below a lower fatal threshold value.
sunHwTrapTempFatalThresholdDeasserted	Trap is generated when a temperature sensor's value goes below an upper fatal threshold setting or above a lower fatal threshold value.
sunHwTrapTempCritThresholdExceeded	Trap is generated when a temperature sensor's value goes above an upper critical threshold setting or below a lower critical threshold value.
sunHwTrapTempCritThresholdDeasserted	Trap is generated when a temperature sensor's value goes below an upper critical threshold setting or above a lower critical threshold value.
sunHwTrapTempNonCritThresholdExceeded	Trap is generated when a temperature sensor's value goes above an upper noncritical threshold setting or below a lower noncritical threshold value.
sunHwTrapTempOk	Trap is generated when a temperature sensor's value returns to its normal operating range.
sunHwTrapTestTrap	Test trap.
sunHwTrapVoltageFatalThresholdExceeded	Trap is generated when a voltage sensor's value goes above an upper fatal threshold setting or below a lower fatal threshold value.
sunHwTrapVoltageFatalThresholdDeasserted	Trap is generated when a voltage sensor's value goes below an upper fatal threshold setting or above a lower fatal threshold value.
sunHwTrapVoltageCritThresholdExceeded	Trap is generated when a voltage sensor's value goes above an upper critical threshold setting or below a lower critical threshold value.
sunHwTrapVoltageCritThresholdDeasserted	Trap is generated when a voltage sensor's value goes below an upper critical threshold setting or above a lower critical threshold value.
sunHwTrapVoltageNonCritThresholdExceeded	Trap is generated when a voltage sensor's value goes above an upper noncritical threshold setting or below a lower noncritical threshold value.
sunHwTrapVoltageNonCritThresholdDeasserted	Trap is generated when a voltage sensor's value goes below an upper noncritical threshold setting or above a lower noncritical threshold value.

Trap or Notification	Description
sunHwTrapVoltageOk	Trap is generated when a voltage sensor's value returns to its normal operating range.

Related Information

- "OID Tables Overview" on page 195
- "Hardware Trap Configuration OIDs" on page 202
- "Hardware Fault Traps" on page 208

Hardware Fault Traps

This table lists the hardware fault traps supported by the SUN-HW-TRAP-MIB MIB.

Trap or Notification	Description
sunHwTrapDriveControllerFault	Trap is generated when a drive controller component is suspected of causing a fault.
sunHwTrapDriveControllerFaultCleared	Trap is generated when a drive controller component fault is cleared.
sunHwTrapFanFault	Trap is generated on a fan fault.
sunHwTrapFaultDiagnosed	Trap is generated when a diagnosed fault has been detected.
sunHwTrapFanFaultCleared	Trap is generated when the fan fault is cleared.
sunHwTrapProcessorFault	Trap is generated when a processor component is suspected of causing a fault.
sunHwTrapProcessorFaultCleared	Trap is generated when a processor component fault has been cleared.
sunHwTrapMemoryFault	Trap is generated when a memory component is suspected of causing a fault.
sunHwTrapMemoryFaultCleared	Trap is generated when a memory component fault has been cleared.
sunHwTrapHardDriveFault	Trap is generated when a hard drive component is suspected of causing a fault.
sunHwTrapHardDriveFaultCleared	Trap is generated when a hard drive component fault has been cleared.
sunHwTrapIOFault	Trap is generated when an I/O subsystem is suspected of causing a fault.
sunHwTrapIOFaultCleared	Trap is generated when an I/O subsystem component fault has been cleared.
sunHwTrapPowerSupplyFault	Trap is generated on a power supply fault.
sunHwTrapPowerSupplyFaultCleared	Trap is generated when the power supply fault has been cleared.
sunHwTrapSlotOrConnectorFault	Trap is generated when a slot or connector component is suspected of causing a fault.
sunHwTrapSlotOrConnectorFaultCleared	Trap is generated when a slot or connector component fault has been cleared.

Trap or Notification	Description
sunHwTrapStorageVolumeFault	Trap is generated when a storage volume is suspected of causing a fault.
sunHwTrapStorageVolumeFaultCleared	Trap is generated when a storage volume fault has been cleared.
sunHwTrapComponentFault	Trap is generated when a component is suspected of causing a fault.
sunHwTrapComponentFaultCleared	Trap is generated when a component fault has been cleared.

Related Information

- “OID Tables Overview” on page 195
- “Hardware Trap Configuration OIDs” on page 202
- “Hardware Traps” on page 204

Understanding the SUN-ILOM-CONTROL-MIB MIB OIDs

These topics provide many tables of the Oracle ILOM object identifiers.

- “SUN-ILOM-CONTROL-MIB MIB OID Command Syntax” on page 210
- “AD OIDs” on page 211
- “DNS OIDs” on page 214
- “LDAP OIDs” on page 214
- “LDAP Over SSL OIDs” on page 215
- “LDAP Over SSL User Domain OID” on page 217
- “LDAP Over SSL User Domain OID” on page 217
- “LDAP Over SSL Admin Group OID” on page 217
- “LDAP Over SSL Operator Group OID” on page 218
- “LDAP Over SSL Alternate Server OIDs” on page 219
- “LDAP Over SSL Custom Group OIDs” on page 220
- “LDAP Over SSL Host Group OIDs” on page 220
- “RADIUS OIDs” on page 221
- “User OIDs” on page 222
- “Audit Log OIDs” on page 222
- “Event Log OIDs” on page 223
- “Alert OIDs” on page 223
- “Backup and Restore OIDs” on page 224
- “Clock OIDs” on page 225
- “NTP OIDs” on page 225
- “Configuration Management OID” on page 226

- "Firmware Management OIDs" on page 226
- "HTTP OIDs" on page 227
- "HTTPS OIDs" on page 228
- "SSH OIDs" on page 228
- "Single Sign-On OID" on page 229
- "Identification OIDs" on page 229
- "Remote syslog OIDs" on page 230
- "Network OIDs" on page 230
- "Interconnect OIDs" on page 231
- "Network Interconnect Global Config OIDs" on page 232
- "Network Interconnect Global Operations OIDs" on page 233
- "Power Control OIDs" on page 234
- "Policy OIDs" on page 234
- "Reset Control OID" on page 235
- "Redundancy OIDs" on page 235
- "Serial Port OIDs" on page 236
- "Session OIDs" on page 236
- "SMTP OIDs" on page 237
- "Telemetry Harness Daemon (THD) OIDs" on page 237

Related Information

- "SNMP Overview" on page 23
- "OID Tables Overview" on page 195
- "Understanding the SUN-HW-CTRL-MIB MIB OIDs" on page 196
- "Understanding the SUN-HW-TRAP-MIB MIB OIDs" on page 200
- "Understanding the SUN-ILOM-SYSTEM-MIB MIB OIDs" on page 238
- "Understanding the SUN-PLATFORM-MIB MIB OIDs" on page 243
- "Understanding the ENTITY-MIB MIB OIDs" on page 260

SUN-ILOM-CONTROL-MIB MIB OID Command Syntax

When you use the object identifiers in a command syntax, you must include the SUN-ILOM-CONTROL-MIB MIB name. For example, using the V2c protocol:

```
$ command -v2c -c public mc_IP SUN-ILOM-CONTROL-MIB::object_id argument
```

Or using the V3 protocol:

```
$ command -v3 -u snmp_user -l security_level -a authentication_protocol -A authentication_password -x DES -
X privacy_password mc_IP SUN-ILOM-CONTROL-MIB::object_id argument
```

where:

- *command* is the command of the SNMP client that performs the action.
- *snmp_user* is a configured user of the SNMP services.
- *security_level* is:
  - `authNoPriv` – There is authentication, but no privacy.
  - `authPriv` – There is authentication and privacy.
- *authentication_protocol* is either `MD5` or `SHA`.
- *authentication_password* is the *snmp_user*'s authentication password.
- *privacy_password* is the *snmp_user*'s privacy password.
- *mc_IP* is the IP address of the SP.
- *object_id* is the object identifier, as listed in the right column of the tables.
- *argument* is a combination of options and variables that support the object identifier.

For example, to securely display a table of information about the current local users on the SP with IP address of `123.45.67.89`, type:

```
$ snmpwalk -v3 -u usersnmp -l authPriv -a MD5 -A authpass -x DES -X privpass 123.45.67.89 SUN-ILOM-
CONTROL-MIB::ilomCtrlLocalUserTable
```

Related Information

- "SNMP Overview" on page 23
- "OID Tables Overview" on page 195
- "Understanding the SUN-ILOM-SYSTEM-MIB MIB OIDs" on page 238
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244
- "ENTITY-MIB MIB OID Command Syntax" on page 261

AD OIDs

This table lists AD object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set whether the AD client is enabled.	read write	ilomCtrlActiveDirectoryEnabled
Display or set the port number for the AD client.	read	ilomCtrlActiveDirectoryPortNumber

Description of Task or Activity	Action	MIB OID
	write	
Display or set the URI of a certificate file needed when Strict Cert mode is enabled.	read write	ilomCtrlActiveDirectoryCertFileURI
Display or set the number of seconds to wait before timing out if the AD server is not responding.	read write	ilomCtrlActiveDirectoryTimeout
Display or set whether Strict Cert mode is enabled for the AD client.	read write	ilomCtrlActiveDirectoryStrictCertEnabled
Display a string indicating the status of the certificate file.	read	ilomCtrlActiveDirectoryCertFileStatus
Display a string that should match exactly with an authentication domain on the AD server.	read write	ilomCtrlActiveDirUserDomain
Display or set a string that should contain a distinguished name that exactly matches one of the group names on the AD server.	read write	ilomCtrlActiveDirAdminGroupName
Display or set a string that should contain a distinguished name that exactly matches one of the group names on the AD server.	read write	ilomCtrlActiveDirOperatorGroupName
Display or set a string that specifies the port number for the AD alternate server.	read write	ilomCtrlActiveDirAlternateServerPort
Display a string indicating the status of the certificate file.	read	ilomCtrlActiveDirAlternateServerCertStatus
Display or set the URI of a certificate file needed when Strict Cert mode is enabled.	read write	ilomCtrlActiveDirAlternateServerCertURI
Display or set a variable that will clear the certificate info associated with the server when it is set to true.	read write	ilomCtrlActiveDirAlternateServerCertClear
Display a string indicating the certificate version of the alternate server certificate file.	read	ilomCtrlActiveDirAlternateServerCertVersion
Display a string showing the serial number of the alternate server certificate file.	read	ilomCtrlActiveDirAlternateServerCertSerialNo
Display a string showing the issuer of the alternate server certificate file.	read	ilomCtrlActiveDirAlternateServerCertIssuer
Display a string showing the subject of the alternate server certificate file.	read	ilomCtrlActiveDirAlternateServerCertSubject
Display a string showing the valid start date of the alternate server certificate file.	read	ilomCtrlActiveDirAlternateServerCertValidBegin
Display a string showing the valid end date of the alternate server certificate file.	read	ilomCtrlActiveDirAlternateServerCertValidEnd
Display or set the IPv4 or IPv6 address of the AD alternate server used as a name service for user accounts.	read write	ilomCtrlActiveDirAlternateServerAddress
Display or set the amount of messages sent to the event log.	read write	ilomCtrlActiveDirectoryLogDetail
Display or set the role that a user authenticated by AD should have.	read	ilomCtrlActiveDirectoryDefaultRoles

Description of Task or Activity	Action	MIB OID
	write	
Display or set a string that should contain a distinguished name that exactly matches one of the group names on the AD server.	read write	ilomCtrlActiveDirCustomGroupName
Display or set the role that a user authenticated through AD should have.	read write	ilomCtrlActiveDirCustomGroupRoles
Display a variable that will clear the certificate info associated with the server when it is set to true.	read	ilomCtrlActiveDirectoryCertClear
Display a string indicating the certificate version of the certificate file.	read	ilomCtrlActiveDirectoryCertVersion
Display a string showing the serial number of the certificate file.	read	ilomCtrlActiveDirectoryCertSerialNo
Display a string showing the issuer of the certificate file.	read	ilomCtrlActiveDirectoryCertIssuer
Display a string showing the subject of the certificate file.	read	lomCtrlActiveDirectoryCertSubject
Display a string showing the valid start date of the certificate file.	read	ilomCtrlActiveDirectoryCertValidBegin
Display a string showing the valid end date of the certificate file.	read	ilomCtrlActiveDirectoryCertValidEnd
Display or set whether the AD DNS locator functionality is enabled.	read write	ilomCtrlActiveDirDnsLocatorEnabled
Display or set a string that should contain the service name that will be used to perform the DNS query.	read write	ilomCtrlActiveDirDnsLocatorQueryService
Display or set whether the AD expanded search query functionality is enabled.	read write	ilomCtrlActiveDirExpSearchEnabled
Display or set whether user credential errors for AD cause the user credentials to be completely errored out, or if the credential validation is attempted using any alternate server.	read write	ilomCtrlActiveDirStrictCredentialErrorEnabled
Display or set the address of the AD server used as a name service for user accounts.	read write	ilomCtrlActiveDirectoryAddress
Display or set a string that should contain a distinguished name that exactly matches one of the group names on the AD server.	read write	ilomCtrlActiveDirHostGroupName
Display or set a string that should contain a list of HOSTx, for example /HOST0 or /HOST1, for which this host group assigns host roles.	read write	ilomCtrlActiveDirHostGroupHosts
Display or set the host roles that a user authenticated by AD should have.	read write	ilomCtrlActiveDirHostGroupRoles

Related Information

- “OID Tables Overview” on page 195
- “SUN-ILOM-CONTROL-MIB MIB OID Command Syntax” on page 210

DNS OIDs

This table lists DNS object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set the name servers for DNS.	read write	ilomCtrlDNSNameServers
Display or set the domains or search path for DNS lookups.	read write	ilomCtrlDNSSearchPath
Display or set whether the DNS configuration is provided by the DHCP server.	read write	ilomCtrlDNSdhcpAutoDns
Display or set the timeout.	read write	ilomCtrlDNSTimeout
Display or set the number of retries.	read write	ilomCtrlDNSRetries

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210

LDAP OIDs

This table lists LDAP object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set whether the LDAP client is enabled.	read write	ilomCtrlLdapEnabled
Display or set the port number for the LDAP client.	read write	ilomCtrlLdapPortNumber
Display or set the distinguished name (DN) for the read-only proxy user used to bind to the LDAP server.	read write	ilomCtrlLdapBindDn

Description of Task or Activity	Action	MIB OID
Display or set the password of a read-only proxy user that is used to bind to the LDAP server.	read write	ilomCtrlLdapBindPassword
Display or set a search base in the LDAP database below which to find users.	read write	ilomCtrlLdapSearchBase
Display or set the role that a user authenticated by LDAP should have.	read write	ilomCtrlLdapDefaultRoles
Display or set the address of the LDAP server used as a name service for user accounts.	read write	ilomCtrlLdapServerAddress

Related Information

- “OID Tables Overview” on page 195
- “SUN-ILOM-CONTROL-MIB MIB OID Command Syntax” on page 210
- “LDAP Over SSL OIDs” on page 215
- “LDAP Over SSL User Domain OID” on page 217
- “LDAP Over SSL Admin Group OID” on page 217
- “LDAP Over SSL Operator Group OID” on page 218
- “LDAP Over SSL Alternate Server OIDs” on page 219
- “LDAP Over SSL Custom Group OIDs” on page 220
- “LDAP Over SSL Host Group OIDs” on page 220

LDAP Over SSL OIDs

This table lists LDAP over SSL object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set whether the LDAP over SSL client is enabled.	read write	ilomCtrlLdapSslEnabled
Display or set the port number for the LDAP over SSL client.	read write	ilomCtrlLdapSslPortNumber
Display or set the TFTP URI of the LDAP over SSL server's certificate file that should be uploaded in order to perform certificate validation.	read write	ilomCtrlLdapSslCertFileURI

Description of Task or Activity	Action	MIB OID
Display or set the number of seconds to wait before timing out if the LDAP over SSL server is not responding.	read write	ilomCtrlLdapSslTimeout
Display or set whether the Strict Cert mode is enabled for the LDAP over SSL client.	read write	ilomCtrlLdapSslStrictCertEnabled
Display a string indicating the status of the certificate file.	read	ilomCtrlLdapSslCertFileStatus
Display or set the role that a user authenticated through LDAP over SSL should have.	read write	ilomCtrlLdapSslDefaultRoles
Display or set a variable that will clear the certificate information associated with the server when it is set to true.	read write	ilomCtrlLdapSslCertFileClear
Display or set a string indicating the certificate version of the certificate file.	read	ilomCtrlLdapSslCertFileVersion
Display a string showing the serial number of the certificate file.	read	ilomCtrlLdapSslCertFileSerialNo
Display a string showing the issuer of the certificate file.	read	ilomCtrlLdapSslCertFileIssuer
Display a string showing the subject of the certificate file.	read	ilomCtrlLdapSslCertFileSubject
Display a string showing the valid start date of the certificate file.	read	ilomCtrlLdapSslCertFileValidBegin
Display a string showing the valid end date of the certificate file.	read	ilomCtrlLdapSslCertFileValidEnd
Display or set whether the optional UserMapping feature is enabled.	read write	ilomCtrlLdapSslOptUsrMappingEnabled
Display or set the attribute information used to look up the user login name to the user's distinguished name (DN).	read write	ilomCtrlLdapSslOptUsrMappingAttrInfo
Display or set the distinguished name used for the manager style LDAP bind so that user lookups can be done.	read write	ilomCtrlLdapSslOptUsrMappingBindDn
Display or set the password string used for the manager style LDAP bind.	read write	ilomCtrlLdapSslOptUsrMappingBindPw
Display or set the search base used to attempt the user name lookup.	read write	ilomCtrlLdapSslOptUsrMappingSearchBase
Display or set the address of the LDAP over SSL server used as a directory service for user accounts.	read write	ilomCtrlLdapSslAddress

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210
- "LDAP OIDs" on page 214
- "LDAP Over SSL User Domain OID" on page 217

- "LDAP Over SSL Admin Group OID" on page 217
- "LDAP Over SSL Operator Group OID" on page 218
- "LDAP Over SSL Alternate Server OIDs" on page 219
- "LDAP Over SSL Custom Group OIDs" on page 220
- "LDAP Over SSL Host Group OIDs" on page 220

LDAP Over SSL User Domain OID

This table lists LDAP over SSL domain object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set a string that matches exactly with an authentication domain on the LDAP over SSL server.	read write	ilomCtrlLdapSslUserDomain

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210
- "LDAP OIDs" on page 214
- "LDAP Over SSL OIDs" on page 215
- "LDAP Over SSL Admin Group OID" on page 217
- "LDAP Over SSL Operator Group OID" on page 218
- "LDAP Over SSL Alternate Server OIDs" on page 219
- "LDAP Over SSL Custom Group OIDs" on page 220
- "LDAP Over SSL Host Group OIDs" on page 220

LDAP Over SSL Admin Group OID

This table lists LDAP over SSL admin group object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set a string that contains a distinguished name that exactly matches one of the group names on the LDAP over SSL server.	read	ilomCtrlLdapSslAdminGroupName

Description of Task or Activity	Action	MIB OID
	write	

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210
- "LDAP OIDs" on page 214
- "LDAP Over SSL OIDs" on page 215
- "LDAP Over SSL User Domain OID" on page 217
- "LDAP Over SSL Operator Group OID" on page 218
- "LDAP Over SSL Alternate Server OIDs" on page 219
- "LDAP Over SSL Custom Group OIDs" on page 220
- "LDAP Over SSL Host Group OIDs" on page 220

LDAP Over SSL Operator Group OID

This table lists LDAP over SSL operator group object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set a string that contains a distinguished name that exactly matches one of the group names on the LDAP over SSL server.	read write	ilomCtrlLdapSslOperatorGroupName

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210
- "LDAP OIDs" on page 214
- "LDAP Over SSL OIDs" on page 215
- "LDAP Over SSL User Domain OID" on page 217
- "LDAP Over SSL Admin Group OID" on page 217
- "LDAP Over SSL Alternate Server OIDs" on page 219
- "LDAP Over SSL Custom Group OIDs" on page 220
- "LDAP Over SSL Host Group OIDs" on page 220

LDAP Over SSL Alternate Server OIDs

This table lists LDAP over SSL alternate server object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set the port number for the LDAP over SSL alternate server.	read write	ilomCtrlLdapSslAlternateServerPort
Display a string indicating the status of the certificate file.	read	ilomCtrlLdapSslAlternateServerCertStatus
Display or set the URI of a certificate file needed when Strict Cert mode is enabled.	read write	ilomCtrlLdapSslAlternateServerCertURI
Display or set a variable that will clear the certificate info associated with the server when it is set to true.	read write	ilomCtrlLdapSslAlternateServerCertClear
Display a string indicating the certificate version of the alternate server certificate file.	read	ilomCtrlLdapSslAlternateServerCertVersion
Display a string showing the serial number of the alternate server certificate file.	read	ilomCtrlLdapSslAlternateServerCertSerialNo
Display a string showing the issuer of the alternate server certificate file.	read	ilomCtrlLdapSslAlternateServerCertIssuer
Display a string showing the subject of the alternate server certificate file.	read	ilomCtrlLdapSslAlternateServerCertSubject
Display a string showing the valid start date of the alternate server certificate file.	read	ilomCtrlLdapSslAlternateServerCertValidBegin
Display a string showing the valid end date of the alternate server certificate file.	read	ilomCtrlLdapSslAlternateServerCertValidEnd
Display the address of the LDAP over SSL alternate server used as the directory server for user accounts.	read write	ilomCtrlLdapSslAlternateServerAddress

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210
- "LDAP OIDs" on page 214
- "LDAP Over SSL OIDs" on page 215
- "LDAP Over SSL User Domain OID" on page 217
- "LDAP Over SSL Admin Group OID" on page 217
- "LDAP Over SSL Operator Group OID" on page 218
- "LDAP Over SSL Custom Group OIDs" on page 220

- "LDAP Over SSL Host Group OIDs" on page 220

LDAP Over SSL Custom Group OIDs

This table lists LDAP over SSL custom group object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set a string that contains a distinguished name that exactly matches one of the group names on the LDAP over SSL server.	read write	ilomCtrlLdapSslCustomGroupName
Display or set the role that a user authenticated by LDAP over SSL should have.	read write	ilomCtrlLdapSslCustomGroupRoles

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210
- "LDAP OIDs" on page 214
- "LDAP Over SSL OIDs" on page 215
- "LDAP Over SSL User Domain OID" on page 217
- "LDAP Over SSL Admin Group OID" on page 217
- "LDAP Over SSL Operator Group OID" on page 218
- "LDAP Over SSL Alternate Server OIDs" on page 219
- "LDAP Over SSL Host Group OIDs" on page 220

LDAP Over SSL Host Group OIDs

This table lists LDAP over SSL host group object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set a string that contains a distinguished name that exactly matches one of the group names on the LDAP over SSL server.	read write	ilomCtrlLdapSslHostGroupName
Display or set a string that contains a list of HOST*x*, for example, /HOST0 or /HOST1, for which this host group assigns host roles.	read	ilomCtrlLdapSslHostGroupHosts

Description of Task or Activity	Action	MIB OID
	write	
Display or set the host roles that a user authenticated through LDAP over SSL should have.	read write	ilomCtrlLdapSslHostGroupRoles

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210
- "LDAP OIDs" on page 214
- "LDAP Over SSL OIDs" on page 215
- "LDAP Over SSL User Domain OID" on page 217
- "LDAP Over SSL Admin Group OID" on page 217
- "LDAP Over SSL Operator Group OID" on page 218
- "LDAP Over SSL Alternate Server OIDs" on page 219
- "LDAP Over SSL Custom Group OIDs" on page 220

RADIUS OIDs

This table lists RADIUS object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set whether the RADIUS client is enabled.	read write	ilomCtrlRadiusEnabled
Display or set the port number for the RADIUS client.	read write	ilomCtrlRadiusPortNumber
Display or set the shared secret encryption key that is used to encrypt traffic between the RADIUS client and server.	read write	ilomCtrlRadiusSecret
Display or set the role that a user authenticated through RADIUS should have.	read write	ilomCtrlRadiusDefaultRoles
Display or set the address of the RADIUS server used as a name service for user accounts.	read write	ilomCtrlRadiusServerAddress

Related Information

- "OID Tables Overview" on page 195

- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210

User OIDs

This table lists local user object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set the password of a local user on the device.	read create	ilomCtrlLocalUserPassword
Display or set the role that is associated with a user.	read write	ilomCtrlLocalUserRoles
Display or create a new row or to delete an existing row in the local users table.	read create	ilomCtrlLocalUserRowStatus
Display or set the host roles for the host.	read write	ilomCtrlLocalUserHostRoles

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210

Audit Log OIDs

This table lists audit log object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display an integer representing the type of audit event.	read	ilomCtrlAuditLogType
Display the date and time that the audit log entry was recorded.	read	ilomCtrlAuditLogTimestamp
Display an integer representing the general event class (typically audit) at this time.	read	ilomCtrlAuditLogClass
Display the severity corresponding to the given audit log entry.	read	ilomCtrlAuditLogSeverity
Display a textual description of the change or audit operation.	read	ilomCtrlAuditLogDescription
Clear the audit log.	read write	ilomCtrlAuditLogClear

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210
- "Event Log OIDs" on page 223

Event Log OIDs

This table lists event log object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display an integer representing the type of event.	read	ilomCtrlEventLogType
Display the date and time that the event log entry was recorded.	read	ilomCtrlEventLogTimestamp
Display an integer representing the class of event.	read	ilomCtrlEventLogClass
Display the event severity corresponding to the given log entry.	read	ilomCtrlEventLogSeverity
Display the description of the event.	read	ilomCtrlEventLogDescription
Clear the event log.	read write	ilomCtrlEventLogClear

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210
- "Audit Log OIDs" on page 222

Alert OIDs

This table lists alert object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set the minimum event severity that should trigger an alert, for a given class.	read write	ilomCtrlAlertSeverity
Display or set the type of notification for a given alert.	read write	ilomCtrlAlertType

Description of Task or Activity	Action	MIB OID
Display or set the email address to send alert notifications when the alert type is email(1).	read write	ilomCtrlAlertDestinationEmail
Display or set the version of SNMP trap that is used for the given alert rule.	read write	ilomCtrlAlertSNMPVersion
Display or set the community string to be used when the ilomCtrlAlertSNMPVersion property is set to v1 or v2c. Display or set the user name to be used when the ilomCtrlAlertSNMPVersion property is set to v3.	read write	ilomCtrlAlertSNMPCommunityOrUsername
Display or set the destination port for SNMP traps.	read write	ilomCtrlAlertDestinationPort
Display or set the class name on which emailed alerts are filtered.	read write	ilomCtrlAlertEmailEventClassFilter
Display or set the type name on which emailed alerts are filtered.	read write	ilomCtrlAlertEmailEventTypeFilter
Display or set an optional format to identify the sender or the from address.	read write	ilomCtrlAlertEmailCustomSender
Display or set an optional string added to the beginning of the message body.	read write	ilomCtrlAlertEmailMessagePrefix
Display or set the address to send alert notifications when the alert type is snmptrap(2) or ipmipet(3).	read write	ilomCtrlAlertDestinationAddress

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210

Backup and Restore OIDs

This table lists backup and restore object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Set the target destination of a configuration XML file during backup and restore. The syntax is:	read write	ilomCtrlBackupAndRestoreTargetURI

Description of Task or Activity	Action	MIB OID
protocol://*user*:*password*@*host*/*path*/*file*		
Set the passphrase for encrypting or decrypting sensitive data during backup and restore.	read write	ilomCtrlBackupAndRestorePassphrase
Set the action to backup or restore.	read write	ilomCtrlBackupAndRestoreAction
Display the current status of backup or restore.	read	ilomCtrlBackupAndRestoreActionStatus

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210
- "Configuration Management OID" on page 226

Clock OIDs

This table lists clock object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set the date and time of the device.	read write	ilomCtrlDateAndTime
Display or set whether NTP is enabled.	read write	ilomCtrlNTPEnabled
Display or set the configured time zone string.	read write	ilomCtrlTimezone

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210
- "NTP OIDs" on page 225

NTP OIDs

This table lists NTP object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set the IP address of the first NTP server used by the device.	read write	ilomCtrlDeviceNTPServerOneAddress
Display or set the IP address of the second NTP server used by the device.	read write	ilomCtrlDeviceNTPServerTwoAddress

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210
- "Clock OIDs" on page 225

Configuration Management OID

This table lists configuration management object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or initiate the action of restoring the configuration on the SP to the original factory default state.	read write	ilomCtrlResetToDefaultsAction

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210
- "Backup and Restore OIDs" on page 224

Firmware Management OIDs

This table lists firmware management object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the version of the current firmware image.	read	ilomCtrlFirmwareMgmtVersion
Display the build number of the current firmware image.	read	ilomCtrlFirmwareBuildNumber

Description of Task or Activity	Action	MIB OID
Display he build date and time of the current firmware image.	read	ilomCtrlFirmwareBuildDate
Display or set the IP address of the TFTP server that will be used to download the firmware image.	read write	ilomCtrlFirmwareTFTPServerIP
Display or set the relative path of the new firmware image file on the TFTP server.	read write	ilomCtrlFirmwareTFTPFileName
Display or set whether the previous configuration of the device should be preserved after a firmware update.	read write	ilomCtrlFirmwarePreserveConfig
Display the status of a firmware update.	read	ilomCtrlFirmwareMgmtStatus
Display or start a firmware update using the values of the other firmware management properties as parameters.	read write	ilomCtrlFirmwareMgmtAction
Display the version of the current file system.	read	ilomCtrlFirmwareMgmtFilesystemVersion
Display or postpone the BIOS upgrade until the next power off.	read write	ilomCtrlFirmwareDelayBIOS

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210

HTTP OIDs

This table lists HTTP service object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set whether the embedded web server is running and listening on the HTTP port.	read write	ilomCtrlHttpEnabled
Display or set the port number that the embedded web server should listen to for HTTP requests.	read write	ilomCtrlHttpPortNumber
Display or set whether the embedded web server should redirect HTTP connections to HTTPS.	read write	ilomCtrlHttpSecureRedirect

Related Information

- "OID Tables Overview" on page 195

- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210
- "HTTPS OIDs" on page 228

HTTPS OIDs

This table lists HTTPS service object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set whether the embedded web server is running and listening on the HTTPS port.	read write	ilomCtrlHttpsEnabled
Display or set the port number that the embedded web server should listen to for HTTPS requests.	read write	ilomCtrlHttpsPortNumber

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210
- "HTTP OIDs" on page 227

SSH OIDs

This table lists SSH object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the fingerprint of the RSA key used for the SSH protocol.	read	ilomCtrlSshRsaKeyFingerprint
Display the length of the RSA key used for the SSH protocol.	read	ilomCtrlSshRsaKeyLength
Display the fingerprint of the DSA key used for the SSH protocol.	read	ilomCtrlSshDsaKeyFingerprint
Display the length of the DSA key used for the SSH protocol.	read	ilomCtrlSshDsaKeyLength
Display the state of initiating a new public key generation action.	read	ilomCtrlSshGenerateNewKeyAction
Display the SSH new key type, either rsa or dsa.	read	ilomCtrlSshGenerateNewKeyType

Description of Task or Activity	Action	MIB OID
Display the state of initiating a restart of the sshd.	read	ilomCtrlSshRestartSshdAction
Display whether the sshd is enabled.	read	ilomCtrlSshEnabled

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210

Single Sign-On OID

This table lists the single-sign on (SSO) object identifier supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set whether single sign-on authentication should be enabled on the device.	read write	ilomCtrlSingleSignonEnabled

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210

Identification OIDs

This table lists identification object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set the system identifier, which is often the host name of the server associated with Oracle ILOM, to be sent out in the varbind for all traps that Oracle ILOM generates.	read write	ilomCtrlSystemIdentifier
Display or set the host name for Oracle ILOM.	read write	ilomCtrlHostName

Description of Task or Activity	Action	MIB OID
Display or set the service tag URN.	read	ilomCtrlServiceTagURN

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210

Remote syslog OIDs

This table lists remote syslog object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set the IP address of the first remote syslog destination (log host).	read write	ilomCtrlRemoteSyslogDestAddress1
Display or set the IP address of the second remote syslog destination (log host).	read write	ilomCtrlRemoteSyslogDestAddress2

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210

Network OIDs

This table lists network object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the MAC address of the SP or system controller.	read	ilomCtrlNetworkMacAddress
Display whether the current target is configured to have static IP settings, or whether these settings are retrieved dynamically from DHCP.	read	ilomCtrlNetworkIpDiscovery
Display the current IP address for the given target.	read	ilomCtrlNetworkIpAddress
Display the current IP gateway for the given target.	read	ilomCtrlNetworkIpGateway
Display the current IP netmask for the given target.	read	ilomCtrlNetworkIpNetmask

Description of Task or Activity	Action	MIB OID
Display or set the pending value for the mode of IP discovery for the given target, either dhcp or static.	read	ilomCtrlNetworkPendingIpDiscovery
Display or set the pending IP address for the given target.	read write	ilomCtrlNetworkPendingIpAddress
Display or set the pending IP gateway for the given target.	read write	ilomCtrlNetworkPendingIpGateway
Display or set the pending IP netmask for the given target.	read write	ilomCtrlNetworkPendingIpNetmask
Commit pending network properties.	read write	ilomCtrlNetworkCommitPending
Display the MAC address of the out of band management interface.	read	ilomCtrlNetworkOutOfBandMacAddress
Specifies the MAC address of the sideband management interface.	read	ilomCtrlNetworkSidebandMacAddress
Display or set the pending management port for the given target.	read write	ilomCtrlNetworkPendingManagementPort
Display or set the current management port for the given target.	read write	ilomCtrlNetworkManagementPort
Display the address of the DHCP server.	read	ilomCtrlNetworkDHCPServerAddr
Display or set whether the row is enabled.	read write	ilomCtrlNetworkState

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210

Interconnect OIDs

This table lists SP-to-host interconnect object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set whether the SP or host network interconnect is managed by the "host".	read	ilomCtrlNetInterConnectCfgHostManaged

Description of Task or Activity	Action	MIB OID
	write	
Display or set whether the SP or host network interconnect is enabled.	read write	ilomCtrlNetInterConnectCfgEnabled
Display the current IP address for the given target.	read write	ilomCtrlNetInterconnectCfgPendingIP
Display the IP address of the SP or host interconnect network connection.	read write	ilomCtrlNetworkIpGateway
Display the network mask of the SP or host interconnect network connection.	read	ilomCtrlNetInterconnectCfgPendingNetMask
Display or set the current IP gateway for the given target.	read write	ilomCtrlNetworkPendingIpDiscovery
Display or set the commit pending action that activates the pending properties.	read write	ilomCtrlNetInterConnectCfgCommit

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210
- "Network Interconnect Global Config OIDs" on page 232
- "Network Interconnect Global Operations OIDs" on page 233

Network Interconnect Global Config OIDs

This table lists network interconnect global config object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set whether the SP or host network interconnect is managed by the "host".	read write	ilomCtrlDomainNetInterConnectCfgHostManaged
Display or set the counterpart of ilomCtrlNetInterConnectCfgEnabled for multidomain.	read write	ilomCtrlDomainNetInterConnectCfgEnabled
Display or set the counterpart of ilomCtrlNetInterconnectCfgPendingIP for multidomain.	read write	ilomCtrlDomainNetInterConnectCfgPendingIP

Description of Task or Activity	Action	MIB OID
Display or set the counterpart of ilomCtrlNetInterconnectCfgPendingNetMask for multidomain.	read write	ilomCtrlDomainNetInterConnectCfgPendingNetMask
Display or set the counterpart of ilomCtrlNetInterConnectCfgCommit for multidomain.	read write	ilomCtrlDomainNetInterConnectCfgCommit
Display the operational IP address of the SP or host interconnect network connection.	read	ilomCtrlNetInterconnectOperIP
Display the network mask of the SP or host interconnect network connection.	read	ilomCtrlNetInterconnectOperNetMask
Display the SP MAC address of the SP or host interconnect network connection.	read	ilomCtrlNetInterconnectOperSpMacAddress
Display the host MAC address of the SP or host interconnect network connection.	read	ilomCtrlNetInterconnectOperHostMacAddress
Display the description of the SP or host interconnect network connection.	read	ilomCtrlNetInterconnectOperType

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210
- "Interconnect OIDs" on page 231
- "Network Interconnect Global Operations OIDs" on page 233

Network Interconnect Global Operations OIDs

This table lists network interconnect global operations object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the counterpart of ilomCtrlNetInterconnectOperIP for multidomain.	read	ilomCtrlDomainNetInterConnectOperIP
Display the counterpart of ilomCtrlNetInterconnectOperNetMask multidomain.	read	ilomCtrlDomainNetInterConnectOperNetMask
Display the counterpart of ilomCtrlNetInterconnectOperSpMacAddress for multidomain.	read	ilomCtrlDomainNetInterConnectOperSpMacAddress
Display the counterpart of ilomCtrlNetInterconnectOperHostMacAddress for multidomain.	read	ilomCtrlDomainNetInterConnectOperHostMacAddress

Description of Task or Activity	Action	MIB OID
Display the counterpart of ilomCtrlNetInterconnectOperType for multidomain.	read	ilomCtrlDomainNetInterConnectOperType

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210
- "Interconnect OIDs" on page 231
- "Network Interconnect Global Config OIDs" on page 232

Power Control OIDs

This table lists power control object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set the action to apply to the given power control target.	read write	ilomCtrlPowerAction
Display the status of the given power control target.	read	ilomCtrlPowerStatus

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210

Policy OIDs

This table lists policy object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display a short description of the policy.	read	ilomCtrlPolicyShortStr
Display a verbose description of the policy.	read	ilomCtrlPolicyLongStr
Display the status of the policy.	read	ilomCtrlPolicyEnabled

Description of Task or Activity	Action	MIB OID
	write	

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210

Reset Control OID

This table lists the reset control log object identifier supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set the action to apply to the given reset control target.	read write	ilomCtrlResetAction

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210

Redundancy OIDs

This table lists redundancy object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the status of the device in a redundant configuration.	read	ilomCtrlRedundancyStatus
Display, promote, or demote this device from active or standby status.	read write	ilomCtrlRedundancyAction
Display the FRU name switch on which this agent is running.	read	ilomCtrlRedundancyFRUName

Related Information

- "OID Tables Overview" on page 195

- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210

Serial Port OIDs

This table lists serial port object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display whether the given device has an external serial port that is configurable.	read	ilomCtrlSerialExternalPortPresent
Display the current baud rate setting for the external serial port.	read write	ilomCtrlSerialExternalPortBaudRate
Display the current flow control setting for the external serial port.	read	ilomCtrlSerialExternalPortFlowControl
Display whether the given device has a host serial port that is configurable.	read	ilomCtrlSerialHostPortPresent
Display the current baud rate setting for the host serial port.	read write	ilomCtrlSerialHostPortBaudRate

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210

Session OIDs

This table lists session object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the user name of the user associated with the session.	read	ilomCtrlSessionsUsername
Display the type of connection that the given user is using to access the device.	read	ilomCtrlSessionsConnectionType
Display the date and time that the user logged into the device.	read	ilomCtrlSessionsLoginTime

Related Information

- "OID Tables Overview" on page 195

- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210

SMTP OIDs

This table lists SMTP object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set whether the SMTP client is enabled.	read write	ilomCtrlSMTPEnabled
Display or set the port number for the SMTP client.	read write	ilomCtrlSMTPPortNumber
Display or set an optional format to identify the sender or the from address.	read write	ilomCtrlSMTPCustomSender
Display or set the address of the SMTP server used as a name service for user accounts.	read write	ilomCtrlSMTPServerAddress

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210

Telemetry Harness Daemon (THD) OIDs

This table lists THD object identifiers supported by the SUN-ILOM-CONTROL-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the state of the THD daemon.	read	ilomCtrlThdState
Display or set action for THD daemon, either suspend or resume.	read write	ilomCtrlThdAction
Display the description of the THD module.	read	ilomCtrlThdModuleDesc
Display the state of the THD module.	read write	ilomCtrlThdModuleState

Description of Task or Activity	Action	MIB OID
Display the control action for the THD module.	read write	ilomCtrlThdModuleAction
Display the state of the instance.	read	ilomCtrlThdInstanceState
Display or set the control action for instance.	read write	ilomCtrlThdInstanceAction

Related Information

- "OID Tables Overview" on page 195
- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210

Understanding the SUN-ILOM-SYSTEM-MIB MIB OIDs

These topics provide tables of the Oracle ILOM system object identifiers and the traps.

- "Oracle ILOM System Open Problem OIDs" on page 238
- "Oracle ILOM System Log OIDs" on page 239
- "Oracle ILOM System Trap Data OIDs" on page 240
- "Oracle ILOM System Traps" on page 241

Related Information

- "SNMP Overview" on page 23
- "OID Tables Overview" on page 195
- "Understanding the SUN-HW-CTRL-MIB MIB OIDs" on page 196
- "Understanding the SUN-HW-TRAP-MIB MIB OIDs" on page 200
- "Understanding the SUN-ILOM-CONTROL-MIB MIB OIDs" on page 209
- "Understanding the SUN-PLATFORM-MIB MIB OIDs" on page 243
- "Understanding the ENTITY-MIB MIB OIDs" on page 260

Oracle ILOM System Open Problem OIDs

This table lists open problems object identifiers supported by the SUN-ILOM-SYSTEM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the system uptime at the time of any change to any of the open system problems.	read	ilomSystemOpenProblemsLastChangeTime
Display the number of current open problems for the switch.	read	ilomSystemOpenProblemsCount
Display the date and time the problem was detected.	read	ilomSystemOpenProblemTimestamp
Display the subsystem affected, if it could be identified. If not, none is displayed.	read	ilomSystemOpenProblemSubsystem
Display the location of the problematic component, if it could be identified.	read	ilomSystemOpenProblemLocation
Display the description of the problem.	read	ilomSystemOpenProblemDescription
Display the percent probability this component is faulted.	read	ilomSystemOpenProblemProbability
Display the part number of the problematic component, if it could be identified.	read	ilomSystemOpenProblemPartNumber
Display the serial number of the problematic component, if it could be identified.	read	ilomSystemOpenProblemSerialNumber
Display the reference document.	read	ilomSystemOpenProblemReferenceDocument
Display the system resource for this open problem.	read	ilomSystemOpenProblemResource
Display the number of seconds since 1970-01-01 00:00:00 UTC.	read	ilomSystemOpenProblemTime
Display the Universal Unique Identifier (UUID) for this open problem.	read	ilomSystemOpenProblemTimeUUID

Related Information

- "OID Tables Overview" on page 195

Oracle ILOM System Log OIDs

This table lists system log object identifiers supported by the SUN-ILOM-SYSTEM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the total number of entries in the Oracle ILOM system log.	read	ilomSystemLogCount
Display the last record in the Oracle ILOM system log.	read	ilomSystemLogLastID
Display or clear the entire Oracle ILOM system log.	read write	ilomSystemLogClear
Display the date and time that the Oracle ILOM system log entry was recorded.	read	ilomSystemLogTimestamp
Display the subsystem.	read	ilomSystemLogSubsystem
Display the component.	read	ilomSystemLogComponent
Display a textual description of the entry.	read	ilomSystemLogDescription

Related Information

- "OID Tables Overview" on page 195

Oracle ILOM System Trap Data OIDs

This table lists system trap data object identifiers supported by the SUN-ILOM-SYSTEM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the product manufacturer.	accessible-for-notify	ilomSystemTrapProductManufacturer
Display the product name.	accessible-for-notify	ilomSystemTrapProductName
Display product serial number.	accessible-for-notify	ilomSystemTrapProductSerialNumber
Display the product part number.	accessible-for-notify	ilomSystemTrapProductPartNumber
Display a text string containing the chassis manufacturer.	accessible-for-notify	ilomSystemTrapChassisManufacturer
Display a text string containing the chassis name.	accessible-for-notify	ilomSystemTrapChassisName
Display a text string containing the chassis serial number.	accessible-for-notify	ilomSystemTrapChassisSerialNumber
Display the text string containing the chassis part number.	accessible-for-notify	ilomSystemTrapChassisPartNumber
Display s text string containing the top-level product manufacturer.	accessible-for-notify	ilomSystemTrapTopProductManufacturer
Display a text string containing the top-level product name.	accessible-for-notify	ilomSystemTrapTopProductName
Display a text string containing the top-level product serial number.	accessible-for-notify	ilomSystemTrapTopProductSerialNumber
Display a text string containing the top-level product part number.	accessible-for-notify	ilomSystemTrapTopProductPartNumber
Display a text string that identifies the top-level system identifier of the system sending the trap.	accessible-for-notify	ilomSystemTrapSystemIdentifier

Related Information

- "OID Tables Overview" on page 195
- "Oracle ILOM System Traps" on page 241

Oracle ILOM System Traps

This table lists the Oracle ILOM system traps supported by the SUN-ILOM-SYSTEM-MIB MIB.

Trap or Notification	Description
ilomSystemTrapSystemServiceRequired	Notification is generated when system service is required.
ilomSystemTrapSystemWarning	Notification is generated on a system warning.
ilomSystemTrapSystemOkay	Notification is generated when the system is OK.
ilomSystemTrapSystemPowerOn	Notification is generated when the switch is powered on.
ilomSystemTrapSystemPowerOff	Notification is generated when the switch is powered off.
ilomSystemTrapSystemReset	Notification is generated when the switch is reset.
ilomSystemTrapCoolingServiceRequired	Notification is generated when cooling or ventilation is required.
ilomSystemTrapCoolingWarning	Notification is generated when a cooling warning occurs.
ilomSystemTrapCoolingOkay	Notification is generated when cooling returns to OK.
ilomSystemTrapCoolingExhaustTooHot	Notification is generated when the temperature of exhaust airflow is too hot.
ilomSystemTrapCoolingInletTooHot	Notification is generated when the temperature of inlet airflow is too hot.
ilomSystemTrapCoolingExhaustTempOkay	Notification is generated when the temperature of exhaust airflow is OK.
ilomSystemTrapCoolingInletTempOkay	Notification is generated when the temperature of inlet airflow is OK.
ilomSystemTrapCoolingFanServiceRequired	Notification is generated when fan service is required.
ilomSystemTrapCoolingFanWarning	Notification is generated when a fan warning occurs.
ilomSystemTrapCoolingFanOkay	Notification is generated when a fan is OK.
ilomSystemTrapCoolingFanInserted	Notification is generated when a fan is inserted into the switch.
ilomSystemTrapCoolingFanRemoved	Notification is generated when a fan is remove from the switch.
ilomSystemTrapProcessorsServiceRequired	Notification is generated when one or more processors in the switch require service.
ilomSystemTrapProcessorsWarning	Notification is generated when one or more processor warnings occurs.
ilomSystemTrapProcessorsOkay	Notification is generated when one or more processor is OK.
ilomSystemTrapProcessorsCpuServiceRequired	Notification is generated when CPU service is required.
ilomSystemTrapProcessorsCpuWarning	Notification is generated when a CPU warning occurs.
ilomSystemTrapProcessorsCpuOkay	Notification is generated when a CPU is OK.
ilomSystemTrapProcessorsCpuRemoved	Notification is generated when a CPU is removed.
ilomSystemTrapProcessorsCpuInserted	Notification is generated when a CPU is inserted.
ilomSystemTrapProcessorsCpuEnabled	Notification is generated when a CPU is enabled.
ilomSystemTrapProcessorsCpuDisabled	Notification is generated when a CPU is disabled.
ilomSystemTrapMemoryServiceRequired	Notification is generated when memory service is required.

Trap or Notification	Description
ilomSystemTrapMemoryWarning	Notification is generated when a memory usage warning occurs.
ilomSystemTrapMemoryOkay	Notification is generated when memory is OK.
ilomSystemTrapMemoryDimmServiceRequired	Notification is generated when DIMM service is required.
ilomSystemTrapMemoryDimmWarning	Notification is generated when a DIMM warning occurs.
ilomSystemTrapMemoryDimmOkay	Notification is generated when a DIMM is OK.
ilomSystemTrapMemoryDimmEnabled	Notification is generated when a DIMM is enabled.
ilomSystemTrapMemoryDimmDisabled	Notification is generated when a DIMM is disabled.
ilomSystemTrapMemoryDimmInserted	Notification is generated when a DIMM is inserted into the switch.
ilomSystemTrapMemoryDimmRemoved	Notification is generated when a DIMM is removed from the switch.
ilomSystemTrapPowerServiceRequired	Notification is generated when power service is required.
ilomSystemTrapPowerWarning	Notification is generated when a power warning occurs.
ilomSystemTrapPowerOkay	Notification is generated when power is OK.
ilomSystemTrapPowerSupplyServiceRequired	Notification is generated when a power supply requires service.
ilomSystemTrapPowerSupplyWarning	Notification is generated when a power supply warning occurs.
ilomSystemTrapPowerSupplyOkay	Notification is generated when a power supply is OK.
ilomSystemTrapPowerSupplyInserted	Notification is generated when a power supply is inserted.
ilomSystemTrapPowerSupplyRemoved	Notification is generated when a power supply is removed from the chassis.
ilomSystemTrapStorageServiceRequired	Notification is generated when storage service is required.
ilomSystemTrapStorageWarning	Notification is generated when a storage warning occurs.
ilomSystemTrapStorageOkay	Notification is generated when a disk is OK.
ilomSystemTrapStorageDiskServiceRequired	Notification is generated when disk service is required.
ilomSystemTrapStorageDiskWarning	Notification is generated when a disk warning occurs.
ilomSystemTrapStorageDiskOkay	Notification is generated when storage is OK.
ilomSystemTrapStorageDiskInserted	Notification is generated when a disk is inserted.
ilomSystemTrapStorageControllerServiceRequired	Notification is generated when controller service is required.
ilomSystemTrapStorageControllerWarning	Notification is generated when a controller warning occurs.
ilomSystemTrapStorageControllerOkay	Notification is generated when a controller is OK.
ilomSystemTrapStorageControllerInserted	Notification is generated when a controller is inserted.
ilomSystemTrapStorageControllerRemoved	Notification is generated when a controller is removed.
ilomSystemTrapFirmwareServiceRequired	Notification is generated when switch firmware service is required.
ilomSystemTrapFirmwareWarning	Notification is generated when a switch firmware warning occurs.
ilomSystemTrapFirmwareOkay	Notification is generated when switch firmware is OK.
ilomSystemTrapIoModuleServiceRequired	Notification is generated when I/O module service is required.
ilomSystemTrapIoModuleWarning	Notification is generated when an I/O module warning occurs.
ilomSystemTrapIoModuleOkay	Notification is generated when an I/O an module is OK.
ilomSystemTrapSystemBiosConfigReset	Notification is generated when switch BIOS configuration is reset.

Trap or Notification	Description
ilomSystemTrapSystemPowerTicketDenied	Notification is generated when a power ticket is denied.
ilomSystemTrapSystemPowerTicketAccepted	Notification is generated when a power ticket is accepted.
ilomSystemTrapSystemHostBootStatus	Notification is generated when a host completes boot up.
ilomSystemTrapSystemHostBootComplete	Notification is generated when host boot status is available.
ilomSystemTrapSystemHostBootbegin	Notification is generated when a host begins its boot up.
ilomSystemTrapSystemHostWatchdogExpired	Notification is generated when the host watchdog expires.
ilomSystemTrapSystemHostFailedPowerOn	Notification is generated when a host fails to power on.
ilomSystemTrapPowerBudgetExceeded	Notification is generated when the switch's power budget is exceeded.
ilomSystemTrapCpuModuleServiceRequired	Notification is generated when the CPU module requires service.
ilomSystemTrapCpuModuleOkay	Notification is generated when the CPU module is OK.

Related Information

- “OID Tables Overview” on page 195
- “Oracle ILOM System Trap Data OIDs” on page 240

Understanding the SUN-PLATFORM-MIB MIB OIDs

These topics provide tables of the hardware, sensor, alarms, and watchdog object identifiers.

- “SUN-PLATFORM-MIB MIB OID Command Syntax” on page 244
- “High-Level OIDs” on page 245
- “Discrete Sensor Table OID” on page 245
- “Discrete Sensor States OIDs” on page 246
- “Sun Platform MIB Object Groups” on page 246
- “Sun Platform Sensor OIDs” on page 248
- “Sun Platform Binary Sensor OIDs” on page 248
- “Sun Platform Numeric Sensor Table OIDs” on page 249
- “Sun Platform Fan Table OID” on page 250
- “Sun Platform Alarm Table OIDs” on page 250
- “Sun Platform Watchdog OIDs” on page 251
- “Sun Platform Power Supply OID” on page 251
- “Sun Platform Battery OID” on page 251
- “Sun Platform MIB Traps” on page 252
- “Sun Platform MIB Notifications Group” on page 253
- “Sun Platform MIB Notifications” on page 253

- "Sun Platform Logical Class Extension OIDs" on page 254
- "NIM Equipment Table OIDs" on page 255
- "NIM Equipment Holder Table OIDs" on page 255
- "NIM Circuit Pack Table OIDs" on page 256
- "NIM Log OIDs" on page 256
- "NIM Trap Agent MIB Additional Information OIDs" on page 257
- "NIM Trap Agent MIB Logged Alarm OIDs" on page 257
- "NIM Trap Agent MIB Logged Attribute/Status Change OIDs" on page 258
- "Physical Class Extension Table OID" on page 259
- "Unitary Computer System OIDs" on page 259
- "Unitary Computer System Initial Load Extension OIDs" on page 260

Related Information

- "SNMP Overview" on page 23
- "OID Tables Overview" on page 195
- "Understanding the SUN-HW-CTRL-MIB MIB OIDs" on page 196
- "Understanding the SUN-HW-TRAP-MIB MIB OIDs" on page 200
- "Understanding the SUN-ILOM-CONTROL-MIB MIB OIDs" on page 209
- "Understanding the SUN-ILOM-SYSTEM-MIB MIB OIDs" on page 238
- "Understanding the ENTITY-MIB MIB OIDs" on page 260

SUN-PLATFORM-MIB MIB OID Command Syntax

When you use the object identifiers in a command syntax, you must include the SUN-PLATFORM-MIB MIB name. For example, using the V2c protocol:

```
$ command -v2c -c public mc_IP SUN-PLATFORM-MIB::object_id argument
```

Or using the V3 protocol:

```
$ command -v3 -u snmp_user -l security_level -a authentication_protocol -A authentication_password -x DES -
X privacy_password mc_IP SUN-PLATFORM-MIB::object_id argument
```

where:

- *command* is the command of the SNMP client that performs the action.
- *snmp_user* is a configured user of the SNMP services.
- *security_level* is:
  - `authNoPriv` – There is authentication, but no privacy.

  - authPriv – There is authentication and privacy.
- *authentication_protocol* is either MD5 or SHA.
- *authentication_password* is the *snmp_user*'s authentication password.
- *privacy_password* is the *snmp_user*'s privacy password.
- *mc_IP* is the IP address of the SP.
- *object_id* is the object identifier, as listed in the right column of the tables.
- *argument* is a combination of options and variables that support the object identifier.

For example, to securely display a table of switch components addressable by the SP with IP address of 123.45.67.89, type:

```
$ snmpwalk -v3 -u usersnmp -l authPriv -a MD5 -A authpass -x DES -X privpass 123.45.67.89 SUN-PLATFORM-MIB::sunPlatEquipmentTable
```

Related Information

- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210
- "ENTITY-MIB MIB OID Command Syntax" on page 261

High-Level OIDs

This table lists the high-level object identifier supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the time at which the agent was last started.	read	sunPlatStartTime

Related Information

- "OID Tables Overview" on page 195
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244

Discrete Sensor Table OID

This table lists the discrete sensor object identifier supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the current reading of the sensor.	read	sunPlatDiscreteSensorCurrent

Related Information

- "OID Tables Overview" on page 195
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244
- "Discrete Sensor States OIDs" on page 246

Discrete Sensor States OIDs

This table lists discrete sensor states object identifiers supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the state represented by the corresponding row of this table.	read	sunPlatDiscreteSensorStatesInterpretation
Display whether this value is acceptable as defined for CIM_DiscreteSensor.AcceptableValues.	read	sunPlatDiscreteSensorStatesAcceptable

Related Information

- "OID Tables Overview" on page 195
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244
- "Discrete Sensor Table OID" on page 245

Sun Platform MIB Object Groups

This table lists the Sun platform MIB object groups supported by the SUN-PLATFORM-MIB MIB.

Trap or Notification	Description
sunPlatGeneralGroup	Displays the collection of objects that are independent of the platforms being monitored.
sunPlatEquipmentGroup	Displays the collection of objects representing attributes of the NIM class of Equipment.
sunPlatEquipmentHolderGroup	Displays the collection of objects representing attributes of platform components with an entPhysicalClass of container(5).
sunPlatCircuitPackGroup	Displays the collection of objects representing attributes of platform components with an entPhysicalClass of module (9).
sunPlatPhysicalGroup	Displays the collection of objects representing attributes of platform components with an entPhysicalClass value of other(1).

Trap or Notification	Description
sunPlatSensorGroup	Displays the collection of objects representing attributes of platform components with an entPhysicalClass value of sensor(8).
sunPlatBinarySensorGroup	Displays the collection of objects representing attributes of sensors with a sunPlatSensorClass of binary(1).
sunPlatNumericSensorGroup	Displays the collection of objects representing attributes of sensors with a sunPlatSensorClass of numeric(2).
sunPlatDiscreteSensorGroup	Displays the collection of objects representing attributes of sensors with a sunPlatSensorClass of discrete(3).
sunPlatFanGroup	Displays the collection of objects representing attributes of platform components with an entPhysicalClass of fan(7).
sunPlatAlarmGroup	Displays the The collection of objects representing attributes of platform components with a sunPlatPhysicalClass of alarm(2).
sunPlatWatchdogGroup	Displays the collection of objects representing attributes of platform components with a sunPlatPhysicalClass of watchdog(3).
sunPlatPowerSupplyGroup	Displays the collection of objects representing attributes of platform components with an entPhysicalClass of powerSupply(6).
sunPlatBatteryGroup	Displays the collection of objects representing attributes of power supplies with a sunPlatPowerSupplyClass of battery (3).
sunPlatLogicalGroup	Displays the collection of objects representing attributes of logical entities present in the entLogicalTable.
sunPlatUnitaryComputerSystemGroup	Displays the collection of objects representing attributes of logical entities with a sunPlatLogicalClass of computerSystem(2).
sunPlatLogGroup	Displays the collection of objects representing attributes of logs or current problem lists.
sunPlatLogRecordGroup	Displays the collection of objects representing a log record or current problem.
sunPlatLogRecordAdditionalGroup	Displays the collection of objects providing additional information relating to a log record or current problem.
sunPlatLogRecordAlarmGroup	Displays the collection of objects providing information related to an alarm log record or current problem.
sunPlatLogRecordChangeGroup	Displays the collection of objects providing information related to an attribute change log record.
sunPlatNotificationObjectGroup	Displays the collection of objects used in notifications.

Related Information

- “Hardware Traps” on page 204
- “OID Tables Overview” on page 195

Sun Platform Sensor OIDs

This table lists the platform sensor object identifiers supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display possible sensor classes where entPhysicalClass is specified as sensor(8).	read	sunPlatSensorClass
Display possible sensor types where entPhysicalClass is specified as sensor(8).	read	sunPlatSensorType
Display the update interval for the sensor measured in milliseconds.	read	sunPlatSensorLatency

Related Information

- "OID Tables Overview" on page 195
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244
- "Sun Platform Binary Sensor OIDs" on page 248
- "Sun Platform Numeric Sensor Table OIDs" on page 249

Sun Platform Binary Sensor OIDs

This table lists binary sensor object identifiers supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the current state of the sensor.	read	sunPlatBinarySensorCurrent
Display the expected state of the sensor. If there is no expected value, no value is returned for this attribute.	read	sunPlatBinarySensorExpected
Display the interpretation to be applied to a sensor reading of true.	read	sunPlatBinarySensorInterpretTrue
Display the interpretation to be applied to a sensor reading of false.	read	sunPlatBinarySensorInterpretFalse

Related Information

- "OID Tables Overview" on page 195
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244
- "Sun Platform Sensor OIDs" on page 248
- "Sun Platform Numeric Sensor Table OIDs" on page 249

Sun Platform Numeric Sensor Table OIDs

This table lists numeric sensor object identifiers supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the base unit of the value returned by the sensor. For example, volts.	read	sunPlatNumericSensorBaseUnits
Display the exponent of 10 to be multiplied by the base unit. For example, 2. So the multiplier is 10^2 or 100.	read	sunPlatNumericSensorExponent
Display the rate associated with the base units, if any. For example, per second.	read	sunPlatNumericSensorRateUnits
Display the current reading of a sensor.	read	sunPlatNumericSensorCurrent
Display the lowest expected value from the sensor.	read	sunPlatNumericSensorNormalMin
Display the highest expected value from the sensor.	read	sunPlatNumericSensorNormalMax
Display the accuracy of the sensor expressed as a +/-% value in units of 100ths of a percent.	read	sunPlatNumericSensorAccuracy
Display or set the lower threshold at which a noncritical condition occurs.	read write	sunPlatNumericSensorLowerThresholdNonCritical
Display the upper threshold at which a noncritical condition occurs.	read write	sunPlatNumericSensorUpperThresholdNonCritical
Display the lower threshold at which a critical condition occurs.	read write	sunPlatNumericSensorLowerThresholdCritical
Display the upper threshold at which a critical condition occurs.	read write	sunPlatNumericSensorUpperThresholdCritical
Display the lower threshold at which a fatal condition occurs.	read write	sunPlatNumericSensorLowerThresholdFatal
Display the upper threshold at which a fatal condition occurs.	read write	sunPlatNumericSensorUpperThresholdFatal
Display the hysteresis around the thresholds.	read	sunPlatNumericSensorHysteresis
Display the thresholds of the sensor.	read write	sunPlatNumericSensorEnabledThresholds
Display sensors' thresholds to the default settings, or reset them to defaults.	read write	sunPlatNumericSensorRestoreDefaultThresholds

Related Information

- "OID Tables Overview" on page 195
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244
- "Sun Platform Sensor OIDs" on page 248
- "Sun Platform Binary Sensor OIDs" on page 248

Sun Platform Fan Table OID

This table lists fan object identifier supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the class of the cooling device.	read	sunPlatFanClass

Related Information

- "OID Tables Overview" on page 195
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244

Sun Platform Alarm Table OIDs

This table lists alarm object identifiers supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the type of alarm.	read	sunPlatAlarmType
Display the state of the alarm.	read write	sunPlatAlarmState
Display the urgency of the alarm.	read	sunPlatAlarmUrgency

Related Information

- "OID Tables Overview" on page 195
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244

Sun Platform Watchdog OIDs

This table lists watchdog object identifiers supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the interval in milliseconds (mS) after which the watchdog will timeout if not reset.	read	sunPlatWatchdogTimeout
Display the action taken by the watchdog if it is not reset within the period specified by sunPlatWatchdogTimeout.	read	sunPlatWatchdogAction
Display the time at which the watchdog last expired.	read	sunPlatWatchdogLastExpired
Display the entity monitored by the watchdog.	read	sunPlatWatchdogMonitoredEntity

Related Information

- "OID Tables Overview" on page 195
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244

Sun Platform Power Supply OID

This table lists power supply object identifier supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the class of the power supply.	read	sunPlatPowerSupplyClass

Related Information

- "OID Tables Overview" on page 195
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244
- "Sun Platform Battery OID" on page 251

Sun Platform Battery OID

This table lists battery object identifier supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the current status of the battery.	read	sunPlatBatteryStatus

Related Information

- "OID Tables Overview" on page 195
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244
- "Sun Platform Power Supply OID" on page 251

Sun Platform MIB Traps

This table lists the Sun platform MIB traps supported by the SUN-PLATFORM-MIB MIB.

Trap or Notification	Action	Description
misidentification	accessible-for-notify	A unique ID for this notification.
sunPlatNotificationTime	accessible-for-notify	The time that this notification was generated.
sunPlatNotificationObject	accessible-for-notify	The object in the entPhysicalTable or the entLogicalTable to which this notification applies.
sunPlatNotificationPerceivedSeverity	accessible-for-notify	The perceived severity of the alarm, as specified by the agent that generated it.
sunPlatNotificationProbableCause	accessible-for-notify	An optional probable cause that provides additional information relevant to this notification.
sunPlatNotificationSpecificProblem	accessible-for-notify	An optional textual description that provides additional information concerning the cause of this notification.
sunPlatNotificationRepairAction	accessible-for-notify	A list of recommended repair actions separated by CR LF sequences.
sunPlatNotificationAdditionalInfo	accessible-for-notify	An optional OID of an object that provides additional information relevant to this notification.
sunPlatNotificationAdditionalText	accessible-for-notify	An optional textual description that provides additional information relevant to this notification.
sunPlatNotificationChangedOID	accessible-for-notify	The changed object's OBJECT IDENTIFIER value in an attribute/state change notification.
sunPlatNotificationOldInteger	accessible-for-notify	The old INTEGER value in an attribute/state change notification.
sunPlatNotificationNewString	accessible-for-notify	The new OCTET-STRING value in an attribute/state notification.

Trap or Notification	Action	Description
sunPlatNotificationOldString	accessible-for-notify	The old OCTET-STRING value in an attribute/state change notification.
sunPlatNotificationNewOID	accessible-for-notify	The new OBJECT IDENTIFIER value in an attribute/state change notification.
sunPlatNotificationOldOID	accessible-for-notify	The old OBJECT IDENTIFIER value in an attribute/state change notification.
sunPlatNotificationCorrelatedNotifications	accessible-for-notify	A list of sunPlatNotificationEventIDs that are correlated to this notification, separated by commas.

Related Information

- “Hardware Traps” on page 204
- “OID Tables Overview” on page 195

Sun Platform MIB Notifications Group

This table lists the Sun platform MIB notifications group supported by the SUN-PLATFORM-MIB MIB.

Trap or Notification	Description
sunPlatNotificationsGroup	Display the collection of notifications that indicate the addition or deletion of managed objects from the model, changes of managed object state, attribute changes, and the raising of alarms.

Related Information

- “Hardware Traps” on page 204
- “OID Tables Overview” on page 195
- “Sun Platform MIB Notifications” on page 253

Sun Platform MIB Notifications

This table lists the Sun platform MIB notifications supported by the SUN-PLATFORM-MIB MIB.

Trap or Notification	Description
sunPlatObjectCreation	Notification when an object has been created.
sunPlatObjectDeletion	Notification when an object has been deleted.
sunPlatCommunicationsAlarm	Notification that a communication alarm has occurred.
sunPlatEnvironmentalAlarm	Notification that an environment alarm has occurred.
sunPlatEquipmentAlarm	Notification that an equipment alarm has occurred.
sunPlatProcessingErrorAlarm	Notification that a processing error alarm has occurred.
sunPlatStateChange	Notification that a change has occurred on the state attribute identified by sunPlatNotificationChangedOID.
sunPlatAttributeChangeInteger	Notification that an attribute has changed from one integer value to another.
sunPlatAttributeChangeString	Notification that an attribute has changed from one string to another.
sunPlatAttributeChangeOID	Notification that an attribute has changed from one OID to another.
sunPlatQualityOfServiceAlarm	Notification that a quality of service alarm has occurred.
sunPlatIndeterminateAlarm	Notification that an alarm of an indeterminate type has occurred.

Related Information

- “Hardware Traps” on page 204
- “OID Tables Overview” on page 195
- “Sun Platform MIB Notifications Group” on page 253

Sun Platform Logical Class Extension OIDs

This table lists the logical class extensions object identifiers supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Displays the logical class of the entry in the logical entities table.	read	sunPlatLogicalClass
Display the current status of the battery.	read	sunPlatLogicalStatus

Related Information

- “Hardware Traps” on page 204
- “OID Tables Overview” on page 195

NIM Equipment Table OIDs

This table lists NIM equipment object identifiers supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the administrative state of the managed object.	read write	sunPlatEquipmentAdministrativeState
Display the operational state of the managed object.	read	sunPlatEquipmentOperationalState
Display the alarm status of the managed object.	read	sunPlatEquipmentAlarmStatus
Display the unknown or known status of the managed object.	read	sunPlatEquipmentUnknownStatus
Display the specific or general location name of the component.	read write	sunPlatEquipmentLocationName
Display a type of component.	read	sunPlatEquipmentHolderType
Display the types of circuit pack that can be supported by the slot.	read	sunPlatEquipmentHolderAcceptableTypes
Display the attributes that identify whether a circuit pack is present in a slot.	read	sunPlatEquipmentHolderStatus
Display the current power management state of the equipment holder.	read write	sunPlatEquipmentHolderPowered

Related Information

- "OID Tables Overview" on page 195
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244
- "NIM Equipment Holder Table OIDs" on page 255

NIM Equipment Holder Table OIDs

This table lists NIM equipment holder object identifiers supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display a type of component.	read	sunPlatEquipmentHolderType
Display the types of circuit pack that can be supported by the slot.	read	sunPlatEquipmentHolderAcceptableTypes

Description of Task or Activity	Action	MIB OID
Display the attributes that identify whether a circuit pack is present in a slot.	read	sunPlatEquipmentHolderStatus
Display the current power management state of the equipment holder.	read write	sunPlatEquipmentHolderPowered

Related Information

- "OID Tables Overview" on page 195
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244
- "NIM Equipment Table OIDs" on page 255

NIM Circuit Pack Table OIDs

This table lists NIM circuit pack object identifiers supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display a type of circuit pack.	read	sunPlatCircuitPackType
Display the availability status of an attribute.	read	sunPlatCircuitPackAvailabilityStatus
Display the CIM_PhysicalPackage.Replaceable property.	read	sunPlatCircuitPackReplaceable
Display the CIM_PhysicalPackage.HotSwappable property.	read	sunPlatCircuitPackHotSwappable

Related Information

- "OID Tables Overview" on page 195
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244

NIM Log OIDs

This table lists the NIM log table object identifiers supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Indicate whether the log is capable of performing its normal operations.	read	sunPlatLogOperationalState
Display whether the log is full (true) or not (false).	read	sunPlatLogFullStatus
Display or create the threshold, expressed in 100ths of a %, at which the log will generate a capacity alarm.	read	sunPlatLogCapacityThreshold

Description of Task or Activity	Action	MIB OID
	create	
Display or create a new row or delete an existing row in the table.	read create	sunPlatLogRowStatus

Related Information

- "OID Tables Overview" on page 195
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244

NIM Trap Agent MIB Additional Information OIDs

This table lists the NIM trap agent MIB additional information object identifiers supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display an optional OID of an object that provides additional information relevant to this notification.	read	sunPlatLogRecordAdditionalInfo
Display an optional textual description that provides additional information relevant to this notification.	read	sunPlatLogRecordAdditionalText

Related Information

- "OID Tables Overview" on page 195
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244
- "NIM Trap Agent MIB Logged Alarm OIDs" on page 257
- "NIM Trap Agent MIB Logged Attribute/Status Change OIDs" on page 258

NIM Trap Agent MIB Logged Alarm OIDs

This table lists the NIM trap agent MIB logged alarm object identifiers supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the perceived severity of the alarm, as specified by the agent that generated it.	read	sunPlatLogRecordAlarmPerceivedSeverity

Description of Task or Activity	Action	MIB OID
Display an optional probable cause that provides additional information relevant to this notification.	read	sunPlatLogRecordAlarmProbableCause
Display an optional textual description that provides additional information concerning the cause of this notification.	read	sunPlatLogRecordAlarmSpecificProblem
Display a list of recommended repair actions separated by CR LF sequences.	read	sunPlatLogRecordAlarmRepairAction

Related Information

- "OID Tables Overview" on page 195
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244
- "NIM Trap Agent MIB Additional Information OIDs" on page 257
- "NIM Trap Agent MIB Logged Attribute/Status Change OIDs" on page 258

NIM Trap Agent MIB Logged Attribute/Status Change OIDs

This table lists the NIM trap agent MIB logged attribute/status change object identifiers supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the changed object's OBJECT IDENTIFIER value in an attribute/state change notification.	read	sunPlatLogRecordChangeChangedOID
Display the new INTEGER value in an attribute/state change notification.	read	sunPlatLogRecordChangeNewInteger
Display the old INTEGER value in an attribute/state change notification.	read	sunPlatLogRecordChangeOldInteger
Display the new OCTET-STRING value in an attribute/state change/state notification.	read	sunPlatLogRecordChangeNewString
Display the old OCTET-STRING value in an attribute/state change notification.	read	sunPlatLogRecordChangeOldString
Display the new OBJECT IDENTIFIER value in an attribute/state change notification.	read	sunPlatLogRecordChangeNewOID
Display the old OBJECT IDENTIFIER value in an attribute/state change notification.	read	sunPlatLogRecordChangeOldOID

Related Information

- "OID Tables Overview" on page 195

- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244
- "NIM Trap Agent MIB Additional Information OIDs" on page 257
- "NIM Trap Agent MIB Logged Alarm OIDs" on page 257

Physical Class Extension Table OID

This table lists physical class extension object identifier supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display possible physical classes where entPhysicalClass is specified as other (1).	read	sunPlatPhysicalClass

Related Information

- "OID Tables Overview" on page 195
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244

Unitary Computer System OIDs

This table lists the unitary computer system object identifiers supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display or set the system's current power state.	read write	SunPlatUnitaryComputerSystemPowerState
Display or apply the system's current settings.	read write	sunPlatUnitaryComputerSystemApplySettings

Related Information

- "OID Tables Overview" on page 195
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244
- "Unitary Computer System Initial Load Extension OIDs" on page 260

Unitary Computer System Initial Load Extension OIDs

This table lists the unitary computer system initial load table object identifiers supported by the SUN-PLATFORM-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the name for the information presented for this value.	read	sunPlatInitialLoadInfoDescr
Display the current contents of the value for an entry in the array.	read	sunPlatInitialLoadInfoCurrentValue
Display the desired contents of the value for an entry in the array.	read write	sunPlatInitialLoadInfoDesiredValue

Related Information

- "OID Tables Overview" on page 195
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244
- "Unitary Computer System OIDs" on page 259

Understanding the ENTITY-MIB MIB OIDs

These topics provide tables of physical and logical entity object identifiers of the switch.

- "ENTITY-MIB MIB OID Command Syntax" on page 261
- "Physical Entity Table OIDs" on page 262
- "Logical Entity Table OIDs" on page 262
- "Entity MIB Traps" on page 263

Related Information

- "SNMP Overview" on page 23
- "OID Tables Overview" on page 195
- "Understanding the SUN-HW-CTRL-MIB MIB OIDs" on page 196
- "Understanding the SUN-HW-TRAP-MIB MIB OIDs" on page 200
- "Understanding the SUN-ILOM-CONTROL-MIB MIB OIDs" on page 209
- "Understanding the SUN-ILOM-SYSTEM-MIB MIB OIDs" on page 238

- "Understanding the SUN-PLATFORM-MIB MIB OIDs" on page 243

ENTITY-MIB MIB OID Command Syntax

When you use the object identifiers in a command syntax, you must include the ENTITY-MIB MIB name. For example, using the V2c protocol:

```
$ command -v2c -c public mc_IP ENTITY-MIB::object_id argument
```

Or using the V3 protocol:

```
$ command -v3 -u snmp_user -l security_level -a authentication_protocol -A authentication_password -x DES -
X privacy_password mc_IP ENTITY-MIB::object_id argument
```

where:

- *command* is the command of the SNMP client that performs the action.
- *snmp_user* is a configured user of the SNMP services.
- *security_level* is:
  - authNoPriv – There is authentication, but no privacy.
  - authPriv – There is authentication and privacy.
- *authentication_protocol* is either MD5 or SHA.
- *authentication_password* is the *snmp_user*'s authentication password.
- *privacy_password* is the *snmp_user*'s privacy password.
- *mc_IP* is the IP address of the SP.
- *object_id* is the object identifier, as listed in the right column of the tables.
- *argument* is a combination of options and variables that support the object identifier.

For example, to securely display the description of physical entity 4 on the SP with IP address of 123.45.67.89, type:

```
$ snmpget -v3 -u usersnmp -l authPriv -a MD5 -A authpass -x DES -X privpass 123.45.67.89 ENTITY-MIB::
entPhysicalDescr.4
```

Related Information

- "SUN-ILOM-CONTROL-MIB MIB OID Command Syntax" on page 210
- "SUN-PLATFORM-MIB MIB OID Command Syntax" on page 244

Physical Entity Table OIDs

This table lists physical entity object identifiers supported by the ENTITY-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the description of the physical entity.	read	entPhysicalDescr
Display the vendor-specific hardware type of the physical entity.	read	entPhysicalVendorType
Display the value of entPhysicalIndex for the physical entity that is the container for this physical entity.	read	entPhysicalContainedIn
Display the general hardware type of the physical entity.	read	entPhysicalClass
Display an indication of the relative position of the child component among all its sibling components.	read	entPhysicalParentRelPos
Display the name of the physical entity.	read	entPhysicalName
Display the vendor-specific hardware revision string of the physical entity.	read	entPhysicalHardwareRev
Display the vendor-specific firmware revision string of the physical entity.	read	entPhysicalFirmwareRev
Display the vendor-specific software revision string of the physical entity.	read	entPhysicalSoftwareRev
Display the vendor-specific serial number string for the physical entity.	read write	entPhysicalSerialNum
Display the name of the manufacturer of the physical component.	read	entPhysicalMfgName
Display the vendor-specific model name string associated with the physical component.	read	entPhysicalModelName
Display a handle or alias for the physical entity as specified by the network manager.	read write	entPhysicalAlias
Display the nonvolatile asset tracking identifier for the physical entity as specified by a network manager.	read write	entPhysicalAssetID
Display whether the physical entity is considered a FRU unit by the vendor.	read	entPhysicalIsFRU

Related Information

- "OID Tables Overview" on page 195
- "ENTITY-MIB MIB OID Command Syntax" on page 261

Logical Entity Table OIDs

This table lists logical entity object identifiers supported by the ENTITY-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the description of the logical entity.	read	entLogicalDescr
Display an indication of the type of logical entity.	read	entLogicalType
Display an SNMPv1 or SNMPv2C community string that can be used to access detailed management information for this logical entity.	read	entLogicalCommunity
Display the transport service address by which the logical entity receives network management traffic, formatted according to the corresponding value of entLogicalTDomain.	read	entLogicalTAddress
Display the kind of transport service by which the logical entity receives network management traffic, as found in *Transport Mappings for SNMPv2 document (RFC 1906 [RFC1906])*.	read	entLogicalTDomain
Display the authoritative contextEngineID that can be used to send an SNMP message concerning information held by this logical entity.	read	entLogicalContextEngineID
Display the contextName that can be used to send an SNMP message concerning information held by this logical entity.	read	entLogicalContextName
Display the value of this object that identifies the index value of a particular entPhysicalEntry associated with the indicated entLogicalEntityy.	read	entLPPhysicalIndex
Display the value of this object that identifies a particular conceptual row associated with the indicated entPhysicalIndex and entLogicalIndex pair.	read	entAliasMappingIdentifier
Display the value of entPhysicalIndex for the contained physical entity.	read	entPhysicalChildIndex
Display the value of sysUpTime at the time a conceptual row is created, modified, or deleted in any of entPhysicalTable, entLogicalTable, entLPMappingTable, entAliasMappingTable, or entPhysicalContainsTable tables.	read	entLastChangeTime

Related Information

- "OID Tables Overview" on page 195
- "ENTITY-MIB MIB OID Command Syntax" on page 261

Entity MIB Traps

This table lists logical entity object identifiers supported by the ENTITY-MIB MIB.

Description of Task or Activity	Action	MIB OID
Display the collection of objects representing associations between multiple logical entities, physical components, interfaces, and port identifiers.	read	entityMappingGroup
Display the collection of objects representing general entity information for which a single agent provides management information.	read	entityGeneralGroup
Display the collection of notifications indicating Entity MIB data contents and general status information.	read	entityNotificationsGroup

Description of Task or Activity	Action	MIB OID
Display the collection of objects representing physical system components, for which a single agent provides management information.	read	entityPhysical2Group
Display the collection of objects representing the list of logical entities for which a single SNMP entity provides management information.	read	entityLogical2Group
Display a notification when the value of entLastChangeTime is changed.	read	entConfigChange

Related Information

- "OID Tables Overview" on page 195
- "ENTITY-MIB MIB OID Command Syntax" on page 261

Understanding the EMS Module

These topics describe how to perform basic SEFOS administration on the EMS module.

Note - Only very basic SEFOS information is provided here. Further information about SEFOS is available from the EMS module documentation library.

- "Understanding the EMS Module and SEFOS Modes" on page 265
- "Displaying Network Information (SEFOS)" on page 271
- "Displaying Logs and History (SEFOS)" on page 275
- "Administering Hardware Parameters (SEFOS)" on page 277
- "Administering Users (SEFOS)" on page 282
- "Administering VLANs (SEFOS)" on page 284
- "Administering SNMP (SEFOS)" on page 292
- "Log Out of SEFOS" on page 299

Related Information

- "Understanding System Administration Resources" on page 19
- "Accessing the Switch" on page 27
- "Monitoring the Switch (Oracle ILOM CLI)" on page 35
- "Monitoring the Switch (Oracle ILOM Web)" on page 125
- "Understanding Oracle ILOM Targets" on page 165
- "Understanding SNMP MIB OIDs" on page 195
- "Controlling the Switch (Oracle ILOM CLI)" on page 301
- "Controlling the Switch (Oracle ILOM Web)" on page 427
- "Updating the Firmware" on page 533

Understanding the EMS Module and SEFOS Modes

These topics describe the EMS module and how to access SEFOS modes.

- "EMS Module Overview" on page 266
- "Access SEFOS Global Configuration Mode" on page 267
- "Access SEFOS Interface Configuration Mode" on page 268
- "Access SEFOS VLAN Configuration Mode" on page 269
- "Display a List of SEFOS Commands" on page 269
- "Get Help on a SEFOS Command" on page 270

Related Information

- "Displaying Network Information (SEFOS)" on page 271
- "Displaying Logs and History (SEFOS)" on page 275
- "Administering Hardware Parameters (SEFOS)" on page 277
- "Administering Users (SEFOS)" on page 282
- "Administering VLANs (SEFOS)" on page 284
- "Administering SNMP (SEFOS)" on page 292

EMS Module Overview

Within the switch chassis is the embedded management switch (EMS). The EMS is an Ethernet switch paired with an ARM-based management controller in a single module. By default, the EMS does not require user management. However, it is a feature-rich Ethernet switch and has functionality comparable to, and is managed similarly to, Oracle's ES1 and ES2 switches.

The management controller for the EMS is the switch's SP. The management controller is a host that runs a minimized version of the Sun Ethernet Fabric Operating System (SEFOS). You administer the EMS from a CLI using SEFOS commands. You access SEFOS through the Oracle ILOM CLI.

The EMS implementation of SEFOS has these interactive modes:

- **Privileged EXEC mode** – Displays parameters of the network and configuration.
- **Global Configuration mode** – Configures parameters and values across the network.
- **Interface Configuration mode** – Configures parameters for a specific interface or port.
- **VLAN Configuration mode** – Configure parameters for a specific VLAN upon VLAN creation.

Each mode has its own specific commands.

The modes are nested, so to configure parameters across the network, you first enter Privileged EXEC mode, then Global Configuration mode. To configure parameters for a specific interface,

you first enter Privileged EXEC mode, then Global Configuration mode, and finally, Interface Configuration mode. To configure parameters for a new VLAN, you first enter Privileged EXEC mode, then Global Configuration mode, and finally, VLAN Configuration mode. Exiting the modes are nested as well.

Related Information

- “Access SEFOS” on page 30
- “Access SEFOS Global Configuration Mode” on page 267
- “Access SEFOS Interface Configuration Mode” on page 268
- “Access SEFOS VLAN Configuration Mode” on page 269
- “Display a List of SEFOS Commands” on page 269
- “Get Help on a SEFOS Command” on page 270
- “Log Out of SEFOS” on page 299

▼ Access SEFOS Global Configuration Mode

1. **Access SEFOS.**

   See “Access SEFOS” on page 30.

2. **Access Global Configuration mode.**

```
SEFOS# configure terminal
SEFOS(config)#
```

3. **Perform the desired tasks in Global Configuration mode.**

   When you are finished, exit Global Configuration mode.

4. **Exit Global Configuration mode.**

```
SEFOS(config)# exit
SEFOS#
```

Related Information

- “EMS Module Overview” on page 266
- “Access SEFOS Interface Configuration Mode” on page 268
- “Access SEFOS VLAN Configuration Mode” on page 269
- “Display a List of SEFOS Commands” on page 269
- “Get Help on a SEFOS Command” on page 270

- “Log Out of SEFOS” on page 299

Access SEFOS Interface Configuration Mode

When you access Interface Configuration mode, you specify the interface to configure.

1. **Access Global Configuration mode.**

   See “Access SEFOS Global Configuration Mode” on page 267.

2. **Access Interface Configuration mode.**

   ```
   SEFOS(config)# interface interface-type 0/port
   ```

   where:

   - *interface-type* is either `gigabitethernet` for the 1GbE RJ-45 ports or `extreme-ethernet` for the 10GbE SFP+ uplink ports.
   - *port* is the port number printed near the connector.

   For example, to access Interface Configuration mode for port 3, which is a 1GbE RJ-45 port, type:

   ```
   SEFOS(config)# interface gigabitethernet 0/3
   SEFOS(config-if)#
   ```

   You are now in Interface Configuration mode for port 3.

3. **Perform the desired tasks in Interface Configuration mode.**

   When you are finished, exit Interface Configuration mode.

4. **Exit Interface Configuration mode.**

   ```
   SEFOS(config-if)# exit
   SEFOS(config)#
   ```

Related Information

- “EMS Module Overview” on page 266
- “Access SEFOS Global Configuration Mode” on page 267
- “Access SEFOS VLAN Configuration Mode” on page 269
- “Display a List of SEFOS Commands” on page 269
- “Get Help on a SEFOS Command” on page 270
- “Log Out of SEFOS” on page 299

Access SEFOS VLAN Configuration Mode

When you access VLAN Configuration mode, you specify the VLAN to create and configure initially. Later, you configure the VLAN from Global Configuration mode, or Interface Configuration mode.

1. **Access Global Configuration mode.**

   See “Access SEFOS Global Configuration Mode” on page 267.

2. **Access VLAN Configuration mode.**

   ```
   SEFOS(config)# vlan VLAN-ID
   ```

   where *VLAN-ID* is the number of the VLAN (`1 - 4094`).

   For example, to create a VLAN with ID of `13` for initial configuration, type:

   ```
   SEFOS(config)# vlan 13
   SEFOS(config-vlan)#
   ```

   You are now in VLAN Configuration mode for VLAN 13.

3. **Perform the desired tasks in VLAN Configuration mode.**

   When you are finished, exit VLAN Configuration mode.

4. **Exit VLAN Configuration mode.**

   ```
   SEFOS(config-vlan)# exit
   SEFOS(config)#
   ```

Related Information

- “EMS Module Overview” on page 266
- “Access SEFOS Global Configuration Mode” on page 267
- “Access SEFOS Interface Configuration Mode” on page 268
- “Display a List of SEFOS Commands” on page 269
- “Get Help on a SEFOS Command” on page 270
- “Log Out of SEFOS” on page 299

Display a List of SEFOS Commands

1. **Access the SEFOS mode for which you want to see a list of commands.**

See:

- "Access SEFOS" on page 30
- "Access SEFOS Global Configuration Mode" on page 267
- "Access SEFOS Interface Configuration Mode" on page 268
- "Access SEFOS VLAN Configuration Mode" on page 269

2. **List the commands available in that mode.**

```
SEFOS# help

EXEC commands :
  archive download-sw /overwrite [ /reload ] { tftp://ip-address/filename | sftp://
<user-name>:<pass-word>@ip-address/filename | flash:filename}
  bcm
  clear config[default-config-restore <filename>]
  clear counters [ <interface-type> <interface-id> ]
  clear interfaces [ <interface-type> <interface-id> ] counters
  clear iss counters [bgp] [ospf] [rip] [rip6] [ospf3] [ipv4] [ipv6]
  clear line vty {<line-number(2-9)> | all}
  clear screen
...
  exit
  firmware upgrade { tftp://ip-address/filename} {flash:normal | flash:fallback}
--More--
```

3. **Press the spacebar to advance the list.**

Related Information

- "EMS Module Overview" on page 266
- "Access SEFOS Global Configuration Mode" on page 267
- "Access SEFOS Interface Configuration Mode" on page 268
- "Access SEFOS VLAN Configuration Mode" on page 269
- "Get Help on a SEFOS Command" on page 270
- "Log Out of SEFOS" on page 299

▼ Get Help on a SEFOS Command

1. **Access the SEFOS mode where you will issue the command.**

   See:

   - "Access SEFOS" on page 30
   - "Access SEFOS Global Configuration Mode" on page 267

- "Access SEFOS Interface Configuration Mode" on page 268
- "Access SEFOS VLAN Configuration Mode" on page 269

2. **Get help on the command.**

```
SEFOS# help first_word
```

where *first_word* is the first word of the command string.

Note - For commands that begin with `no`, you must type: **`help no`**.

For example, to get help on the `show clock` command, type:

```
SEFOS# help show

EXEC commands :
  show access-lists [[{ip | mac}] <access-list-number (1-65535)> ]
  [Desc]: Display access lists configuration
  show aliases
  [Desc]: Displays the aliases.
  show arp spoofing [interface <ifXtype> <ifnum>]
  [Desc]: Shows the arp spoofing details.
...
  show clock
  [Desc]: Displays the system clock.
...
  show wildcard {mac-address <mac_addr> | broadcast}  [switch <context_name>]
  [Desc]: Displays wildcard Mac Address Table entries
SEFOS#
```

Related Information

- "EMS Module Overview" on page 266
- "Access SEFOS Global Configuration Mode" on page 267
- "Access SEFOS Interface Configuration Mode" on page 268
- "Access SEFOS VLAN Configuration Mode" on page 269
- "Display a List of SEFOS Commands" on page 269
- "Log Out of SEFOS" on page 299

Displaying Network Information (SEFOS)

These tasks display information about the Ethernet network managed by the EMS.

- "Display Basic Port Status of All Ports (SEFOS)" on page 272

- "Display Detailed Status of One Port (SEFOS)" on page 273
- "Display the IP Address of the Ethernet Switch (SEFOS)" on page 274

Related Information

- "Understanding the EMS Module and SEFOS Modes" on page 265
- "Displaying Logs and History (SEFOS)" on page 275
- "Administering Hardware Parameters (SEFOS)" on page 277
- "Administering Users (SEFOS)" on page 282
- "Administering VLANs (SEFOS)" on page 284
- "Administering SNMP (SEFOS)" on page 292

▼ Display Basic Port Status of All Ports (SEFOS)

1. **Access SEFOS.**

   See "Access SEFOS" on page 30.

2. **Display the basic status of all ports.**

```
SEFOS# show interfaces status

Port        Status           Duplex   Speed       Negotiation     Capability
----        ------           ------   -----       -----------     ----------
Gi0/1       not connected    Half     -           Auto            Auto-MDIX on
Gi0/2       not connected    Half     -           Auto            Auto-MDIX on
Gi0/3       not connected    Half     -           Auto            Auto-MDIX on
Gi0/4       not connected    Half     -           Auto            Auto-MDIX on
Gi0/5       not connected    Half     -           Auto            Auto-MDIX on
Gi0/6       not connected    Half     -           Auto            Auto-MDIX on
Gi0/7       not connected    Half     -           Auto            Auto-MDIX on
Gi0/8       not connected    Half     -           Auto            Auto-MDIX on
Gi0/9       not connected    Half     -           Auto            Auto-MDIX on
Gi0/10      not connected    Half     -           Auto            Auto-MDIX on
Gi0/11      not connected    Half     -           Auto            Auto-MDIX on
Gi0/12      connected        Full     1 Gbps      Auto            Auto-MDIX on
Gi0/13      not connected    Half     -           Auto            Auto-MDIX on
Gi0/14      not connected    Half     -           Auto            Auto-MDIX on
Gi0/15      not connected    Half     -           Auto            Auto-MDIX on
Gi0/16      not connected    Half     -           Auto            Auto-MDIX on
Gi0/17      not connected    Half     -           Auto            Auto-MDIX on
Gi0/18      not connected    Half     -           Auto            Auto-MDIX on
Gi0/19      not connected    Half     -           Auto            Auto-MDIX on
Gi0/20      not connected    Half     -           Auto            Auto-MDIX on
Gi0/21      not connected    Half     -           Auto            Auto-MDIX on
```

```
Gi0/22      not connected    Half     -           Auto            Auto-MDIX on
Gi0/23      not connected    Half     -           Auto            Auto-MDIX on
Gi0/24      not connected    Half     -           Auto            Auto-MDIX on
Gi0/25      connected        Full     1 Gbps      Auto            Auto-MDIX on
Gi0/26      connected        Full     1 Gbps      Auto            Auto-MDIX on
Ex0/1       not connected    Full     10 Gbps     No-Negotiation  Auto-MDIX on
Ex0/2       not connected    Full     10 Gbps     No-Negotiation  Auto-MDIX on
SEFOS#
```

Related Information

- “Display Detailed Status of One Port (SEFOS)” on page 273
- “Display the IP Address of the Ethernet Switch (SEFOS)” on page 274

▼ Display Detailed Status of One Port (SEFOS)

1. **Access SEFOS.**

   See “Access SEFOS” on page 30.

2. **Display detailed status of a port.**

   `SEFOS# show interfaces` *interface-type* `0/`*port*

   where:

   - *interface-type* is either `gigabitethernet` for the 1GbE RJ-45 ports or `extreme-ethernet` for the 10GbE SFP+ ports.
   - *port* is the port number printed near the connector.

   For example, to display detailed status for port 12, type:

```
SEFOS# show interfaces gigabitethernet 0/12

Gi0/12 up, line protocol is up (connected)
Bridge Port Type: Customer Bridge Port

Interface SubType: gigabitEthernet
Interface Alias: Slot0/12

Hardware Address is 00:01:02:03:04:10
MTU  1500 bytes, Full duplex, 1 Gbps,  Auto-Negotiation
HOL Block Prevention disabled.
CPU Controlled Learning disabled.
Auto-MDIX on
Input flow-control is off,output flow-control is off

Link Up/Down Trap is enabled
```

```
VLANs Allowed in Trunk Mode : 1-4094

Reception Counters
   Octets                   : 924037937
   Unicast Packets          : 617468
   Multicast Packets        : 36885
   Broadcast Packets        : 12622
   Discarded Packets        : 3604
   Error Packets            : 0
   Unknown Protocol         : 0

Transmission Counters
   Octets                   : 25085216
   Unicast Packets          : 318888
   Multicast Packets        : 13960
   Broadcast Packets        : 29
   Discarded Packets        : 0
   Error Packets            : 0
SEFOS#
```

Related Information

- “Display Basic Port Status of All Ports (SEFOS)” on page 272
- “Display the IP Address of the Ethernet Switch (SEFOS)” on page 274

▼ Display the IP Address of the Ethernet Switch (SEFOS)

1. **Access SEFOS.**

   See “Access SEFOS” on page 30.

2. **Display the IP address of the Ethernet switch.**

```
SEFOS# show ip interface

vlan1 is up, line protocol is up
Internet Address is 10.0.0.1/8
Broadcast Address  10.255.255.255
SEFOS#
```

Related Information

- “Display Basic Port Status of All Ports (SEFOS)” on page 272
- “Display Detailed Status of One Port (SEFOS)” on page 273

Displaying Logs and History (SEFOS)

These tasks display log information.

- "Display the Syslog Status (SEFOS)" on page 275
- "Display System Log Information (SEFOS)" on page 276
- "Display the Command History (SEFOS)" on page 276

Related Information

- "Understanding the EMS Module and SEFOS Modes" on page 265
- "Displaying Network Information (SEFOS)" on page 271
- "Administering Hardware Parameters (SEFOS)" on page 277
- "Administering Users (SEFOS)" on page 282
- "Administering VLANs (SEFOS)" on page 284
- "Administering SNMP (SEFOS)" on page 292

▼ Display the Syslog Status (SEFOS)

1. **Access SEFOS.**
   See "Access SEFOS" on page 30.

2. **Display the syslog status.**

```
SEFOS# show syslog information

System Log Information
----------------------
Syslog Localstorage   : Disabled

Syslog Mail Option    : Disabled

Syslog Port    : 514

Syslog Role    : Device

Smtp Authentication   : None
SEFOS#
```

Related Information

- "Display System Log Information (SEFOS)" on page 276
- "Display the Command History (SEFOS)" on page 276

Display System Log Information (SEFOS)

1. **Access SEFOS.**

   See “Access SEFOS” on page 30.

2. **Display information about the system log.**

```
SEFOS# show logging

System Log Information
----------------------
Syslog logging   : enabled(Number of messages 0)
Console logging  : enabled(Number of messages 1)
TimeStamp option : enabled
Severity logging     : Critical
Facility         : Default (local0)
Buffered size    : 50 Entries

LogBuffer(1 Entries, 1028 bytes)
<129>Jan  1 03:41:27 ISS CLI Attempt to login as root via telnet from 127.0.0.1
 Succeeded
SEFOS#
```

Related Information

- “Display the Syslog Status (SEFOS)” on page 275
- “Display the Command History (SEFOS)” on page 276

Display the Command History (SEFOS)

1. **Access SEFOS.**

   See “Access SEFOS” on page 30.

2. **Display the command history.**

```
SEFOS# show history
 1  show interfaces status
 2  show interfaces gigabitethernet 0/12
 3  show ip interface
 4  show spanning-tree
 5  show spanning tree
 6  help show
 7  show syslog information
 8  show logging
 9  show history
```

```
SEFOS#
```

Related Information

- "Display the Syslog Status (SEFOS)" on page 275
- "Display System Log Information (SEFOS)" on page 276

Administering Hardware Parameters (SEFOS)

These tasks manage the EMS hardware environment.

- "Display the Environmental Parameters (SEFOS)" on page 277
- "Display the SEFOS NVRAM Configuration (SEFOS)" on page 278
- "Display the EMS Version, Part Number, and Status (SEFOS)" on page 280
- "Display the Date and Time (SEFOS)" on page 280
- "Clear the Screen (SEFOS)" on page 281
- "Write the SEFOS Configuration Into Oracle ILOM (SEFOS)" on page 281

Related Information

- "Understanding the EMS Module and SEFOS Modes" on page 265
- "Displaying Network Information (SEFOS)" on page 271
- "Displaying Logs and History (SEFOS)" on page 275
- "Administering Users (SEFOS)" on page 282
- "Administering VLANs (SEFOS)" on page 284
- "Administering SNMP (SEFOS)" on page 292

▼ Display the Environmental Parameters (SEFOS)

1. **Access SEFOS.**

   See "Log Out of SEFOS" on page 299.

2. **Display the environmental parameters.**

```
SEFOS# show env all

RAM Threshold                    : 100%
Current RAM Usage                : 49%
CPU Threshold                    : 100%
```

```
Current CPU Usage                : 13%
Fan Status   1                   : Operational
Fan Status   2                   : Operational
Fan Status   3                   : Operational
Fan Status   4                   : Operational
Fan Status   5                   : Operational
Min power supply                 : 100v
Max power supply                 : 230v
Current power supply             : 230v
Max Temperature                  : 40C
Min Temperature                  : 10C
Current Temperature              : 40C
Flash Threshold                  : 100%
Current Flash Usage              : 100%
Mgmt Port Routing                : Disabled


SEFOS#
```

Related Information

- “Display the SEFOS NVRAM Configuration (SEFOS)” on page 278
- “Display the EMS Version, Part Number, and Status (SEFOS)” on page 280
- “Display the Date and Time (SEFOS)” on page 280
- “Clear the Screen (SEFOS)” on page 281
- “Write the SEFOS Configuration Into Oracle ILOM (SEFOS)” on page 281

▼ Display the SEFOS NVRAM Configuration (SEFOS)

1. **Access SEFOS.**

   See “Log Out of SEFOS” on page 299.

2. **Display the NVRAM configuration.**

```
SEFOS# show nvram

Default IP Address                    : 10.0.0.1
Default Subnet Mask                   : 255.0.0.0
Default IP Address Config Mode        : Manual
Default IP Address Allocation Protocol : DHCP
Switch Base MAC Address               : 00:01:02:03:04:05
Default Interface Name                : Gi0/1
Default RM Interface Name             : NONE
Config Restore Option                 : No restore
```

```
Config Save Option                    : No save
Auto Save                             : Disable
Incremental Save                      : Disable
Roll Back                             : Enable
Config Save IP Address                : 0.0.0.0
Config Save Filename                  : switch.conf
Config Restore Filename               : switch.conf
PIM Mode                              : Sparse Mode
IGS Forwarding Mode                   : MAC based
Cli Serial Console                    : No
SNMP EngineID                         : 80.00.08.1c.04.46.53
SNMP Engine Boots                     : 3
Default VLAN Identifier               : 1
Stack PortCount                       : 0
ColdStandby                           : Disable
Store Default Value                   : Disable
Vrf Unique Mac                        : Disable
Hitless Restart  Flag                 : Disable
Hardware Version                      : 5.9.1
Firmware Version                      : 6.7.2
Hardware Part Number                  : 1-0-0
Software Serial Number                : 1-0-0
Software Version                      : 7.1.0
Switch Name                           : SEFOS
RM Heart Beat Mode                    : Internal
RM Redundancy Type                    : Hot
RM Data Plane Type                    : Shared
RM Type                               : OOB
NPAPI mode                            : Synchronous
TimeStamp Method                      : TransHardware
Restore Flag                          : Enabled
Dynamic Port Count                    : 28
FIPS operation mode                   : Disabled
Restore Option                        : Disabled
Bridge Mode                           : Customer Bridge
Debugging Log File Location           :
Management Port                       : Disabled
Automatic Port Create Flag            : Enabled

IMG_DUMP_PATH                         :

SEFOS#
```

Related Information

- “Display the Environmental Parameters (SEFOS)” on page 277
- “Display the EMS Version, Part Number, and Status (SEFOS)” on page 280
- “Display the Date and Time (SEFOS)” on page 280
- “Clear the Screen (SEFOS)” on page 281
- “Write the SEFOS Configuration Into Oracle ILOM (SEFOS)” on page 281

Display the EMS Version, Part Number, and Status (SEFOS)

1. **Access SEFOS.**
   See “Log Out of SEFOS” on page 299.

2. **Display the EMS information.**

```
SEFOS# show system information

Hardware Version                 : 5.9.1
Firmware Version                 : 6.7.2

Hardware Part Number             : 1-0-0
Software Serial Number           : 1-0-0
Software Version                 : 7.1.0
Switch Name                      : SEFOS
System Contact                   : Oracle Corp, USA
System Location                  : Oracle Corp, USA
Logging Option                   : Console Logging
Login Authentication Mode        : Local
Config Save Status               : Not Initiated
Remote Save Status               : Not Initiated
Config Restore Status            : Not Initiated
Traffic Separation Control       : none

SEFOS#
```

Related Information

- “Display the Environmental Parameters (SEFOS)” on page 277
- “Display the SEFOS NVRAM Configuration (SEFOS)” on page 278
- “Display the Date and Time (SEFOS)” on page 280
- “Clear the Screen (SEFOS)” on page 281
- “Write the SEFOS Configuration Into Oracle ILOM (SEFOS)” on page 281

Display the Date and Time (SEFOS)

1. **Access SEFOS.**
   See “Log Out of SEFOS” on page 299.

2. **Display the date and time.**

```
SEFOS# show clock
```

```
 Sun Dec 31 04:28:57 2000 (UTC +00:00)
SEFOS#
```

Note - The date and time for SEFOS are not explicitly set. Instead, EMS gets the date and time from Oracle ILOM.

Related Information

- “Display the Environmental Parameters (SEFOS)” on page 277
- “Display the SEFOS NVRAM Configuration (SEFOS)” on page 278
- “Display the EMS Version, Part Number, and Status (SEFOS)” on page 280
- “Clear the Screen (SEFOS)” on page 281
- “Write the SEFOS Configuration Into Oracle ILOM (SEFOS)” on page 281

▼ Clear the Screen (SEFOS)

- **From within SEFOS Privileged EXEC mode, clear the screen.**

```
SEFOS# clear screen
```

Related Information

- “Display the Environmental Parameters (SEFOS)” on page 277
- “Display the SEFOS NVRAM Configuration (SEFOS)” on page 278
- “Display the EMS Version, Part Number, and Status (SEFOS)” on page 280
- “Display the Date and Time (SEFOS)” on page 280
- “Write the SEFOS Configuration Into Oracle ILOM (SEFOS)” on page 281

▼ Write the SEFOS Configuration Into Oracle ILOM (SEFOS)

You can write the SEFOS configuration into Oracle ILOM, so when the Oracle ILOM configuration is backed up, the SEFOS configuration is backed up as well. When the Oracle ILOM configuration is restored, the SEFOS configuration is also restored.

1. **Access SEFOS.**

   See “Log Out of SEFOS” on page 299.

2. **Write the SEFOS configuration to Oracle ILOM.**

```
SEFOS# write startup-config
Building configuration ...
[OK]
SEFOS#
```

Related Information

- “Display the Environmental Parameters (SEFOS)” on page 277
- “Display the SEFOS NVRAM Configuration (SEFOS)” on page 278
- “Display the EMS Version, Part Number, and Status (SEFOS)” on page 280
- “Display the Date and Time (SEFOS)” on page 280
- “Clear the Screen (SEFOS)” on page 281

Administering Users (SEFOS)

These tasks manage SEFOS users.

- “Display the SEFOS Users Currently Online (SEFOS)” on page 282
- “Display Configured SEFOS Users (SEFOS)” on page 283
- “Create a SEFOS User (SEFOS)” on page 283
- “Delete a SEFOS User (SEFOS)” on page 284

Related Information

- “Understanding the EMS Module and SEFOS Modes” on page 265
- “Displaying Network Information (SEFOS)” on page 271
- “Displaying Logs and History (SEFOS)” on page 275
- “Administering Hardware Parameters (SEFOS)” on page 277
- “Administering VLANs (SEFOS)” on page 284
- “Administering SNMP (SEFOS)” on page 292

▼ Display the SEFOS Users Currently Online (SEFOS)

1. **Access SEFOS.**

   See “Access SEFOS” on page 30.

2. **Display SEFOS users online.**

```
SEFOS# show users

 Line           User           Peer-Address
2 tel           root           127.0.0.1
SEFOS#
```

Related Information

- “Display Configured SEFOS Users (SEFOS)” on page 283
- “Create a SEFOS User (SEFOS)” on page 283
- “Delete a SEFOS User (SEFOS)” on page 284

▼ Display Configured SEFOS Users (SEFOS)

1. **Access SEFOS.**

   See “Access SEFOS” on page 30.

2. **Display configured SEFOS users.**

```
SEFOS# listuser

USER                    MODE                  PRIVILEGE
root                     /                          15
guest                    /                          1
SEFOS#
```

Related Information

- “Display the SEFOS Users Currently Online (SEFOS)” on page 282
- “Create a SEFOS User (SEFOS)” on page 283
- “Delete a SEFOS User (SEFOS)” on page 284

▼ Create a SEFOS User (SEFOS)

1. **Access SEFOS Global Configuration mode.**

   See “Access SEFOS Global Configuration Mode” on page 267.

2. **Create a SEFOS user.**

```
SEFOS# username username password passwd privilege level
```

where:

- *level* is the privilege level of the user. `1` is the lowest and `15` is the highest.
- *passwd* is the password for the user.
- *username* is the name of the user.

For example, to create a user `myuser`, with password `Sef0sSef0$`, and privilege `1`, type:

```
SEFOS(config)# username myuser password Sef0sSef0$ privilege 1
SEFOS(config)#
```

Related Information

- “Display the SEFOS Users Currently Online (SEFOS)” on page 282
- “Display Configured SEFOS Users (SEFOS)” on page 283
- “Delete a SEFOS User (SEFOS)” on page 284

▼ Delete a SEFOS User (SEFOS)

1. **Access SEFOS Global Configuration mode.**
   See “Access SEFOS Global Configuration Mode” on page 267.

2. **Delete a SEFOS user.**

   ```
   SEFOS# no username username
   ```

   where *username* is the name of the user.

   For example, to delete user `myuser`, type:

   ```
   SEFOS(config)# no username myuser
   SEFOS(config)#
   ```

Related Information

- “Display the SEFOS Users Currently Online (SEFOS)” on page 282
- “Display Configured SEFOS Users (SEFOS)” on page 283
- “Create a SEFOS User (SEFOS)” on page 283

Administering VLANs (SEFOS)

These tasks manage EMS VLANs.

- “Display VLANs (SEFOS)” on page 285
- “Display Port VLAN Configuration Information (SEFOS)” on page 286
- “Enable VLANs (SEFOS)” on page 288
- “Create a VLAN (SEFOS)” on page 288
- “Add a Port to a VLAN (SEFOS)” on page 289
- “Remove a Port From a VLAN (SEFOS)” on page 290
- “Delete a VLAN (SEFOS)” on page 290
- “Disable VLANs (SEFOS)” on page 291

Related Information

- “Understanding the EMS Module and SEFOS Modes” on page 265
- “Displaying Network Information (SEFOS)” on page 271
- “Displaying Logs and History (SEFOS)” on page 275
- “Administering Hardware Parameters (SEFOS)” on page 277
- “Administering Users (SEFOS)” on page 282
- “Administering SNMP (SEFOS)” on page 292

▼ Display VLANs (SEFOS)

1. **Access SEFOS.**

   See “Access SEFOS” on page 30.

2. **Display configured VLANs.**

```
SEFOS# show vlan

Vlan database
-------------
Vlan ID             : 1
Member Ports        : Gi0/1, Gi0/2, Gi0/3, Gi0/4, Gi0/5, Gi0/6
                      Gi0/7, Gi0/8, Gi0/9, Gi0/10, Gi0/11, Gi0/12
                      Gi0/13, Gi0/14, Gi0/15, Gi0/16, Gi0/17, Gi0/18
                      Gi0/19, Gi0/20, Gi0/21, Gi0/22, Gi0/23, Gi0/24
                      Gi0/25, Gi0/26, Ex0/1, Ex0/2
Untagged Ports      : Gi0/1, Gi0/2, Gi0/3, Gi0/4, Gi0/5, Gi0/6
                      Gi0/7, Gi0/8, Gi0/9, Gi0/10, Gi0/11, Gi0/12
                      Gi0/13, Gi0/14, Gi0/15, Gi0/16, Gi0/17, Gi0/18
                      Gi0/19, Gi0/20, Gi0/21, Gi0/22, Gi0/23, Gi0/24
                      Gi0/25, Gi0/26, Ex0/1, Ex0/2
Forbidden Ports     : None
Blocked Trunk Ports : None
```

```
Name                :
Status              : Permanent
Egress Ethertype    : 0x8100
----------------------------------------------------
Vlan ID             : 4022
Member Ports        : Gi0/12
Untagged Ports      : None
Forbidden Ports     : None
Blocked Trunk Ports : None
Name                :
Status              : Dynamic Gvrp
Egress Ethertype    : 0x8100
----------------------------------------------------

SEFOS#
```

Related Information

- “Display Port VLAN Configuration Information (SEFOS)” on page 286
- “Enable VLANs (SEFOS)” on page 288
- “Create a VLAN (SEFOS)” on page 288
- “Add a Port to a VLAN (SEFOS)” on page 289
- “Remove a Port From a VLAN (SEFOS)” on page 290
- “Delete a VLAN (SEFOS)” on page 290
- “Disable VLANs (SEFOS)” on page 291

▼ Display Port VLAN Configuration Information (SEFOS)

1. **Access SEFOS.**
   See “Access SEFOS” on page 30.

2. **Display the VLAN configuration information for the port.**

   `SEFOS# show vlan port config port` *interface-type* `0/`*port*

   where:

   - *interface-type* is either `gigabitethernet` for the 1GbE RJ-45 ports or `extreme-ethernet` for the 10GbE SFP+ ports.
   - *port* is the port number printed near the connector.

   For example, to display the VLAN configuration information for port `12`, type:

   ```
   SEFOS# show vlan port config port gigabitethernet 0/12
   ```

```
Vlan Port configuration table
------------------------------
Port Gi0/12
 Bridge Port Type                    : Customer Bridge Port
 Port Vlan ID                        : 1
 Port Acceptable Frame Type          : Admit All
 Port Mac Learning Status            : Enabled
 Port Ingress Filtering              : Disabled
 Port Mode                           : Hybrid
 Port Gvrp Status                    : Enabled
 Port Gmrp Status                    : Enabled
 Port Gvrp Failed Registrations      : 0
 Gvrp last pdu origin                : 00:10:e0:80:4d:19
 Port Restricted Vlan Registration   : Disabled
 Port Restricted Group Registration  : Disabled
 Mac Based Support                   : Disabled
 Subnet Based Support                : Disabled
 Port-and-Protocol Based Support     : Enabled
 Default Priority                    : 0
 Dot1x Protocol Tunnel Status        : Peer
 LACP Protocol Tunnel Status         : Peer
 Spanning Tree Tunnel Status         : Peer
 MVRP Protocol Tunnel Status         : Peer
 MMRP Protocol Tunnel Status         : Peer
 GVRP Protocol Tunnel Status         : Peer
 GMRP Protocol Tunnel Status         : Peer
 IGMP Protocol Tunnel Status         : Peer
 ELMI Protocol Tunnel Status         : Peer
 LLDP Protocol Tunnel Status         : Peer
 ECFM Protocol Tunnel Status         : Peer
 Filtering Utility Criteria          : Default
 Port Protected Status               : Disabled
 Ingress EtherType                   : 0x8100
 Egress EtherType                    : 0x8100
 Egress TPID Type                    : Portbased
 Allowable TPID 1                    : 0x0
 Allowable TPID 2                    : 0x0
 Allowable TPID 3                    : 0x0
 ---------------------------------------------------------

SEFOS#
```

Related Information

- “Display VLANs (SEFOS)” on page 285
- “Enable VLANs (SEFOS)” on page 288
- “Create a VLAN (SEFOS)” on page 288
- “Add a Port to a VLAN (SEFOS)” on page 289
- “Remove a Port From a VLAN (SEFOS)” on page 290

- "Delete a VLAN (SEFOS)" on page 290
- "Disable VLANs (SEFOS)" on page 291

Enable VLANs (SEFOS)

1. **Access SEFOS Global Configuration mode.**

   See "Access SEFOS Global Configuration Mode" on page 267.

2. **Enable VLANs.**

```
SEFOS(config)# no shutdown vlan
SEFOS(config)#
```

Related Information

- "Display VLANs (SEFOS)" on page 285
- "Display Port VLAN Configuration Information (SEFOS)" on page 286
- "Create a VLAN (SEFOS)" on page 288
- "Add a Port to a VLAN (SEFOS)" on page 289
- "Remove a Port From a VLAN (SEFOS)" on page 290
- "Delete a VLAN (SEFOS)" on page 290
- "Disable VLANs (SEFOS)" on page 291

Create a VLAN (SEFOS)

1. **Access SEFOS Global Configuration mode.**

   See "Access SEFOS Global Configuration Mode" on page 267.

2. **Create a VLAN.**

```
SEFOS(config)# vlan VLAN-ID
```

   where *VLAN-ID* is the number of the VLAN (`1 - 4094`).

   For example, to create a VLAN with ID of `13`, type:

```
SEFOS(config)# vlan 13
SEFOS(config-vlan)# vlan active
SEFOS(config-vlan)#
```

3. **Exit VLAN Configuration mode.**

```
SEFOS(config-vlan)# exit
SEFOS(config)#
```

Related Information

- “Display VLANs (SEFOS)” on page 285
- “Display Port VLAN Configuration Information (SEFOS)” on page 286
- “Enable VLANs (SEFOS)” on page 288
- “Add a Port to a VLAN (SEFOS)” on page 289
- “Remove a Port From a VLAN (SEFOS)” on page 290
- “Delete a VLAN (SEFOS)” on page 290
- “Disable VLANs (SEFOS)” on page 291

▼ Add a Port to a VLAN (SEFOS)

1. **Access SEFOS Interface Configuration mode for the interface you are configuring.**

   See “Access SEFOS Interface Configuration Mode” on page 268.

   For example, to access SEFOS Interface Configuration mode for port 2:

   ```
   SEFOS(config)# interface gigabitethernet 0/2
   SEFOS(config-if)#
   ```

2. **Add a port to a VLAN.**

   ```
   SEFOS(config-if)# switchport access vlan VLAN-ID
   ```

   where *VLAN-ID* is the number of the VLAN (1 - 4094).

   For example, to add port 2 to the VLAN with ID 13, type:

   ```
   SEFOS(config-if)# switchport access vlan 13
   SEFOS(config-if)#
   ```

3. **Exit SEFOS Interface Configuration mode.**

   ```
   SEFOS(config-if)# exit
   SEFOS(config)#
   ```

Related Information

- “Display VLANs (SEFOS)” on page 285
- “Display Port VLAN Configuration Information (SEFOS)” on page 286

- "Enable VLANs (SEFOS)" on page 288
- "Create a VLAN (SEFOS)" on page 288
- "Remove a Port From a VLAN (SEFOS)" on page 290
- "Delete a VLAN (SEFOS)" on page 290
- "Disable VLANs (SEFOS)" on page 291

▼ Remove a Port From a VLAN (SEFOS)

1. **Access SEFOS Interface Configuration mode for the interface you are configuring.**

   See "Access SEFOS Interface Configuration Mode" on page 268.

   For example, to access SEFOS Interface Configuration mode for port 2, type:

```
SEFOS(config)# interface gigabitethernet 0/2
SEFOS(config-if)#
```

2. **Remove a port from a VLAN.**

   For this instance, port 2 is removed from VLAN with ID 13.

```
SEFOS(config-if)# no switchport access vlan
SEFOS(config-if)#
```

3. **Exit SEFOS Interface Configuration mode.**

```
SEFOS(config-if)# exit
SEFOS(config)#
```

Related Information

- "Display VLANs (SEFOS)" on page 285
- "Display Port VLAN Configuration Information (SEFOS)" on page 286
- "Enable VLANs (SEFOS)" on page 288
- "Create a VLAN (SEFOS)" on page 288
- "Add a Port to a VLAN (SEFOS)" on page 289
- "Delete a VLAN (SEFOS)" on page 290
- "Disable VLANs (SEFOS)" on page 291

▼ Delete a VLAN (SEFOS)

1. **Access SEFOS Global Configuration mode.**

See “Access SEFOS Global Configuration Mode” on page 267.

2. **Delete a VLAN.**

```
SEFOS(config)# no vlan VLAN-ID
```

where *VLAN-ID* is the number of the VLAN (`1 - 4094`).

For example, to delete the VLAN with ID of `13`, type:

```
SEFOS(config)# no vlan 13
SEFOS(config)#
```

Related Information

- “Display VLANs (SEFOS)” on page 285
- “Display Port VLAN Configuration Information (SEFOS)” on page 286
- “Enable VLANs (SEFOS)” on page 288
- “Create a VLAN (SEFOS)” on page 288
- “Add a Port to a VLAN (SEFOS)” on page 289
- “Remove a Port From a VLAN (SEFOS)” on page 290
- “Disable VLANs (SEFOS)” on page 291

▼ Disable VLANs (SEFOS)

1. **Access SEFOS Global Configuration mode.**

See “Access SEFOS Global Configuration Mode” on page 267.

2. **Disable VLANs.**

```
SEFOS(config)# shutdown vlan
SEFOS(config)#
```

Related Information

- “Display VLANs (SEFOS)” on page 285
- “Display Port VLAN Configuration Information (SEFOS)” on page 286
- “Enable VLANs (SEFOS)” on page 288
- “Create a VLAN (SEFOS)” on page 288
- “Add a Port to a VLAN (SEFOS)” on page 289
- “Remove a Port From a VLAN (SEFOS)” on page 290
- “Delete a VLAN (SEFOS)” on page 290

Administering SNMP (SEFOS)

These tasks manage EMS SNMP parameters.

- "Display SNMP Information (SEFOS)" on page 292
- "Display SNMP Group Information (SEFOS)" on page 293
- "Display SNMP User Information (SEFOS)" on page 294
- "Display SNMP Community Information (SEFOS)" on page 295
- "Create an SNMP User (SEFOS)" on page 296
- "Create an SNMP Group (SEFOS)" on page 297
- "Delete an SNMP Group (SEFOS)" on page 297
- "Delete an SNMP User (SEFOS)" on page 298

Related Information

- "Understanding the EMS Module and SEFOS Modes" on page 265
- "Displaying Network Information (SEFOS)" on page 271
- "Displaying Logs and History (SEFOS)" on page 275
- "Administering Hardware Parameters (SEFOS)" on page 277
- "Administering Users (SEFOS)" on page 282
- "Administering VLANs (SEFOS)" on page 284

▼ Display SNMP Information (SEFOS)

1. **Access SEFOS.**
   See "Access SEFOS" on page 30.

2. **Display SNMP information.**

```
SEFOS# show snmp

 0 SNMP Packets Input
     0 Bad SNMP Version errors
     0 Unknown community name
     0 Get request PDUs
     0 Get Next PDUs
     0 Set request PDUs

 0 SNMP Packets Output
     0 Too big errors
     0 No such name errors
     0 Bad value errors
```

```
    0 General errors
    0 Trap PDUs

0 SNMP Rollback failures

SNMP Manager-role output packets
    0 Drops

SNMP Informs:
    0 Inform Requests generated
    0 Inform Responses received
    0 Inform messages Dropped
    0 Inform Requests awaiting Acknowledgement

SNMP Trap Listen Port is 162

snmp agent port : 161

SEFOS#
```

Related Information

- “Display SNMP Group Information (SEFOS)” on page 293
- “Display SNMP User Information (SEFOS)” on page 294
- “Display SNMP Community Information (SEFOS)” on page 295
- “Create an SNMP User (SEFOS)” on page 296
- “Create an SNMP Group (SEFOS)” on page 297
- “Delete an SNMP Group (SEFOS)” on page 297
- “Delete an SNMP User (SEFOS)” on page 298

▼ Display SNMP Group Information (SEFOS)

1. **Access SEFOS.**
   See “Access SEFOS” on page 30.

2. **Display SNMP group information.**

```
SEFOS# show snmp group

Security Model : v1
Security Name  : none
Group Name     : iso
Storage Type   : Non-volatile
Row Status     : Active
------------------------------
Security Model : v2c
```

```
Security Name  : none
Group Name     : iso
Storage Type   : Non-volatile
Row Status     : Active
------------------------------
Security Model : v3
Security Name  : noAuthUser
Group Name     : noAuthUser
Storage Type   : Non-volatile
Row Status     : Active
------------------------------
Security Model : v3
Security Name  : templateMD5
Group Name     : noAuthUser
Storage Type   : Non-volatile
Row Status     : Active
------------------------------
Security Model : v3
Security Name  : templateSHA
Group Name     : noAuthUser
Storage Type   : Non-volatile
Row Status     : Active
------------------------------

SEFOS#
```

Related Information

- “Display SNMP Information (SEFOS)” on page 292
- “Display SNMP User Information (SEFOS)” on page 294
- “Display SNMP Community Information (SEFOS)” on page 295
- “Create an SNMP User (SEFOS)” on page 296
- “Create an SNMP Group (SEFOS)” on page 297
- “Delete an SNMP Group (SEFOS)” on page 297
- “Delete an SNMP User (SEFOS)” on page 298

▼ Display SNMP User Information (SEFOS)

1. **Access SEFOS.**
   See “Access SEFOS” on page 30.

2. **Display SNMP user information.**

```
SEFOS# show snmp user

Engine ID               : 80.00.08.1c.04.46.53
```

```
User                    : noAuthUser
Authentication Protocol : None
Privacy Protocol        : None
Storage Type            : Non-volatile
Row Status              : Active
------------------------------
Engine ID               : 80.00.08.1c.04.46.53
User                    : templateMD5
Authentication Protocol : MD5
Privacy Protocol        : None
Storage Type            : Non-volatile
Row Status              : Active
------------------------------
Engine ID               : 80.00.08.1c.04.46.53
User                    : templateSHA
Authentication Protocol : SHA
Privacy Protocol        : DES_CBC
Storage Type            : Non-volatile
Row Status              : Active
------------------------------

SEFOS#
```

Related Information

- “Display SNMP Information (SEFOS)” on page 292
- “Display SNMP Group Information (SEFOS)” on page 293
- “Display SNMP Community Information (SEFOS)” on page 295
- “Create an SNMP User (SEFOS)” on page 296
- “Create an SNMP Group (SEFOS)” on page 297
- “Delete an SNMP Group (SEFOS)” on page 297
- “Delete an SNMP User (SEFOS)” on page 298

▼ Display SNMP Community Information (SEFOS)

1. **Access SEFOS.**
   See “Access SEFOS” on page 30.

2. **Display SNMP community information.**

```
SEFOS# show snmp community

Community Index : NETMAN
Community Name  : NETMAN
Security Name   : none
Context Name    :
```

```
Context EngineID: 80.00.08.1c.04.46.53
Transport Tag   :
Storage Type    : Non-volatile
Row Status      : Active
------------------------------
Community Index : PUBLIC
Community Name  : PUBLIC
Security Name   : none
Context Name    :
Context EngineID: 80.00.08.1c.04.46.53
Transport Tag   :
Storage Type    : Non-volatile
Row Status      : Active
------------------------------

SEFOS#
```

Related Information

- "Display SNMP Information (SEFOS)" on page 292
- "Display SNMP Group Information (SEFOS)" on page 293
- "Display SNMP User Information (SEFOS)" on page 294
- "Create an SNMP User (SEFOS)" on page 296
- "Create an SNMP Group (SEFOS)" on page 297
- "Delete an SNMP Group (SEFOS)" on page 297
- "Delete an SNMP User (SEFOS)" on page 298

▼ Create an SNMP User (SEFOS)

1. **Access SEFOS Global Configuration mode.**
   See "Access SEFOS Global Configuration Mode" on page 267.

2. **Create an SNMP user.**

   ```
   SEFOS(config)# snmp user UserName
   ```

   where *UserName* is the name of the user.

   For example, to create an SNMP user called `myuser`, type:

   ```
   SEFOS(config)# snmp user myuser
   SEFOS(config)#
   ```

Related Information

- "Display SNMP Information (SEFOS)" on page 292

- "Display SNMP Group Information (SEFOS)" on page 293
- "Display SNMP User Information (SEFOS)" on page 294
- "Display SNMP Community Information (SEFOS)" on page 295
- "Create an SNMP Group (SEFOS)" on page 297
- "Delete an SNMP Group (SEFOS)" on page 297
- "Delete an SNMP User (SEFOS)" on page 298

▼ Create an SNMP Group (SEFOS)

1. **Access SEFOS Global Configuration mode.**

   See "Access SEFOS Global Configuration Mode" on page 267.

2. **Create an SNMP group.**

   `SEFOS(config)# snmp group` *GroupName* `user` *UserName* `security-model v1|v2c|v3`

   where:

   - *GroupName* is the name the SNMP group.
   - *UserName* is the name of the user.

   For example, to create an SNMP group `mygroup` with user `myuser` and security model `v1`, type:

```
SEFOS(config)# snmp group mygroup user myuser security-model v1
SEFOS(config)#
```

Related Information

- "Display SNMP Information (SEFOS)" on page 292
- "Display SNMP Group Information (SEFOS)" on page 293
- "Display SNMP User Information (SEFOS)" on page 294
- "Display SNMP Community Information (SEFOS)" on page 295
- "Create an SNMP User (SEFOS)" on page 296
- "Delete an SNMP Group (SEFOS)" on page 297
- "Delete an SNMP User (SEFOS)" on page 298

▼ Delete an SNMP Group (SEFOS)

1. **Access SEFOS Global Configuration mode.**

   See "Access SEFOS Global Configuration Mode" on page 267.

2. **Delete an SNMP group.**

```
SEFOS(config)# no snmp group GroupName user UserName security-model v1|v2c|v3
```

where:

- *GroupName* is the name the SNMP group.
- *UserName* is the name of the user.

For example, to delete the SNMP group `mygroup` with user `myuser` and security model `v1`, type:

```
SEFOS(config)# no snmp group mygroup user myuser security-model v1
SEFOS(config)#
```

Related Information

- "Display SNMP Information (SEFOS)" on page 292
- "Display SNMP Group Information (SEFOS)" on page 293
- "Display SNMP User Information (SEFOS)" on page 294
- "Display SNMP Community Information (SEFOS)" on page 295
- "Create an SNMP User (SEFOS)" on page 296
- "Create an SNMP Group (SEFOS)" on page 297
- "Delete an SNMP User (SEFOS)" on page 298

▼ Delete an SNMP User (SEFOS)

1. **Access SEFOS Global Configuration mode.**

   See "Access SEFOS Global Configuration Mode" on page 267.

2. **Delete an SNMP user.**

```
SEFOS(config)# no snmp user UserName
```

where *UserName* is the name of the user.

For example, to delete the SNMP user called `myuser`, type:

```
SEFOS(config)# no snmp user myuser
SEFOS(config)#
```

Related Information

- "Display SNMP Information (SEFOS)" on page 292
- "Display SNMP Group Information (SEFOS)" on page 293
- "Display SNMP User Information (SEFOS)" on page 294

- "Display SNMP Community Information (SEFOS)" on page 295
- "Create an SNMP User (SEFOS)" on page 296
- "Create an SNMP Group (SEFOS)" on page 297
- "Delete an SNMP Group (SEFOS)" on page 297

Log Out of SEFOS

The outputs for this procedure are from an Oracle InfiniBand Switch IS2-46, however output from other switches is similar.

- **When you complete your tasks in SEFOS, type:**

```
SEFOS# exit
Connection closed by foreign host

Entering character mode
Escape character is '^]'.
start: The session with /System/Networking/Switches/Switch_0/fs_cli has ended.
->
```

Related Information

- "EMS Module Overview" on page 266
- "Access SEFOS Global Configuration Mode" on page 267
- "Access SEFOS Interface Configuration Mode" on page 268
- "Access SEFOS VLAN Configuration Mode" on page 269
- "Display a List of SEFOS Commands" on page 269
- "Get Help on a SEFOS Command" on page 270

Controlling the Switch (Oracle ILOM CLI)

These topics describe how to administer various aspects of the switch through the Oracle ILOM CLI.

Description	Links
Familiarize yourself with the Oracle ILOM web interface.	“Oracle ILOM CLI Overview” on page 36
Review help on Oracle ILOM targets.	“Getting Oracle ILOM Help (Oracle ILOM CLI)” on page 36
Control various elements of the switch and its configuration.	“Managing Switch Components and Identification (Oracle ILOM CLI” on page 302
Control different clients that govern authentication and authorization.	“Managing Authentication and Access (Oracle ILOM CLI)” on page 327
Control the behavior of system events and alerts, and how they are logged.	“Managing Notifications and Logging (Oracle ILOM CLI)” on page 365
Control network properties for the SP and switch.	“Managing Management Networking (Oracle ILOM CLI)” on page 374
Control properties for connecting and logging in	“Managing Management Connections to the Switch (Oracle ILOM CLI)” on page 381
Control different methods of interfacing with the switch and switch-interface behavior	“Managing Switch Interface Methods (Oracle ILOM CLI)” on page 386
Control properties of getting support for the switch	“Managing the ASR Client (Oracle ILOM CLI)” on page 414
Control user accounts and sessions	“Managing User Accounts (Oracle ILOM CLI)” on page 418
Control additional aspects of the switch	“Configure the FIPS Service (Oracle ILOM CLI)” on page 425

Related Information

- “Understanding System Administration Resources” on page 19
- “Accessing the Switch” on page 27
- “Monitoring the Switch (Oracle ILOM CLI)” on page 35
- “Monitoring the Switch (Oracle ILOM Web)” on page 125
- “Understanding Oracle ILOM Targets” on page 165

- "Understanding SNMP MIB OIDs" on page 195
- "Understanding the EMS Module" on page 265
- "Controlling the Switch (Oracle ILOM Web)" on page 427
- "Updating the Firmware" on page 533

Managing Switch Components and Identification (Oracle ILOM CLI

You can do most switch management tasks any time after the switch is online. However, you can perform some basic switch tasks before others each time the switch is powered on or restart.

- "Configure the Switch IP Address (Oracle ILOM CLI)" on page 303
- "Configure the Switch Console Properties (Oracle ILOM CLI)" on page 304
- "Configure the Date and Time (Oracle ILOM CLI)" on page 305
- "Configure the Time Zone (Oracle ILOM CLI)" on page 306
- "Configure the NTP Client (Oracle ILOM CLI)" on page 306
- "Configure the System Identification Properties (Oracle ILOM CLI)" on page 307
- "Managing Switch Configurations (Oracle ILOM CLI)" on page 309
- "Managing the Locator LED (Oracle ILOM CLI)" on page 314
- "Reset the SP (Oracle ILOM CLI)" on page 315
- "Restart the SP (Oracle ILOM CLI)" on page 316
- "Controlling the Switch Chips (Oracle ILOM CLI)" on page 317
- "Control Checking for SP Physical Presence (Oracle ILOM CLI)" on page 319
- "Controlling I/O Modules (Oracle ILOM CLI)" on page 319 (Virtualization switches)

Related Information

- "Understanding Oracle ILOM Targets" on page 165
- "Oracle ILOM CLI Overview" on page 36
- "Getting Oracle ILOM Help (Oracle ILOM CLI)" on page 36
- "Managing Authentication and Access (Oracle ILOM CLI)" on page 327
- "Managing Notifications and Logging (Oracle ILOM CLI)" on page 365
- "Managing Management Networking (Oracle ILOM CLI)" on page 374
- "Managing Management Connections to the Switch (Oracle ILOM CLI)" on page 381
- "Managing Switch Interface Methods (Oracle ILOM CLI)" on page 386
- "Managing the ASR Client (Oracle ILOM CLI)" on page 414
- "Managing User Accounts (Oracle ILOM CLI)" on page 418
- "Configure the FIPS Service (Oracle ILOM CLI)" on page 425

▼ Configure the Switch IP Address (Oracle ILOM CLI)

The switch IP address is configured as part of installing the switch. Refer to the installation guide for your switch.

The switch IP address should remain configured across power cycles, upgrades and so on, so you should not need to configure the switch IP address often. However, if you do need to configure or reset the switch's IP address, you must use the `nm3tool`.

Note - The `nm3tool` is also used for chassis upgrades. See "Upgrading the Switch Firmware (`nm3tool`)" on page 536.

---

1. **Start a remote root session to NM3 using `ssh` or the Oracle ILOM console.**

   For example, to establish an SSH session to the switch, type:

   `ssh root@`*host_IP_address*

   When you login, you will be at the switch's bash prompt.

2. **Start the `nm3tool`:**

```
[root@switch1 ~]# nm3tool
```

   When the tool starts, a menu is displayed.

Note - When `nm3tool` starts, it performs a quick health check on the switch. If `nm3tool` determines a problem might exist, you are prompted to run the `nm3tool verify` command before proceeding. Follow the on-screen instructions, and when `nm3tool` completes verification, return to this task.

---

3. **Note the switch's current IP address next to item `1`.**

4. **From the menu, select `1`, then complete the on-screen prompts.**

```
Main Menu (0.1.5.0)

1. Change IP address     (current config: 10.11.12.13 current active: 10.11.12.13)
2. Change hostname       (current config: switch1.us.company.com current active:
 switch1.us.company.com)
3. Perform chassis upgrade
(q to quit)
Select:3
Transfer method? (scp,http,ftp,tftp): scp
ip or hostname: 123.45.67.89
```

```
path/filename: firmware-0.1.6.0
username: root
password: ********
...

Upgrade complete.
[root@switch1 ~]#
```

Related Information

- "Oracle ILOM CLI Overview" on page 36
- "Getting Oracle ILOM Help (Oracle ILOM CLI)" on page 36
- "Display the Host Console Connection Settings (Oracle ILOM CLI)" on page 107
- "Display the Serial Connection Properties (Oracle ILOM CLI)" on page 106

▼ Configure the Switch Console Properties (Oracle ILOM CLI)

You can control the properties of the console connection to the switch. For example, you can enable or disable console logging or set the number of lines displayed in the console window.

1. **Enable console logging.**

```
-> set /HOST/console/ logging=enabled
Set 'logging' to 'enabled'
->
```

2. **Set the number of lines to be displayed in the console.**

```
-> set /HOST/console/ line_count=16
Set 'line_count' to '16'
->
```

3. **Set the number of lines before a pause prompt is displayed in the console session.**

```
-> set /HOST/console/ pause_count=99
Set 'pause_count' to '99'
->
```

4. **Set where the console display will start to display, either from the beginning lines of the display or the end.**

```
-> set /HOST/console/ start_from=beginning
Set 'start_from' to 'beginning'
->
```

Related Information

- “Oracle ILOM CLI Overview” on page 36
- “Getting Oracle ILOM Help (Oracle ILOM CLI)” on page 36
- “Display the Host Console Connection Settings (Oracle ILOM CLI)” on page 107
- “Display the Serial Connection Properties (Oracle ILOM CLI)” on page 106

▼ Configure the Date and Time (Oracle ILOM CLI)

The switch has a system clock processor that supports keeping the date, time, and time zone. Typically, the system clock is programmed with time and date information as part of installing the switch and bringing it online the first time. However, you can you can change the date and time whenever you want.

Note - If the switch has already been configured for NTP, setting the date and time will have no effect on the switch. When the switch is configured for NTP, the switch uses the NTP time signal instead.

- **Type:**

```
-> set /SP/clock datetime=MMDDhhmmYYYY
```

where *MMDDhhmmYYYY* is the month, date, hour, and minute as two digits, and the year as four digits.

For example, type:

```
-> set /SP/clock datetime=101111112015
Set 'datetime' to '101111112015' [Sun Oct 11:11:00 2015]
->
```

Note - Additional configuration is available for the switch's system clock. See “Configure the NTP Client (Oracle ILOM CLI)” on page 306.

Related Information

- “Oracle ILOM CLI Overview” on page 36

- "Getting Oracle ILOM Help (Oracle ILOM CLI)" on page 36
- "Display the Date and Timezone (Oracle ILOM CLI)" on page 43
- "Configure the Time Zone (Oracle ILOM CLI)" on page 306

Configure the Time Zone (Oracle ILOM CLI)

The switch has a system clock processor that supports keeping the date, time, and time zone. By default, the switch is programmed with a default timezone, but you can change the timezone whenever you want.

1. **Set the time and date for the system clock.**
   See "Configure the Date and Time (Oracle ILOM CLI)" on page 305.

2. **Set the time zone for the switch.**

```
-> set /SP/clock timezone=time-zone
```

where *time-zone* is the identifier of the time zone.

For example, type:

```
-> set /SP/clock timezone=CET
Set 'timezone' to 'CET'
->
```

Related Information

- "Oracle ILOM CLI Overview" on page 36
- "Getting Oracle ILOM Help (Oracle ILOM CLI)" on page 36
- "Display the Date and Timezone (Oracle ILOM CLI)" on page 43
- "Configure the Date and Time (Oracle ILOM CLI)" on page 305

Configure the NTP Client (Oracle ILOM CLI)

Many networks use an NTP as the central timekeeper to which all NTP-compatible devices synchronize. The switch has an NTP client that enables the system clock to synchronize with the NTP server that your network uses. Using an NTP server is not required, but if you do, use this task to configure the switch's NTP client.

1. **Set the IP addresses of the time servers.**

```
-> set /SP/clients/ntp/server/number address=IP_address
```

where:

- *number* is `1` for the first time-server and `2` for the second time-server.
- *IP_address* is the IP address of the time-server.

For example, to use the time-servers with addresses `123.45.67.89` and `123.45.67.88`, type:

```
-> set /SP/clients/ntp/server/1 address=123.45.67.89
Set 'address' to '123.45.67.89'
-> set /SP/clients/ntp/server/2 address=123.45.67.88
Set 'address' to '123.45.67.88'
->
```

2. **Start using the time servers.**

```
-> set /SP/clock usentpserver=enabled
Set 'usentpserver' to 'enabled'
->
```

The SP is configured to use the time servers.

Related Information

- “Oracle ILOM CLI Overview” on page 36
- “Getting Oracle ILOM Help (Oracle ILOM CLI)” on page 36
- “Display the NTP Servers (Oracle ILOM CLI)” on page 44
- “Display the Date and Timezone (Oracle ILOM CLI)” on page 43

▼ Configure the System Identification Properties (Oracle ILOM CLI)

The switch has identification properties for the overall system and the SP. By setting the system identification properties, you can differentiate the switch from any other switch in your deployment. In deployments of multiple switches, you might want to change the system identification properties so that each switch is unique.

1. **Set the host name property.**

```
-> set /SP hostname=string
```

For example, type:

```
-> set /SP hostname=us-gw-1
Set 'hostname' to 'us-gw-1'
->
```

2. **Set the system contact property.**

```
-> set /SP system_contact=string
```

For example, type:

```
-> set /SP system_contact='sysadmin'
Set 'system_contact' to 'sysadmin'
->
```

3. **(Optional) Set the system description.**

```
-> set /SP system_description=string
```

For example, type:

```
-> set /SP system_description='customer_training_dept'
Set 'system_identifier' to 'customer_training_dept'
->
```

4. **Set the system identifier property.**

```
-> set /SP system_identifier=string
```

For example, type:

```
-> set /SP system_identifier='data center'
Set 'system_identifier' to 'data center'
->
```

5. **Set the system location property.**

```
-> set /SP system_location=string
```

For example, type:

```
-> set /SP system_location='3rd floor'
```

```
Set 'system_location' to '3rd floor'
->
```

Related Information

- "Oracle ILOM CLI Overview" on page 36
- "Getting Oracle ILOM Help (Oracle ILOM CLI)" on page 36
- "Display System Identification Properties (Oracle ILOM CLI)" on page 46

Managing Switch Configurations (Oracle ILOM CLI)

These topics describe how to manage information about the switch configuration.

- "Create a Backup of the Switch Configuration (Oracle ILOM CLI)" on page 309
- "Backed Up Switch Configuration Information" on page 310
- "Restore the Configuration (Oracle ILOM CLI)" on page 311
- "Create a Snapshot of the Switch State (Oracle ILOM CLI)" on page 312
- "Snapshot Dataset Information (Oracle ILOM CLI)" on page 313

Related Information

- "Reset the SP (Oracle ILOM CLI)" on page 315
- "Display the Switch Configuration Snapshot (Oracle ILOM CLI)" on page 50
- "Display the Switch Firmware Versions (Oracle ILOM CLI)" on page 45

▼ Create a Backup of the Switch Configuration (Oracle ILOM CLI)

At times, you might want to back up the switch configuration so that you have a copy to revert to if needed. For example, before starting an upgrade, you might want to back up the existing configuration. When you backup the configuration, it is kept in a separate file on the SP.

Note - You must use a passphrase to back up sensitive information, such as passwords.

Note - For information about the configuration information that is saved, see "Backed Up Switch Configuration Information" on page 310.

1. **Set the passphrase for the backup.**

```
-> set /SP/config passphrase=phrase
```

where *phrase* is an alphanumeric string. For example, type:

```
-> set /SP/config passphrase=user1234
Set 'passphrase' to 'user1234'
->
```

2. **Back up the configuration.**

```
-> set /SP/config dump_uri=URI
```

where *URI* is the uniform resource indicator.
For example, to dump the configuration as the `my.config` file to the `/opt/dump` directory on a server with IP address `123.45.67.89` using the SCP protocol, type:

```
-> set /SP/config dump_uri=scp://root:changeme@123.45.67.89/opt/dump/my.config
Dump successful.
->
```

The configuration is backed up as the `my.config` XML file.

Related Information

- "Oracle ILOM CLI Overview" on page 36
- "Getting Oracle ILOM Help (Oracle ILOM CLI)" on page 36
- "Backed Up Switch Configuration Information" on page 310
- "Restore the Configuration (Oracle ILOM CLI)" on page 311
- "Display the Switch Configuration Snapshot (Oracle ILOM CLI)" on page 50

Backed Up Switch Configuration Information

When you back up the configuration with a passphrase, this switch-specific information is saved into an `.xml` file:

- DCS configuration
- User Subnet Manager configuration
- Environment daemon configuration
- List of disabled ports
- Boot monitor configuration
- IPoIB settings

- IPoIB interface settings
- List of ports configured for autodisable
- BridgeX Manager settings
- BridgeX Manager LAG settings
- BridgeX Manager VNIC settings

Related Information

- “Create a Backup of the Switch Configuration (Oracle ILOM CLI)” on page 309
- “Back Up the Configuration (Oracle ILOM Web)” on page 431
- “Restore the Configuration (Oracle ILOM Web)” on page 432

▼ Restore the Configuration (Oracle ILOM CLI)

If a configuration has been backed up, you can restore it at any time. When the configuration is restored, the switch resumes operation with the parameters from the last configuration that was backed up.

Note - You must use the correct passphrase when restoring the configuration that was backed up with a passphrase.

1. **Set the passphrase for the restore.**

```
-> set /SP/config passphrase=phrase
```

where *phrase* is an alphanumeric string. For example, type:

```
-> set /SP/config passphrase=user1234
Set 'passphrase' to 'user1234'
->
```

2. **Restore the configuration.**

```
-> set /SP/config load_uri=URI
```

where *URI* is the uniform resource indicator.

For example, to load the configuration as the `my.config` file from the `/opt/dump` directory on a server with IP address `123.45.67.89` using the SCP protocol, type:

```
-> set /SP/config load_uri=scp://root:changeme@123.45.67.89/opt/dump/my.config
```

```
Load successful.
->
```

The configuration is restored.

Related Information

- “Oracle ILOM CLI Overview” on page 36
- “Getting Oracle ILOM Help (Oracle ILOM CLI)” on page 36
- “Create a Backup of the Switch Configuration (Oracle ILOM CLI)” on page 309
- “Backed Up Switch Configuration Information” on page 310
- “Display the Switch Configuration Snapshot (Oracle ILOM CLI)” on page 50

▼ Create a Snapshot of the Switch State (Oracle ILOM CLI)

The snapshot utility collects log files, executes various commands and collects their output, and sends the data collected to a user-defined location. The dataset property of the `/SP/diag/snapshot` target defines the data that is collected. See “Snapshot Dataset Information (Oracle ILOM CLI)” on page 313.

The snapshot describes the state of the switch at a particular moment in time. You can use this information for diagnosing system problems. The snapshot utility requires administrator privileges.

1. **Create a snapshot of the switch state.**

```
-> set /SP/diag/snapshot dataset=value dump_uri=URI
```

where:

- *value* is the type of dataset, as described in the table in “Snapshot Dataset Information (Oracle ILOM CLI)” on page 313.
- *URI* is the uniform resource indicator (FTP and SFTP supported).

For example, to take a snapshot of the `normal` dataset and transfer the snapshot using the FTP protocol to the `/tftpboot/normal` directory of the host with IP address 123.45.67.89 as the `root` user, type:

```
-> set /SP/diag/snapshot dataset=normal dump_uri=ftp://root:changeme@123.45.67.89//tftpboot/normal
Set 'dataset' to 'normal'
Set 'dump_uri' to 'ftp://root:changeme@123.45.67.89//tftpboot/normal'
->
```

The snapshot process takes several minutes to complete.

2. **(Optional) Check the progress of the snapshot process.**

```
-> show /SP/diag/snapshot result
 /SP/diag/snapshot
  Properties:
   result = Running
->
```

For example, to show the progress of the snapshot process after it has finished, type:

```
-> show /SP/diag/snapshot result
 /SP/diag/snapshot
  Properties:
   result = Collecting data into ftp://root:*****@123.45.67.89//tftpboot/normal/
magnum_123.45.67.89_2012-12T06-43-15.zip
Snapshot Complete
Done.
->
```

Related Information

- "Oracle ILOM CLI Overview" on page 36
- "Getting Oracle ILOM Help (Oracle ILOM CLI)" on page 36
- "Snapshot Dataset Information (Oracle ILOM CLI)" on page 313
- "Display the Switch Configuration Snapshot (Oracle ILOM CLI)" on page 50

Snapshot Dataset Information (Oracle ILOM CLI)

The `dataset` property of the `/SP/diag/snapshot` target determines what data is included in the snapshot.

Note - The `normal`, `fruid`, and `full` datasets of the snapshot utility are currently equivalent and contain the same data in the snapshot.

Dataset Value	Description
`normal`	Contains Oracle ILOM, basic OS, and switch configuration data.
`normal-logonly`	Contains only log entries that pertain to Oracle ILOM, basic OS, and switch hardware data.
`fruid`	Contains normal dataset information, with additional FRUID data.
`fruid-logonly`	Contains only log entries that pertain to Oracle ILOM, basic OS, switch hardware, and additional FRUID data.

Dataset Value	Description
`full`	Contains normal dataset information, with additional FRUID and diagnostic data.
`full-logonly`	Contains only log entries that pertain to Oracle ILOM, basic OS, switch hardware, additional FRUID, and diagnostic data.

The snapshot is stored as a `.zip` file with a file name of this format:

hostname_IP_address_year-month-day-hour-minute-second`.zip`

For example:

```
leaf_123.45.67.89_2012-12-12T06-43-15.zip
```

Related Information

- "Display the Switch Configuration Snapshot (Oracle ILOM CLI)" on page 50

Managing the Locator LED (Oracle ILOM CLI)

The Locator LED provides a visual indicator on the switch that facilitates finding the switch in a datacenter aisle or equipment rack.

- "Enable the Locator LED (Oracle ILOM CLI)" on page 314
- "Disable the Locator LED (Oracle ILOM CLI)" on page 315

Related Information

- "Reset the SP (Oracle ILOM CLI)" on page 315
- "Control Checking for SP Physical Presence (Oracle ILOM CLI)" on page 319
- "Restart the SP (Oracle ILOM CLI)" on page 316

▼ Enable the Locator LED (Oracle ILOM CLI)

When activated, the Locator LED blinks to facilitate finding the switch in your data center.

- **Type:**

```
-> set /System/ locator_indicator=on
Set 'locator_indicator' to 'on' [On]
```

```
->
```

The Locator LED flashes.

Related Information

- "Oracle ILOM CLI Overview" on page 36
- "Getting Oracle ILOM Help (Oracle ILOM CLI)" on page 36
- "Disable the Locator LED (Oracle ILOM CLI)" on page 315
- "Display the Status LEDs States (Oracle ILOM CLI)" on page 50

▼ Disable the Locator LED (Oracle ILOM CLI)

When disabled, the Locator LED is unlit. Disable the Locator LED whenever service on the switch is complete.

- **Type:**

```
-> set /System/ locator_indicator=off
Set 'locator_indicator' to 'off' [Off]
->
```

Related Information

- "Oracle ILOM CLI Overview" on page 36
- "Getting Oracle ILOM Help (Oracle ILOM CLI)" on page 36
- "Enable the Locator LED (Oracle ILOM CLI)" on page 314
- "Display the Status LEDs States (Oracle ILOM CLI)" on page 50

▼ Reset the SP (Oracle ILOM CLI)

The SP can be reset to any of the following states:

- None, which retains the existing configuration if the SP is reset.
- All, which resets the SP to the system default properties.
- Factory settings (the most severe), which resets the SP to its initial state when shipped from the factory.

Use this task to reset the SP.

- **Choose the level of reset.**

- **For none, type:**

```
-> set /SP/ reset_to_defaults=none
Set 'reset_to_defaults' to 'none'
->
```

- **For all values, type:**

```
-> set /SP reset_to_defaults=all
Set 'reset_to_defaults' to 'all'
The configuration change will be applied the next time the SP is reset.
->
```

- **For factory defaults, type:**

```
-> set /SP reset_to_defaults=factory
Set 'reset_to_defaults' to 'factory'
The configuration change will be applied the next time the SP is reset.
->
```

Related Information

- "Oracle ILOM CLI Overview" on page 36
- "Getting Oracle ILOM Help (Oracle ILOM CLI)" on page 36
- "Updating the Firmware" on page 533
- "Control Checking for SP Physical Presence (Oracle ILOM CLI)" on page 319
- "Display SP Information (Oracle ILOM CLI)" on page 48
- "Restart the SP (Oracle ILOM CLI)" on page 316
- "Configure the FIPS Service (Oracle ILOM CLI)" on page 425

▼ Restart the SP (Oracle ILOM CLI)

As an option, you can reset the switch's service processor (SP).

Note - Restarting the SP closes any active link between the management console and the SP. You must reaccess the SP to regain administrative control.

- **Reset the SP.**

```
-> reset /SP
Are you sure you want to reset /SP (y/n)? y
->
```

Related Information

- “Oracle ILOM CLI Overview” on page 36
- “Getting Oracle ILOM Help (Oracle ILOM CLI)” on page 36
- “Reset the SP (Oracle ILOM CLI)” on page 315
- “Display SP Information (Oracle ILOM CLI)” on page 48
- “Configure the FIPS Service (Oracle ILOM CLI)” on page 425

Controlling the Switch Chips (Oracle ILOM CLI)

The switch has separate processors that control different aspects of the switch hardware and networking.

- “Reset the Ethernet Switch Chip Functionality (Oracle ILOM CLI)” on page 317
- “Reset the IB Switch Chip (Oracle ILOM CLI)” on page 318
- “Load Ethernet Switch Chip Firmware (Oracle ILOM CLI)” on page 318

Related Information

- “Managing Switch Configurations (Oracle ILOM CLI)” on page 309
- “Reset the SP (Oracle ILOM CLI)” on page 315
- “Control Checking for SP Physical Presence (Oracle ILOM CLI)” on page 319
- “Restart the SP (Oracle ILOM CLI)” on page 316

▼ Reset the Ethernet Switch Chip Functionality (Oracle ILOM CLI)

The switch has an Ethernet switch chip, also known as the EMS chip, which is networking switch 0. By default, this switch is brought online whenever the switch is powered on. While the switch is running, you can use this task to reset the EMS.

1. **Reset the network switch chip 0 (EMS chip).**

```
-> reset /System/Networking/Switches/Switch_0
Are you sure you want to reset /System/Networking/Switches/Switch_0 (y/n)? y
->
```

2. **Reset the SEFOS on the EMS chip.**

```
-> reset /System/Networking/Switches/Switch_0/sefos
Are you sure you want to reset /System/Networking/Switches/Switch_0/sefos (y/n)? y
->
```

Related Information

- “Oracle ILOM CLI Overview” on page 36
- “Getting Oracle ILOM Help (Oracle ILOM CLI)” on page 36
- “Reset the IB Switch Chip (Oracle ILOM CLI)” on page 318
- “Load Ethernet Switch Chip Firmware (Oracle ILOM CLI)” on page 318

▼ Reset the IB Switch Chip (Oracle ILOM CLI)

The switch has an IB switch chip that is networking switch 0. By default, this switch is brought online whenever the switch is powered on. While the switch is running, you can use this task to reset the IB switch chip.

- **Reset network chip 1 (the IB switch chip).**

```
-> reset /System/Networking/Switches/Switch_1
Are you sure you want to reset /System/Networking/Switches/Switch_1 (y/n)? y
->
```

Related Information

- “Oracle ILOM CLI Overview” on page 36
- “Getting Oracle ILOM Help (Oracle ILOM CLI)” on page 36
- “Display Power Information for the IB Switch Chip (Oracle ILOM CLI)” on page 60
- “Reset the Ethernet Switch Chip Functionality (Oracle ILOM CLI)” on page 317
- “Load Ethernet Switch Chip Firmware (Oracle ILOM CLI)” on page 318

▼ Load Ethernet Switch Chip Firmware (Oracle ILOM CLI)

Firmware images in the switch are numbered, and the firmware for the Ethernet switch chip is number 2. For the Ethernet switch chip, you can use this task to load Ethernet switch chip firmware on an as needed basis.

- **Type:**

```
-> set /System/Firmware/Other_Firmware/Firmware_2/ load_uri=firmware_uri
->
```

where *firmware_uri* is the URI for the firmware image you want to load on the Ethernet switch chip.

Related Information

- "Oracle ILOM CLI Overview" on page 36
- "Getting Oracle ILOM Help (Oracle ILOM CLI)" on page 36
- "Reset the Ethernet Switch Chip Functionality (Oracle ILOM CLI)" on page 317

Control Checking for SP Physical Presence (Oracle ILOM CLI)

You can control whether the switch checks for the presence of the SP when it resets.

- **Type:**

```
-> set /SP/ check_physical_presence=false
Set 'check_physical_presence' to 'false'
->
```

Related Information

- "Oracle ILOM CLI Overview" on page 36
- "Getting Oracle ILOM Help (Oracle ILOM CLI)" on page 36
- "Reset the SP (Oracle ILOM CLI)" on page 315
- "Restart the SP (Oracle ILOM CLI)" on page 316
- "Display SP Information (Oracle ILOM CLI)" on page 48

Controlling I/O Modules (Oracle ILOM CLI)

Note - This topic is not applicable to the Oracle InfiniBand Switch IS2-46 (leaf switch).

The virtualization switch contains I/O modules to customize connectivity in your datacenter. For information about the modules, refer to the user's guide for the appropriate module. User's guides are available at: `http://www.oracle.com/goto/f2-io-mod/docs`.

Module slots in the virtualization switch are numbered from 0 to 11. Module 0 is the module in the leftmost physical slot in the virtualization switch.

Through Oracle ILOM, you can control individual modules only. You cannot control individual properties of the module. The `/SYS/MODULES/MODULE`*X* target controls the I/O modules in the virtualization switch.

These topics describe how to control the virtualization switch's I/O modules:

- “Stop a Module (Oracle ILOM CLI)” on page 320
- “Start a Module (Oracle ILOM CLI)” on page 321
- “Clear Module Faults (Oracle ILOM CLI)” on page 323
- “Reset a Module (Oracle ILOM CLI)” on page 325

Related Information

- “Oracle ILOM Module Targets Overview” on page 73
- “Display Module Type (Oracle ILOM CLI)” on page 74
- “Display Module Power Information (Oracle ILOM CLI)” on page 78
- “Display Module Temperatures (Oracle ILOM CLI)” on page 80
- “Display Module Faults (Oracle ILOM CLI)” on page 76
- “Display Module FRU Information (Oracle ILOM CLI)” on page 82

▼ Stop a Module (Oracle ILOM CLI)

Modules installed in the virtualization switch should be operational while the switch is powered on and running. Modules can be in a different state than the overall switch power state.

If a module is currently operational, you can stop it. When a module is stopped, the module no longer receives 12V and active 3.3V power. However 3.3V standby power, which only powers the FRU ID chip on the module, is still enabled.

1. **Display the installed modules.**

```
-> show /SYS/MODULES/

 /SYS/MODULES
    Targets:
        MODULE0
        MODULE1
        MODULE3
        MODULE5
        MODULE6
```

```
        MODULE10
```

2. **Assuming the module is running, stop it.**

```
-> stop /SYS/MODULES/MODULEX
```

where *X* is a number between `0` or `11` that corresponds to the module slot for which you want to display information.

For example, to stop module 3, type:

```
-> stop /SYS/MODULES/MODULE3
Are you sure you want to stop /SYS/MODULES/MODULE3 (y/n)? y
Stopping /SYS/MODULES/MODULE3
```

If you answer yes, the module is immediately stopped.

3. **Verify the module is stopped.**

```
-> show /SYS/MODULES/MODULE3 power_state

  /SYS/MODULES/MODULE3
    Properties:
        power_state = Off
```

You can return the module to operation by issuing the `start` command. For information, see "Start a Module (Oracle ILOM CLI)" on page 321.

Related Information

- "Oracle ILOM Module Targets Overview" on page 73
- "Display Module Type (Oracle ILOM CLI)" on page 74
- "Display Module Faults (Oracle ILOM CLI)" on page 76
- "Clear Module Faults (Oracle ILOM CLI)" on page 323
- "Reset a Module (Oracle ILOM CLI)" on page 325

▼ Start a Module (Oracle ILOM CLI)

Modules installed in the virtualization switch should be operational while the switch is powered on and running. Modules can be in a different state than the overall switch power state, for example, a module can be stopped while the virtualization switch is operating.

If a module is currently stopped, you can start it. When a module is started, 12V and active 3.3V power is restarted on the module.

1. **Display the installed modules.**

```
-> show /SYS/MODULES/

 /SYS/MODULES
    Targets:
        MODULE0
        MODULE1
        MODULE3
        MODULE5
        MODULE6
        MODULE10
```

I/O modules in the virtualization switch are numbered 0 to 11 with Module 0 occupying the first (leftmost) physical slot.

2. **Query each module's power state until you locate the module that is stopped.**

```
-> show /SYS/MODULES/MODULEX power_state
```

where *X* is a number between `0` or `11` that corresponds to the module you want to start.

For example, to start module 3, type:

```
-> show /SYS/MODULES/MODULE3 power_state

  /SYS/MODULES/MODULE3
    Properties:
        power_state = Off
```

3. **When you identify the stopped module, start it.**

```
-> start /SYS/MODULES/MODULE3/
Are you sure you want to start /SYS/MODULES/MODULE3 (y/n)? y
Starting /SYS/MODULES/MODULE3
```

4. **Verify the module is started.**

```
-> show /SYS/MODULES/MODULE3 power_state
```

```
 /SYS/MODULES/MODULE3
   Properties:
       power_state = On
```

5. **Verify the module is not in a fault condition.**

```
-> show /SYS/MODULES/MODULE3 fault_state

  /SYS/MODULES/MODULE3
   Properties:
       fault_state = OK
```

If the module is in a fault state, see “Clear Module Faults (Oracle ILOM CLI)” on page 323.

Related Information

- “Oracle ILOM Module Targets Overview” on page 73
- “Display Module Type (Oracle ILOM CLI)” on page 74
- “Stop a Module (Oracle ILOM CLI)” on page 320
- “Reset a Module (Oracle ILOM CLI)” on page 325

▼ Clear Module Faults (Oracle ILOM CLI)

Sensors detect fault conditions on each module. If a fault occurs, an alarm is raised and Oracle ILOM sets the `FAULT` and `fault_state` properties for the module. When the fault is cleared, you must explicitly reset these properties for the module by clearing the fault indications.

1. **Display the installed modules.**

```
-> show /SYS/MODULES/

 /SYS/MODULES
    Targets:
        MODULE0
        MODULE1
        MODULE3
        MODULE5
        MODULE6
        MODULE10
```

I/O modules in the virtualization switch are numbered 0 to 11 with Module 0 occupying the first (leftmost) physical slot.

2. **Display the presence or absence of a fault.**

```
show /SYS/MODULES/MODULEX/FAULT
```

where *X* is a number between `0` or `11` that corresponds to the module slot for which you want to display information.

For example, to display the power state for module 3, type:

```
-> show /SYS/MODULES/MODULE3/FAULT

 /SYS/MODULES/MODULE3/FAULT
    Targets:

    Properties:
        type = Module
        ipmi_name = MODULE3/FAULT
        class = Discrete Sensor
        value = State Asserted
        alarm_status = present
```

In this example, the module sensor is in `Asserted` state, so the module is experiencing a fault condition. For information about module sensor states, see "Oracle ILOM Module Targets Overview" on page 73.

3. **Display the presence or absence of a fault condition on a module.**

```
show /SYS/MODULES/MODULEX/ fault_state
```

where *X* is a number between `0` or `11` that corresponds to the module slot for which you want to display information.

For example, to display the fault state for module 3, type:

```
-> show /SYS/MODULES/MODULE3/ fault_state

  /SYS/MODULES/MODULE3
    Properties:
        fault_state = true
```

In this example, the module sensor is in `Asserted` state, so the module is experiencing a fault condition.

4. **If needed, stop the module to resolve the fault condition.**

See "Stop a Module (Oracle ILOM CLI)" on page 320.

5. **Resolve the fault on the module.**

6. **If you stopped the module, start it.**

   See “Start a Module (Oracle ILOM CLI)” on page 321.

7. **When the fault is corrected, clear the module's fault indicator.**

```
-> set /SYS/MODULES/MODULE3/ clear_fault_action=true
Are you sure you want to clear /SYS/MODULES/MODULE3 (y/n)? y
Set 'clear_fault_action' to 'true'
```

8. **Verify that the module is no longer in a fault condition.**

```
-> show /SYS/MODULES/MODULE3/ fault_state

  /SYS/MODULES/MODULE3
    Properties:
        fault_state = OK
```

9. **Verify that the module fault condition is cleared from Oracle ILOM.**

```
-> show /SYS/MODULES/MODULE3/ clear_fault_action

  /SYS/MODULES/MODULE3
    Properties:
        clear_fault_action = (none)
```

Related Information

- “Oracle ILOM Module Targets Overview” on page 73
- “Stop a Module (Oracle ILOM CLI)” on page 320
- “Display Module Type (Oracle ILOM CLI)” on page 74
- “Display Module Faults (Oracle ILOM CLI)” on page 76
- “Start a Module (Oracle ILOM CLI)” on page 321
- “Reset a Module (Oracle ILOM CLI)” on page 325

▼ Reset a Module (Oracle ILOM CLI)

If a module is running in the virtualization switch, you can reset it. Resetting a module holds the module's reset pin for one second and brings the module back online. Resetting a module does not affect power to the module.

1. **Display the installed modules.**

```
-> show /SYS/MODULES/

 /SYS/MODULES
```

```
Targets:
    MODULE0
    MODULE1
    MODULE3
    MODULE5
    MODULE6
    MODULE10
```

I/O modules in the virtualization switch are numbered 0 to 11 with Module 0 occupying the first (leftmost) physical slot.

2. **Identify the module you want to restart.**

3. **Reset the module.**

```
-> reset /SYS/MODULES/MODULE3
Are you sure you want to reset /SYS/MODULES/MODULE3 (y/n)? y
Performing reset on /SYS/MODULES/MODULE3
```

4. **Verify the module is reset.**

```
-> show /SYS/MODULES/MODULE3 power_state

 /SYS/MODULES/MODULE3
   Properties:
       power_state = On
```

5. **Verify the module has no faults after the reset.**

```
-> show /SYS/MODULES/MODULE3 fault_state

  /SYS/MODULES/MODULE3
   Properties:
       fault_state = OK
```

Related Information

- “Oracle ILOM Module Targets Overview” on page 73
- “Display Module Type (Oracle ILOM CLI)” on page 74
- “Display Module Faults (Oracle ILOM CLI)” on page 76
- “Stop a Module (Oracle ILOM CLI)” on page 320
- “Clear Module Faults (Oracle ILOM CLI)” on page 323

- “Start a Module (Oracle ILOM CLI)” on page 321

Managing Authentication and Access (Oracle ILOM CLI)

These topics describe how to configure information about the various methods of authentication and accessing the switch through the Oracle ILOM CLI.

- “Managing the AD Client (Oracle ILOM CLI)” on page 327
- “Configure the DNS Client (Oracle ILOM CLI)” on page 342
- “Configure the LDAP Client (Oracle ILOM CLI)” on page 343
- “Managing the LDAP over SSL Client (Oracle ILOM CLI)” on page 345
- “Managing the RADIUS Client (Oracle ILOM CLI)” on page 360
- “Managing SSO (Oracle ILOM CLI)” on page 364

Related Information

- “Managing Switch Components and Identification (Oracle ILOM CLI” on page 302
- “Managing Notifications and Logging (Oracle ILOM CLI)” on page 365
- “Managing Management Networking (Oracle ILOM CLI)” on page 374
- “Managing Management Connections to the Switch (Oracle ILOM CLI)” on page 381
- “Managing Switch Interface Methods (Oracle ILOM CLI)” on page 386
- “Managing the ASR Client (Oracle ILOM CLI)” on page 414
- “Managing User Accounts (Oracle ILOM CLI)” on page 418
- “Configure the FIPS Service (Oracle ILOM CLI)” on page 425

Managing the AD Client (Oracle ILOM CLI)

The switch supports an AD client for communication with AD servers in your network.

- “Enable the AD Client (Oracle ILOM CLI)” on page 328
- “Configure AD Properties (Oracle ILOM CLI)” on page 329
- “Configure DNS Locator Queries (Oracle ILOM CLI)” on page 331
- “Manage an AD Server's Certificate (Oracle ILOM CLI)” on page 332
- “Configure an Alternate AD Server (Oracle ILOM CLI)” on page 333
- “Manage Certificates for Alternate AD Servers (Oracle ILOM CLI)” on page 335

- "AD Groups (Oracle ILOM CLI)" on page 336
- "Configure an AD Administrator Group (Oracle ILOM CLI)" on page 337
- "Configure an AD Custom Group (Oracle ILOM CLI)" on page 338
- "Configure an AD Operator Group (Oracle ILOM CLI)" on page 339
- "Configure an AD User Domain (Oracle ILOM CLI)" on page 340
- "Disable the AD Client (Oracle ILOM CLI)" on page 341

Related Information

- "Configure the DNS Client (Oracle ILOM CLI)" on page 342
- "Configure the LDAP Client (Oracle ILOM CLI)" on page 343
- "Managing the LDAP over SSL Client (Oracle ILOM CLI)" on page 345
- "Managing the RADIUS Client (Oracle ILOM CLI)" on page 360
- "Managing SSO (Oracle ILOM CLI)" on page 364

▼ Enable the AD Client (Oracle ILOM CLI)

The switch has an AD client, which you must configure if the switch will be operating in a network with AD servers.

1. **Activate the AD client.**

```
-> set /SP/clients/activedirectory state=enabled
Set 'state' to 'enabled'
->
```

2. **Set the AD server address.**

```
-> set /SP/clients/activedirectory address=10.11.12.13
Set 'state' to 'enabled'
->
```

3. **Set the port for AD communication.**

```
-> set /SP/clients/activedirectory/ port=188
Set 'address' to '123.45.67.89'
->
```

Related Information

- "Configure AD Properties (Oracle ILOM CLI)" on page 329

- "Configure DNS Locator Queries (Oracle ILOM CLI)" on page 331
- "Manage an AD Server's Certificate (Oracle ILOM CLI)" on page 332
- "Configure an Alternate AD Server (Oracle ILOM CLI)" on page 333
- "Manage Certificates for Alternate AD Servers (Oracle ILOM CLI)" on page 335
- "AD Groups (Oracle ILOM CLI)" on page 336
- "Configure an AD Administrator Group (Oracle ILOM CLI)" on page 337
- "Configure an AD Custom Group (Oracle ILOM CLI)" on page 338
- "Configure an AD Operator Group (Oracle ILOM CLI)" on page 339
- "Configure an AD User Domain (Oracle ILOM CLI)" on page 340
- "Disable the AD Client (Oracle ILOM CLI)" on page 341

▼ Configure AD Properties (Oracle ILOM CLI)

Numerous AD properties are customizable for your environment. Assuming the AD protocol is enabled (see "Enable the AD Client (Oracle ILOM CLI)" on page 328), you can use this task to configure the various protocol properties.

1. **Set the timeout value for AD communication.**

```
-> set /SP/clients/activedirectory/ timeout=10
Set 'timeout' to '10'
->
```

2. **Set the AD default role assigned to AD users.**

```
-> set /SP/clients/activedirectory/ defaultrole=o
Set 'defaultrole' to 's' [os]
->
```

For the *role*, you can use the characters of the `aucros` string to enable the respective abilities. See "User Roles and Permissions" on page 27. The operator role (`o`) is added to whatever single role you set.

3. **Enable expanded search (expsearch) mode.**

```
-> set /SP/clients/activedirectory/ expsearchmode=enabled
Set 'expsearchmode' to 'enabled'
->
```

4. **(Optional) Set the amount of information to include for AD communication and events written to the audit and event logs.**

```
-> set /SP/clients/activedirectory/ logdetail=property_value
->
```

where *property_value* is:

- `high`, `medium`, `low`, or `trace` for more or less information in the log.
- `none`, for either no details, or to completely disable logging.

For example, to include the most amount of information, type:

```
-> set /SP/clients/activedirectory/ logdetail=high
Set 'logdetail' to 'high'
->
```

5. **Enable strict certificate mode.**

```
-> set /SP/clients/activedirectory/ strictcertmode=enabled
Set 'strictcertmode' to 'enabled'
->
```

Note - To use this option, the Authentication Server Certificate file must be available to the switch.

6. **Enable strict credential error mode.**

```
-> set /SP/clients/activedirectory/ strictcredentialerrormode=enabled
Set 'strictcredentialerrormode' to 'enabled'
->
```

7. **If needed, configure DNS locator queries.**

See “Configure DNS Locator Queries (Oracle ILOM CLI)” on page 331.

Related Information

- “Enable the AD Client (Oracle ILOM CLI)” on page 328
- “Configure DNS Locator Queries (Oracle ILOM CLI)” on page 331
- “Manage an AD Server's Certificate (Oracle ILOM CLI)” on page 332
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▼ Configure DNS Locator Queries (Oracle ILOM CLI)

A DNS locator query identifies a specific DNS service and the port on which it runs. By default, the switch provides two DNS locator queries, but you can create custom DNS locator queries.

- The switch supports a maximum of five DNS locator queries.
- The current DNS service can be changed to a DNS service in a different domain by specifying the new DNS service in the `DOMAIN` element of the locator string.
- The current DNS port can be changed to a DNS port in a different domain by specifying the new port in the `PORT:`*x* element of the locator string.

Note - For the switch to support locator queries, the DNS service and DNS Locator Mode must be enabled on the switch. See “Enable the AD Client (Oracle ILOM CLI)” on page 328.

---

1. Enable DNS locator query mode.

```
-> set /SP/clients/activedirectory/ dnslocatormode=enabled
Set 'dnslocatormode' to 'enabled'
->
```

2. Create DNS locator queries.

```
-> set /SP/clients/activedirectory/dnslocatorqueries/X service=service_name.
domain.PORT:X
->
```

where:

- *X* is a number from `1` to `5` that represents the locator query.
- *service* is the locator service name, including a domain and port.
- *domain* is the domain that the locator query will search.
- PORT:*x* is the port on which the locator query communication occurs.

For example, to create a DNS locator query `1` for the service `_ldap._tcp.gc._msdcs` in domain `companyq` on port `2112`, type:

```
-> set /SP/clients/activedirectory/dnslocatorqueries/1
 service=_ldap._tcp.gc._msdcs.companyQ.PORT:2112
Set 'service' to '_ldap._tcp.gc._msdcs.companyQ.PORT:2112'
->
```

3. **Repeat the preceding step as needed to create the required number of queries up to the maximum.**

Related Information

- “Enable the AD Client (Oracle ILOM CLI)” on page 328
- “Configure AD Properties (Oracle ILOM CLI)” on page 329
- “Manage an AD Server's Certificate (Oracle ILOM CLI)” on page 332
- “Configure an Alternate AD Server (Oracle ILOM CLI)” on page 333
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▼ Manage an AD Server's Certificate (Oracle ILOM CLI)

Managing an AD server's certificate involves uploading a certificate if one is not present, or deleting a certificate when needed.

- If strict certificate mode is required, you must upload the switch's certificate.
- Some situations might require you to remove an existing certificate. For example, if the switch is no longer using strict certificate mode, or if a certificate expires and must be replaced with a new one, you must remove the existing certificate.

- **Do one of the following:**

  - **Remove an existing certificate.**

```
-> set /SP/clients/activedirectory/cert/ clear_action=true
Are you sure you want to remove the cert (y/n)? y
->
```

  - **Load a certificate file onto the switch's AD server.**

```
-> load /SP/clients/activedirectory/cert/ load_uri=URI
->
```

where *URI* is the uniform resource indicator for the certificate file.

For example, to load the certificate file `112115.cert`, type:

```
-> load /SP/clients/activedirectory/cert/ load_uri=ftp://root:changeme@123.45.67.89/
privkeystore/112115.cert
Load Successful.
->
```

Related Information

- “Enable the AD Client (Oracle ILOM CLI)” on page 328
- “Configure AD Properties (Oracle ILOM CLI)” on page 329
- “Configure DNS Locator Queries (Oracle ILOM CLI)” on page 331
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▼ Configure an Alternate AD Server (Oracle ILOM CLI)

Typically, AD networks have multiple alternate AD servers. The switch supports a maximum of five AD servers, plus the primary. Use this task to configure alternate AD servers and set the order of importance for each server.

1. **Specify the alternate server's IP address.**

```
-> set /SP/clients/activedirectory/alternateservers/X address=IP_address
->
```

where:

- *X* is a number from 1 to 5 for each alternate AD server.
- *IP_address* is the IP address of the alternate server.

For example, to set alternate server 1 with an address of 123.45.67.89, type:

```
-> set /SP/clients/activedirectory/alternateservers/1 address=123.45.67.89
Set 'address' to '123.45.67.89'
->
```

2. **Set the alternate server's port.**

```
-> set /SP/clients/activedirectory/alternateservers/Xport=number
->
```

where:

- *X* is a number from 1 to 5 for each alternate AD server.
- *number*is the port number the alternate AD server will use for communication.

For example, to set alternate server 1 to use port 190, type:

```
-> set /SP/clients/activedirectory/alternateservers/1 port=190
Set 'port' to '190'
->
```

3. **(Optional) Administer certificates for the alternate servers.**

   See “Manage Certificates for Alternate AD Servers (Oracle ILOM CLI)” on page 335.

4. **Repeat this task to configure the required number of alternate servers up to the maximum.**

Related Information

- “Enable the AD Client (Oracle ILOM CLI)” on page 328
- “Configure AD Properties (Oracle ILOM CLI)” on page 329
- “Configure DNS Locator Queries (Oracle ILOM CLI)” on page 331
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▼ Manage Certificates for Alternate AD Servers (Oracle ILOM CLI)

Alternate AD servers can also have SSL certificates that need to be loaded onto or removed from those servers. Use this task to manage the certificates for the alternate servers.

- **Do one of the following:**

  - **Remove an existing certificate.**

    For example, to remove the certificate file from alternate server `1`, type:

```
-> set /SP/clients/activedirectory/alternateservers/1/cert/ clear_action=true
Are you sure you want to remove the cert (y/n)? y
->
```

  - **Load a certificate file onto an alternate AD server.**

    For example, to load a certificate file onto alternate server `1`, type:

```
-> load /SP/clients/activedirectory/cert/ load_uri=URI
->
```

    where *URI* is the uniform resource indicator for the certificate file.

    For example, to load the certificate file `112115.cert` onto alternate server `1`, type:

```
-> load /SP/clients/activedirectory/alternateservers/1/cert/ load_uri=ftp://root:
changeme@123.45.67.89/privkeystore/112115.cert
Load Successful.
->
```

Related Information

- “Enable the AD Client (Oracle ILOM CLI)” on page 328
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AD Groups (Oracle ILOM CLI)

The switch supports numerous types of AD groups, namely admin groups, operator groups, and custom groups. Some rules apply for each type:

If your network uses AD admin groups, you must configure those groups on the switch so that members of the admin group can access the switch.

- Admin groups configured on the AD server must match the admin groups configured on the switch.
- Admin group names must be 128 characters or less.
- Admin group names must comply with the standard AD name formats for admin groups.

If your network uses AD operator groups, you must configure those groups on the switch so that members of the operator group can access the switch.

- Operator groups configured on the AD server must match the groups configured on the switch
- Group names must be 128 characters or less.
- Group names must comply with standard AD name formats for operator groups.

If your network uses AD custom groups, you must configure those groups on the switch so that members of the custom groups can access the switch.

- Custom groups configured on the AD server must match the groups configured on the switch.
- Group names must be 128 characters or less.
- Group names must comply with standard AD name formats for custom groups.

Related Information

- “Enable the AD Client (Oracle ILOM CLI)” on page 328
- “Configure AD Properties (Oracle ILOM CLI)” on page 329
- “Configure DNS Locator Queries (Oracle ILOM CLI)” on page 331
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▼ Configure an AD Administrator Group (Oracle ILOM CLI)

The switch supports administrator groups (admin groups). For information about configuring an admin group, see "AD Groups (Oracle ILOM CLI)" on page 336.

1. **Type:**

```
-> set /SP/clients/activedirectory/admingroups/X name=name
->
```

where:

- *X* is a number from `1` to `5` for the admin group.
- *name* is the name for the admin group that you are configuring.

For example, to configure admin group `1` and assign it the name `edradmins`, type:

```
->set /SP/clients/activedirectory/admingroups/1/name=edradmins
Set 'name' to 'edradmins'
->
```

2. **Assign a default role to members of the admin group.**

```
-> set /SP/clients/activedirectory/customgroups/X roles=role
->
```

where:

- *X* is a number from `1` to `5` for the custom group.
- *role* is the role that you are configuring for the custom group.

For example, to configure custom group `1` and assign it the `service` role, type:

```
 -> set /SP/clients/activedirectory/customgroups/1/ roles=s
Set 'roles' to 's'
->
```

For the *role*, you can use the characters of the `aucros` string to enable the respective abilities. See "User Roles and Permissions" on page 27. Any member of this custom group receives the service role by default.

Related Information

- "Enable the AD Client (Oracle ILOM CLI)" on page 328
- "Configure AD Properties (Oracle ILOM CLI)" on page 329
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▼ Configure an AD Custom Group (Oracle ILOM CLI)

The switch supports AD custom groups. For information about configuring custom groups, see "AD Groups (Oracle ILOM CLI)" on page 336.

1. **Configure a custom group.**

```
-> set /SP/clients/activedirectory/customgroups/Xname=name
->
```

where:

- *X* is a number from `1` to `5` for the custom group.
- *name* is the name for the custom group that you are configuring.

For example, to configure custom group `1` and assign it the name `techpubs`, type:

```
-> set /SP/clients/activedirectory/customgroups/1/ name=techpubs
Set 'name' to 'techpubs'
->
```

2. **Assign a default role to members of the custom group.**

```
-> set /SP/clients/activedirectory/customgroups/X roles=role
->
```

where:

- *X* is a number from 1 to 5 for the custom group.
- *role* is the role that you are configuring for the custom group.

For example, to configure custom group 1 and assign it the service role, type:

```
 -> set /SP/clients/activedirectory/customgroups/1/ roles=s
Set 'roles' to 's' [os]
->
```

For the *role*, you can use the characters of the aucros string to enable the respective abilities. See "User Roles and Permissions" on page 27. Any member of this custom group receives the service role by default.

Related Information

- "Enable the AD Client (Oracle ILOM CLI)" on page 328
- "Configure AD Properties (Oracle ILOM CLI)" on page 329
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▼ Configure an AD Operator Group (Oracle ILOM CLI)

The switch supports AD operator groups. Some rules apply to configuring AD operator groups. See "AD Groups (Oracle ILOM CLI)" on page 336.

- **Type:**

```
-> set /SP/clients/activedirectory/opergroups/X name=name
->
```

where:

- *X* is a number from 1 to 5 for the operator group.
- *name* is the name for the operator group that you are configuring.

For example, to configure operator group `1` and assign it the name `guests`, type:

```
->set /SP/clients/activedirectory/opergroups/1/name=guests
Set 'name' to 'guests'
->
```

Because you are configuring the operator group, you set no explicit roles. Instead, any member of this operator group receives the operator (`o`) role by default.

Related Information

- “Enable the AD Client (Oracle ILOM CLI)” on page 328
- “Configure AD Properties (Oracle ILOM CLI)” on page 329
- “Configure DNS Locator Queries (Oracle ILOM CLI)” on page 331
- “Manage an AD Server's Certificate (Oracle ILOM CLI)” on page 332
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▼ Configure an AD User Domain (Oracle ILOM CLI)

A user domain can be added in either principle or distinguished name format:

- Principle name format is *username@domain.company*.com.
- Distinguished name format is `CN=`*username*,`CN=`*users*,`DC=`*domain*,`DC=`*company*,`DC=`com.
- The domain(s) configured on the AD server must match the domain(s) configured on the switch.
- The switch supports a maximum of five user domains

In either name format, the *username* substitution string is replaceable with a user's login name, but the remaining information elements must match exactly the information elements on the authentication server.

- **Configure an AD user domain.**

```
-> set /SP/clients/activedirectory/userdomains/Xname=username@domain.company.com
```

```
->
```

where:

- *X* is a number from `1` to `5` for the admin group
- *username* is a user's login name used during authentication.
- *domain* is the domain name configured on the authentication server.
- *company* is the company name configured on the AD authentication server.

For example, to configure user domain `1` and assign it for `writer1@oracle.com`, type:

```
-> set /SP/clients/activedirectory/userdomains/1/ domain=writer1@techpubs.oracle.com
Set 'domain' to 'writer1@techpubs.oracle.com'
->
```

Related Information

- “Enable the AD Client (Oracle ILOM CLI)” on page 328
- “Configure AD Properties (Oracle ILOM CLI)” on page 329
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▼ Disable the AD Client (Oracle ILOM CLI)

You can selectively disable AD without having to delete or reset any of the AD properties.

- **Type:**

```
-> set /SP/clients/activedirectory state=disabled
Set 'state' to 'disabled'
->
```

Related Information

- “Enable the AD Client (Oracle ILOM CLI)” on page 328

- “Configure AD Properties (Oracle ILOM CLI)” on page 329
- “Configure DNS Locator Queries (Oracle ILOM CLI)” on page 331
- “Manage an AD Server's Certificate (Oracle ILOM CLI)” on page 332
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▼ Configure the DNS Client (Oracle ILOM CLI)

To enable name services within the SP, Oracle ILOM must be configured as a DNS client.

1. **Specify the IP address of the primary and backup name servers.**

```
-> set /SP/clients/dns nameserver=123.45.67.89,123.45.67.90,123.45.67.91
Set 'nameserver' to '123.45.67.89,123.45.67.90,123.45.67.91' [123.45.67.89,
 123.45.67.90, 123.45.67.91]
->
```

If you need multiple name servers for redundancy, you can configure a maximum of three. The order you specify is the order in which servers are tried, if the preceding servers are unavailable. If you specify multiple name servers, separate them with a comma, but no blank spaces.

2. **Set the number of retries.**

```
-> set /SP/clients/dns retries=3
Set 'retries' to '3'
->
```

You can configure up to 4 retries. Setting the retry value to `0` disables retrying so that only the first communication attempt is made.

3. **Set the timeout value.**

```
-> set /SP/clients/dns timeout=10
Set 'timeout' to '10'
```

```
->
```

You can configure a timeout between 1 and 10 seconds.

4. **(Optional) Enable auto DNS.**

```
-> set /SP/clients/dns automatons=enabled nameserver=123.45.67.89,123.45.67.90
 searchpath='us.companyq.com,canada.companyq.com'
Set 'automatons' to 'enabled'
Set 'nameserver' to '123.45.67.89,123.45.67.90'
Set 'searchpath' to 'us.companyq.com,canada.companyq.com'
->
```

Related Information

- "Oracle ILOM CLI Overview" on page 36
- "Getting Oracle ILOM Help (Oracle ILOM CLI)" on page 36
- "Display the DNS Client Status (Oracle ILOM CLI)" on page 88

▼ Configure the LDAP Client (Oracle ILOM CLI)

The switch has an RFC 2307-compliant LDAP client that enables LDAP users to access the switch. Some configuration rules exist for the LDAP client:

- LDAP can be enabled only if FIPS is disabled. See "Configure the FIPS Service (Oracle ILOM CLI)" on page 425.
- You must have user management role (u) in Oracle roles model to configure the LDAP user properties for the Oracle ILOM client.
- LDAP properties must be set on both the switch and the LDAP server(s).

When LDAP users access the switch, you can specify how much control they have by assigning the appropriate role and privileges.

1. **Enable the LDAP client.**

```
-> set /SP/clients/ldap state=enabled
Set 'state' to 'enabled'
->
```

2. **Specify the LDAP client's IP address.**

```
-> set /SP/clients/ldap address=192.168.45.60
```

```
Set 'address' to '192.168.45.60'
->
```

3. **Set the LDAP port.**

```
-> set /SP/clients/ldap port=400
Set 'port' to '400'
->
```

4. **Set the LDAP user roles.**

```
-> set /SP/clients/ldap defaultrole=s
Set 'defaultrole' to 's' [os]
->
```

By default, the LDAP user role is operator (o), but you can configure additional roles. Regardless of the role you configure, the operator role is always configured.

5. **Set the search base.**

```
-> set /SP/clients/ldap searchbase=us.oracle.com
Set 'searchbase' to 'us.oracle.com'
->
```

6. **Set the bind DN.**

```
-> set /SP/clients/ldap binddn=companyq.com
Set 'binddn' to 'companyq.com'
->
```

7. **Set the bind password.**

```
-> set /SP/clients/ldap bindpw=toothbrush
Set 'bindpw' to 'toothbrush'
->
```

Related Information

- “Oracle ILOM CLI Overview” on page 36
- “Getting Oracle ILOM Help (Oracle ILOM CLI)” on page 36
- “Display the Oracle ILOM LDAP Client Information (Oracle ILOM CLI)” on page 89

Managing the LDAP over SSL Client (Oracle ILOM CLI)

The switch has an LDAP over SSL client that provides both authentication of user credentials and authorization of user access levels. These topics document how to configure LDAP over SSL on the switch.

- "Enable the LDAP over SSL Client (Oracle ILOM CLI)" on page 345
- "Configure LDAP over SSL Client Properties (Oracle ILOM CLI)" on page 346
- "Manage an LDAP over SSL Server's Certificate (Oracle ILOM CLI)" on page 348
- "Configure Alternate LDAP over SSL Servers (Oracle ILOM CLI)" on page 349
- "Manage Certificates for Alternate LDAP over SSL Servers (Oracle ILOM CLI)" on page 351
- "LDAP over SSL Groups (Oracle ILOM CLI)" on page 352
- "Configure an LDAP over SSL Administrator Group (Oracle ILOM CLI)" on page 353
- "Configure an LDAP over SSL Operator Group (Oracle ILOM CLI)" on page 354
- "Configure an LDAP over SSL Custom Group (Oracle ILOM CLI)" on page 355
- "Configure an LDAP over SSL User Domain (Oracle ILOM CLI)" on page 357
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- "Disable the LDAP over SSL Client (Oracle ILOM CLI)" on page 359

Related Information

- "Managing the AD Client (Oracle ILOM CLI)" on page 327
- "Configure the DNS Client (Oracle ILOM CLI)" on page 342
- "Configure the LDAP Client (Oracle ILOM CLI)" on page 343
- "Managing the RADIUS Client (Oracle ILOM CLI)" on page 360
- "Managing SSO (Oracle ILOM CLI)" on page 364

▼ Enable the LDAP over SSL Client (Oracle ILOM CLI)

The switch has an LDAP over SSL client that can grant access to authenticated and authorized LDAP over SSL users. Authorization occurs in either of these ways:

- Simple authorization, which uses standard roles in the Oracle ILOM.
- Remote server authorization, which uses one or more LDAP over SSL configured groups. These groups must contain users, and the groups must be configured on the LDAP over SSL authentication server before configuring the groups on the switch.

You must have user management role (u) to configure LDAP over SSL and its properties on the switch.

- **Type:**

```
-> set /SP/clients/ldapssl state=enabled
Set 'state' to 'enabled'
->
```

Related Information

- "Manage an LDAP over SSL Server's Certificate (Oracle ILOM CLI)" on page 348
- "Configure Alternate LDAP over SSL Servers (Oracle ILOM CLI)" on page 349
- "Manage Certificates for Alternate LDAP over SSL Servers (Oracle ILOM CLI)" on page 351
- "LDAP over SSL Groups (Oracle ILOM CLI)" on page 352
- "Configure an LDAP over SSL Administrator Group (Oracle ILOM CLI)" on page 353
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- "Display LDAP over SSL Properties (Oracle ILOM CLI)" on page 90

▼ Configure LDAP over SSL Client Properties (Oracle ILOM CLI)

As part of configuring LDAP over SSL properties, specify the following properties:

- Server and port on which LDAP over SSL communication occurs.
- Timeout for communication.
- Specific roles and privileges that the user has on the switch.
- Whether certificates are required (strict certificate mode).

1. **Enable LDAP over SSL.**

   See "Enable the LDAP over SSL Client (Oracle ILOM CLI)" on page 345.

2. **Set the server address for the primary LDAP over SSL server.**

```
-> set /SP/clients/ldapssl address=123.45.67.89
Set 'address' to '123.45.67.89'
->
```

3. **Set the port for LDAP over SSL communication.**

```
-> set /SP/clients/ldapssl port=188
Set 'port' to '188'
->
```

4. **Set the timeout value for LDAP over SSL communication.**

```
-> set /SP/clients/ldapssl/ timeout=10
Set 'timeout' to '10'
->
```

5. **Set the default role assigned to LDAP over SSL users.**

```
-> set /SP/clients/ldapssl/ defaultrole=s
Set 'defaultrole' to 's' [os]
->
```

For the *role*, you can use the characters of the `aucros` string to enable the respective abilities. See "User Roles and Permissions" on page 27.

6. **(Optional) Set the amount of information to include for LDAP over SSL communication and events written to the audit and event logs.**

```
-> set /SP/clients/ldapssl/ logdetail=value
->
```

where *value* is:

- `high`, `medium`, `low`, or `trace` for more or less information in the log.
- `none` for either no details, or to completely disable logging.

For example, to include the most amount of information, type:

```
-> set /SP/clients/ldapssl/ logdetail=high
Set 'logdetail' to 'high'
->
```

7. **Enable strict certificate mode.**

```
-> set /SP/clients/ldapssl/ strictcertmode=enabled
Set 'strictcertmode' to 'enabled'
->
```

Note - To use this option, the authentication server certificate file must be available to the switch.

Related Information

- “Manage an LDAP over SSL Server's Certificate (Oracle ILOM CLI)” on page 348
- “Configure Alternate LDAP over SSL Servers (Oracle ILOM CLI)” on page 349
- “Manage Certificates for Alternate LDAP over SSL Servers (Oracle ILOM CLI)” on page 351
- “LDAP over SSL Groups (Oracle ILOM CLI)” on page 352
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- “Disable the LDAP over SSL Client (Oracle ILOM CLI)” on page 359
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- “Display LDAP over SSL Properties (Oracle ILOM CLI)” on page 90

▼ Manage an LDAP over SSL Server's Certificate (Oracle ILOM CLI)

Managing an LDAP over SSL server's certificate involves uploading a certificate if one is not present, or deleting a certificate when needed.

- If strict certificate mode is required, you must upload the switch's certificate.
- Some situations might require you to remove an existing certificate. For example, if the switch is no longer using strict certificate mode, or if a certificate expires and must be replaced with a new one, you must remove the existing certificate.

● **Do one of the following:**

- **Remove an existing certificate.**

```
-> set /SP/clients/ldapssl/cert/ clear_action=true
```

```
Are you sure you want to remove the cert (y/n)? y
->
```

- **Load a certificate file onto the switch's LDAP over SSL server.**

```
-> load /SP/clients/activedirectory/cert/ load_uri=URI
->
```

where *URI* is the uniform resource indicator for the certificate file.

For example, to load the certificate file `112115.cert`, type:

```
-> load /SP/clients/ldapssl/cert/ load_uri=ftp://root:changeme@123.45.67.89/
privkeystore/112115.cert
Load Successful.
->
```

Related Information

- “Configure LDAP over SSL Client Properties (Oracle ILOM CLI)” on page 346
- “Configure Alternate LDAP over SSL Servers (Oracle ILOM CLI)” on page 349
- “Manage Certificates for Alternate LDAP over SSL Servers (Oracle ILOM CLI)” on page 351
- “LDAP over SSL Groups (Oracle ILOM CLI)” on page 352
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- “Disable the LDAP over SSL Client (Oracle ILOM CLI)” on page 359
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- “Display LDAP over SSL Properties (Oracle ILOM CLI)” on page 90

▼ Configure Alternate LDAP over SSL Servers (Oracle ILOM CLI)

The switch supports redundant LDAP over SSL servers in the unlikely event that the primary LDAP over SSL server is unavailable. The switch supports a maximum of five alternate LDAP over SSL servers. Use this task to specify the LDAP over SSL servers by address and set the order of importance for each server.

1. **Specify the alternate server's IP address.**

```
-> set /SP/clients/ldapssl/alternateservers/Xaddress=IP_address
->
```

where:

- *X* is a number from 1 to 5 for each alternate LDAP over SSL server.
- *IP_address* is the IP address of the alternate server.

For example, to set alternate server 1 with an address of 123.45.67.89, type:

```
-> set /SP/clients/ldapssl/alternateservers/1 address=123.45.67.89
Set 'address' to '123.45.67.89'
->
```

2. **Set the alternate server's port.**

```
-> set /SP/clients/ldapssl/alternateservers/1 address=123.45.67.89 port=number
->
```

where:

- *X* is a number from 1 to 5 for each alternate AD server.
- *number*is the port number the alternate AD server will use for communication.

For example, to set alternate server 1 to use port 190, type:

```
-> set /SP/clients/ldapssl/alternateservers/1 port=190
Set 'port' to '190'
->
```

3. **(Optional) Administer certificates for the alternate servers.**

   See “Manage Certificates for Alternate LDAP over SSL Servers (Oracle ILOM CLI)” on page 351.

4. **Repeat this task to configure the required number of alternate servers up to the maximum.**

Related Information

- “Enable the LDAP over SSL Client (Oracle ILOM CLI)” on page 345
- “Configure LDAP over SSL Client Properties (Oracle ILOM CLI)” on page 346
- “Manage an LDAP over SSL Server's Certificate (Oracle ILOM CLI)” on page 348
- “Manage Certificates for Alternate LDAP over SSL Servers (Oracle ILOM CLI)” on page 351

- "LDAP over SSL Groups (Oracle ILOM CLI)" on page 352
- "Configure an LDAP over SSL Administrator Group (Oracle ILOM CLI)" on page 353
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Manage Certificates for Alternate LDAP over SSL Servers (Oracle ILOM CLI)

Alternate LDAP over SSL servers can also have SSL certificates that need to be loaded onto or removed from those servers. Use this task to manage the certificates for the alternate servers.

- **Do one of the following:**

  - **Remove an existing certificate.**

    For example, to remove the certificate file from alternate server 1, type:

```
-> set /SP/clients/ldapssl/alternateservers/1/cert/ clear_action=true
Are you sure you want to remove the cert (y/n)? y
->
```

  - **Load a certificate file onto an alternate AD server.**

    For example, to load a certificate file onto alternate server 1, type:

```
-> load /SP/clients/ldapssl/cert/ load_uri=URI
->
```

    where *URI* is the uniform resource indicator for the certificate file.

    For example, to load the certificate file `112115.cert` onto alternate server 1, type:

```
-> load /SP/clients/ldapssl/alternateservers/1/cert/ load_uri=ftp://root:
changeme@123.45.67.89/privkeystore/112115.cert
Load Successful.
->
```

Related Information

- “Enable the LDAP over SSL Client (Oracle ILOM CLI)” on page 345
- “Configure LDAP over SSL Client Properties (Oracle ILOM CLI)” on page 346
- “Manage an LDAP over SSL Server's Certificate (Oracle ILOM CLI)” on page 348
- “Configure Alternate LDAP over SSL Servers (Oracle ILOM CLI)” on page 349
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LDAP over SSL Groups (Oracle ILOM CLI)

The switch supports multiple types of LDAP over SSL groups, namely, administrator groups, operator groups, and custom groups. Some rules apply to each type.

If your network uses LDAP over SSL admin groups, you must configure those groups on the switch so that members of the admin group can access the switch.

- Admin group configured on the LDAP over SSL server must match the admin group configured on the switch.
- Admin group names must comply with the standard LDAP over SSL name formats for admin groups.
- The switch supports a maximum of five groups.

If your network uses LDAP over SSL operator groups, you must configure those groups on the switch so that members of the operator group can access the switch.

- Operator group configured on the LDAP over SSL server must match the group configured on the switch
- Operator group names must comply with standard LDAP over SSL name formats for operator groups.
- The switch supports a maximum of five groups.

If your network uses LDAP over SSL custom groups, you must configure those groups on the switch so that members of the custom group can access the switch.

- Custom group configured on the LDAP over SSL server must match the group configured on the switch.
- Custom group names must comply with standard LDAP over SSL name formats for custom groups.
- The switch supports a maximum of five groups.

Related Information

- "Enable the LDAP over SSL Client (Oracle ILOM CLI)" on page 345
- "Configure LDAP over SSL Client Properties (Oracle ILOM CLI)" on page 346
- "Manage an LDAP over SSL Server's Certificate (Oracle ILOM CLI)" on page 348
- "Configure Alternate LDAP over SSL Servers (Oracle ILOM CLI)" on page 349
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- "Display LDAP over SSL Properties (Oracle ILOM CLI)" on page 90

▼ Configure an LDAP over SSL Administrator Group (Oracle ILOM CLI)

The switch supports administrator groups for LDAP over SSL environments. For information about configuring administrator groups, see "LDAP over SSL Groups (Oracle ILOM CLI)" on page 352.

● **Configure an LDAP over SSL administrator group.**

```
-> set /SP/clients/ldapssl/admingroups/X  distinguished-name
->
```

where:

- *X* is a number from `1` to `5` for the admin group.
- *distinguished-name* (DN) is a comma separated list consisting of the elements in the DN.

For example, to configure admin group `1` with an LDAP over SSL DN for technical writers, you would type:

```
-> set /SP/clients/ldapssl/admingroups/1/
 name=CN=SpAdmin,OU=Techniques,DC=techpubs,DC=companyq,DC=com
Set 'name' to 'CN=SpAdmin,OU=Techniques,DC=techpubs,DC=companyq,DC=com'
->
```

The individual elements in the DN must match the one of the groups configured on the LDAP over SSL server. Any member of the LDAP over SSL group will get the administrator role by default.

Related Information

- “Enable the LDAP over SSL Client (Oracle ILOM CLI)” on page 345
- “Configure LDAP over SSL Client Properties (Oracle ILOM CLI)” on page 346
- “Manage an LDAP over SSL Server's Certificate (Oracle ILOM CLI)” on page 348
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▼ Configure an LDAP over SSL Operator Group (Oracle ILOM CLI)

The switch supports operator groups for LDAP over SSL environments. For information about configuring operator groups, see “LDAP over SSL Groups (Oracle ILOM CLI)” on page 352.

- **Configure an LDAP over SSL operator group.**

```
-> set /SP/clients/ldapssl/opergroups/Xname=distinguished-name
->
```

where:

- *X* is a number from 1 to 5 for the operator group.
- *distinguished-name* is the name for the operator group that you are configuring.

For example, to configure operator group 1 and assign it the name guests, type:

```
-> set /SP/clients/ldapssl/opergroups/1
 name=name=CN=Popper,OU=guests,DC=us,DC=companyq,DC=com
Set 'name' to 'name=CN=Popper,OU=guests,DC=us,DC=companyq,DC=com'

Set 'name' to 'name=CN=Popper,OU=guests,DC=us,DC=companyq,DC=com'

->
```

Any member of this group will get the operator role by default.

Related Information

- “Enable the LDAP over SSL Client (Oracle ILOM CLI)” on page 345
- “Configure LDAP over SSL Client Properties (Oracle ILOM CLI)” on page 346
- “Manage an LDAP over SSL Server's Certificate (Oracle ILOM CLI)” on page 348
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▼ Configure an LDAP over SSL Custom Group (Oracle ILOM CLI)

The switch supports custom groups for LDAP over SSL environments. For information about configuring LDAP over SSL custom groups, see “LDAP over SSL Groups (Oracle ILOM CLI)” on page 352.

1. **Configure a custom group.**

```
-> set /SP/clients/ldapssl/customgroups/Xname=distinguished-name
->
```

where:

- *X* is a number from 1 to 5 for the custom group.
- *distinguished-name* (DN) is the name for the custom group that you are configuring.

For example, to configure custom group 1 and assign it the name techpubs, type:

```
-> set /SP/clients/ldapssl/customgroups/1
 name=CN=SpAdmin,OU=Techniques,DC=techpubs,DC=companyq,DC=com
Set 'name' to 'CN=SpAdmin,OU=Techniques,DC=techpubs,DC=companyq,DC=com'
->
```

2. **Assign a default role to members of the custom group.**

```
-> set /SP/clients/ldapssl/customgroups/Xroles=role
->
```

where:

- *X* is a number from 1 to 5 for the custom group.
- *role* is the role that you are configuring for the custom group.

For example, to configure custom group 1 and assign it the service role, type:

```
 -> set /SP/clients/ldapssl/customgroups/1/ roles=s
Set 'roles' to 's' [os]
->
```

For the *role*, you can use the characters of the aucros string to enable the respective abilities. See "User Roles and Permissions" on page 27. Any member of this custom group receives the service role by default.

Related Information

- "Enable the LDAP over SSL Client (Oracle ILOM CLI)" on page 345
- "Configure LDAP over SSL Client Properties (Oracle ILOM CLI)" on page 346
- "Manage an LDAP over SSL Server's Certificate (Oracle ILOM CLI)" on page 348
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▼ Configure an LDAP over SSL User Domain (Oracle ILOM CLI)

User domains can be added in either UID or distinguished name format:

- UID name format is `uid=`*username*`,ou=`*people*`,dc=`*company*`,dc=com`
- Distinguished name format is `CN=`*username*`,CN=`*users*`,DC=`*domain*`,DC=`*company*`,DC=com`

In either name format, the *username* substitution string is replaceable with a user's login name, but the remaining information elements must exactly match the information elements on the authentication server.

● **Configure an LDAP over SSL user domain.**

```
-> set /SP/clients/ldapssl/userdomains/Xuid=username,ou=people,dc=company,dc=com
->
```

where:

- *X* is a number from `1` to `5` for the user domain.
- *username* is a user's login name used during authentication.
- *people* is the group of people configured on the authentication server.*company* is the company name configured on the authentication server.

For example, to configure user domain `1` and assign it to `writer1` in `techpubs` at `company.com`, type:

```
-> set /SP/clients/activedirectory/userdomains/1
 uid=writer1,ou=techpubs,dc=oracle,dc=com
Set 'domain' to 'uid=writer1,ou=techpubs,dc=oracle,dc=com'
->
```

Related Information

- "Enable the LDAP over SSL Client (Oracle ILOM CLI)" on page 345

- "Configure LDAP over SSL Client Properties (Oracle ILOM CLI)" on page 346
- "Manage an LDAP over SSL Server's Certificate (Oracle ILOM CLI)" on page 348
- "Configure Alternate LDAP over SSL Servers (Oracle ILOM CLI)" on page 349
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▼ Configure an LDAP over SSL Optional User Mapping (Oracle ILOM CLI)

LDAP over SSL user mappings enable converting simple login names to the distinguished names (DNs) for user credential validation.

1. **Enable optional user mappings on the switch.**

```
 -> set /SP/clients/ldapssl/optionalUserMapping/ state=enabled
Set 'state' to 'enabled'
->
```

2. **Set the search base.**

```
-> set /SP/clients/ldapssl/optionalUserMapping/ searchbase=genericstring.companyq.com
Set 'searchbase' to 'genericstring.companyq.com'
->
```

3. **Set the bind DN.**

```
 -> set /SP/clients/ldapssl/optionalUserMapping/ binddn=companyq.com
Set 'binddn' to 'companyq.com'
->
```

4. **Set the bind password.**

```
-> set /SP/clients/ldapssl/optionalUserMapping/ bindpw=toothbrush
Set 'bindpw' to 'toothbrush'
->
```

5. **Set the attribute information.**

```
-> set /SP/clients/ldapssl/optionalUserMapping/ attributeInfo=fortestonly
Set 'attributeInfo' to 'fortestonly'
->
```

Related Information

- “Enable the LDAP over SSL Client (Oracle ILOM CLI)” on page 345
- “Configure LDAP over SSL Client Properties (Oracle ILOM CLI)” on page 346
- “Manage an LDAP over SSL Server's Certificate (Oracle ILOM CLI)” on page 348
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▼ Disable the LDAP over SSL Client (Oracle ILOM CLI)

You can selectively disable LDAP over SSL without having to delete or reset any of the AD properties. When disabled, LDAP over SSL users are not allowed access to the switch.

- **Type:**

```
-> set /SP/clients/ldapssl state=disabled
Set 'state' to 'disabled'
->
```

Related Information

- “Enable the LDAP over SSL Client (Oracle ILOM CLI)” on page 345
- “Configure LDAP over SSL Client Properties (Oracle ILOM CLI)” on page 346
- “Manage an LDAP over SSL Server's Certificate (Oracle ILOM CLI)” on page 348
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Managing the RADIUS Client (Oracle ILOM CLI)

The switch has a RADIUS client that interacts with RADIUS servers in your network to grant access to RADIUS authenticated users.

- “Enable the RADIUS Client (Oracle ILOM CLI)” on page 361
- “Configure RADIUS Properties (Oracle ILOM CLI)” on page 361
- “Configure a RADIUS Alternate Server (Oracle ILOM CLI)” on page 362
- “Disable the RADIUS Client (Oracle ILOM CLI)” on page 364

Related Information

- “Managing the AD Client (Oracle ILOM CLI)” on page 327
- “Configure the DNS Client (Oracle ILOM CLI)” on page 342
- “Configure the LDAP Client (Oracle ILOM CLI)” on page 343
- “Managing the LDAP over SSL Client (Oracle ILOM CLI)” on page 345
- “Managing SSO (Oracle ILOM CLI)” on page 364

▼ Enable the RADIUS Client (Oracle ILOM CLI)

The switch has a RADIUS client that interacts with RADIUS servers in your network. When the switch is configured for RADIUS, authenticated and authorized RADIUS users can access the switch.

- RADIUS can be enabled only if FIPS is disabled. See "Configure the FIPS Service (Oracle ILOM CLI)" on page 425.
- You must have user management role (u) in Oracle roles model to configure the RADIUS user properties for the Oracle ILOM client.
- RADIUS properties must be set on both the switch and the RADIUS servers.

- **Type:**

```
-> set /SP/clients/radius/ state=enabled
Set 'state' to 'enabled'
->
```

Related Information

- "Configure RADIUS Properties (Oracle ILOM CLI)" on page 361
- "Configure a RADIUS Alternate Server (Oracle ILOM CLI)" on page 362
- "Disable the RADIUS Client (Oracle ILOM CLI)" on page 364
- "Configure the FIPS Service (Oracle ILOM CLI)" on page 425
- "Display the Oracle ILOM RADIUS Client Information (Oracle ILOM CLI)" on page 93

▼ Configure RADIUS Properties (Oracle ILOM CLI)

As part of configuring general RADIUS properties for the switch, you set:

- Server address and port
- Default roles for RADIUS users
- Alternate RADIUS servers

1. **Enable RADIUS.**

   See "Enable the RADIUS Client (Oracle ILOM CLI)" on page 361.

2. **Set the address of the primary RADIUS server.**

```
-> set /SP/clients/radius address=123.45.67.89
Set 'address' to '123.45.67.89'
->
```

3. **Set the port for RADIUS communication.**

```
-> set /SP/clients/radius port=1900
Set 'port' to '1900'
->
```

The default port for RADIUS authentication is 1812.

4. **Set the default role for users authenticated through RADIUS.**

```
-> set /SP/clients/radius defaultrole=s
Set 'role' to 's' [os]
->
```

By default, the LDAP user role is operator (o), but you can configure additional roles. The operator role is always configured.

5. **Set the RADIUS secret password.**

```
-> set /SP/clients/radius/ secret=knockknock
Set 'secret' to 'knockknock'
->
```

Related Information

- “Enable the RADIUS Client (Oracle ILOM CLI)” on page 361
- “Configure a RADIUS Alternate Server (Oracle ILOM CLI)” on page 362
- “Disable the RADIUS Client (Oracle ILOM CLI)” on page 364
- “Configure the FIPS Service (Oracle ILOM CLI)” on page 425
- “Display the Oracle ILOM RADIUS Client Information (Oracle ILOM CLI)” on page 93

▼ Configure a RADIUS Alternate Server (Oracle ILOM CLI)

Typically, RADIUS networks have multiple alternate RADIUS servers to avoid a single point of failure. The switch supports a maximum of five RADIUS servers, plus the primary. Use this task to configure alternate RADIUS servers.

1. **Specify the alternate server's IP address.**

```
-> set /SP/clients/radius/alternateservers/Xaddress=IP_address
->
```

where:

- *X* is a number from 1 to 5 for each alternate RADIUS server.
- *IP_address* is the IP address of the alternate server.

For example, to set alternate server 1 with an address of 123.45.67.89, type:

```
-> set /SP/clients/radius/alternateservers/1 address=123.45.67.89
Set 'address' to '123.45.67.89'
->
```

2. **Set the alternate server's port.**

```
-> set /SP/clients/radius/alternateservers/Xport=number
->
```

where:

- *X* is a number from 1 to 5 for each alternate RADIUS server.
- *number* is the port number the alternate server will use for communication.

For example, to set alternate server 1 to use port 130, type:

```
-> set /SP/clients/radius/alternateservers/1 port=130
Set 'port' to '130'
->
```

3. **Set the secret for the alternate server.**

```
-> set /SP/clients/radius/alternateservers/Xsecret=passworded
->
```

where:

- *X* is a number from 1 to 5 for each alternate RADIUS server.
- *number* is the port number the alternate server will use for communication.

For example, to set alternate server 1 to use the secret openplease, type:

```
-> set /SP/clients/radius/alternateservers/1 secret=openplease
Set 'secret' to 'openplease'
->
```

Related Information

- “Enable the RADIUS Client (Oracle ILOM CLI)” on page 361
- “Configure RADIUS Properties (Oracle ILOM CLI)” on page 361

- "Disable the RADIUS Client (Oracle ILOM CLI)" on page 364
- "Configure the FIPS Service (Oracle ILOM CLI)" on page 425
- "Display the Oracle ILOM RADIUS Client Information (Oracle ILOM CLI)" on page 93

▼ Disable the RADIUS Client (Oracle ILOM CLI)

You can selectively disable RADIUS without having to delete or reset any of the RADIUS properties. When disabled, RADIUS users are not allowed access to the switch.

- **Type:**

```
-> set /SP/clients/radius state=disabled
Set 'state' to 'disabled'
->
```

Related Information

- "Enable the RADIUS Client (Oracle ILOM CLI)" on page 361
- "Configure RADIUS Properties (Oracle ILOM CLI)" on page 361
- "Configure a RADIUS Alternate Server (Oracle ILOM CLI)" on page 362
- "Configure the FIPS Service (Oracle ILOM CLI)" on page 425
- "Display the Oracle ILOM RADIUS Client Information (Oracle ILOM CLI)" on page 93

Managing SSO (Oracle ILOM CLI)

The switch supports a single sign on feature (SSO), which enables transportability for your user credentials after you have been successfully authenticated. Credentials are stored and translated across multiple, different systems so that you are not always prompted for additional logins and passwords.

- "Enable SSO (Oracle ILOM CLI)" on page 365
- "Disable SSO (Oracle ILOM CLI)" on page 365

Related Information

- "Managing the AD Client (Oracle ILOM CLI)" on page 327
- "Configure the DNS Client (Oracle ILOM CLI)" on page 342
- "Configure the LDAP Client (Oracle ILOM CLI)" on page 343
- "Managing the LDAP over SSL Client (Oracle ILOM CLI)" on page 345
- "Managing the RADIUS Client (Oracle ILOM CLI)" on page 360

▼ Enable SSO (Oracle ILOM CLI)

When SSO is enabled, you login with your user name and password once, and your user credentials follow you during the current session so that you do not need to log in again when you access different systems or applications.

- **Type:**

```
 -> set /SP/services/sso/ state=enabled
Set 'state' to 'enabled'
->
```

Related Information

- “Disable SSO (Oracle ILOM CLI)” on page 365
- “Display the State of Single Sign-On (Oracle ILOM CLI)” on page 94

▼ Disable SSO (Oracle ILOM CLI)

You can disable SSO as needed. When disabled, every time you need to provide credentials to the switch you will be prompted for username and password.

- **Type:**

```
 -> set /SP/services/sso/ state=disabled
Set 'state' to 'disabled'
->
```

Related Information

- “Enable SSO (Oracle ILOM CLI)” on page 365
- “Display the State of Single Sign-On (Oracle ILOM CLI)” on page 94

Managing Notifications and Logging (Oracle ILOM CLI)

These topics describe how to configure the state and properties of events, notifications, and event logging through the Oracle ILOM CLI.

- “Configure the SMTP Client (Oracle ILOM CLI)” on page 366
- “Managing Alerts and Events (Oracle ILOM CLI)” on page 367

- “Managing Logs (Oracle ILOM CLI)” on page 372

Related Information

- “Monitoring the Switch (Oracle ILOM CLI)” on page 35
- “Managing Switch Components and Identification (Oracle ILOM CLI” on page 302
- “Managing Authentication and Access (Oracle ILOM CLI)” on page 327
- “Managing Management Networking (Oracle ILOM CLI)” on page 374
- “Managing Management Connections to the Switch (Oracle ILOM CLI)” on page 381
- “Managing Switch Interface Methods (Oracle ILOM CLI)” on page 386
- “Managing the ASR Client (Oracle ILOM CLI)” on page 414
- “Managing User Accounts (Oracle ILOM CLI)” on page 418
- “Configure the FIPS Service (Oracle ILOM CLI)” on page 425

▼ Configure the SMTP Client (Oracle ILOM CLI)

The switch contains an SMTP email client which is used to email notification and alerts to specified email address. The email address can be an alias or individual recipient's email, for example, the switch administrator.

Note - To send messages, the SMTP client must be enabled and configured for email alert rules. See “Enable an Alert to Send Email Alerts (Oracle ILOM CLI)” on page 369.

---

1. **Configure the client with the SMTP server information.**

```
-> set /SP/clients/smtp address=IP_address customisers=email port=outnumber state=state
```

where:

- *IP_address* is the IP address of the SMTP server.
- *email* is the sender, as seen in the From field. For example, `ilom-gwl@`*hostname*, where *hostname* is the host name of the SP.
- *port* is the port on which the SMTP server communication occurs.
- *state* is either `enabled` or `disabled`.

For example, type:

```
-> set /SP/clients/smtp address=123.45.67.89 customisers=ilom-gwl@hostname state=enabled
Set 'address' to '123.45.67.89'
Set 'customisers' to 'ilom-gwl@hostname'
```

```
Set 'state' to 'enabled'
->
```

2. **(Optional) Send a test email to verify SMTP client settings:**

   a. **Type:**

   ```
   -> set /SP/clients/smtp send_test_email_to=email_to
   ```

   where *email_to* is the destination email address.

   b. **Verify that the email was received.**

Related Information

- "Display the SMTP Client Status (Oracle ILOM CLI)" on page 95

Managing Alerts and Events (Oracle ILOM CLI)

These topics describe information about how to use the Oracle ILOM CLI to configure the switch's notification system to send alerts and events.

- "Enable an Alert to Send SNMP Traps (Oracle ILOM CLI)" on page 367
- "Enable an Alert to Send Email Alerts (Oracle ILOM CLI)" on page 369
- "Enable an Alert to Send PETs (Oracle ILOM CLI)" on page 370
- "Disable an Alert (Oracle ILOM CLI)" on page 371
- "Clear a Faulted System Component (Oracle ILOM CLI)" on page 371

Related Information

- "Configure the SMTP Client (Oracle ILOM CLI)" on page 366
- "Managing Logs (Oracle ILOM CLI)" on page 372

▼ Enable an Alert to Send SNMP Traps (Oracle ILOM CLI)

Alerts are sent when conditions in the switch match an alert level that you create by editing a preconfigured rule already on the switch. Part of configuring the rule is specifying the alert level, and also, specifying the alert type, which can be an SNMP trap. When an alert of the specified level or greater occurs, the switch then sends an SNMP trap. By default, alerts are disabled.

Use this task to configure the switch to send a trap when an alert occurs.

- **Type:**

```
-> set /SP/alertmgmt/rules/alert/ destination=IP_address destination_port=162 level=level
 snmp_version=version
```

where:

- *alert* is the number of the alert.
- *IP_address* is the IP address of the host to receive the SNMP trap.
- *level* is the level of the alert.
- *version* is the version of SNMP trap.

For example, to set alert 1 to send v2c SNMP traps on occurrence of `minor` or higher severity events to the host at `123.45.67.89`, type:

```
-> set /SP/alertmgmt/rules/1/ destination=123.45.67.89 destination_port=162 level=minor snmp_version=3
Set 'destination' to '123.45.67.89'
Set 'destination_port' to '162'
Set 'level' to 'minor'
Set 'snmp_version' to '3'
->
```

Note - The destination port of 162 is the default.

This is an example of an SNMP v2c trap of when the aggregate sensor is in the state of `Asserted`. In the output, the trap source is the switch, and the component raising the trap is `/SYS/CHASSIS_STATUS` or the aggregate sensor.

```
Sep 25 10:18:08 mnm-blr-9 snmptrapd[3579]: [ID 702911 daemon.warning] mnm-blr-60.in.oracle.com
 [123.45.67.90]: Trap
DISMAN-EVENT-MIB::sysUpTimeInstance = Timeticks: (2814848) 7:49:08.48, SNMPv2-MIB::snmpTrapOID.0 = OID:
SUN-HW-TRAP-MIB::sunHwTrapComponentError, SUN-HW-TRAP-MIB::sunHwTrapSystemIdentifier.0 = STRING:
 123.45.67.90,
SUN-HW-TRAP-MIB::sunHwTrapChassisId.0 = STRING: AK00022680, SUN-HW-TRAP-MIB::sunHwTrapProductName.0 =
 STRING: Oracle
IS2-46 InfiniBand Switch, SUN-HW-TRAP-MIB::sunHwTrapComponentName.0 = STRING: /SYS/CHASSIS_STATUS,
SUN-HW-TRAP-MIB::sunHwTrapAdditionalInfo.0 = STRING: State Asserted, SUN-HW-TRAP-
MIB::sunHwTrapAssocObjectId.0 = OID:
ENTITY-MIB::entPhysicalDescr.37
```

Related Information

- “Enable an Alert to Send Email Alerts (Oracle ILOM CLI)” on page 369

- "Enable an Alert to Send PETs (Oracle ILOM CLI)" on page 370
- "Disable an Alert (Oracle ILOM CLI)" on page 371
- "Clear a Faulted System Component (Oracle ILOM CLI)" on page 371
- "Display the Alert Properties (Oracle ILOM CLI)" on page 96

▼ Enable an Alert to Send Email Alerts (Oracle ILOM CLI)

Alerts are sent when conditions in the switch match an alert level that you create by editing a preconfigured rule already on the switch. Part of configuring the rule is specifying the alert level, and also, specifying the alert type, which can be an email. When an alert of the specified level or greater occurs, the switch then sends an email. By default, alerts are disabled.

- **Type:**

```
-> set /SP/alertmgmt/rules/alert destination=email_to type=email email_custom_sender=email_from level=level
```

where:

- *alert* is the number of the alert.
- *email_to* is the email address to receive the alert.
- *email_from* is the sender, as seen in the From field. For example: `ilom-gwl-`*hostname*, where *hostname* is the host name of the SP.
- *level* is the level of the alert.

For example, to set alert 1 to send an email to `user@headsup.com` whenever a major or higher severity event happens:

```
-> set /SP/alertmgmt/rules/1 destination=user@companyq.com type=email email_custom_sender=ilom-gwl-unit1
 level=major
Set 'destination' to 'user@companyq.com'
Set 'type' to 'email'
Set 'email_custom_sender' to 'ilom-gwl-unit1'
Set 'level' to 'major'
->
```

Related Information

- "Enable an Alert to Send SNMP Traps (Oracle ILOM CLI)" on page 367
- "Enable an Alert to Send PETs (Oracle ILOM CLI)" on page 370
- "Disable an Alert (Oracle ILOM CLI)" on page 371
- "Clear a Faulted System Component (Oracle ILOM CLI)" on page 371
- "Display the Alert Properties (Oracle ILOM CLI)" on page 96

▼ Enable an Alert to Send PETs (Oracle ILOM CLI)

Alerts are sent when conditions in the switch match an alert level that you create by editing a preconfigured rule already on the switch. Part of configuring the rule is specifying the alert level, and also, specifying the alert type, which can be an IPMI PET. When an alert of the specified level or greater occurs, the switch then sends an IPM PET. By default, alerts are disabled.

- **Type:**

```
-> set /SP/alertmgmt/rules/alert/ destination=IP_address level=level type=ipmipet
```

where:

- *alert* is the number of the alert.
- *IP_address* is the IP address of the host to receive the PET trap.
- *level* is the level of the alert.

For example, to set alert 2 to send `ipmipet` traps on occurrence of `minor` or higher severity events to the host at `123.45.67.89`, type:

```
-> set /SP/alertmgmt/rules/2/ destination=123.45.67.89 level=minor type=ipmipet
Set 'destination' to '123.45.67.89'
Set 'level' to 'minor'
Set 'type' to 'ipmipet'
->
```

This is an example of a PET trap of a minor level alert.

```
Sep 12 13:12:38 mnm-blr-2 snmptrapd[1514]: [ID 702911 daemon.warning] 123.45.67.90: Enterprise Specific
 Trap (12583681) Uptime: 117 days, 8:00:20.80, SNMPv2-SMI::enterprises.3183.1.1.1 = Hex-STRING: FF 20 00
 08 FF FF FF FF FF FF 8E 00 28 4B E0 00
Sep 12 13:12:38 mnm-blr-2 02 00 A0 EB C1 07 FF FF 20 20 02 20 01 00 00 01
Sep 12 13:12:38 mnm-blr-2 FF FF 00 00 00 00 00 19 2A 00 00 00 30 30 80 0F
Sep 12 13:12:38 mnm-blr-2 03 43 48 41 53 53 49 53 5F 53 54 41 54 55 53 00
Sep 12 13:12:38 mnm-blr-2 80 26 03 53 75 6E 54 4D 20 44 61 74 61 63 65 6E
Sep 12 13:12:38 mnm-blr-2 74 65 72 20 49 6E 66 69 6E 69 42 61 6E 64 20 53
Sep 12 13:12:38 mnm-blr-2 77 69 74 63 68 20 33 36 00 C1 00 00 00 00
```

Related Information

- “Enable an Alert to Send SNMP Traps (Oracle ILOM CLI)” on page 367
- “Enable an Alert to Send Email Alerts (Oracle ILOM CLI)” on page 369
- “Disable an Alert (Oracle ILOM CLI)” on page 371
- “Clear a Faulted System Component (Oracle ILOM CLI)” on page 371

- “Display the Alert Properties (Oracle ILOM CLI)” on page 96

Disable an Alert (Oracle ILOM CLI)

By default, alerts are disabled. For enabled alerts, you can selectively disable individual rules. When alerts are disabled, the SNMP trap, email, or IPMI PET associated with that rule is no longer sent. The condition that caused the alert still exists, but you are not notified.

- **Type:**

```
-> set /SP/alertmgmt/rules/alert level=disable
```

where *alert* is the number of the alert to disable.
For example, to disable alert 1, type:

```
-> set /SP/alertmgmt/rules/1 level=disable
Set 'level' to 'disable'
->
```

The alert is disabled.

Related Information

- “Enable an Alert to Send SNMP Traps (Oracle ILOM CLI)” on page 367
- “Enable an Alert to Send Email Alerts (Oracle ILOM CLI)” on page 369
- “Enable an Alert to Send PETs (Oracle ILOM CLI)” on page 370
- “Clear a Faulted System Component (Oracle ILOM CLI)” on page 371
- “Display the Alert Properties (Oracle ILOM CLI)” on page 96

Clear a Faulted System Component (Oracle ILOM CLI)

If any system component encounters a fault, you can clear individual faulted components as needed. Use this task to clear faulted components.

- **Type:**

```
-> set faulted_target clear_fault_action=true
```

where *faulted_target* is the Oracle ILOM target of the faulted component.
For example, type:

```
-> set /SYS/PS0/ clear_fault_action=true
Are you sure you want to clear /SYS/PS0 (y/n)? y
Set 'clear_fault_action' to 'true'
->
```

Related Information

- “Enable an Alert to Send SNMP Traps (Oracle ILOM CLI)” on page 367
- “Enable an Alert to Send Email Alerts (Oracle ILOM CLI)” on page 369
- “Enable an Alert to Send PETs (Oracle ILOM CLI)” on page 370
- “Disable an Alert (Oracle ILOM CLI)” on page 371
- “Display the Alert Properties (Oracle ILOM CLI)” on page 96

Managing Logs (Oracle ILOM CLI)

The Oracle ILOM has two files that automatically record pertinent information:

- The event log records all switch hardware-related events logged to the SP.
- The audit log records user-issued commands that result in a configuration change on the switch.

These topics describe how to control the display and behavior of entries in the event and audit logs.

- “Clear a Log (Oracle ILOM CLI)” on page 372
- “Configure the Remote Log Host (Oracle ILOM CLI)” on page 373

Related Information

- “Configure the SMTP Client (Oracle ILOM CLI)” on page 366
- “Managing Alerts and Events (Oracle ILOM CLI)” on page 367

▼ Clear a Log (Oracle ILOM CLI)

When a log file gets large, you might want to clear it to facilitate locating and managing log contents. If you clear a log, it begins to fill again when new events occur.

- **Do one or all of the following:**

  - **To clear the audit log, type:**

    ```
    -> set /SP/logs/audit/ clear=true
    ```

```
Are you sure you want to clear /SP/logs/audit (y/n)? y
Set 'clear' to 'true'
->
```

- **To clear the event log, type:**

```
-> set /SP/logs/event clear=true
Are you sure you want to clear /SP/logs/event (y/n)? y
Set 'clear' to 'true'
->
```

- **To clear the system log, type:**

```
-> set /System/Log/ clear=true
-> Are you sure you want to clear /System/Log (y/n)? y
->
```

Related Information

- “Configure the Remote Log Host (Oracle ILOM CLI)” on page 373
- “Display the Oracle ILOM Audit Log (Oracle ILOM CLI)” on page 96
- “Oracle ILOM Log Entry Filters” on page 99

▼ Configure the Remote Log Host (Oracle ILOM CLI)

The Oracle ILOM implementation in the SP provides a protocol for transmitting Oracle ILOM events to a remote log host. The events transmitted are similar to those displayed in the local log.

- **Set the remote log host IP address.**

-> **set /SP/clients/syslog/***number***address=***IP_address*

where:

- *number* is `1` for the first log host and `2` for the second log host.
- *IP_address* is the IP address of the log host.

Note - Setting a remote log host IP address to `0.0.0.0` disables that functionality.

For example, to set the IP address of remote host 1 to `123.45.67.89`, type:

```
-> set /SP/clients/syslog/1 address=123.45.67.89
```

```
Set 'address' to '123.45.67.89'
->
```

Related Information

- “Display the Remote Log Hosts (Oracle ILOM CLI)” on page 100

Managing Management Networking (Oracle ILOM CLI)

These topics describe how to control the switch's IPv4 and IPv6 network configuration and individual network controllers through the Oracle ILOM CLI.

- “Configure the Management Network Parameters (Oracle ILOM CLI)” on page 374
- “Managing IPv4 Management Network Properties (Oracle ILOM CLI)” on page 376
- “Managing IPv6 Management Network Properties (Oracle ILOM CLI)” on page 378
- “Test the Management Network Configuration (Oracle ILOM CLI)” on page 381

Related Information

- “Monitoring the Switch (Oracle ILOM CLI)” on page 35
- “Managing Switch Components and Identification (Oracle ILOM CLI” on page 302
- “Managing Authentication and Access (Oracle ILOM CLI)” on page 327
- “Managing Notifications and Logging (Oracle ILOM CLI)” on page 365
- “Managing Management Connections to the Switch (Oracle ILOM CLI)” on page 381
- “Managing Switch Interface Methods (Oracle ILOM CLI)” on page 386
- “Managing the ASR Client (Oracle ILOM CLI)” on page 414
- “Managing User Accounts (Oracle ILOM CLI)” on page 418
- “Configure the FIPS Service (Oracle ILOM CLI)” on page 425

▼ Configure the Management Network Parameters (Oracle ILOM CLI)

The switch's network management parameters enable Oracle ILOM to automatically learn the SP's IP address.

Note - This task makes changes that do not require a reset or reboot.

1. **Configure the network management parameters.**

```
-> set /SP/network property=value property=value ...
```

where:

- *property* is the parameter of the network to configure.
- *value* is the value of the *property* to configure.

Note - You can configure one, several, or all properties in one command line.

These properties are supported:

- `commitpendingpending` – *value* is whether pending information has been committed, either `true` or `false`.
- `dhcp_clienid` – *value* is the identifier for the DHCP client receiving its address information.
- `dhcp_server_ip` – *value* is the IP address of the DHCP server.
- `ipaddress` – *value* is the switch's host IP address.
- `ipdiscovery` – *value* is the IP address assignment type configured, either `static` or `dhcp`.
- `ipgateway` – *value* is the IP address of the IP gateway for the switch.
- `ipnetmask` – *value* is the IP netmask for the switch's host IP address.
- `macaddress` – *value* is the switch's MAC address.
- `pendingipaddress` – *value* is the IP address of the SP to be configured.
- `pendingipdiscovery` – *value* is the method of IP discovery to be configured, either `static` or `dhcp`.
- `pendingipgateway` – *value* is the IP address of the switch to be configured.
- `pendingipnetmask` – *value* is the netmask to be configured.
- `pendingvlan_id` – *value* is the VLAN ID to be configured.
- `state` – *value* is the IP protocol version currently configured and in use.
- `vlan_id` – *value* is the VLAN ID currently configured and in use.

For example, to set the IP address of the SP, type:

```
-> set /SP/network pendingipaddress=123.45.67.90
Set 'pendingipaddress' to '123.45.67.90'
```

2. **Commit the changes.**

```
-> set /SP/network commitpending=true
Set 'commitpending' to 'true'
```

The IP address has changed to `123.45.67.90`.

3. **Access the Oracle ILOM CLI using the new IP address.**

4. **Display the new IP address.**

```
-> show /SP/network ipaddress
 /SP/network
  Properties:
   ipaddress = 123.45.67.90
->
```

Related Information

- “Managing IPv4 Management Network Properties (Oracle ILOM CLI)” on page 376
- “Managing IPv6 Management Network Properties (Oracle ILOM CLI)” on page 378
- “Display the Management Network Configuration (Oracle ILOM CLI)” on page 104

Managing IPv4 Management Network Properties (Oracle ILOM CLI)

The switch supports standard IPv4 routing for the network management interface.

- “Enable IPv4 (Oracle ILOM CLI)” on page 376
- “Configure IPv4 Routing Properties (Oracle ILOM CLI)” on page 377
- “Disable IPv4 Management Network Routing (Oracle ILOM CLI)” on page 378

Related Information

- “Configure the Management Network Parameters (Oracle ILOM CLI)” on page 374
- “Managing IPv6 Management Network Properties (Oracle ILOM CLI)” on page 378
- “Display the Management Network Configuration (Oracle ILOM CLI)” on page 104

▼ Enable IPv4 (Oracle ILOM CLI)

If network management occurs over an IPv4 network, use this task to enable IPv4 network connectivity for the SP and network management interface.

- **Type:**

```
-> set /SP/network/ state=enabled
Set 'state' to 'enabled' [ipv4-only]
->
```

Related Information

- “Configure IPv4 Routing Properties (Oracle ILOM CLI)” on page 377
- “Disable IPv4 Management Network Routing (Oracle ILOM CLI)” on page 378
- “Test the Management Network Configuration (Oracle ILOM CLI)” on page 381

▼ Configure IPv4 Routing Properties (Oracle ILOM CLI)

If network management occurs over an IPv4 network, use this task to configure the SP and network management properties.

1. **Enable IPV4 networking.**

   See “Enable IPv4 (Oracle ILOM CLI)” on page 376.

2. **Set the DHCP client ID.**

```
 -> set /SP/network dhcp_clientid=sysid
Set 'dhcp_clientid' to 'sysid'
->
```

3. **Set the discovery method for pending IP addresses.**

```
 -> set /SP/network/ pendingipdiscovery=static
Set 'pendingipdiscovery' to 'static'
->
```

4. **Set the pending IP address.**

```
 -> set /SP/network/ pendingipaddress=192.168.1.121
Set 'pendingipaddress' to '192.168.1.121'
->
```

5. **Set the pending IP gateway.**

```
 -> set /SP/network/ pendingipgateway=192.168.1.1
Set 'pendingipgateway' to '192.168.1.1'
->
```

6. **Set the pending IP netmask.**

```
 -> set /SP/network/ pendingipnetmask=255.255.255.0
Set 'pendingipnetmask' to '255.255.255.0'
->
```

7. **Activate pending commits.**

```
-> set /SP/network/ commitpending=true
Commit Successful.
->
```

8. **(Optional) Test the validity of the network.**

   See “Test the Management Network Configuration (Oracle ILOM CLI)” on page 381.

Related Information

- “Enable IPv4 (Oracle ILOM CLI)” on page 376
- “Disable IPv4 Management Network Routing (Oracle ILOM CLI)” on page 378
- “Test the Management Network Configuration (Oracle ILOM CLI)” on page 381

▼ Disable IPv4 Management Network Routing (Oracle ILOM CLI)

At any time, you can disable IPv4 routing for the network management interface. When disabled, IPv4 routing properties remain configured, but IPv4 traffic is not supported on the SP.

- **Type:**

```
-> set /SP/network/ state=disabled
Set 'state' to 'disabled' [ipv4-only]
->
```

Related Information

- “Enable IPv4 (Oracle ILOM CLI)” on page 376
- “Configure IPv4 Routing Properties (Oracle ILOM CLI)” on page 377
- “Test the Management Network Configuration (Oracle ILOM CLI)” on page 381

Managing IPv6 Management Network Properties (Oracle ILOM CLI)

The switch supports standard IPv6 routing for the network management interface.

- “Enable IPv6 Management Network Routing (Oracle ILOM CLI)” on page 379
- “Configure IPv6 Management Network Properties (Oracle ILOM CLI)” on page 379
- “Disable IPv6 Management Networking (Oracle ILOM CLI)” on page 380

Related Information

- “Configure the Management Network Parameters (Oracle ILOM CLI)” on page 374
- “Display the Management Network Configuration (Oracle ILOM CLI)” on page 104
- “Test the Management Network Configuration (Oracle ILOM CLI)” on page 381

▼ Enable IPv6 Management Network Routing (Oracle ILOM CLI)

If network management occurs over an IPv6 network, use this task to enable IPv6 network connectivity for the SP and network management interface.

- **Type:**

```
-> set /SP/network/ipv6 state=enabled
Set 'state' to 'enabled'
->
```

Related Information

- “Configure IPv6 Management Network Properties (Oracle ILOM CLI)” on page 379
- “Disable IPv6 Management Networking (Oracle ILOM CLI)” on page 380
- “Test the Management Network Configuration (Oracle ILOM CLI)” on page 381
- “Display the IPv6 Management Network Properties (Oracle ILOM CLI)” on page 103

▼ Configure IPv6 Management Network Properties (Oracle ILOM CLI)

If network management occurs over an IPv6 network, use this task to configure the SP and network management properties.

1. **Enable IPv6 networking.**

   See “Enable IPv6 Management Network Routing (Oracle ILOM CLI)” on page 379.

2. **Enable automatic configuration as needed:**

   - **For DHCP, type:**

```
-> set /SP/network/ipv6 autoconfig=dhcpv6_stateful
Set 'autoconfig' to 'dhcpv6_stateless'
->
```

- **For static address assignment, type:**

```
-> set /SP/network/ipv6 autoconfig=dhcpv6_stateless
Set 'autoconfig' to 'dhcpv6_stateless'
->
```

3. **For static address assignment, set the pending static IP address.**

```
-> set /SP/network/ipv6 pending_static_ipaddress=2001:345:abcd::123:45
Set 'pending_static_ipaddress' to '2001:345:abcd::123:45' [2001:345:abcd::123:44/128]
->
```

4. **For static address assignment, set the pending static IP address for the gateway.**

```
 -> set /SP/network/ipv6 pending_static_ipgateway=2001:345:abcd::1:1
Set 'pending_static_ipgateway' to '2001:345:abcd::1:1'
->
```

Related Information

- “Enable IPv6 Management Network Routing (Oracle ILOM CLI)” on page 379
- “Disable IPv6 Management Networking (Oracle ILOM CLI)” on page 380
- “Test the Management Network Configuration (Oracle ILOM CLI)” on page 381
- “Display the IPv6 Management Network Properties (Oracle ILOM CLI)” on page 103

▼ Disable IPv6 Management Networking (Oracle ILOM CLI)

At any time, you can disable IPv6 routing for the network management interface. When IPv6 is disabled, its routing properties remain configured, but IPv6 traffic is not supported on the SP.

- **Type:**

```
-> set /SP/network/ipv6 state=disabled
Set 'state' to 'disabled'
->
```

Related Information

- “Enable IPv6 Management Network Routing (Oracle ILOM CLI)” on page 379
- “Configure IPv6 Management Network Properties (Oracle ILOM CLI)” on page 379
- “Test the Management Network Configuration (Oracle ILOM CLI)” on page 381
- “Display the IPv6 Management Network Properties (Oracle ILOM CLI)” on page 103

▼ Test the Management Network Configuration (Oracle ILOM CLI)

The switch can send IPv4 `ping` and IPv6 `ping6` packets to a specified destination to ensure that networking is configured correctly.

- **Use the method appropriate for your network protocol version:**
  - **For IPv4, send a `ping` packet to a device that supports IPv4.**

```
-> set /SP/network/test/ping 10.11.12.13
->
```

  - **For IPv6, send a `ping6` packet to a device that supports IPv6.**

```
-> set /SP/network/test/ping6 10.11.12.13
->
```

Related Information

- “Enable IPv6 Management Network Routing (Oracle ILOM CLI)” on page 379
- “Configure IPv6 Management Network Properties (Oracle ILOM CLI)” on page 379
- “Disable IPv6 Management Networking (Oracle ILOM CLI)” on page 380
- “Display the IPv6 Management Network Properties (Oracle ILOM CLI)” on page 103

Managing Management Connections to the Switch (Oracle ILOM CLI)

These topics describe how to manage connections to the switch through the Oracle ILOM CLI.

- “Managing Serial Connections (Oracle ILOM CLI)” on page 382
- “Managing Switch Management Connection and Login Messages (Oracle ILOM CLI)” on page 384
- “Configure the Oracle ILOM CLI Session Timeout (Oracle ILOM CLI)” on page 386

Related Information

- “Monitoring the Switch (Oracle ILOM CLI)” on page 35

- “Managing Switch Components and Identification (Oracle ILOM CLI” on page 302
- “Managing Authentication and Access (Oracle ILOM CLI)” on page 327
- “Managing Notifications and Logging (Oracle ILOM CLI)” on page 365
- “Managing Management Networking (Oracle ILOM CLI)” on page 374
- “Managing Switch Interface Methods (Oracle ILOM CLI)” on page 386
- “Managing the ASR Client (Oracle ILOM CLI)” on page 414
- “Managing User Accounts (Oracle ILOM CLI)” on page 418
- “Configure the FIPS Service (Oracle ILOM CLI)” on page 425

Managing Serial Connections (Oracle ILOM CLI)

The switch supports connection to a management terminal through a serial connection.

- “Configure External Serial Connection Properties (Oracle ILOM CLI)” on page 382
- “Configure Host Serial Connection Properties (Oracle ILOM CLI)” on page 383
- “Configure Port Sharing (Oracle ILOM CLI)” on page 384

Related Information

- “Managing Switch Management Connection and Login Messages (Oracle ILOM CLI)” on page 384
- “Configure the Oracle ILOM CLI Session Timeout (Oracle ILOM CLI)” on page 386

▼ Configure External Serial Connection Properties (Oracle ILOM CLI)

The serial connection must be configured with properties that match at the switch end and host end of the connection. Use this task to set the serial connection properties, such as flow control and connection baud rate, for the switch end of the connection. Configuring the serial connection requires you to commit the properties. To commit the pending properties, the serial console cannot be in use.

1. **Set the pending flow control.**

```
-> set /SP/serial/external/ pendingflowcontrol=software
Set 'pendingflowcontrol' to 'software'
->
```

2. **Set the pending speed.**

```
-> set /SP/serial/external/ pendingspeed=115200
Set 'pendingspeed' to '115200'
->
```

3. **Commit the pending properties.**

```
-> set /SP/serial/external/ commitpending=true
Set 'commitpending' to 'true'
->
```

Related Information

- "Configure Host Serial Connection Properties (Oracle ILOM CLI)" on page 383
- "Configure Port Sharing (Oracle ILOM CLI)" on page 384
- "Configure Connection Message Properties (Oracle ILOM CLI)" on page 385
- "Configure Login Message Properties (Oracle ILOM CLI)" on page 385
- "Display the Host Console Connection Settings (Oracle ILOM CLI)" on page 107

▼ Configure Host Serial Connection Properties (Oracle ILOM CLI)

The serial connection must be configured with properties that match at the switch end and host end of the connection. Use this task to set the serial connection properties, such as flow control and connection baud rate, for the host end of the connection. Configuring the serial connection requires you to commit the properties. To commit the pending properties, the serial console cannot be in use.

1. **Set the pending flow control.**

```
-> set /SP/serial/host/ pendingflowcontrol=software
Set 'pendingflowcontrol' to 'software'
->
```

2. **Set the pending speed.**

```
-> set /SP/serial/host/ pendingspeed=115200
Set 'pendingspeed' to '115200'
->
```

3. **Commit the pending properties.**

```
-> set /SP/serial/host/ commitpending=true
Set 'commitpending' to 'true'
->
```

Related Information

- “Configure External Serial Connection Properties (Oracle ILOM CLI)” on page 382
- “Configure Port Sharing (Oracle ILOM CLI)” on page 384
- “Configure Connection Message Properties (Oracle ILOM CLI)” on page 385
- “Configure Login Message Properties (Oracle ILOM CLI)” on page 385
- “Display the Host Console Connection Settings (Oracle ILOM CLI)” on page 107

▼ Configure Port Sharing (Oracle ILOM CLI)

One end of the connection must be responsible for controlling the port sharing feature. Use this task to set the SP as the owner of port sharing. Configuring the port sharing requires you to commit the port sharing owner. To commit the owner, the serial console cannot be in use.

- **Set what entity controls port sharing.**

```
 -> set /SP/serial/portsharing/ owner=sp
Set 'owner' to 'sp'
->
```

Related Information

- “Configure External Serial Connection Properties (Oracle ILOM CLI)” on page 382
- “Configure Host Serial Connection Properties (Oracle ILOM CLI)” on page 383
- “Configure Connection Message Properties (Oracle ILOM CLI)” on page 385
- “Configure Login Message Properties (Oracle ILOM CLI)” on page 385
- “Display the Host Console Connection Settings (Oracle ILOM CLI)” on page 107

Managing Switch Management Connection and Login Messages (Oracle ILOM CLI)

The switch supports banner messages that are displayed as users connect to, or log in to, the switch.

- “Configure Connection Message Properties (Oracle ILOM CLI)” on page 385
- “Configure Login Message Properties (Oracle ILOM CLI)” on page 385

Related Information

- “Managing Serial Connections (Oracle ILOM CLI)” on page 382
- “Managing Switch Management Connection and Login Messages (Oracle ILOM CLI)” on page 384
- “Configure the Oracle ILOM CLI Session Timeout (Oracle ILOM CLI)” on page 386

▼ Configure Connection Message Properties (Oracle ILOM CLI)

By default, no connection message is displayed, but you can configure one if needed.

- **Type:**

```
 -> -> set /SP/preferences/banner/connect/ message="Welcome to the Tech Pubs Leaf."
Set 'message' to 'Welcome to the Tech Pubs Leaf.'

->
```

Related Information

- “Configure Login Message Properties (Oracle ILOM CLI)” on page 385
- “Display the System Banner Messages (Oracle ILOM CLI)” on page 106
- “Configure the Oracle ILOM CLI Session Timeout (Oracle ILOM CLI)” on page 386

▼ Configure Login Message Properties (Oracle ILOM CLI)

When users are logging in to the switch, you can configure a banner message to provide customized information. As part of the login message, you also can configure an optional acknowledgement that users must confirm before they can complete logging in to the switch.

1. **Set a message that is displayed when users successfully log in to the switch.**

```
 -> set /SP/preferences/banner/login/ message="You must log off when done with this
 switch!"
Set 'message' to 'You must log off when done with this switch!'
->
```

2. **(Optional) Set whether users must accept the login banner message before they can connect to the switch.**

```
 -> set /SP/preferences/banner/login/ message_acceptance=enabled
Set 'message_acceptance' to 'enabled'
->
```

Related Information

- “Configure Login Message Properties (Oracle ILOM CLI)” on page 385
- “Display the System Banner Messages (Oracle ILOM CLI)” on page 106
- “Configure the Oracle ILOM CLI Session Timeout (Oracle ILOM CLI)” on page 386

▼ Configure the Oracle ILOM CLI Session Timeout (Oracle ILOM CLI)

The switch supports an inactivity timer that closes any open CLI sessions after a configured number of minutes. A timeout value of zero (`0`) disables the timeout so that inactive CLI session remain open indefinitely.

- **Type:**

```
-> set /SP/cli timeout=value
```

where *value* is the number of minutes for session timeout (`1`–`1440`). Setting a timeout *value* of `0` disables the timeout feature.

For example, to set the timeout for 100 minutes, type:

```
-> set /SP/cli timeout=100
Set 'timeout' to '100'
->
```

The CLI session timeout is set.

Related Information

- “Configure Connection Message Properties (Oracle ILOM CLI)” on page 385
- “Configure Login Message Properties (Oracle ILOM CLI)” on page 385
- “Display the System Banner Messages (Oracle ILOM CLI)” on page 106

Managing Switch Interface Methods (Oracle ILOM CLI)

These topics describe how to use the Oracle ILOM CLI to manage various methods of interfacing with the switch.

- “Managing the HTTP Service (Oracle ILOM CLI)” on page 387

- “Managing the HTTPS Service (Oracle ILOM CLI)” on page 390
- “Managing the SSH Service (Oracle ILOM CLI)” on page 395
- “Managing SNMP Services (Oracle ILOM CLI)” on page 398
- “Managing IPMI Services (Oracle ILOM CLI)” on page 410
- “Restart Oracle ILOM” on page 413
- “Restart Oracle Fabric OS” on page 413

Related Information

- “Monitoring the Switch (Oracle ILOM CLI)” on page 35
- “Managing Switch Components and Identification (Oracle ILOM CLI” on page 302
- “Managing Authentication and Access (Oracle ILOM CLI)” on page 327
- “Managing Notifications and Logging (Oracle ILOM CLI)” on page 365
- “Managing Management Networking (Oracle ILOM CLI)” on page 374
- “Managing Management Connections to the Switch (Oracle ILOM CLI)” on page 381
- “Managing the ASR Client (Oracle ILOM CLI)” on page 414
- “Managing User Accounts (Oracle ILOM CLI)” on page 418
- “Configure the FIPS Service (Oracle ILOM CLI)” on page 425

Managing the HTTP Service (Oracle ILOM CLI)

The HTTP service on the switch supports the web access for your network environment. HTTP is not the default service and is disabled by default, but is supported.

- “Enable the HTTP Service (Oracle ILOM CLI)” on page 387
- “Configure HTTP Properties (Oracle ILOM CLI)” on page 388
- “Disable the HTTP Service (Oracle ILOM CLI)” on page 389

Related Information

- “Managing the HTTPS Service (Oracle ILOM CLI)” on page 390
- “Managing the SSH Service (Oracle ILOM CLI)” on page 395
- “Managing SNMP Services (Oracle ILOM CLI)” on page 398
- “Managing IPMI Services (Oracle ILOM CLI)” on page 410

▼ Enable the HTTP Service (Oracle ILOM CLI)

The HTTP service on the switch enables web server connections to the Oracle ILOM. Both HTTP and HTTPS (the default) can run simultaneously.

Note - By default, the HTTP service is disabled and the HTTPS service is enabled.

- **Type:**

```
-> set /SP/services/http servicestate=enabled
Set 'servicestate' to 'enabled'
->
```

Related Information

- “Configure HTTP Properties (Oracle ILOM CLI)” on page 388
- “Disable the HTTP Service (Oracle ILOM CLI)” on page 389
- “Display the HTTP Service Status (Oracle ILOM CLI)” on page 115
- “Enable the HTTPS Service (Oracle ILOM CLI)” on page 390
- “Configure HTTPS Properties (Oracle ILOM CLI)” on page 391
- “Install a Custom SSL Certificate and Key (Oracle ILOM CLI)” on page 392
- “Remove the Custom SSL Certificate and Key (Oracle ILOM CLI)” on page 393
- “Disable the HTTPS Service (Oracle ILOM CLI)” on page 394

▼ Configure HTTP Properties (Oracle ILOM CLI)

1. **If HTTP is not already enabled, enable it now.**

   See “Enable the HTTP Service (Oracle ILOM CLI)” on page 387

2. **Set the HTTP port.**

```
 -> set /SP/services/http port=81
Set 'port' to '81'
->
```

   By default, the HTTP service is disabled and runs on port 80 when enabled.

3. **Set the state of secure redirection.**

```
 -> set /SP/services/http secureredirect=enabled
Set 'secureredirect' to 'enabled'
->
```

4. **Set the session timeout.**

```
 -> set /SP/services/http sessiontimeout=120
Set 'sessiontimeout' to '120'
->
```

By default, the session timeout is 60 seconds.

Related Information

- “Enable the HTTP Service (Oracle ILOM CLI)” on page 387
- “Disable the HTTP Service (Oracle ILOM CLI)” on page 389
- “Display the HTTP Service Status (Oracle ILOM CLI)” on page 115
- “Enable the HTTPS Service (Oracle ILOM CLI)” on page 390
- “Configure HTTPS Properties (Oracle ILOM CLI)” on page 391
- “Install a Custom SSL Certificate and Key (Oracle ILOM CLI)” on page 392
- “Remove the Custom SSL Certificate and Key (Oracle ILOM CLI)” on page 393
- “Disable the HTTPS Service (Oracle ILOM CLI)” on page 394

▼ Disable the HTTP Service (Oracle ILOM CLI)

If HTTP is enabled, you can disable it at any time without having to change any of the existing HTTP properties.

Note - The HTTP service is disabled by default.

- **Type:**

```
-> set /SP/services/http servicestate=disabled
Set 'servicestate' to 'disabled'
->
```

Related Information

- “Enable the HTTP Service (Oracle ILOM CLI)” on page 387
- “Configure HTTP Properties (Oracle ILOM CLI)” on page 388
- “Display the HTTP Service Status (Oracle ILOM CLI)” on page 115
- “Enable the HTTPS Service (Oracle ILOM CLI)” on page 390
- “Configure HTTPS Properties (Oracle ILOM CLI)” on page 391
- “Install a Custom SSL Certificate and Key (Oracle ILOM CLI)” on page 392
- “Remove the Custom SSL Certificate and Key (Oracle ILOM CLI)” on page 393
- “Disable the HTTPS Service (Oracle ILOM CLI)” on page 394

Managing the HTTPS Service (Oracle ILOM CLI)

The HTTPS service on the switch supports the web access and encryption levels required for your network environment. HTTPS is the default service and is enabled by default, but HTTP is also supported.

- "Enable the HTTPS Service (Oracle ILOM CLI)" on page 390
- "Configure HTTPS Properties (Oracle ILOM CLI)" on page 391
- "Install a Custom SSL Certificate and Key (Oracle ILOM CLI)" on page 392
- "Remove the Custom SSL Certificate and Key (Oracle ILOM CLI)" on page 393
- "Disable the HTTPS Service (Oracle ILOM CLI)" on page 394

Related Information

- "Managing the HTTP Service (Oracle ILOM CLI)" on page 387
- "Managing the SSH Service (Oracle ILOM CLI)" on page 395
- "Managing SNMP Services (Oracle ILOM CLI)" on page 398
- "Managing IPMI Services (Oracle ILOM CLI)" on page 410

▼ Enable the HTTPS Service (Oracle ILOM CLI)

By default, HTTPS is enabled and HTTP is not, but both services can run simultaneously on the switch. If HTTP has been disabled, use this task to enable it again.

Note - This task enables an HTTPS connection to the Oracle ILOM web interface. The HTTPS service is enabled by default.

1. **Enable secure redirection.**

```
-> set /SP/services/http secureredirect=enabled
Set 'secureredirect' to 'enabled'
->
```

2. **Enable the HTTPS service.**

```
-> set /SP/services/https servicestate=enabled
Set 'servicestate' to 'enabled'
->
```

Related Information

- "Enable the HTTP Service (Oracle ILOM CLI)" on page 387

- “Configure HTTP Properties (Oracle ILOM CLI)” on page 388
- “Display the HTTP Service Status (Oracle ILOM CLI)” on page 115
- “Configure HTTPS Properties (Oracle ILOM CLI)” on page 391
- “Install a Custom SSL Certificate and Key (Oracle ILOM CLI)” on page 392
- “Remove the Custom SSL Certificate and Key (Oracle ILOM CLI)” on page 393
- “Disable the HTTPS Service (Oracle ILOM CLI)” on page 394

▼ Configure HTTPS Properties (Oracle ILOM CLI)

The HTTPS properties enable security and encryption for web server connections in your network. Use this task to configure the switch's HTTP properties, including supported versions of SSL and TLS.

1. **If HTTPS is not already enabled, enable it now.**

   See “Enable the HTTPS Service (Oracle ILOM CLI)” on page 390.

2. **Set the HTTP port.**

```
 -> set /SP/services/http port=81
Set 'port' to '81'
->
```

   By default, the HTTP service is disabled and runs on port 80 when enabled.

3. **Set the session timeout.**

```
 -> set /SP/services/https sessiontimeout=120
Set 'sessiontimeout' to '120'
->
```

   By default, the session timeout is 60 seconds.

4. **Enable any, or all, TLS services that apply.**

   - **Enable TLS v1.**

```
 -> set /SP/services/https/ tlsv1=enabled
Set 'tlsv1' to 'enabled'
->
```

   - **Enable TLS v1.1.**

```
 -> set /SP/services/https/ tlsv1_1=enabled
Set 'tlsv1_1' to 'enabled'
->
```

- **Enable TLS v1.2.**

```
 -> set /SP/services/https tlsv1_2=enabled
Set 'tlsv1_2' to 'enabled'
->
```

Related Information

- "Enable the HTTP Service (Oracle ILOM CLI)" on page 387
- "Configure HTTP Properties (Oracle ILOM CLI)" on page 388
- "Enable the HTTPS Service (Oracle ILOM CLI)" on page 390
- "Install a Custom SSL Certificate and Key (Oracle ILOM CLI)" on page 392
- "Remove the Custom SSL Certificate and Key (Oracle ILOM CLI)" on page 393
- "Disable the HTTPS Service (Oracle ILOM CLI)" on page 394

▼ Install a Custom SSL Certificate and Key (Oracle ILOM CLI)

The switch has an integrated web server and contains a default SSL certificate and self-signing key for HTTPS access, but also supports a custom SSL certificate if you have one.

Note - To use a custom certificate, you must install both a custom SSL certificate and key.

1. **Load the certificate.**

   -> **load** *URI* **/SP/services/https/ssl/custom_cert**

   where *URI*is the uniform resource indicator.

   For example, to load a certificate named `server.pem` from IP address `123.45.67.89` using the TFTP protocol, type:

```
-> load tftp://123.45.67.89//server.pem /SP/services/https/ssl/custom_cert
Load successful.
->
```

2. **Load the key.**

   -> **load** *URI* **/SP/services/https/ssl/custom_key**

where *URI*is the uniform resource indicator.

For example, to load a certificate named `server-key.pem` from IP address `123.45.67.89` using the TFTP protocol, type:

```
-> load tftp://123.45.67.89//server-key.pem /SP/services/https/ssl/custom_key
Load successful.
->
```

Related Information

- “Enable the HTTP Service (Oracle ILOM CLI)” on page 387
- “Configure HTTP Properties (Oracle ILOM CLI)” on page 388
- “Disable the HTTP Service (Oracle ILOM CLI)” on page 389
- “Enable the HTTPS Service (Oracle ILOM CLI)” on page 390
- “Configure HTTPS Properties (Oracle ILOM CLI)” on page 391
- “Remove the Custom SSL Certificate and Key (Oracle ILOM CLI)” on page 393
- “Disable the HTTPS Service (Oracle ILOM CLI)” on page 394

▼ Remove the Custom SSL Certificate and Key (Oracle ILOM CLI)

If the switch has a custom SSL certificate that you no longer want, for example, if the certificate expired, use this task to remove the custom certificate and its corresponding key.

1. **Remove the certificate.**

```
-> reset /SP/services/https/ssl/custom_cert
Are you sure you want to reset /SP/services/https/ssl/customer_cert (y/n)? y
Performing reset on /SP/services/https/ssl/custom_cert

->
```

2. **Remove the key.**

```
-> reset /SP/services/https/ssl/custom_key
Are you sure you want to reset /SP/services/https/ssl/customer_key (y/n)? y
Performing reset on /SP/services/https/ssl/custom_key
->
```

Related Information

- “Enable the HTTP Service (Oracle ILOM CLI)” on page 387

- “Configure HTTP Properties (Oracle ILOM CLI)” on page 388
- “Disable the HTTP Service (Oracle ILOM CLI)” on page 389
- “Enable the HTTPS Service (Oracle ILOM CLI)” on page 390
- “Configure HTTPS Properties (Oracle ILOM CLI)” on page 391
- “Install a Custom SSL Certificate and Key (Oracle ILOM CLI)” on page 392
- “Disable the HTTPS Service (Oracle ILOM CLI)” on page 394

▼ Disable the HTTPS Service (Oracle ILOM CLI)

You can selectively disable the HTTP server on the switch without having to change any of the HTTPS properties. When you disable the HTTPS service, you can enable HTTP to retain web server access to Oracle ILOM. If you want no web server functionality, you can leave HTTP disabled.

Note - Performing this task on an already active HTTPS server effectively resets the server.

This task disables the HTTPS connection to the web interface. To access the web interface, either the HTTP service or the HTTPS service must be enabled. You cannot disable HTTPS while the HTTP `secure redirect` property is enabled.

1. **Disable secure redirection.**

```
-> set /SP/services/http secureredirect=disabled
Set 'secureredirect' to 'disabled'
->
```

2. **Disable the HTTPS service.**

```
-> set /SP/services/https servicestate=disabled
Set 'servicestate' to 'disabled'
->
```

Related Information

- “Enable the HTTPS Service (Oracle ILOM CLI)” on page 390
- “Configure HTTPS Properties (Oracle ILOM CLI)” on page 391
- “Install a Custom SSL Certificate and Key (Oracle ILOM CLI)” on page 392
- “Disable the HTTPS Service (Oracle ILOM CLI)” on page 394
- “Display the HTTPS Service Status (Oracle ILOM CLI)” on page 113
- “Display the HTTPS Server SSL Certificates (Oracle ILOM CLI)” on page 114
- “Enable the HTTP Service (Oracle ILOM CLI)” on page 387

- “Configure HTTP Properties (Oracle ILOM CLI)” on page 388
- “Disable the HTTP Service (Oracle ILOM CLI)” on page 389

Managing the SSH Service (Oracle ILOM CLI)

The switch contains an SSH server to provide secure shell connections and key generation.

- “Enable the SSH Service (Oracle ILOM CLI)” on page 395
- “Configure SSH Properties (Oracle ILOM CLI)” on page 396
- “Generate New Keys (Oracle ILOM CLI)” on page 396
- “Restart the SSH Daemon (Oracle ILOM CLI)” on page 397
- “Disable the SSH Service (Oracle ILOM CLI)” on page 397

Related Information

- “Managing the HTTP Service (Oracle ILOM CLI)” on page 387
- “Managing the HTTPS Service (Oracle ILOM CLI)” on page 390
- “Managing SNMP Services (Oracle ILOM CLI)” on page 398
- “Managing IPMI Services (Oracle ILOM CLI)” on page 410

▼ Enable the SSH Service (Oracle ILOM CLI)

The switch contains an SSH server that sets properties for management access through SSH and supports generating new SSH keys whenever needed. By default, the switch generates a set of default RSA and DSA server keys when the switch boots up for the first time, so keys should always be present.

- **Type:**

```
 -> set /SP/services/ssh/ state=enabled
Set 'state' to 'enabled'
->
```

Related Information

- “Configure SSH Properties (Oracle ILOM CLI)” on page 396
- “Generate New Keys (Oracle ILOM CLI)” on page 396
- “Restart the SSH Daemon (Oracle ILOM CLI)” on page 397
- “Disable the SSH Service (Oracle ILOM CLI)” on page 397
- “Display the SSH Properties (Oracle ILOM CLI)” on page 112

▼ Configure SSH Properties (Oracle ILOM CLI)

1. **If the SSH service is not already enabled, enable it now.**

   See “Enable the SSH Service (Oracle ILOM CLI)” on page 395.

2. **Set the state of weak ciphers.**

```
 -> set /SP/services/ssh/ weakciphers=enabled
Set 'state' to 'enabled'
->
```

Related Information

- “Enable the SSH Service (Oracle ILOM CLI)” on page 395
- “Generate New Keys (Oracle ILOM CLI)” on page 396
- “Restart the SSH Daemon (Oracle ILOM CLI)” on page 397
- “Disable the SSH Service (Oracle ILOM CLI)” on page 397
- “Display the SSH Properties (Oracle ILOM CLI)” on page 112

▼ Generate New Keys (Oracle ILOM CLI)

The switch can generate RSA and DSA keys for SSH connections. Generating new keys requires a restart of the SSH server, which terminates any in-process SSH sessions.

1. **Determine if an RSA or DSA key is needed.**

2. **Set the type of key that will be generated.**

   - **For an RSA key, type:**

```
 -> set /SP/services/ssh/ generate_new_key_type=rsa
Set 'generate_new_key_type' to 'rsa'
->
```

   - **For a DSA key, type:**

```
 -> set /SP/services/ssh/ generate_new_key_type=dsa
Set 'generate_new_key_type' to 'dsa'
->
```

3. **Generate the appropriate key.**

```
 -> set /SP/services/ssh generate_new_key_action=true
Set 'generate_new_key_action' to 'true'
->
```

Related Information

- “Enable the SSH Service (Oracle ILOM CLI)” on page 395
- “Configure SSH Properties (Oracle ILOM CLI)” on page 396
- “Restart the SSH Daemon (Oracle ILOM CLI)” on page 397
- “Disable the SSH Service (Oracle ILOM CLI)” on page 397
- “Display the SSH Properties (Oracle ILOM CLI)” on page 112

▼ Restart the SSH Daemon (Oracle ILOM CLI)

You can selectively restart the SSH daemon on the switch at any time without having to change the SSH configuration. When SSH is restarted, the switch terminates all active SSH CLI sessions running on the SP. Use this task to restart SSH on the switch.

- **Type:**

```
 -> set /SP/services/ssh restart_sshd_action=true
Set 'restart_sshd_action' to 'true'
->
```

Related Information

- “Enable the SSH Service (Oracle ILOM CLI)” on page 395
- “Configure SSH Properties (Oracle ILOM CLI)” on page 396
- “Generate New Keys (Oracle ILOM CLI)” on page 396
- “Disable the SSH Service (Oracle ILOM CLI)” on page 397
- “Display the SSH Properties (Oracle ILOM CLI)” on page 112

▼ Disable the SSH Service (Oracle ILOM CLI)

You can selectively disable the SSH server on the switch at any time without having to change the SSH configuration. When SSH is disabled, the switch terminates all active SSH CLI sessions running on the SP.

- **Type:**

```
 -> set /SP/services/ssh/ state=disabled
Set 'state' to 'disabled'
->
```

Related Information

- “Enable the SSH Service (Oracle ILOM CLI)” on page 395
- “Configure SSH Properties (Oracle ILOM CLI)” on page 396
- “Generate New Keys (Oracle ILOM CLI)” on page 396
- “Restart the SSH Daemon (Oracle ILOM CLI)” on page 397
- “Display the SSH Properties (Oracle ILOM CLI)” on page 112

Managing SNMP Services (Oracle ILOM CLI)

The switch has an SNMP client that interacts with SNMP servers to allow access to the Oracle ILOM.

- “Enable the SNMP Service (Oracle ILOM CLI)” on page 398
- “Configure the SNMP Service (Oracle ILOM CLI)” on page 399
- “Add an SNMP Service User Account (Oracle ILOM CLI)” on page 401
- “Modify an SNMP Service User Account (Oracle ILOM CLI)” on page 402
- “Delete an SNMP Service User Account (Oracle ILOM CLI)” on page 403
- “Add an SNMP Service Community (Oracle ILOM CLI)” on page 404
- “Modify an SNMP Service Community (Oracle ILOM CLI)” on page 405
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- “Configure SNMP Properties (Oracle ILOM CLI)” on page 407
- “Disable the SNMP Service (Oracle ILOM CLI)” on page 408
- “Download SNMP Service MIBs (Oracle ILOM CLI)” on page 409

Related Information

- “Managing the HTTP Service (Oracle ILOM CLI)” on page 387
- “Managing the HTTPS Service (Oracle ILOM CLI)” on page 390
- “Managing the SSH Service (Oracle ILOM CLI)” on page 395
- “Managing IPMI Services (Oracle ILOM CLI)” on page 410

▼ Enable the SNMP Service (Oracle ILOM CLI)

The switch contains a preinstalled SNMP agent that supports Oracle ILOM functions only, not standard SNMP network management functions. By default, the SNMP service is enabled.

- **Type:**

```
-> set /SP/services/snmp servicestate=enabled
Set 'servicestate' to 'enabled'
->
```

Related Information

- “Enable the SNMP Service (Oracle ILOM CLI)” on page 398
- “Configure the SNMP Service (Oracle ILOM CLI)” on page 399
- “Add an SNMP Service User Account (Oracle ILOM CLI)” on page 401
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- “Display the SNMP Service Communities (Oracle ILOM CLI)” on page 110
- “Download SNMP Service MIBs (Oracle ILOM CLI)” on page 409

▼ Configure the SNMP Service (Oracle ILOM CLI)

The switch has an SNMP client that supports SNMP v1, v2c, and v3. SNMP v3 is enabled by default because it is more secure that either v1 or v2c. For information about the different versions of SNMP, see “Controlling SNMP Services (Oracle ILOM Web)” on page 509.

- **Configure the SNMP parameters.**

```
-> set /SP/services/snmp property=value property=value ...
```

where:

- *property* is the parameter of the SNMP service to configure.
- *value* is the value of the *property* to configure

Note - You can configure one, some, or all properties in one command line.

These properties are supported:

- `port` – *value* is the UDP port for SNMP.
- `servicestate` – *value* is either `enabled` or `disabled`.
- `sets` – *value* is either `enabled` or `disabled` for set requests.
- `v1` – *value* is either `enabled` or `disabled` for this protocol.
- `v2c` – *value* is either `enabled` or `disabled` for this protocol.
- `v3` – *value* is either `enabled` or `disabled` for this protocol.

For example, to enable `sets` and the `v2c` protocol, type:

```
-> set /SP/services/snmp sets=enabled v2c=enabled
Set 'sets' to 'enabled'
********* WARNING *********
Use of SNMP v1 or v2c protocols is insecure.
Are you sure you want to set sets=enabled v2c=enabled (y/n)? y
Set 'v2c' to 'enabled'
->
```

For example, to enable `sets` and the `v3` protocol, type:

```
-> set /SP/services/snmp sets=enabled v3=enabled
Set 'sets' to 'enabled'
Set 'v3' to 'enabled'
->
```

Related Information

- “Enable the SNMP Service (Oracle ILOM CLI)” on page 398
- “Add an SNMP Service User Account (Oracle ILOM CLI)” on page 401
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- “Download SNMP Service MIBs (Oracle ILOM CLI)” on page 409

▼ Add an SNMP Service User Account (Oracle ILOM CLI)

SNMP user accounts are supported in SNMP v3 only. The user account can be from 1 to 32 characters long.

1. **Decide whether the user requires a privacy protocol.**
2. **Add an SNMP user.**

```
-> create /SP/services/snmp/users/username authenticationpassword=password privacyprotocol=protocol
```

where:

- *username* is the name of the SNMP user.
- *password* is the password used for authentication. The authentication password is 8 to 13 characters long.

Note - To add an SNMP user without a privacy protocol, you must explicitly set the `privacyprotocol` option to none.

For example, to create an SNMP user with the name of `snmpuser`, the password of `changeme` and no privacy protocol, type:

```
-> create /SP/services/snmp/users/snmpuser authenticationpassword=changeme privacyprotocol=none
Created /SP/services/snmp/users/snmpuser
->
```

Note - By default, new users are given read-only permissions and no privacy protocol.

---

3. **Configure the user with a privacy protocol and password.**

```
-> set /SP/services/snmp/users/snmpuser privacyprotocol=DES privacypassword=password
 authenticationpassword=password
```

Note - The privacy password must be exactly 8 characters in length.

For example, to configure the `snmpuser` with the DES protocol and privacy password of `changeme`, type:

```
-> set /SP/services/snmp/users/snmpuser privacyprotocol=DES privacypassword=changeme
 authenticationpassword=changeme
```

```
Set 'privacyprotocol' to 'DES'
Set 'privacypassword' to 'changeme'
Set 'authenticationpassword' to 'changeme'
User /SP/services/snmp/users/snmpuser properties were updated successfully
->
```

Related Information

- “Enable the SNMP Service (Oracle ILOM CLI)” on page 398
- “Configure the SNMP Service (Oracle ILOM CLI)” on page 399
- “Modify an SNMP Service User Account (Oracle ILOM CLI)” on page 402
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▼ Modify an SNMP Service User Account (Oracle ILOM CLI)

- **Modify an SNMP user.**

```
-> set /SP/services/snmp/users/username property=value property=value ...
```

where:

- *username* is the name of the SNMP user to modify.
- *property* is the parameter of the SNMP user to configure.
- *value* is the value of the *property* to configure.

These properties are supported:

- `authenticationpassword` – *value* is the password used for authentication (8 to 12 characters).
- `authenticationprotocol` – *value* is the protocol used for authentication.
- `permission` – *value* is permission granted to the SNMP user.
- `privacypassword` – *value* is the password used for privacy (exactly 8 characters).
- `privacyprotocol` – *value* is the protocol used for privacy.

For example, to configure the `snmpuser` with read and write permissions, type:

```
-> set /SP/services/snmp/users/snmpuser permission=rw
Set 'permission' to 'rw'
User /SP/services/snmp/users/snmpuser properties were updated successfully
->
```

Related Information

- “Enable the SNMP Service (Oracle ILOM CLI)” on page 398
- “Configure the SNMP Service (Oracle ILOM CLI)” on page 399
- “Add an SNMP Service User Account (Oracle ILOM CLI)” on page 401
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- “Download SNMP Service MIBs (Oracle ILOM CLI)” on page 409

▼ Delete an SNMP Service User Account (Oracle ILOM CLI)

You can selectively delete SNMP v3 user accounts without having to change other SNMP properties. When an SNMP v3 user account is deleted, that user can no longer access the switch.

Note - If you delete an SNMP v3 user account from Oracle ILOM, the switch can no longer decode any traps sent to that user account.

- **Delete an SNMP user.**

```
-> delete /SP/services/snmp/users/username
```

where *username* is the name of the SNMP user to be deleted.

For example, to delete the user `snmpuser`, type:

```
-> delete /SP/services/snmp/users/snmpuser
Are you sure you want to delete /SP/services/snmp/users/snmpuser (y/n)? y
Deleted /SP/services/snmp/users/snmpuser
->
```

Related Information

- "Enable the SNMP Service (Oracle ILOM CLI)" on page 398
- "Configure the SNMP Service (Oracle ILOM CLI)" on page 399
- "Add an SNMP Service User Account (Oracle ILOM CLI)" on page 401
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▼ Add an SNMP Service Community (Oracle ILOM CLI)

SNMP communities are supported in SNMP v1 and v2c only. For information about adding SNMP communities, see "Add SNMP Service User Accounts (Oracle ILOM Web)" on page 512.

- **Type:**

```
-> create /SP/services/snmp/communities/community permission=rw
```

where *community* is the name of the SNMP community to create.

For example, to add the community `newcom`, type:

```
-> create /SP/services/snmp/communities/newcom permission=rw
Created /SP/services/snmp/communities/newcom
->
```

Related Information

- "Enable the SNMP Service (Oracle ILOM CLI)" on page 398

- "Configure the SNMP Service (Oracle ILOM CLI)" on page 399
- "Add an SNMP Service User Account (Oracle ILOM CLI)" on page 401
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▼ Modify an SNMP Service Community (Oracle ILOM CLI)

● **Type:**

-> **set /SP/services/snmp/communities/***community property***=***value property***=***value* **...**

where:

- *community* is the name of the SNMP community to modify.
- *property* is the parameter of the SNMP community to configure.
- *value* is the value of the *property* to configure.

This property is supported:

- `permission` – *value* is permission granted to the SNMP community.

For example, to configure the `newcom` community with read-only permissions, type:

```
-> set /SP/services/snmp/communities/newcom permission=ro
Set 'permission' to 'ro'
->
```

Related Information

- "Enable the SNMP Service (Oracle ILOM CLI)" on page 398
- "Configure the SNMP Service (Oracle ILOM CLI)" on page 399
- "Add an SNMP Service User Account (Oracle ILOM CLI)" on page 401
- "Modify an SNMP Service User Account (Oracle ILOM CLI)" on page 402
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- "Add an SNMP Service Community (Oracle ILOM CLI)" on page 404
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- "Configure SNMP Properties (Oracle ILOM CLI)" on page 407
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- "Display the SNMP Service Status (Oracle ILOM CLI)" on page 109
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▼ Delete an SNMP Service Community (Oracle ILOM CLI)

You can selectively delete SNMP v1 or v2c communities without having to change other SNMP properties. When an SNMP community is deleted, that members of that community can no longer access the switch.

- **Type:**

```
-> delete /SP/services/snmp/communities/community
```

where *community* is the name of the SNMP community to delete.

For example, to delete the `newcom` community, type:

```
-> delete /SP/services/snmp/communities/newcom
Are you sure you want to delete /SP/services/snmp/communities/newcom (y/n)? y
Deleted /SP/services/snmp/communities/newcom
->
```

Related Information

- "Enable the SNMP Service (Oracle ILOM CLI)" on page 398
- "Configure the SNMP Service (Oracle ILOM CLI)" on page 399
- "Add an SNMP Service User Account (Oracle ILOM CLI)" on page 401
- "Modify an SNMP Service User Account (Oracle ILOM CLI)" on page 402
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- “Display the SNMP Service Communities (Oracle ILOM CLI)” on page 110
- “Download SNMP Service MIBs (Oracle ILOM CLI)” on page 409

▼ Configure SNMP Properties (Oracle ILOM CLI)

Use this task to configure general SNMP properties such as enabling the SNMP service or selectively enabling SNMP v1, v2c, or v3. SNMP v1 and v2c are supported by the switch even though they are not secure. If you enable SNMP v1 or v2c, you are prompted with warning text, and must confirm that you want to use these versions of the protocol.

1. **Enable SNMP service on the switch.**

   See “Enable the SNMP Service (Oracle ILOM CLI)” on page 398.

2. **(Optional) Set the port for SNMP communication.**

```
-> set /SP/services/snmp servicestate=enabled
Set 'servicestate' to 'enabled'
->
```

3. **Determine whether the SNMP Set primitive is supported.**

```
 -> set /SP/services/snmp/ sets=disabled
Set 'sets' to 'disabled'
 ->
```

Note - SNMP Set primitives are supported by default. If SNMP Sets are disabled, only SNMP Gets will function on the switch.

4. **(Optional) Enable a specific version of SNMP in use in your environment.**

```
-> set /SP/services/snmp v2c=enabled
********* WARNING *********
Use of SNMP v1 or v2c protocols is insecure.
Are you sure you want to set v2c=enabled (y/n)? y
Set 'v2c' to 'enabled'

->
```

Note - The switch uses SNMP v3 by default. The preceding example is shown for illustrative purposes only.

The switch can support multiple versions of SNMP simultaneously.

5. **For SNMP v3, specify an engine ID for authentication and encryption of SNMP v3 communication.**

```
-> set /SP/services/snmp/ engineid=12345
Set 'engineid' to '12345'
 ->
```

Note - If authentication or encryption are not required in your environment, leave the engine ID at default value, or use this command to set the engine ID to `(none)`.

Related Information

- “Configure the SNMP Service (Oracle ILOM CLI)” on page 399
- “Add an SNMP Service User Account (Oracle ILOM CLI)” on page 401
- “Modify an SNMP Service User Account (Oracle ILOM CLI)” on page 402
- “Delete an SNMP Service User Account (Oracle ILOM CLI)” on page 403
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- “Download SNMP Service MIBs (Oracle ILOM CLI)” on page 409

▼ Disable the SNMP Service (Oracle ILOM CLI)

When the SNMP service is disabled, the switch receives no SNMP communication (for example, traps) from the SNMP servers in your network.

- **Type:**

```
-> set /SP/services/snmp servicestate=disabled
Set 'servicestate' to 'disabled'
->
```

Related Information

- “Enable the SNMP Service (Oracle ILOM CLI)” on page 398
- “Configure the SNMP Service (Oracle ILOM CLI)” on page 399
- “Add an SNMP Service User Account (Oracle ILOM CLI)” on page 401

- "Modify an SNMP Service User Account (Oracle ILOM CLI)" on page 402
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- "Download SNMP Service MIBs (Oracle ILOM CLI)" on page 409

▼ Download SNMP Service MIBs (Oracle ILOM CLI)

The SNMP MIBs are contained on the switch as individual files, but you can download them to a remote device, typically an SNMP host. This task creates a compressed file, `ilom-mibs.zip`, that contains the following MIBs:

- `ENTITY-MIB.mib`
- `SUN-HW-CTRL-MIB.mib`
- `SUN-HW-TRAP-MIB.mib`
- `SUN-ILOM-CONTROL-MIB.mib`
- `SUN-ILOM-SYSTEM-MIB.mib`
- `SUN-PLATFORM-MIB.mib`

● Download the MIBs.

```
-> dump -destination URI /SP/services/snmp/mibs
```

where *URI* is the uniform resource indicator.

For example, to dump the MIBs as the `ilom-mibs.zip` file to a server with IP address `123.45.67.89` using the FTP protocol:

```
-> dump -destination ftp://root:changeme@123.45.67.89/tftpboot/ilom-mibs.zip /SP/services/snmp/mibs
Dump successful.
->
```

The MIBs are downloaded.

Related Information

- "Enable the SNMP Service (Oracle ILOM CLI)" on page 398

- "Configure the SNMP Service (Oracle ILOM CLI)" on page 399
- "Add an SNMP Service User Account (Oracle ILOM CLI)" on page 401
- "Modify an SNMP Service User Account (Oracle ILOM CLI)" on page 402
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- "Display the SNMP Service Communities (Oracle ILOM CLI)" on page 110

Managing IPMI Services (Oracle ILOM CLI)

The switch runs a service that supports IPMI management of the switch. For more information about the switch's IPMI support, see "Controlling IPMI Services (Oracle ILOM Web)" on page 506.

- "Enable the IPMI Service (Oracle ILOM CLI)" on page 410
- "Disable the IPMI Service (Oracle ILOM CLI)" on page 411
- "Enable IPMI 1.5 Sessions (Oracle ILOM CLI)" on page 411
- "Disable IPMI 1.5 Sessions (Oracle ILOM CLI)" on page 412

Related Information

- "Managing the HTTP Service (Oracle ILOM CLI)" on page 387
- "Managing the HTTPS Service (Oracle ILOM CLI)" on page 390
- "Managing the SSH Service (Oracle ILOM CLI)" on page 395
- "Managing SNMP Services (Oracle ILOM CLI)" on page 398

▼ Enable the IPMI Service (Oracle ILOM CLI)

The switch runs a service that support IPMI management of the switch. The switch's IPMI service supports both IPMI version 1.5 and 2.0 (the default). For more information, see "Enable the IPMI Service (Oracle ILOM Web)" on page 507.

Note - The IPMI service is enabled by default.

- **Type:**

```
-> set /SP/services/ipmi servicestate=enabled
Set 'servicestate' to 'enabled'
->
```

Related Information

- “Disable the IPMI Service (Oracle ILOM CLI)” on page 411
- “Enable IPMI 1.5 Sessions (Oracle ILOM CLI)” on page 411
- “Disable IPMI 1.5 Sessions (Oracle ILOM CLI)” on page 412
- “Display the IPMI Service Status (Oracle ILOM CLI)” on page 111

▼ Disable the IPMI Service (Oracle ILOM CLI)

You can selectively disable the overall IPMI service running on the switch. If you disable the IPMI service, any and all versions of IPMI (either 1.5, 2.0, or both) configured on the switch no longer function.

- **Type:**

```
-> set /SP/services/ipmi servicestate=disabled
Set 'servicestate' to 'disabled'
->
```

Related Information

- “Enable the IPMI Service (Oracle ILOM CLI)” on page 410
- “Enable IPMI 1.5 Sessions (Oracle ILOM CLI)” on page 411
- “Disable IPMI 1.5 Sessions (Oracle ILOM CLI)” on page 412
- “Display the IPMI Service Status (Oracle ILOM CLI)” on page 111

▼ Enable IPMI 1.5 Sessions (Oracle ILOM CLI)

By default, the switch supports IPMI version 2.0, but you can enable IPMI version 1.5 sessions if needed. For more information, see “Enable IPMI Version 1.5 Sessions (Oracle ILOM Web)” on page 508.

1. **Enable the overall IPMI service.**

```
-> set /SP/services/ipmi servicestate=enabled
```

```
Set 'servicestate' to 'enabled'
->
```

2. **Enable IPMI 1.5 sessions.**

```
-> set /SP/services/ipmi v1_5_sessions=enabled
Set 'v1_5_sessions' to 'enabled'
->
```

Related Information

- “Enable the IPMI Service (Oracle ILOM CLI)” on page 410
- “Disable the IPMI Service (Oracle ILOM CLI)” on page 411
- “Disable IPMI 1.5 Sessions (Oracle ILOM CLI)” on page 412
- “Display the IPMI Service Status (Oracle ILOM CLI)” on page 111

▼ Disable IPMI 1.5 Sessions (Oracle ILOM CLI)

You can selectively disable the IPMI version 1.5 sessions at any time. When you disable IPMI 1.5 sessions, any existing sessions are terminated and future 1.5 session requests are blocked. If IPMI 1.5 sessions are disabled, IPMItool users must use the IPMI version 2.0 `-I lanplus` option.

Note - IPMI 1.5 sessions are disabled by default.

---

1. **Enable the standard IPMI service.**

```
-> set /SP/services/ipmi servicestate=enabled
Set 'servicestate' to 'enabled'
->
```

2. **Disable any active IPMI 1.5 sessions.**

```
-> set /SP/services/ipmi v1_5_sessions=disabled
Set 'v1_5_sessions' to 'disabled'
->
```

Related Information

- “Enable the IPMI Service (Oracle ILOM CLI)” on page 410
- “Disable the IPMI Service (Oracle ILOM CLI)” on page 411
- “Enable IPMI 1.5 Sessions (Oracle ILOM CLI)” on page 411
- “Display the IPMI Service Status (Oracle ILOM CLI)” on page 111

Restart Oracle ILOM

Oracle ILOM is started automatically each time the switch is powered on or restart. You can also explicitly restart Oracle ILOM without affecting power to the switch. Restarting Oracle ILOM affects both the Oracle ILOM CLI and the Oracle ILOM GUI. Restarting Oracle ILOM is supported through Oracle Fabric OS.

Note - Restarting Oracle ILOM disconnects the current Oracle ILOM session. You will need to reconnect to Oracle ILOM after the restart is completed.

1. **Access the Oracle Fabric OS.**

   See “Access the Oracle Fabric OS” on page 31.

2. **After successfully logging in to Oracle Fabric OS, type:**

```
admin@switch[OFOS] system restart-ilom
Restarting OFOS may disrupt IO traffic on attached servers.  Are you sure you
want to restart the system (y/n)?y
admin@switch[OFOS]
```

3. **When the restart sequence is complete, login to either Oracle ILOM CLI or Oracle ILOM Web again.**

   - **For Oracle ILOM CLI, see “Access Oracle ILOM From the CLI” on page 29.**
   - **For Oracle ILOM Web, see “Access Oracle ILOM From the Web Interface” on page 29.**

Related Information

- “Restart Oracle Fabric OS” on page 413
- “Monitoring the Switch (Oracle ILOM CLI)” on page 35
- “Managing Switch Components and Identification (Oracle ILOM CLI” on page 302
- “Managing Notifications and Logging (Oracle ILOM CLI)” on page 365
- “Managing the ASR Client (Oracle ILOM CLI)” on page 414

Restart Oracle Fabric OS

Oracle Fabric OS is started automatically each time the switch is powered on or restart. You can also explicitly restart Oracle Fabric OS without affecting power to the switch. Restarting Oracle Fabric OS is supported through Oracle Fabric OS.

Note - Restarting Oracle Fabric OS disconnects the current Oracle Fabric OS session. You will need to reconnect to Oracle Fabric OS after the restart is completed.

1. **Access the Oracle Fabric OS.**
   See "Access the Oracle Fabric OS" on page 31.

2. **After successfully logging in to Oracle Fabric OS, type:**

```
admin@switch[OFOS] system restart-ofos
Restarting OFOS may disrupt IO traffic on attached servers.  Are you sure you
want to restart the system (y/n)?y
[admin@switch ~]#
```

   While the Oracle Fabric OS restarts, numerous system messages scroll across the management window.

3. **When the restart sequence is complete, login to either Oracle ILOM CLI or Oracle ILOM Web again.**

   - **For Oracle ILOM CLI, see "Access Oracle ILOM From the CLI" on page 29.**
   - **For Oracle ILOM Web, see "Access Oracle ILOM From the Web Interface" on page 29.**

Related Information

- "Restart Oracle ILOM" on page 413
- "Monitoring the Switch (Oracle ILOM CLI)" on page 35
- "Managing Switch Components and Identification (Oracle ILOM CLI" on page 302
- "Managing Notifications and Logging (Oracle ILOM CLI)" on page 365
- "Managing the ASR Client (Oracle ILOM CLI)" on page 414

Managing the ASR Client (Oracle ILOM CLI)

Oracle Auto Service Request (ASR) provides speeds and facilitates reporting and issues and opening service requests in the unlikely event that the switch encounters a problem. For more information about Oracle ASR, see "Oracle Auto Service Request Software" on page 24.

- "Enable the ASR Client (Oracle ILOM CLI)" on page 415
- "Configure the ASR Properties (Oracle ILOM CLI)" on page 415
- "Configure the ASR Proxy Properties (Oracle ILOM CLI)" on page 417
- "Disable the ASR Client (Oracle ILOM CLI)" on page 418

Related Information

- “Monitoring the Switch (Oracle ILOM CLI)” on page 35
- “Managing Switch Components and Identification (Oracle ILOM CLI” on page 302
- “Managing Authentication and Access (Oracle ILOM CLI)” on page 327
- “Managing Notifications and Logging (Oracle ILOM CLI)” on page 365
- “Managing Management Networking (Oracle ILOM CLI)” on page 374
- “Managing Management Connections to the Switch (Oracle ILOM CLI)” on page 381
- “Managing Switch Interface Methods (Oracle ILOM CLI)” on page 386
- “Managing User Accounts (Oracle ILOM CLI)” on page 418
- “Configure the FIPS Service (Oracle ILOM CLI)” on page 425

▼ Enable the ASR Client (Oracle ILOM CLI)

If the switch encounters a problem, the ASR client sends ASR information to an endpoint, which is either a URL directly in the Oracle Services organization, or an ASR relay which indirectly connects to Oracle Services. By default, Oracle ASR is disabled.

Note - To enable the ASR client, a valid My Oracle Support account must exist, and the ASR properties must be configured on the switch.

- **Type:**

```
-> set /SP/clients/asr state=enabled
Set 'state' to 'enabled'
->
```

Related Information

- “Configure the ASR Properties (Oracle ILOM CLI)” on page 415
- “Configure the ASR Proxy Properties (Oracle ILOM CLI)” on page 417
- “Disable the ASR Client (Oracle ILOM CLI)” on page 418
- “Display the ASR Client Status (Oracle ILOM CLI)” on page 117

▼ Configure the ASR Properties (Oracle ILOM CLI)

For ASR to operate, you must have a valid My Oracle Support account. When you create the ASR username, it must match the username registered with an active My Oracle Support account.

1. **Configure the endpoint.**

```
-> set /SP/clients/asr endpoint=domain.company.com
->
```

where:

- *domain* is a domain or server that is sending the ASR messages.
- *company* is the company for the domain or server that is sending ASR messages.

For example, to configure an endpoint named `transport.oracle.com`, type:

```
-> set /SP/clients/asr endpoint=transport.oracle.com
Set 'endpoint' to 'transport.oracle.com'
->
```

2. **Configure the password.**

```
-> set /SP/clients/asr password=testword
Changing password for ASR user...
Enter new password again: ********
Set 'password' to '********'
New password was successfully set for user /SP/clients/asr

->
```

3. **Configure the ASR username.**

```
-> set /SP/clients/asr username=username@company.com
->
```

where:

- *username* is the name associated with a valid My Oracle Support account.
- *company* is the company name where the switch is installed.

For example, to configure the user name `admin1@abc.com`, type:

```
-> set /SP/clients/asr username=joe.public@companyq.com
Set 'username' to 'joe.public@companyq.com'
->
```

4. **(Optional) Send an event to the ASR service.**

```
-> set /SP/clients/asr send-event=test
Set 'username' to 'joe.public@companyq.com'
```

```
->
```

Related Information

- “Enable the ASR Client (Oracle ILOM CLI)” on page 415
- “Configure the ASR Proxy Properties (Oracle ILOM CLI)” on page 417
- “Disable the ASR Client (Oracle ILOM CLI)” on page 418
- “Display the ASR Client Status (Oracle ILOM CLI)” on page 117

▼ Configure the ASR Proxy Properties (Oracle ILOM CLI)

You can configure a proxy account and proxy server to send ASR message to Oracle. This task assumes that the general ASR properties have been configured. If not, configure them now. See “Configure the ASR Properties (Oracle ILOM CLI)” on page 415.

1. **Set the ASR proxy host address.**

```
-> set /SP/clients/asr proxy-host=123.45.67.89
Set 'proxy-host' to '123.45.67.89'
->
```

2. **Set the ASR proxy password.**

```
-> set /SP/clients/asr proxy-password=proxpass
Set 'proxy-password' to 'proxpass'
->
```

3. **Set the ASR proxy user.**

```
-> set /SP/clients/asr proxy-user=asradmin1@abc.com
Set 'proxy-user' to 'asradmin1@companyq.com'
->
```

Related Information

- “Enable the ASR Client (Oracle ILOM CLI)” on page 415
- “Configure the ASR Properties (Oracle ILOM CLI)” on page 415
- “Disable the ASR Client (Oracle ILOM CLI)” on page 418
- “Display the ASR Client Status (Oracle ILOM CLI)” on page 117

▼ Disable the ASR Client (Oracle ILOM CLI)

At any time, you can disable the ASR client without having to change any of the configured ASR properties.

- **Type:**

```
-> set /SP/clients/asr state=disabled
Set 'state' to 'disabled'
->
```

Related Information

- "Enable the ASR Client (Oracle ILOM CLI)" on page 415
- "Configure the ASR Properties (Oracle ILOM CLI)" on page 415
- "Configure the ASR Proxy Properties (Oracle ILOM CLI)" on page 417
- "Display the ASR Client Status (Oracle ILOM CLI)" on page 117

Managing User Accounts (Oracle ILOM CLI)

These topics describe how to use the Oracle ILOM CLI to manage information about the ILOM user accounts and sessions on the switch.

- "Managing Oracle ILOM User Accounts (Oracle ILOM CLI)" on page 419
- "Delete a Session (Oracle ILOM CLI)" on page 424

Related Information

- "Monitoring the Switch (Oracle ILOM CLI)" on page 35
- "Managing Switch Components and Identification (Oracle ILOM CLI" on page 302
- "Managing Authentication and Access (Oracle ILOM CLI)" on page 327
- "Managing Notifications and Logging (Oracle ILOM CLI)" on page 365
- "Managing Management Networking (Oracle ILOM CLI)" on page 374
- "Managing Management Connections to the Switch (Oracle ILOM CLI)" on page 381
- "Managing Switch Interface Methods (Oracle ILOM CLI)" on page 386
- "Managing the ASR Client (Oracle ILOM CLI)" on page 414
- "Configure the FIPS Service (Oracle ILOM CLI)" on page 425

Managing Oracle ILOM User Accounts (Oracle ILOM CLI)

These topics describe how to use the Oracle ILOM Web interface to manage information about the ILOM user accounts and sessions on the switch.

- "Add an Oracle ILOM User Account (Oracle ILOM CLI)" on page 419
- "Load a User's SSH Key (Oracle ILOM CLI)" on page 420
- "Add a Comment to a User's Key (Oracle ILOM CLI)" on page 421
- "Reset a User's SSH Key (Oracle ILOM CLI)" on page 422
- "Change an Oracle ILOM User's Password or Role (Oracle ILOM CLI)" on page 422
- "Delete an Oracle ILOM User Account (Oracle ILOM CLI)" on page 424

Related Information

- "Delete a Session (Oracle ILOM CLI)" on page 424

▼ Add an Oracle ILOM User Account (Oracle ILOM CLI)

Oracle ILOM local user accounts must be configured on the switch to allow Oracle ILOM access to the SP. Oracle ILOM local users are limited to a maximum of 5.

- **Type:**

```
-> create /SP/user/username
```

where *username* is the name of the user's account.

For example, to add a user named `testuser`, type:

```
-> create /SP/users/testuser
Creating user...
Enter new password: ********
Enter new password again: ********
Created /SP/users/testuser
->
```

Note - New users are assigned the role of `o` (operator) or read-only by default, but you can change the user's role. See "Change an Oracle ILOM User's Password or Role (Oracle ILOM CLI)" on page 422.

Related Information

- “Load a User's SSH Key (Oracle ILOM CLI)” on page 420
- “Add a Comment to a User's Key (Oracle ILOM CLI)” on page 421
- “Reset a User's SSH Key (Oracle ILOM CLI)” on page 422
- “Delete an Oracle ILOM User Account (Oracle ILOM CLI)” on page 424
- “Delete a Session (Oracle ILOM CLI)” on page 424
- “Display the Oracle ILOM Sessions (Oracle ILOM CLI)” on page 119
- “Display the Oracle ILOM Password Policy for Local Users (Oracle ILOM CLI)” on page 120
- “Display the Oracle ILOM Root User Properties (Oracle ILOM CLI)” on page 121

▼ Load a User's SSH Key (Oracle ILOM CLI)

The switch supports SSH key-based authentication for Oracle ILOM user accounts. With SSH keys, password authentication is automatic for Oracle ILOM users. The switch supports custom-generated DSA or RSA key pairs for individual Oracle ILOM user accounts, with the public key being uploaded to Oracle ILOM. If you are configuring an SSH key for your own account, you need only the operator role (o) in Oracle's roles model, but to configure SSH keys for other users, you need the admin role (a).

- **Install a key for a user.**

```
-> load /SP/users/users/ssh/keys/X load_uri=URI
->
```

where:

- *user* is the name of the user whose key will be loaded.
- *X* is the number, from `1` to `5`, of the key that will be loaded.
- *URI* is the uniform resource indicator for the key that will be loaded.

For example, to load `112115.rsa` for the user `user1`, type:

```
-> set /SP/users/root/ssh/keys/1/ load_uri=ftp://root:changeme@123.45.67.89/
privkeystore/112115.rsa
Load successful.
->
```

Related Information

- “Add an Oracle ILOM User Account (Oracle ILOM CLI)” on page 419
- “Add a Comment to a User's Key (Oracle ILOM CLI)” on page 421

- “Reset a User's SSH Key (Oracle ILOM CLI)” on page 422
- “Change an Oracle ILOM User's Password or Role (Oracle ILOM CLI)” on page 422
- “Delete an Oracle ILOM User Account (Oracle ILOM CLI)” on page 424
- “Delete a Session (Oracle ILOM CLI)” on page 424
- “Display the Oracle ILOM Sessions (Oracle ILOM CLI)” on page 119
- “Display the Oracle ILOM Password Policy for Local Users (Oracle ILOM CLI)” on page 120
- “Display the Oracle ILOM Root User Properties (Oracle ILOM CLI)” on page 121

▼ Add a Comment to a User's Key (Oracle ILOM CLI)

As an option, you can edit the key to add a comment.

- **Embed a comment in a user's key.**

```
-> set /SP/users/user/ssh/keys/X embedded_comment=comment
->
```

where:

- *user* is the name of the user whose keys will be reset.
- *X* is the number, from `1` to `5`, of the key that will be reset.
- *comment* is an alphanumeric comment string consisting of one word with no special characters, hyphens, or underscores.

For example, to embed the comment `temporarykeyonly` into the key for `user1`, type:

```
-> set /SP/users/root/ssh/keys/1 embedded_comment=temporarykeyonly
Set 'embedded_comment' to 'temporarykeyonly'
->
```

Related Information

- “Add an Oracle ILOM User Account (Oracle ILOM CLI)” on page 419
- “Load a User's SSH Key (Oracle ILOM CLI)” on page 420
- “Reset a User's SSH Key (Oracle ILOM CLI)” on page 422
- “Change an Oracle ILOM User's Password or Role (Oracle ILOM CLI)” on page 422
- “Delete an Oracle ILOM User Account (Oracle ILOM CLI)” on page 424
- “Delete a Session (Oracle ILOM CLI)” on page 424
- “Display the Oracle ILOM Sessions (Oracle ILOM CLI)” on page 119
- “Display the Oracle ILOM Password Policy for Local Users (Oracle ILOM CLI)” on page 120

- "Display the Oracle ILOM Root User Properties (Oracle ILOM CLI)" on page 121

Reset a User's SSH Key (Oracle ILOM CLI)

When a user's SSH key is configured, you can reset the key at any time.

- **Reset the key information for a user.**

```
-> reset /SP/users/user/ssh/keys/X
->
```

where:

- *user* is the name of the user whose keys will be reset.
- *X* is the number, from `1` to `5`, of the key that will be reset.

For example, to reset the SSH key for the user `user1`, type:

```
-> reset /SP/users/user1/ssh/keys/1/
Are you sure you want to reset /SP/users/root/ssh/keys/1 (y/n)? y
Performing reset on /SP/users/matlock/ssh/keys/1

->
```

Related Information

- "Add an Oracle ILOM User Account (Oracle ILOM CLI)" on page 419
- "Load a User's SSH Key (Oracle ILOM CLI)" on page 420
- "Add a Comment to a User's Key (Oracle ILOM CLI)" on page 421
- "Change an Oracle ILOM User's Password or Role (Oracle ILOM CLI)" on page 422
- "Delete an Oracle ILOM User Account (Oracle ILOM CLI)" on page 424
- "Delete a Session (Oracle ILOM CLI)" on page 424
- "Display the Oracle ILOM Sessions (Oracle ILOM CLI)" on page 119
- "Display the Oracle ILOM Password Policy for Local Users (Oracle ILOM CLI)" on page 120
- "Display the Oracle ILOM Root User Properties (Oracle ILOM CLI)" on page 121

Change an Oracle ILOM User's Password or Role (Oracle ILOM CLI)

When Oracle ILOM users are initially created, you assign them a password and roles that govern their privileges. On occasion, a user might need to have roles or the password changed.

For example, if a user changes jobs within your company, the roles might also need to change. You can change an Oracle ILOM user's password and roles at any time without having to delete and recreate the user account.

Note - To change the `root` user's password, refer to *Switch Administration*, changing the `root` user's password.

- **Change the Oracle ILOM user's configuration.**

```
-> set /SP/users/user password=password role=role
```

where:

- *username* is the user account name.
- *password* is the new password.
- *role* is the new role for the user.

For the *role*, you can use the characters of the `aucros` string to enable the respective abilities. See "User Roles and Permissions" on page 27.

Note - You can change the user password and role independently.

For example, to change the password for the `testuser` user, type:

```
-> set /SP/users/testuser password=knockknock
Changing password for user /SP/users/testuser...
Enter new password again: **********
New password was successfully set for user /SP/users/testuser
->
```

Caution - With this task, it is also possible for the user to reset the `root` user password, should it be lost or forgotten. The user must use the USB management port to reset the `root` user password.

Related Information

- "Add an Oracle ILOM User Account (Oracle ILOM CLI)" on page 419
- "Load a User's SSH Key (Oracle ILOM CLI)" on page 420
- "Add a Comment to a User's Key (Oracle ILOM CLI)" on page 421
- "Reset a User's SSH Key (Oracle ILOM CLI)" on page 422
- "Delete an Oracle ILOM User Account (Oracle ILOM CLI)" on page 424
- "Delete a Session (Oracle ILOM CLI)" on page 424
- "Display the Oracle ILOM Sessions (Oracle ILOM CLI)" on page 119

- "Display the Oracle ILOM Password Policy for Local Users (Oracle ILOM CLI)" on page 120
- "Display the Oracle ILOM Root User Properties (Oracle ILOM CLI)" on page 121

Delete an Oracle ILOM User Account (Oracle ILOM CLI)

At any time you can delete a configured Oracle ILOM user account. When you delete a user account, that user can no longer access the Oracle ILOM. Use this task to delete an Oracle ILOM user account.

- **Type:**

```
-> delete /SP/users/username
```

where *username* is the name of the user's account.

For example, to delete the `testuser` user, type:

```
-> delete /SP/users/testuser
Are you sure you want to delete /SP/users/testuser (y/n)? y
Deleted /SP/users/testuser
->
```

Related Information

- "Add an Oracle ILOM User Account (Oracle ILOM CLI)" on page 419
- "Load a User's SSH Key (Oracle ILOM CLI)" on page 420
- "Add a Comment to a User's Key (Oracle ILOM CLI)" on page 421
- "Reset a User's SSH Key (Oracle ILOM CLI)" on page 422
- "Change an Oracle ILOM User's Password or Role (Oracle ILOM CLI)" on page 422
- "Delete a Session (Oracle ILOM CLI)" on page 424
- "Display the Oracle ILOM Sessions (Oracle ILOM CLI)" on page 119
- "Display the Oracle ILOM Password Policy for Local Users (Oracle ILOM CLI)" on page 120
- "Display the Oracle ILOM Root User Properties (Oracle ILOM CLI)" on page 121

Delete a Session (Oracle ILOM CLI)

Active management sessions on the switch are identified by a session number. Active sessions can be deleted at any time. If a session is deleted, that session is immediately terminated and access to the switch is severed.

1. **Display the list of active ILOM CLI sessions.**

```
-> show /SP/sessions
/SP/sessions
  Targets:
   753 (current)
->
```

2. **Note the number of the session that you want to delete.**

3. **Delete the session.**

```
-> delete /SP/sessions/753/
Are you sure you want to delete /SP/sessions/753 (y/n)?
->
```

Related Information

- “Add an Oracle ILOM User Account (Oracle ILOM CLI)” on page 419
- “Load a User's SSH Key (Oracle ILOM CLI)” on page 420
- “Add a Comment to a User's Key (Oracle ILOM CLI)” on page 421
- “Reset a User's SSH Key (Oracle ILOM CLI)” on page 422
- “Change an Oracle ILOM User's Password or Role (Oracle ILOM CLI)” on page 422
- “Display the Oracle ILOM Sessions (Oracle ILOM CLI)” on page 119
- “Display the Oracle ILOM Password Policy for Local Users (Oracle ILOM CLI)” on page 120
- “Display the Oracle ILOM Root User Properties (Oracle ILOM CLI)” on page 121

▼ Configure the FIPS Service (Oracle ILOM CLI)

FIPS provides encryption and security to certain data transmitted and received by FIPS-compliant devices. Some environments (for example, government installations) require FIPS. By default, FIPS is disabled, but you can enable it by using this task.

1. **If needed, enable FIPS.**

```
-> set /SP/services/fips/ state=enabled
Set 'state' to 'enabled'
The configuration change will be applied the next time the SP is reset.
->
```

Note - Enabling FIPs is not immediate. You must reset the SP for FIPS to become active.

2. **Reset the SP.**

```
-> reset /SP/
Set 'state' to 'enabled'
The configuration change will be applied the next time the SP is reset.
->
```

3. **Check the status of FIPS.**

The `state` and `status` should both be `enabled`. If the status of FIPS is `disabled; enabled at next boot` then you must reset the SP.

See "Display the FIPS Service Status (Oracle ILOM CLI)" on page 122.

Related Information

- "Monitoring the Switch (Oracle ILOM CLI)" on page 35
- "Managing Switch Components and Identification (Oracle ILOM CLI" on page 302
- "Managing Authentication and Access (Oracle ILOM CLI)" on page 327
- "Managing Notifications and Logging (Oracle ILOM CLI)" on page 365
- "Managing Management Networking (Oracle ILOM CLI)" on page 374
- "Managing Management Connections to the Switch (Oracle ILOM CLI)" on page 381
- "Managing Switch Interface Methods (Oracle ILOM CLI)" on page 386
- "Managing the ASR Client (Oracle ILOM CLI)" on page 414
- "Managing User Accounts (Oracle ILOM CLI)" on page 418

Controlling the Switch (Oracle ILOM Web)

These topics describe how to administer various aspects of the switch through the Oracle ILOM web interface.

Description	Links
Familiarize yourself with the web interface.	“Oracle ILOM Web Interface Overview” on page 126
Review help on Oracle ILOM targets.	“Get Help on Oracle ILOM Targets (Oracle ILOM Web)” on page 128
Control various elements of the switch and its configuration.	“Managing Switch Components and Identification (Oracle ILOM Web)” on page 428
Control different clients that govern authentication and authorization.	“Managing Authentication and Access (Oracle ILOM Web)” on page 441
Control the behavior of system events and alerts, and how they are logged.	“Managing Notifications and Event Logging (Oracle ILOM Web)” on page 472
Control network properties for the SP and switch.	“Managing Management Networking (Oracle ILOM Web)” on page 487
Control properties for connecting and logging in.	“Managing Management Connections to the Switch (Oracle ILOM Web)” on page 493
Control different methods of interfacing with the switch and switch-interface behavior.	“Managing Switch Interface Methods (Oracle ILOM Web)” on page 498
Control properties of getting support for the switch.	“Configuring ASR Client Properties (Oracle ILOM Web)” on page 519
Control user accounts and sessions.	“Managing User Accounts (Oracle ILOM Web)” on page 521
Control additional aspects of the switch.	“Managing Other Switch Components and Services (Oracle ILOM Web)” on page 527

Related Information

- “Understanding System Administration Resources” on page 19
- “Accessing the Switch” on page 27
- “Monitoring the Switch (Oracle ILOM Web)” on page 125
- “Understanding Oracle ILOM Targets” on page 165
- “Understanding SNMP MIB OIDs” on page 195
- “Understanding the EMS Module” on page 265

- “Controlling the Switch (Oracle ILOM CLI)” on page 301
- “Updating the Firmware” on page 533

Managing Switch Components and Identification (Oracle ILOM Web)

You can do most switch management tasks any time after the switch is online. However, some basic switch tasks should be done before others each time the switch is powered on or restarted.

- “Configure the Switch IP Address (Oracle ILOM Web)” on page 429
- “Reset the SP (Oracle ILOM Web)” on page 429
- “Enable the Locator LED (Oracle ILOM Web)” on page 430
- “Disable the Locator LED (Oracle ILOM Web)” on page 430
- “Back Up the Configuration (Oracle ILOM Web)” on page 431
- “Restore the Configuration (Oracle ILOM Web)” on page 432
- “Create a Snapshot of the Switch State (Oracle ILOM Web)” on page 433
- “Snapshot Dataset Information (Oracle ILOM Web)” on page 434
- “Set the System Identification Properties (Oracle ILOM Web)” on page 434
- “Change the Host Name (Oracle ILOM Web)” on page 435
- “Configure the NTP Client (Oracle ILOM Web)” on page 435
- “Set the Time Zone (Oracle ILOM Web)” on page 436
- “Set the Date and Time (Oracle ILOM Web)” on page 436
- “Set the Oracle ILOM CLI Session Timeout (Oracle ILOM Web)” on page 495
- “Enable a Custom CLI Prompt (Oracle ILOM Web)” on page 437
- “Set a Custom CLI Prompt (Oracle ILOM Web)” on page 437
- “Disable a Custom CLI Prompt (Oracle ILOM Web)” on page 438
- “Controlling Switch Power (Oracle ILOM Web)” on page 438
- “Set the Serial Port Properties (Oracle ILOM Web)” on page 440

Related Information

- “Oracle ILOM Web Interface Overview” on page 126
- “Get Help on Oracle ILOM Targets (Oracle ILOM Web)” on page 128
- “Managing Authentication and Access (Oracle ILOM Web)” on page 441
- “Managing Notifications and Event Logging (Oracle ILOM Web)” on page 472
- “Managing Management Networking (Oracle ILOM Web)” on page 487
- “Managing Management Connections to the Switch (Oracle ILOM Web)” on page 493
- “Managing Switch Interface Methods (Oracle ILOM Web)” on page 498

- “Configuring ASR Client Properties (Oracle ILOM Web)” on page 519
- “Managing User Accounts (Oracle ILOM Web)” on page 521
- “Managing Other Switch Components and Services (Oracle ILOM Web)” on page 527

▼ Configure the Switch IP Address (Oracle ILOM Web)

The switch IP address is configured as part of installing the switch. Refer to the installation guide for your switch.

The switch IP address should remain configured across power cycles, upgrades and so on, so you should not need to configure the switch IP address often. However, if you do need to configure or reset the switch's IP address, you must use the `nm3tool`.

Note - The `nm3tool` is also used for chassis upgrades. See “Upgrading the Switch Firmware (`nm3tool`)” on page 536.

- **If you need to configure or set the switch IP address, run the `nm3tool`.**
  See “Configure the Switch IP Address (Oracle ILOM CLI)” on page 303.

Related Information

- “Updating the Firmware” on page 533

▼ Reset the SP (Oracle ILOM Web)

Occasionally, the SP must be reset to complete an operation, for example, to finish a firmware upgrade to clear an error condition.

Note - Restarting the SP closes any active link between the management console and the SP. You must reaccess the SP to regain administrative control.

---

1. **Choose ILOM Administration → Maintenance, and then click the Reset SP tab.**
2. **Click Reset SP.**
   A dialog prompts you for confirmation.

Note - If you reset the SP, all active Oracle ILOM sessions will be terminated. If you want to continue managing the switch, you must log in again after the SP returns to service.

---

3. **Click OK.**

   A message describing the reset action is displayed with a link, and the SP is reset.

Related Information

- "Enable FIPS (Oracle ILOM Web)" on page 530
- "Updating the Firmware" on page 533

Enable the Locator LED (Oracle ILOM Web)

The Locator LED is used to provide a visual indicator on the switch. When activated, this LED blinks to facilitate finding the switch in your data center.

1. **Choose System Information → Summary link.**
2. **In the Actions section, find the Locator Indicator button.**
3. **Click Turn On.**

   A dialog prompts you for confirmation.

4. **Click OK.**

   When the Locator LED is on, it flashes on the switch, and the icon in the Actions section is green.

Related Information

- "Disable the Locator LED (Oracle ILOM Web)" on page 430
- "Display the Switch Status LEDs States (Oracle ILOM Web)" on page 132

Disable the Locator LED (Oracle ILOM Web)

When disabled, the Locator LED is unlit.

1. **Choose System Information → Summary.**
2. **In the Actions section, find the Locator Indicator button.**
3. **Click Turn Off.**

   A dialog prompts you for confirmation.

4. **Click OK.**

   The Locator LED extinguishes. While the Locator LED is off, it does not flash on the switch, and the icon in the Actions section is gray.

Related Information

- "Enable the Locator LED (Oracle ILOM Web)" on page 430
- "Display the Switch Status LEDs States (Oracle ILOM Web)" on page 132

▼ Back Up the Configuration (Oracle ILOM Web)

At times, you might want to back up the switch configuration so that you have a copy to revert to if needed. For example, before starting an upgrade, you might want to back up the existing configuration. When you backup the configuration, it is kept in a separate file on the SP.

Note - See "Backed Up Switch Configuration Information" on page 310 for what switch-specific configuration information is backed up when a passphrase is used.

---

1. **Choose ILOM Administration → Configuration Management, and click the Backup/ Restore tab.**

2. **Select Backup from the Operation drop-down menu.**

3. **Select the transfer protocol from the Transfer Method drop-down menu.**

4. **For the protocol selected, type the host IP address, file path, user name, and password into the respective fields.**

   If you selected TFTP as the transfer protocol, type just the host IP address and file path.

5. **(Optional) Make a note of the device where you will back up the configuration.**

   Noting the device that contains the backed up configuration is helpful if you need to restore the configuration later.

6. **If you want to back up sensitive information in addition to the configuration:**

   a. **Type a passphrase into the Passphrase field.**

   b. **Type the passphrase again into the Confirm Passphrase field.**

7. **Click Run.**

   A dialog prompts you for confirmation.

8. **Click OK.**

Related Information

- “Restore the Configuration (Oracle ILOM Web)” on page 432
- “Back Up the Configuration (Oracle ILOM Web)” on page 431
- “Create a Snapshot of the Switch State (Oracle ILOM Web)” on page 433
- “Snapshot Dataset Information (Oracle ILOM Web)” on page 434

▼ Restore the Configuration (Oracle ILOM Web)

If a configuration has been backed up, you can restore it at any time. When the configuration is restored, the switch resumes operation with the parameters from the last configuration that was backed up.

1. **Choose ILOM Administration → Maintenance, and then click the Backup/Restore tab.**
2. **Select Restore from the Operation drop-down menu.**
3. **Select the transfer method:**
   - **For Browser, click Browse, navigate to the backed up configuration file, and upload it.**
   - **For file transfer protocols, select the protocol from the dropdown menu, then type the file name, host IP address, file path, user name, and password (as needed) into the respective fields.**
4. **If you used a passphrase with the backup, type the passphrase into the Passphrase and Confirm Passphrase fields so that sensitive information is also restored.**
5. **If prompted, enter the passphrase used when you backed up the configuration.**
6. **Click Run.**

   A dialog prompts you for confirmation.
7. **Click OK.**

Related Information

- “Back Up the Configuration (Oracle ILOM Web)” on page 431

- “Backed Up Switch Configuration Information” on page 310
- “Create a Snapshot of the Switch State (Oracle ILOM Web)” on page 433
- “Snapshot Dataset Information (Oracle ILOM Web)” on page 434

▼ Create a Snapshot of the Switch State (Oracle ILOM Web)

The snapshot utility collects log files, executes various commands and collects their output, and sends the data collected to a user-defined location as a `.zip` file. The data set selected determines what data is to be included in the snapshot.

The snapshot describes the state of the switch at a particular moment in time. You can use this information for diagnosing system problems.

1. **Choose ILOM Administration → Maintenance, and click the Snapshot tab.**
2. **Select the data set from the Data Set drop-down menu.**
   See the table in “Snapshot Dataset Information (Oracle ILOM Web)” on page 434.
3. **If you chose the Custom data set, check the data that you want to include in the snapshot.**

Note - If you choose the Full data set, be aware that the switch might be reset.

---

4. **If you want only log files, select the Collect Only Log Files From Data Set checkbox.**
5. **If you want security applied to the snapshot file, select the Encrypt Output File checkbox.**
6. **Select the transfer protocol from the Transfer Method drop-down menu.**
7. **Type the host IP address or host name, file path, user name, and password into the respective fields.**
8. **Click Run.**

Related Information

- “Restore the Configuration (Oracle ILOM Web)” on page 432
- “Back Up the Configuration (Oracle ILOM Web)” on page 431
- “Backed Up Switch Configuration Information” on page 310

Snapshot Dataset Information (Oracle ILOM Web)

Data Set	Description
Normal	Contains Oracle ILOM data, basic OS data, and switch configuration data.
FRUID	Contains normal dataset information, with additional FRUID data.
Full	Contains normal dataset information, with additional FRUID data and diagnostic data.
Custom	Contains the user's choice of Oracle ILOM data, basic OS data, switch hardware data, additional FRUID data, and diagnostic data.

The snapshot is stored as a `.zip` file with a file name of this format:

hostname_IP_address_year-month-day-hour-minute-second`.zip`

For example:

```
unit1_123.45.67.89_2012-10-07T14-43-15.zip
```

Note - The normal, FRUID, and full datasets of the snapshot utility are currently equivalent and contain the same data in the snapshot.

Related Information

- "Create a Snapshot of the Switch State (Oracle ILOM Web)" on page 433

▼ Set the System Identification Properties (Oracle ILOM Web)

The switch has identification properties for the overall system and the SP. By setting the system identification properties, you can differentiate the switch from any other switch in your deployment.

1. **Choose ILOM Administration → Identification.**
2. **Type the host name, system identifier, system contact, and system location into their respective fields.**

3. **Click Save.**

Related Information

- “Display System Identification Properties (Oracle ILOM Web)” on page 138
- “Change the Host Name (Oracle ILOM Web)” on page 435

▼ Change the Host Name (Oracle ILOM Web)

The switch is shipped with a default host name. At your option, you can leave the default host name, or use this task to change the host name.

1. **Choose ILOM Administration → Identification.**
2. **Type the new host name.**
3. **Click Save.**

Related Information

- “Set the System Identification Properties (Oracle ILOM Web)” on page 434
- “Display System Identification Properties (Oracle ILOM Web)” on page 138

▼ Configure the NTP Client (Oracle ILOM Web)

The switch has an NTP client that enables the system clock to synchronize with the NTP server that your network uses.

1. **Before configuring the NTP Client, gather the IP addresses or host names for the NTP servers available in your network.**
2. **Choose ILOM Administration → Date and Time, and click the Clock tab.**
3. **Click the Enabled checkbox for Synchronize Time Using NTP.**

Note - When you enable the NTP client, any manually configured time and date settings are no longer used.

---

4. **Type the IP address or host name for the primary and secondary (if present) NTP servers.**

5. **Click Save.**

Related Information

- “Display the NTP Servers (Oracle ILOM Web)” on page 140
- “Set the Date and Time (Oracle ILOM Web)” on page 436
- “Set the Time Zone (Oracle ILOM Web)” on page 436
- “Display the Date (Oracle ILOM Web)” on page 139
- “Display the Time Zone (Oracle ILOM Web)” on page 139

▼ Set the Time Zone (Oracle ILOM Web)

The switch has a system clock processor that supports keeping the date, time, and time zone. By default, the switch is programmed with a default time zone, but you can change the time zone whenever you want.

1. **Choose ILOM Administration → Date and Time, and then click the Timezone tab.**
2. **Select the time zone from the Timezone dropdown menu.**
3. **Click Save.**

Related Information

- “Set the Date and Time (Oracle ILOM Web)” on page 436
- “Configure the NTP Client (Oracle ILOM Web)” on page 435
- “Display the NTP Servers (Oracle ILOM Web)” on page 140
- “Display the Date (Oracle ILOM Web)” on page 139
- “Display the Time Zone (Oracle ILOM Web)” on page 139

▼ Set the Date and Time (Oracle ILOM Web)

The switch has a system clock processor that supports keeping the date, time, and time zone. Typically, the system clock is programmed with time and date information as part of installing the switch and bringing it online the first time. However, you can you can change the date and time whenever you want.

Note - If the switch has already been configured for NTP, setting the date and time will have no effect the switch. When the switch is configured for NTP, the switch uses the NTP time signal instead.

---

1. **Choose ILOM Administration → Date and Time, and click the Clock tab.**
2. **Type the date into the Date field.**
3. **Select the time from the Time dropdown menus.**
4. **(Optional) If you want to use a time server, set the NTP parameters.**
   See "Configure the NTP Client (Oracle ILOM Web)" on page 435.
5. **Click Save.**

Related Information

- "Set the Time Zone (Oracle ILOM Web)" on page 436
- "Configure the NTP Client (Oracle ILOM Web)" on page 435
- "Display the NTP Servers (Oracle ILOM Web)" on page 140
- "Display the Date (Oracle ILOM Web)" on page 139
- "Display the Time Zone (Oracle ILOM Web)" on page 139

▼ Enable a Custom CLI Prompt (Oracle ILOM Web)

The switch has a default command prompt, which can be changed to a custom prompt. Use this task to selectively enable a custom prompt.

1. **Choose ILOM Administration → Management Access, and click the CLI tab.**
2. **Select the Enabled box for Custom CLI Prompt.**
3. **Click Save.**

Related Information

- "Set a Custom CLI Prompt (Oracle ILOM Web)" on page 437
- "Display the Custom CLI Prompt (Oracle ILOM Web)" on page 140

▼ Set a Custom CLI Prompt (Oracle ILOM Web)

The switch has a default command prompt, which can be changed to a custom prompt.

1. **Choose ILOM Administration → Management Access, and click the CLI tab.**

2. **Select the Enabled checkbox for Custom Prompt.**
3. **Type the custom prompt in the field.**
4. **Click Save.**

Related Information

- “Enable a Custom CLI Prompt (Oracle ILOM Web)” on page 437
- “Display the Custom CLI Prompt (Oracle ILOM Web)” on page 140

▼ Disable a Custom CLI Prompt (Oracle ILOM Web)

If a custom prompt is configured, and you no longer want to use it, you can disable it. When the custom prompt is disabled, the switch uses the default prompt again.

1. **Choose ILOM Administration → Management Access, and click the CLI tab.**
2. **Clear the Enabled tab for Custom CLI Prompt.**
   When a custom CLI prompt is disabled, the default switch CLI prompt is used.
3. **Click Save.**

Related Information

- “Set a Custom CLI Prompt (Oracle ILOM Web)” on page 437
- “Enable a Custom CLI Prompt (Oracle ILOM Web)” on page 437
- “Display the Custom CLI Prompt (Oracle ILOM Web)” on page 140

Controlling Switch Power (Oracle ILOM Web)

The switch can be powered on or powered off in different ways.

- “Power Down the Switch (Oracle ILOM Web)” on page 439
- “Restart the Switch (Oracle ILOM Web)” on page 439
- “Power On the Switch (Oracle ILOM Web)” on page 440

Related Information

- “Reset the SP (Oracle ILOM Web)” on page 429

▼ Power Down the Switch (Oracle ILOM Web)

When you power down the switch, you stop it from receiving facility power. You can power down the switch in one of two ways, and the switch behaves differently depending on the power down method you choose.

1. **Choose Host Management → Power Control.**
2. **From the Select Action drop-down menu, choose a power down option.**
   - **Select Immediate Power Off to stop power to the switch.**
   - **Select Graceful Shutdown and Power Off to attempt to gracefully shut down the switch by stopping services, halting traffic, bringing down the OS, and so on, before stopping power to the switch.**
3. **Click Save.**

Related Information

- “Restart the Switch (Oracle ILOM Web)” on page 439
- “Power On the Switch (Oracle ILOM Web)” on page 440
- “Display System-Level Power Information (Oracle ILOM Web)” on page 132

▼ Restart the Switch (Oracle ILOM Web)

When you restart the switch, you are applying power to a switch that is receiving some power in some part of its power subsystem. You can restart a running switch by either resetting or power cycling it, and the switch behaves differently depending on the method you use to restart the switch.

1. **Choose Host Management → Power Control.**
2. **From the Select Action drop-down menu, choose a restart option.**
   - **Select Reset to power cycle the switch (power it off, then power it on) while continuing to apply standby power to some of the switch's subsystems.**
   - **Select Power Cycle to power the switch off, then power it on. No standby power is applied to any of the switch's subsystems.**
3. **Click Save.**

Related Information

- “Power Down the Switch (Oracle ILOM Web)” on page 439
- “Power On the Switch (Oracle ILOM Web)” on page 440
- “Display System-Level Power Information (Oracle ILOM Web)” on page 132

▼ Power On the Switch (Oracle ILOM Web)

When you power on the switch, you apply facility power to a switch that is completely shut down and has no standby power. For example, you would power on the switch if it was shut down and removed from the rack for a service task.

1. **Choose Host Management → Power Control.**
2. **From the Select Action drop-down menu, choose Power On.**
3. **Click Save.**

Related Information

- “Power Down the Switch (Oracle ILOM Web)” on page 439
- “Restart the Switch (Oracle ILOM Web)” on page 439
- “Display System-Level Power Information (Oracle ILOM Web)” on page 132

▼ Set the Serial Port Properties (Oracle ILOM Web)

The serial port is a connection between the host server and the switch's SP. Through this connection, the switch can access the host serial console.

1. **Choose ILOM Administration → Connectivity, and click the Serial Port tab.**
2. **Select the entity that controls the serial port connection and properties from the Owner drop-down menu.**
3. **Select the maximum baud rate from the Baud Rate drop-down menu.**
4. **Select Software from the Flow Control drop-down menu.**

   Hardware is not a supported flow control method.
5. **Select the maximum baud rate from the Baud Rate drop-down menu for the Oracle ILOM external serial port (SER MGT).**

6. **Select the method of flow control for the Oracle ILOM external serial port (SER MGT) from the Flow Control drop-down menu.**

7. **Click Save.**

Related Information

- “Display the Serial Port Configuration (Oracle ILOM Web)” on page 143

Managing Authentication and Access (Oracle ILOM Web)

These topics describe how to configure information about the various methods of authentication and accessing the switch through the Oracle ILOM web interface.

- “Controlling AD (Oracle ILOM Web)” on page 441
- “Configure the DNS Client (Oracle ILOM Web)” on page 452
- “Controlling LDAP User Access (Oracle ILOM Web)” on page 453
- “Controlling LDAP over SSL (Oracle ILOM Web)” on page 455
- “Controlling RADIUS User Access (Oracle ILOM Web)” on page 468

Related Information

- “Managing Switch Components and Identification (Oracle ILOM Web)” on page 428
- “Managing Notifications and Event Logging (Oracle ILOM Web)” on page 472
- “Managing Management Networking (Oracle ILOM Web)” on page 487
- “Managing Management Connections to the Switch (Oracle ILOM Web)” on page 493
- “Managing Switch Interface Methods (Oracle ILOM Web)” on page 498
- “Configuring ASR Client Properties (Oracle ILOM Web)” on page 519
- “Managing User Accounts (Oracle ILOM Web)” on page 521
- “Managing Other Switch Components and Services (Oracle ILOM Web)” on page 527

Controlling AD (Oracle ILOM Web)

The switch supports an AD client for communication with AD servers in your network.

- “Enable AD (Oracle ILOM Web)” on page 442
- “Set the AD User's Role and Privileges (Oracle ILOM Web)” on page 443
- “Load Certificate Information for an AD Server (Oracle ILOM Web)” on page 444
- “Remove a Certificate From an AD Server (Oracle ILOM Web)” on page 445

- "Disable AD (Oracle ILOM Web)" on page 446
- "Add AD Admin Groups (Oracle ILOM Web)" on page 446
- "Add AD Operator Groups (Oracle ILOM Web)" on page 447
- "Add AD Custom Groups (Oracle ILOM Web)" on page 448
- "Add AD User Domains (Oracle ILOM Web)" on page 449
- "Add Alternate AD Servers (Oracle ILOM Web)" on page 450
- "Set the DNS Locator Queries (Oracle ILOM Web)" on page 451

Related Information

- "Configure the DNS Client (Oracle ILOM Web)" on page 452
- "Controlling LDAP User Access (Oracle ILOM Web)" on page 453
- "Controlling LDAP over SSL (Oracle ILOM Web)" on page 455
- "Controlling RADIUS User Access (Oracle ILOM Web)" on page 468

▼ Enable AD (Oracle ILOM Web)

The switch has an AD client, which you must configure if the switch will be operating in a network with AD servers.

1. **Choose ILOM Administration → User Management, and click the Active Directory tab.**
2. **Select the Enabled checkbox for State.**
3. **Type the IP address or host name of the active directory server in the Address field.**
4. **Type the port for communication with the active directory server in the Port field.**
   - **Select the AutoSelect checkbox (default) if you want the port automatically determined.**
   - **Deselect the AutoSelect checkbox, and enter a port number in the Port field if you want to specify the communication port.**
5. **Type the number of seconds in the Timeout field.**
6. **Configure operational modes as needed.**
   For these modes, select the Enabled checkbox for State:
   - Strict Certificate mode.
   - DNS Locator mode.

- Expanded Search mode.
- Strict Credential mode.

7. **From the Log Detail drop-down menu, select the amount of detail you want included in logs.**

8. **Click Save.**

Related Information

- “Set the AD User's Role and Privileges (Oracle ILOM Web)” on page 443
- “Load Certificate Information for an AD Server (Oracle ILOM Web)” on page 444
- “Remove a Certificate From an AD Server (Oracle ILOM Web)” on page 445
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- “Add AD Admin Groups (Oracle ILOM Web)” on page 446
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- “Add AD User Domains (Oracle ILOM Web)” on page 449
- “Add Alternate AD Servers (Oracle ILOM Web)” on page 450
- “Set the DNS Locator Queries (Oracle ILOM Web)” on page 451
- “Display the AD Client (Oracle ILOM Web)” on page 146

▼ Set the AD User's Role and Privileges (Oracle ILOM Web)

For AD users accessing the switch, you can set the user's specific roles and privileges.

1. **Choose ILOM Administration → User Management, and click the Active Directory tab.**

2. **Select the Enabled checkbox for State.**

3. **From the Roles drop-down menu, make a selection:**

   - Administrator or Operator to set either role and the predefined privileges for it.
   - None (Server Authorization) to have the user's role assigned by the active directory server.
   - Advanced Roles to have a customizable set of privileges assigned to the active directory user.

4. **For Advanced Roles, select the appropriate checkboxes to enable those privileges for the Active Directory user.**

   For more information, see “User Roles and Permissions” on page 27.

5. **Click Save.**

Related Information

- “Enable AD (Oracle ILOM Web)” on page 442
- “Load Certificate Information for an AD Server (Oracle ILOM Web)” on page 444
- “Remove a Certificate From an AD Server (Oracle ILOM Web)” on page 445
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- “Set the DNS Locator Queries (Oracle ILOM Web)” on page 451
- “Display the AD Client (Oracle ILOM Web)” on page 146

▼ Load Certificate Information for an AD Server (Oracle ILOM Web)

If strict certificate mode is required, you must upload the switch's certificate.

1. **Choose ILOM Administration → User Management, and click the Active Directory tab.**
2. **Click the Certificate Information link.**
   The pane scrolls to the Certificate Information section.
3. **From the Transfer Method drop-down menu, select the desired transfer method.**
4. **Provide additional information.**
   - **For Browser, click Browse and select the file containing the certificate.**
   - **For TFTP, provide the host name and file path for the server where the certificate is.**
   - **For FTP or SCP, provide the host name, file path, username, and password for the server where the certificate is.**
   - **For Paste, paste the text of the certificate (if you have it) into the Data field**
5. **Click Load Certificate.**
6. **Click Save.**

Related Information

- “Enable AD (Oracle ILOM Web)” on page 442
- “Set the AD User's Role and Privileges (Oracle ILOM Web)” on page 443
- “Remove a Certificate From an AD Server (Oracle ILOM Web)” on page 445
- “Disable AD (Oracle ILOM Web)” on page 446
- “Add AD Admin Groups (Oracle ILOM Web)” on page 446
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- “Set the DNS Locator Queries (Oracle ILOM Web)” on page 451
- “Display the AD Client (Oracle ILOM Web)” on page 146

▼ Remove a Certificate From an AD Server (Oracle ILOM Web)

Some situations might require you to remove an existing certificate. For example, if the switch is no longer using strict certificate mode, or if a certificate expires and must be replaced with a new one, you must remove the existing certificate.

1. **Choose ILOM Administration → User Management, and click the Active Directory tab.**
2. **Click the Certificate Information link.**

   The pane scrolls to the Certificate Information section.
3. **Click Remove Certificate.**
4. **Click Save.**

Related Information

- “Enable AD (Oracle ILOM Web)” on page 442
- “Set the AD User's Role and Privileges (Oracle ILOM Web)” on page 443
- “Load Certificate Information for an AD Server (Oracle ILOM Web)” on page 444
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- “Add AD User Domains (Oracle ILOM Web)” on page 449
- “Add Alternate AD Servers (Oracle ILOM Web)” on page 450

- "Set the DNS Locator Queries (Oracle ILOM Web)" on page 451
- "Display the AD Client (Oracle ILOM Web)" on page 146

▼ Disable AD (Oracle ILOM Web)

You can selectively disable AD without having to delete or reset any of the AD properties. When AD is disabled, AD users are disallowed access to the switch.

1. **Choose ILOM Administration → User Management, and click the Active Directory tab.**
2. **Clear the Enabled checkbox for State.**
3. **Click Save.**

Related Information

- "Enable AD (Oracle ILOM Web)" on page 442
- "Set the AD User's Role and Privileges (Oracle ILOM Web)" on page 443
- "Load Certificate Information for an AD Server (Oracle ILOM Web)" on page 444
- "Remove a Certificate From an AD Server (Oracle ILOM Web)" on page 445
- "Add AD Admin Groups (Oracle ILOM Web)" on page 446
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- "Add AD User Domains (Oracle ILOM Web)" on page 449
- "Add Alternate AD Servers (Oracle ILOM Web)" on page 450
- "Set the DNS Locator Queries (Oracle ILOM Web)" on page 451
- "Display the AD Client (Oracle ILOM Web)" on page 146

▼ Add AD Admin Groups (Oracle ILOM Web)

If your network uses AD admin groups, you must configure those groups on the switch so that members of the admin group can access the switch. Some rules exist for configuring admin groups. See "AD Groups (Oracle ILOM CLI)" on page 336.

1. **Choose ILOM Administration → User Management, and click the Active Directory.**
2. **Click the Admin Groups link.**
   The pane scrolls to the Admin Groups section.
3. **Click Edit.**

A pop-up window is displayed.

4. **In the Name field, type the qualified name in one of these formats:**
   - DN format, which consists of CN, OU, DC, DC, and DC suffixes.
   - NT Domain format, which consists of *domain**admingroup*.
   - Full Domain format, which consists of the DC, DC, and DC suffix*admingroup*.
   - Simple Name format, which consists of *admingroup*.
5. **Click Save.**

Related Information

- “Enable AD (Oracle ILOM Web)” on page 442
- “Set the AD User's Role and Privileges (Oracle ILOM Web)” on page 443
- “Load Certificate Information for an AD Server (Oracle ILOM Web)” on page 444
- “Remove a Certificate From an AD Server (Oracle ILOM Web)” on page 445
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- “Add AD Operator Groups (Oracle ILOM Web)” on page 447
- “Add AD Custom Groups (Oracle ILOM Web)” on page 448
- “Add AD User Domains (Oracle ILOM Web)” on page 449
- “Add Alternate AD Servers (Oracle ILOM Web)” on page 450
- “Set the DNS Locator Queries (Oracle ILOM Web)” on page 451
- “Display the AD Client (Oracle ILOM Web)” on page 146

▼ Add AD Operator Groups (Oracle ILOM Web)

If your network uses AD operator groups, you must configure those groups on the switch so that members of the operator group can access the switch. Some rules exist for configuring operator groups. See “AD Groups (Oracle ILOM CLI)” on page 336.

1. **Choose ILOM Administration → User Management, and click the Active Directory tab.**
2. **Click the Operator Groups link.**
   The pane scrolls to the Operator Groups section.
3. **Click Edit.**
   A pop-up window is displayed.
4. **In the Name field, type the qualified name in one of these formats:**
   - DN format, which consists of CN, OU, DC, and DC suffixes.

- NT Domain format, which consists of *domain**admingroup*.
- Full Domain format, which consists of the DC, DC, and DC suffix*admingroup*.
- Simple Name format, which consists of *admingroup*.

5. **Click Save.**

Related Information

- "Enable AD (Oracle ILOM Web)" on page 442
- "Set the AD User's Role and Privileges (Oracle ILOM Web)" on page 443
- "Load Certificate Information for an AD Server (Oracle ILOM Web)" on page 444
- "Remove a Certificate From an AD Server (Oracle ILOM Web)" on page 445
- "Disable AD (Oracle ILOM Web)" on page 446
- "Add AD Admin Groups (Oracle ILOM Web)" on page 446
- "Add AD Custom Groups (Oracle ILOM Web)" on page 448
- "Add AD User Domains (Oracle ILOM Web)" on page 449
- "Add Alternate AD Servers (Oracle ILOM Web)" on page 450
- "Set the DNS Locator Queries (Oracle ILOM Web)" on page 451
- "Display the AD Client (Oracle ILOM Web)" on page 146

▼ Add AD Custom Groups (Oracle ILOM Web)

If your network uses AD custom groups, you must configure those groups on the switch so that members of the custom group(s) can access the switch. Some rules exist for configuring custom groups. See "AD Groups (Oracle ILOM CLI)" on page 336.

1. **Choose ILOM Administration → User Management, and click the Active Directory tab.**

2. **Click the Custom Groups link.**

   The pane scrolls to the Custom Groups section.

3. **Click Edit.**

   A pop-up window is displayed.

4. **In the Name field, enter the qualified name in one of these formats:**

   - DN format, which consists of CN, OU, DC, DC, and DC suffix.
   - NT Domain format, which consists of *domain**admingroup*.
   - Full Domain format, which consists of the DC, DC, and DC suffix*admingroup*.
   - Simple Name format, which consists of *admingroup*.

5. **From the Roles drop-down menu, make a selection.**

   - Administrator or Operator to set either role and the predefined privileges for it.
   - None (No Assigned Roles) to have no role assigned to the user.
   - Advanced Roles to have a configurable set of privileges assigned.

6. **For Advanced Roles, select the appropriate checkboxes to enable those privileges for the AD user.**

   For more information, see "User Roles and Permissions" on page 27.

7. **Click Save.**

Related Information

- "Enable AD (Oracle ILOM Web)" on page 442
- "Set the AD User's Role and Privileges (Oracle ILOM Web)" on page 443
- "Load Certificate Information for an AD Server (Oracle ILOM Web)" on page 444
- "Remove a Certificate From an AD Server (Oracle ILOM Web)" on page 445
- "Disable AD (Oracle ILOM Web)" on page 446
- "Add AD Admin Groups (Oracle ILOM Web)" on page 446
- "Add AD Operator Groups (Oracle ILOM Web)" on page 447
- "Add AD User Domains (Oracle ILOM Web)" on page 449
- "Add Alternate AD Servers (Oracle ILOM Web)" on page 450
- "Set the DNS Locator Queries (Oracle ILOM Web)" on page 451
- "Display the AD Client (Oracle ILOM Web)" on page 146

▼ Add AD User Domains (Oracle ILOM Web)

If your network uses AD user domains, you must configure those domains on the switch so that members of the domains can access the switch. Some rules exist for configuring user domains. See "Configure an AD User Domain (Oracle ILOM CLI)" on page 340.

1. **Choose ILOM Administration → User Management, and click the Active Directory tab.**

2. **Click the User Domains link.**

   The pane scrolls to the User Domains section.

3. **Click Edit.**

   A pop-up window is displayed.

4. **Enter the user domain in one of the supported formats:**

- UPN format, which consists of *username@domain.company.com*.
- DN format, which consists of CN, CN, DC, DC, and DC suffixes.

5. **Click Save.**

Related Information

- “Enable AD (Oracle ILOM Web)” on page 442
- “Set the AD User's Role and Privileges (Oracle ILOM Web)” on page 443
- “Load Certificate Information for an AD Server (Oracle ILOM Web)” on page 444
- “Remove a Certificate From an AD Server (Oracle ILOM Web)” on page 445
- “Disable AD (Oracle ILOM Web)” on page 446
- “Add AD Admin Groups (Oracle ILOM Web)” on page 446
- “Add AD Operator Groups (Oracle ILOM Web)” on page 447
- “Add AD Custom Groups (Oracle ILOM Web)” on page 448
- “Add Alternate AD Servers (Oracle ILOM Web)” on page 450
- “Set the DNS Locator Queries (Oracle ILOM Web)” on page 451
- “Display the AD Client (Oracle ILOM Web)” on page 146

▼ Add Alternate AD Servers (Oracle ILOM Web)

Typically, AD deployments have multiple alternate AD servers. The switch supports a maximum of five AD servers plus the primary.

1. **Choose ILOM Administration → User Management, and then click the Active Directory tab.**
2. **Click the Alternate Servers link.**
   The pane scrolls to the Alternate Servers section.
3. **Click Edit.**
   A pop-up window is displayed.
4. **Enter the IP address or host name of the alternate AD server.**
5. **Select the port for communication with the AD server:**
   - **Select the AutoSelect checkbox if you want the port automatically determined.**
   - **Deselect the AutoSelect checkbox, and enter a port number in the Port field if you want to specify the communication port.**

6. **Assign an SSL certificate to the AD server.**

   See "Load Certificate Information for an AD Server (Oracle ILOM Web)" on page 444.

   Note - You can also remove an SSL certificate through this window, by clicking Remove Certificate.

7. **Click Save.**

Related Information

- "Enable AD (Oracle ILOM Web)" on page 442
- "Set the AD User's Role and Privileges (Oracle ILOM Web)" on page 443
- "Load Certificate Information for an AD Server (Oracle ILOM Web)" on page 444
- "Remove a Certificate From an AD Server (Oracle ILOM Web)" on page 445
- "Disable AD (Oracle ILOM Web)" on page 446
- "Add AD Admin Groups (Oracle ILOM Web)" on page 446
- "Add AD Operator Groups (Oracle ILOM Web)" on page 447
- "Add AD Custom Groups (Oracle ILOM Web)" on page 448
- "Add AD User Domains (Oracle ILOM Web)" on page 449
- "Set the DNS Locator Queries (Oracle ILOM Web)" on page 451
- "Display the AD Client (Oracle ILOM Web)" on page 146

▼ Set the DNS Locator Queries (Oracle ILOM Web)

A DNS locator query identifies a specific DNS service and the port on which it runs. By default, the switch provides two DNS locator queries, but you can create custom DNS locator queries.

- The switch supports a maximum of five DNS locator queries.
- The current DNS service can be changed to a DNS service in a different domain by specifying the new DNS service in the `DOMAIN` element of the locator string.
- The current DNS port can be changed to a DNS port in a different domain by specifying the new port in the `PORT:`*x* element of the locator string.

Note - For the switch to support locator queries, the DNS service and DNS Locator Mode must be enabled on the switch. See "Enable AD (Oracle ILOM Web)" on page 442.

1. **Choose ILOM Administration → User Management, and click the Active Directory tab.**

2. **Click the DNS Locator Queries link.**

The pane scrolls to the DNS Locator Queries section.

3. **Click Edit.**

   A pop-up window is displayed.

4. **Enter the name of the locator query string in the proper format.**

   For example: `_ldap._tcp.gc._msdcs.`*DOMAIN.PORT:x*

5. **Click Save.**

Related Information

- “Enable AD (Oracle ILOM Web)” on page 442
- “Set the AD User's Role and Privileges (Oracle ILOM Web)” on page 443
- “Load Certificate Information for an AD Server (Oracle ILOM Web)” on page 444
- “Remove a Certificate From an AD Server (Oracle ILOM Web)” on page 445
- “Disable AD (Oracle ILOM Web)” on page 446
- “Add AD Admin Groups (Oracle ILOM Web)” on page 446
- “Add AD Operator Groups (Oracle ILOM Web)” on page 447
- “Add AD Custom Groups (Oracle ILOM Web)” on page 448
- “Add AD User Domains (Oracle ILOM Web)” on page 449
- “Add Alternate AD Servers (Oracle ILOM Web)” on page 450
- “Display the AD Client (Oracle ILOM Web)” on page 146

▼ Configure the DNS Client (Oracle ILOM Web)

To enable name services within the SP, Oracle ILOM must be configured as a DNS client.

1. **Choose ILOM Administration → Connectivity, and click the DNS tab.**

2. **If you want the DHCP server to provide the DNS client configuration, check the Enabled box for Auto DNS via DHCP.**

   Note - If Auto DNS via DHCP is enabled, then the Name Server and Search Path fields are grayed out.

3. **In the DNS Name Server field, type up to three IP addresses of name servers, separated by commas.**

   List the IP addresses in order of search preference.

4. **In the DNS Search Path field, type up to six domains or search suffixes, separated by commas.**

   List the domains or search suffixes in order of search preference.

5. **In the DNS Timeout and DNS Retries field, you can configure timeout and retry values as needed for your network.**

6. **Click Save.**

Related Information

- “Controlling AD (Oracle ILOM Web)” on page 441
- “Controlling LDAP User Access (Oracle ILOM Web)” on page 453
- “Controlling LDAP over SSL (Oracle ILOM Web)” on page 455
- “Controlling RADIUS User Access (Oracle ILOM Web)” on page 468

Controlling LDAP User Access (Oracle ILOM Web)

The switch has an RFC 2307-compliant LDAP client that enables LDAP users to access the switch. These topics describe information about how to configure LDAP access on the switch.

- “Enable LDAP User Access Through Oracle ILOM (Oracle ILOM Web)” on page 453
- “Configure Roles for LDAP Users (Oracle ILOM Web)” on page 454
- “Disable LDAP User Access Through Oracle ILOM (Oracle ILOM Web)” on page 455

Related Information

- “Controlling AD (Oracle ILOM Web)” on page 441
- “Configure the DNS Client (Oracle ILOM Web)” on page 452
- “Controlling LDAP over SSL (Oracle ILOM Web)” on page 455
- “Controlling RADIUS User Access (Oracle ILOM Web)” on page 468

▼ Enable LDAP User Access Through Oracle ILOM (Oracle ILOM Web)

The switch has an LDAP client that can grant access to authenticated and authorized LDAP users.

- LDAP can be enabled only if FIPS is disabled. See “Disable FIPS (Oracle ILOM Web)” on page 531.

- You must have user management role (u) in the Oracle roles model to configure the LDAP user properties for the Oracle ILOM client.
- LDAP properties must be set on both the switch and the LDAP servers.

1. **Choose ILOM Administration → User Management, and click the LDAP tab.**
2. **Select the Enabled checkbox for State.**
3. **Type the IP address or host name of the LDAP server.**
4. **Specify the port to be used for LDAP connections.**
5. **Type the searchbase for Oracle ILOM to search for LDAP user accounts.**
6. **Type the distinguished name into the Bind DN field.**
7. **Type the password the Oracle ILOM can use as a proxy in the Bind Password field.**
8. **Click Save.**

Related Information

- “Configure Roles for LDAP Users (Oracle ILOM Web)” on page 454
- “Disable LDAP User Access Through Oracle ILOM (Oracle ILOM Web)” on page 455
- “Display the LDAP Client Information (Oracle ILOM Web)” on page 145

▼ Configure Roles for LDAP Users (Oracle ILOM Web)

When LDAP users access the switch, you can specify how much control they have by assigning the appropriate role and privileges. LDAP users can be one of three roles on the switch, and each has its privileges predefined.

1. **Choose ILOM Administration → User Management, and click the LDAP tab.**
2. **Select the Enabled checkbox for State.**
3. **Choose the appropriate roles:**
   - **Select the preconfigured Administrator or Operator role.**
   - **To create an advanced role with custom privileges, select Advanced Roles.**
4. **For advanced roles, select the checkboxes as needed to apply privileges.**

For more information, see “User Roles and Permissions” on page 27.

5. **Click Save.**

Related Information

- “Enable LDAP User Access Through Oracle ILOM (Oracle ILOM Web)” on page 453
- “Disable LDAP User Access Through Oracle ILOM (Oracle ILOM Web)” on page 455
- “Display the LDAP Client Information (Oracle ILOM Web)” on page 145

▼ Disable LDAP User Access Through Oracle ILOM (Oracle ILOM Web)

You can selectively disable LDAP user access to the switch without having to change ro delete the LDAP properties configured on the switch. When you disable LDAP, no LDAP users can access the switch.

1. **Choose ILOM Administration → User Management, and then click the LDAP tab.**
2. **Clear the Enabled checkbox for State, and click Save.**

Related Information

- “Enable LDAP User Access Through Oracle ILOM (Oracle ILOM Web)” on page 453
- “Configure Roles for LDAP Users (Oracle ILOM Web)” on page 454
- “Display the LDAP Client Information (Oracle ILOM Web)” on page 145

Controlling LDAP over SSL (Oracle ILOM Web)

The switch has an LDAP over SSL client that provides both authentication of user credentials and authorization of user access levels. These topics describe how to configure LDAP/SSL on the switch.

- “Enable LDAP over SSL (Oracle ILOM Web)” on page 456
- “(Optional) Configure LDAP over SSL User Mappings (Oracle ILOM Web)” on page 457
- “Set the LDAP over SSL User's Role and Privileges (Oracle ILOM Web)” on page 458
- “Load Certificate Information for an LDAP over SSL Server (Oracle ILOM Web)” on page 459
- “Remove a Certificate From an LDAP over SSL Server (Oracle ILOM Web)” on page 460

- "Disable LDAP over SSL (Oracle ILOM Web)" on page 461
- "Add LDAP over SSL Administrator Groups (Oracle ILOM Web)" on page 462
- "Add LDAP over SSL Operator Groups (Oracle ILOM Web)" on page 463
- "Add LDAP over SSL Custom Groups (Oracle ILOM Web)" on page 464
- "Add LDAP over SSL User Domains (Oracle ILOM Web)" on page 465
- "Add Alternate LDAP over SSL Servers (Oracle ILOM Web)" on page 466

Related Information

- "Controlling AD (Oracle ILOM Web)" on page 441
- "Configure the DNS Client (Oracle ILOM Web)" on page 452
- "Controlling LDAP User Access (Oracle ILOM Web)" on page 453
- "Controlling RADIUS User Access (Oracle ILOM Web)" on page 468

▼ Enable LDAP over SSL (Oracle ILOM Web)

The switch has an LDAP over SSL client that can grant access to authenticated and authorized LDAP over SSL users. Authorization occurs in either of these ways:

- Simple authorization, which uses standard roles in the Oracle ILOM.
- Remote server authorization, which uses one or more LDAP over SSL configured groups. These groups must contains users, and the groups must be configured on the LDAP over SSL authentication server before configuring the groups on the switch.

You must have user management role (u) to configure LDAP over SSL and its properties on the switch.

1. **Choose ILOM Administration → User Management, and click the LDAP over SSL tab.**
2. **Select the Enabled checkbox for State.**
3. **In the Address field, type the IP address or host name of the LDAP server.**
4. **Select the port for communication with the LDAP server.**
   - **Select the AutoSelect checkbox if you want the port automatically determined.**
   - **Deselect the AutoSelect checkbox, and enter a port number in the Port field, if you want to specify the communication port.**

5. **Type the number of seconds in the Timeout field.**

6. **If Strict Certificate mode is required, select the Strict Mapping Mode checkbox.**

7. **(Optional) If you want to configure User Mappings, select the checkbox.**
   See "(Optional) Configure LDAP over SSL User Mappings (Oracle ILOM Web)" on page 457.

8. **From the Log Detail drop-down menu, select the amount of detail you want included in logs.**

9. **Click Save.**

Related Information

- "(Optional) Configure LDAP over SSL User Mappings (Oracle ILOM Web)" on page 457
- "Set the LDAP over SSL User's Role and Privileges (Oracle ILOM Web)" on page 458
- "Load Certificate Information for an LDAP over SSL Server (Oracle ILOM Web)" on page 459
- "Remove a Certificate From an LDAP over SSL Server (Oracle ILOM Web)" on page 460
- "Disable LDAP over SSL (Oracle ILOM Web)" on page 461
- "Add LDAP over SSL Administrator Groups (Oracle ILOM Web)" on page 462
- "Add LDAP over SSL Operator Groups (Oracle ILOM Web)" on page 463
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- "Add LDAP over SSL User Domains (Oracle ILOM Web)" on page 465
- "Add Alternate LDAP over SSL Servers (Oracle ILOM Web)" on page 466
- "Display the LDAP over SSL Client (Oracle ILOM Web)" on page 145

▼ (Optional) Configure LDAP over SSL User Mappings (Oracle ILOM Web)

LDAP over SSL user mappings enable converting simple login names to the distinguished names (DNs) for user credential validation.

Note - Configure the user mapping properties through a separate pop-up window.

---

1. **Choose ILOM Administration → User Management, and click the LDAP over SSL tab.**

2. **Click Configure for Optional User Mapping.**

3. **Select the Enabled checkbox for State.**

4. **In the Attribute Info field, type the object class and UID.**

   For example, the object class would be `person`, and the UID would be the person's name.

5. **In the Searchbase field, type the OU, DC, and DC suffixes.**

   For example, the OU could be an organization within a company, the DC could be the company name, and the DC suffix could be `com`.

6. **In the Bind DN field, type the OU, DC, and DC suffixes.**

   For example, the OU could be an organization within a company, the DC could be the company name, and the DC suffix could be `com`.

7. **In the Bind Password field, type the password.**

8. **Click Save.**

Related Information

- “Enable LDAP over SSL (Oracle ILOM Web)” on page 456
- “Set the LDAP over SSL User's Role and Privileges (Oracle ILOM Web)” on page 458
- “Load Certificate Information for an LDAP over SSL Server (Oracle ILOM Web)” on page 459
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- “Disable LDAP over SSL (Oracle ILOM Web)” on page 461
- “Add LDAP over SSL Administrator Groups (Oracle ILOM Web)” on page 462
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- “Add LDAP over SSL Custom Groups (Oracle ILOM Web)” on page 464
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- “Add Alternate LDAP over SSL Servers (Oracle ILOM Web)” on page 466
- “Display the LDAP over SSL Client (Oracle ILOM Web)” on page 145

▼ Set the LDAP over SSL User's Role and Privileges (Oracle ILOM Web)

For LDAP over SSL users accessing the switch, you can set the specific roles and privileges that the user has on the switch.

1. **Choose ILOM Administration → User Management, and click the LDAP over SSL tab.**

2. **Select the Enabled checkbox for State.**

3. **From the Roles drop-down menu, make a selection:**

   - Administrator or Operator (simple authentication) to set either role and the predefined privileges for it.
   - None (remote server authentication) to have the LDAP user's role assigned by the LDAP server.
   - Advanced Roles to have a customizable set of privileges assigned to the LDAP user.

4. **For Advanced Roles, select the appropriate checkboxes to enable those privileges for the LDAP user.**

   For more information, see "User Roles and Permissions" on page 27.

5. **Click Save.**

Related Information

- "Enable LDAP over SSL (Oracle ILOM Web)" on page 456
- "(Optional) Configure LDAP over SSL User Mappings (Oracle ILOM Web)" on page 457
- "Load Certificate Information for an LDAP over SSL Server (Oracle ILOM Web)" on page 459
- "Remove a Certificate From an LDAP over SSL Server (Oracle ILOM Web)" on page 460
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- "Add LDAP over SSL Administrator Groups (Oracle ILOM Web)" on page 462
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- "Add Alternate LDAP over SSL Servers (Oracle ILOM Web)" on page 466
- "Display the LDAP over SSL Client (Oracle ILOM Web)" on page 145

▼ Load Certificate Information for an LDAP over SSL Server (Oracle ILOM Web)

If strict certificate mode is enabled, you must upload the switch's certificate.

1. **Choose ILOM Administration → User Management, and click the LDAP over SSL tab.**

2. **Click the Certificate Information link.**

The pane scrolls to the Certificate Information section.

3. **From the Transfer Method drop-down menu, select the desired transfer method.**
4. **Provide additional information.**
   - **For Browser, click Browse and select the file.**
   - **For TFTP, provide the host name and file path.**
   - **For FTP, SFTP, SCP, HTTP, or HTTPS, provide the host name, file path, username, and password.**
   - **For Paste, paste the text of the key into the Data field.**
5. **Click Load Certificate.**
6. **Click Save.**

Related Information

- “Enable LDAP over SSL (Oracle ILOM Web)” on page 456
- “(Optional) Configure LDAP over SSL User Mappings (Oracle ILOM Web)” on page 457
- “Set the LDAP over SSL User's Role and Privileges (Oracle ILOM Web)” on page 458
- “Remove a Certificate From an LDAP over SSL Server (Oracle ILOM Web)” on page 460
- “Disable LDAP over SSL (Oracle ILOM Web)” on page 461
- “Add LDAP over SSL Administrator Groups (Oracle ILOM Web)” on page 462
- “Add LDAP over SSL Operator Groups (Oracle ILOM Web)” on page 463
- “Add LDAP over SSL Custom Groups (Oracle ILOM Web)” on page 464
- “Add LDAP over SSL User Domains (Oracle ILOM Web)” on page 465
- “Add Alternate LDAP over SSL Servers (Oracle ILOM Web)” on page 466
- “Display the LDAP over SSL Client (Oracle ILOM Web)” on page 145

▼ Remove a Certificate From an LDAP over SSL Server (Oracle ILOM Web)

Some situations might require you to remove an existing certificate. For example, if the switch is no longer using Strict Certificate mode, or if a certificate expires and must be replaced with a new one, you must remove the existing certificate.

1. **Choose ILOM Administration → User Management, and click the LDAP over SSL tab.**
2. **Click the Certificate Information link.**
   The pane scrolls to the Certificate Information section.
3. **Click Remove Certificate.**
4. **Click Save.**

Related Information

- “Enable LDAP over SSL (Oracle ILOM Web)” on page 456
- “(Optional) Configure LDAP over SSL User Mappings (Oracle ILOM Web)” on page 457
- “Set the LDAP over SSL User's Role and Privileges (Oracle ILOM Web)” on page 458
- “Load Certificate Information for an LDAP over SSL Server (Oracle ILOM Web)” on page 459
- “Disable LDAP over SSL (Oracle ILOM Web)” on page 461
- “Add LDAP over SSL Administrator Groups (Oracle ILOM Web)” on page 462
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- “Add LDAP over SSL Custom Groups (Oracle ILOM Web)” on page 464
- “Add LDAP over SSL User Domains (Oracle ILOM Web)” on page 465
- “Add Alternate LDAP over SSL Servers (Oracle ILOM Web)” on page 466
- “Display the LDAP over SSL Client (Oracle ILOM Web)” on page 145

▼ Disable LDAP over SSL (Oracle ILOM Web)

You can selectively disable LDAP over SSL without having to delete or reset any of the AD properties. When disabled, LDAP over SSL users are not allowed access to the switch.

1. **Choose ILOM Administration → User Management, and click the LSAP/SSL tab.**
2. **Clear the Enabled checkbox for State.**
3. **Click Save.**

Related Information

- “Enable LDAP over SSL (Oracle ILOM Web)” on page 456
- “(Optional) Configure LDAP over SSL User Mappings (Oracle ILOM Web)” on page 457
- “Set the LDAP over SSL User's Role and Privileges (Oracle ILOM Web)” on page 458

- "Load Certificate Information for an LDAP over SSL Server (Oracle ILOM Web)" on page 459
- "Remove a Certificate From an LDAP over SSL Server (Oracle ILOM Web)" on page 460
- "Add LDAP over SSL Administrator Groups (Oracle ILOM Web)" on page 462
- "Add LDAP over SSL Operator Groups (Oracle ILOM Web)" on page 463
- "Add LDAP over SSL Custom Groups (Oracle ILOM Web)" on page 464
- "Add LDAP over SSL User Domains (Oracle ILOM Web)" on page 465
- "Add Alternate LDAP over SSL Servers (Oracle ILOM Web)" on page 466
- "Display the LDAP over SSL Client (Oracle ILOM Web)" on page 145

▼ Add LDAP over SSL Administrator Groups (Oracle ILOM Web)

If your network uses LDAP over SSL administrator groups, you must configure those groups on the switch so that members of the administrator group can access the switch.

- Administrator groups configured on the LDAP over SSL server must match the administrator groups configured on the switch.
- Administrator group names must comply with the standard LDAP over SSL name formats for administrator groups.
- The switch supports a maximum of five groups.

1. **Choose ILOM Administration → User Management, and click the LDAP over SSL tab.**
2. **Click the Admin Groups link.**
   The pane scrolls to the Admin Groups section.
3. **Select a row on the Admin Groups table even if the table is empty.**
4. **Click Edit.**
   A pop-up window is displayed.
5. **In the Name field, enter the qualified name consisting of a CN, OU, DC, and DC suffix.**
   When entering the name, use commas to separate each information element, and do not use spaces. For example, `CN=SpAdmin,OU=Groups,DC=domain,DC=companyq,DC=com`.
6. **Click Save.**

Related Information

- "Enable LDAP over SSL (Oracle ILOM Web)" on page 456

- "(Optional) Configure LDAP over SSL User Mappings (Oracle ILOM Web)" on page 457
- "Set the LDAP over SSL User's Role and Privileges (Oracle ILOM Web)" on page 458
- "Load Certificate Information for an LDAP over SSL Server (Oracle ILOM Web)" on page 459
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- "Add LDAP over SSL Operator Groups (Oracle ILOM Web)" on page 463
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- "Add Alternate LDAP over SSL Servers (Oracle ILOM Web)" on page 466
- "Display the LDAP over SSL Client (Oracle ILOM Web)" on page 145

▼ Add LDAP over SSL Operator Groups (Oracle ILOM Web)

If your network uses LDAP over SSL operator groups, you must configure those groups on the switch so that members of the operator groups can access the switch.

- Operator groups configured on the LDAP over SSL server must match the groups configured on the switch
- Group names must comply with standard LDAP over SSL name formats for operator groups.
- The switch supports a maximum of five groups.

1. **Choose ILOM Administration → User Management, and click the LDAP over SSL tab.**

2. **Click the Operator Groups link.**

   The pane scrolls to the Operator Groups section.

3. **Select a row on the Operator Groups table even if the table is empty.**

4. **Click Edit.**

   A pop-up window is displayed.

5. **In the Name field, enter the qualified name consisting of a CN, OU, DC, and DC suffix.**

   When entering the name, use commas to separate each information element, and do not use spaces. For example, `CN=SpOperator,OU=Groups,DC=domain,DC=companyq,DC=com`.

6. **Click Save.**

Related Information

- “Enable LDAP over SSL (Oracle ILOM Web)” on page 456
- “(Optional) Configure LDAP over SSL User Mappings (Oracle ILOM Web)” on page 457
- “Set the LDAP over SSL User's Role and Privileges (Oracle ILOM Web)” on page 458
- “Load Certificate Information for an LDAP over SSL Server (Oracle ILOM Web)” on page 459
- “Remove a Certificate From an LDAP over SSL Server (Oracle ILOM Web)” on page 460
- “Disable LDAP over SSL (Oracle ILOM Web)” on page 461
- “Add LDAP over SSL Administrator Groups (Oracle ILOM Web)” on page 462
- “Add LDAP over SSL Custom Groups (Oracle ILOM Web)” on page 464
- “Add LDAP over SSL User Domains (Oracle ILOM Web)” on page 465
- “Add Alternate LDAP over SSL Servers (Oracle ILOM Web)” on page 466
- “Display the LDAP over SSL Client (Oracle ILOM Web)” on page 145

▼ Add LDAP over SSL Custom Groups (Oracle ILOM Web)

If your network uses LDAP over SSL custom groups, you must configure those groups on the switch so that members of the custom groups can access the switch.

- Custom groups configured on the LDAP over SSL server must match the groups configured on the switch.
- Group names must comply with standard LDAP over SSL name formats for custom groups.
- The switch supports a maximum of five groups.

1. **Choose ILOM Administration → User Management, and click the LDAP over SSL tab.**

2. **Click the Custom Groups link.**

   The pane scrolls to the Custom Groups section.

3. **Select a row on the Custom Groups table even if the table is empty.**

4. **Click Edit.**

   A pop-up window is displayed.

5. **In the Name field, enter the qualified name consisting of a CN, OU, DC, and DC suffix.**

   When entering the name, use commas to separate each information element, and do not use spaces. For example, `CN=SpCustom,OU=Groups,DC=domain,DC=companyq,DC=com`.

6. **From the Roles drop-down menu, make a selection:**

   - Administrator or Operator to set either role and the predefined privileges for it.
   - None (No Assigned Roles) to have the LDAP user's role assigned by the LDAP server.
   - Advanced Roles to have a configurable set of privileges assigned to the LDAP user.

7. **For Advanced Roles, select the appropriate checkboxes to enable those privileges for the LDAP user.**

   For more information, see "User Roles and Permissions" on page 27.

8. **Click Save.**

Related Information

- "Enable LDAP over SSL (Oracle ILOM Web)" on page 456
- "(Optional) Configure LDAP over SSL User Mappings (Oracle ILOM Web)" on page 457
- "Set the LDAP over SSL User's Role and Privileges (Oracle ILOM Web)" on page 458
- "Load Certificate Information for an LDAP over SSL Server (Oracle ILOM Web)" on page 459
- "Remove a Certificate From an LDAP over SSL Server (Oracle ILOM Web)" on page 460
- "Disable LDAP over SSL (Oracle ILOM Web)" on page 461
- "Add LDAP over SSL Administrator Groups (Oracle ILOM Web)" on page 462
- "Add LDAP over SSL Operator Groups (Oracle ILOM Web)" on page 463
- "Add LDAP over SSL User Domains (Oracle ILOM Web)" on page 465
- "Add Alternate LDAP over SSL Servers (Oracle ILOM Web)" on page 466
- "Display the LDAP over SSL Client (Oracle ILOM Web)" on page 145

▼ Add LDAP over SSL User Domains (Oracle ILOM Web)

If your network uses LDAP over SSL user domains, you must configure those domains on the switch so that members of the domains can access the switch.

- Domains configured on the LDAP over SSL server must match the domains configured on the switch.
- The user domain must comply with standard LDAP over SSL name formats for user domains.
- The switch supports a maximum of five groups.

1. **Choose ILOM Administration → User Management, and click the LDAP over SSL tab.**

2. **Click the User Domains link.**

   The pane scrolls to the User Domains section.

3. **Select a row on the User Domains table even if the table is empty.**

4. **Click Edit.**

   A pop-up window is displayed.

5. **Enter the user domain in one of the supported formats:**

   - UID format, which is UID, OU, DC, and DC suffix.
   - DN format, which is CN, OU, DC, and DC suffix.
   - Optional Searchbase format, which is UID, OU, DC, DC suffix, and BASE.

6. **Click Save.**

Related Information

- “Enable LDAP over SSL (Oracle ILOM Web)” on page 456
- “(Optional) Configure LDAP over SSL User Mappings (Oracle ILOM Web)” on page 457
- “Set the LDAP over SSL User's Role and Privileges (Oracle ILOM Web)” on page 458
- “Load Certificate Information for an LDAP over SSL Server (Oracle ILOM Web)” on page 459
- “Remove a Certificate From an LDAP over SSL Server (Oracle ILOM Web)” on page 460
- “Disable LDAP over SSL (Oracle ILOM Web)” on page 461
- “Add LDAP over SSL Administrator Groups (Oracle ILOM Web)” on page 462
- “Add LDAP over SSL Operator Groups (Oracle ILOM Web)” on page 463
- “Add LDAP over SSL Custom Groups (Oracle ILOM Web)” on page 464
- “Add Alternate LDAP over SSL Servers (Oracle ILOM Web)” on page 466
- “Display the LDAP over SSL Client (Oracle ILOM Web)” on page 145

▼ Add Alternate LDAP over SSL Servers (Oracle ILOM Web)

Typically, LDAP over SSL networks have multiple alternate LDAP over SSL servers. The switch supports a maximum of five LDAP over SSL servers plus the primary.

1. **Choose ILOM Administration → User Management, and click the LDAP over SSL tab.**

2. **Click the Alternate Servers link.**

The pane scrolls the Alternate Servers section.

3. **Select a row on the Alternate Servers table even if the table is empty.**

4. **Click Edit.**

   A pop-up window is displayed.

5. **Enter the IP address or host name of the alternate LDAP over SSL server.**

6. **Select the port for communication with the LDAP over SSL server:**

   - **Select the AutoSelect checkbox if you want the port automatically determined.**
   - **Deselect the AutoSelect checkbox, and enter a port number in the Port field if you want to specify the communication port.**

7. **Assign an SSL certificate to the LDAP server.**

   See "Load Certificate Information for an LDAP over SSL Server (Oracle ILOM Web)" on page 459.

Note - You can also remove an SSL certificate through this window, by clicking Remove Certificate.

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8. **Click Save.**

Related Information

- "Enable LDAP over SSL (Oracle ILOM Web)" on page 456
- "(Optional) Configure LDAP over SSL User Mappings (Oracle ILOM Web)" on page 457
- "Set the LDAP over SSL User's Role and Privileges (Oracle ILOM Web)" on page 458
- "Load Certificate Information for an LDAP over SSL Server (Oracle ILOM Web)" on page 459
- "Remove a Certificate From an LDAP over SSL Server (Oracle ILOM Web)" on page 460
- "Disable LDAP over SSL (Oracle ILOM Web)" on page 461
- "Add LDAP over SSL Administrator Groups (Oracle ILOM Web)" on page 462
- "Add LDAP over SSL Operator Groups (Oracle ILOM Web)" on page 463
- "Add LDAP over SSL Custom Groups (Oracle ILOM Web)" on page 464
- "Add LDAP over SSL User Domains (Oracle ILOM Web)" on page 465
- "Display the LDAP over SSL Client (Oracle ILOM Web)" on page 145

Controlling RADIUS User Access (Oracle ILOM Web)

The switch has a RADIUS client that interacts with RADIUS servers in your network to grant access to RADIUS authenticated users. These topics describe information about how to configure the switch's RADIUS client.

- "Enable RADIUS User Access through Oracle ILOM (Oracle ILOM Web)" on page 468
- "(Optional) Set the RADIUS Shared Secret (Oracle ILOM Web)" on page 469
- "Add Alternate RADIUS Servers (Oracle ILOM Web)" on page 470
- "Configure Roles for RADIUS Users (Oracle ILOM Web)" on page 470
- "Disable RADIUS User Access Through Oracle ILOM (Oracle ILOM Web)" on page 471

Related Information

- "Controlling AD (Oracle ILOM Web)" on page 441
- "Configure the DNS Client (Oracle ILOM Web)" on page 452
- "Controlling LDAP User Access (Oracle ILOM Web)" on page 453
- "Controlling LDAP over SSL (Oracle ILOM Web)" on page 455

▼ Enable RADIUS User Access through Oracle ILOM (Oracle ILOM Web)

The switch has a RADIUS client that interacts with RADIUS servers in your network. When the switch is configured for RADIUS, authenticated and authorized RADIUS users can access the switch.

- RADIUS can be enabled only if FIPS is disabled. See "Disable FIPS (Oracle ILOM Web)" on page 531.
- You must have user management role (u) in the Oracle roles model to configure the RADIUS user properties for the Oracle ILOM client.
- RADIUS properties must be set on both the switch and the RADIUS servers.

1. **Choose ILOM Administration → User Management, and click the RADIUS tab.**
2. **Select the Enabled checkbox for State.**
3. **Type the IP address or host name of the RADIUS server.**

4. **Specify the port to be used for RADIUS communication.**

5. **(Optional) Set the shared secret password.**

   See "(Optional) Set the RADIUS Shared Secret (Oracle ILOM Web)" on page 469.

6. **Click Save.**

Related Information

- "(Optional) Set the RADIUS Shared Secret (Oracle ILOM Web)" on page 469
- "Add Alternate RADIUS Servers (Oracle ILOM Web)" on page 470
- "Configure Roles for RADIUS Users (Oracle ILOM Web)" on page 470
- "Disable RADIUS User Access Through Oracle ILOM (Oracle ILOM Web)" on page 471
- "Display the RADIUS Client Information (Oracle ILOM Web)" on page 146

▼ (Optional) Set the RADIUS Shared Secret (Oracle ILOM Web)

If the RADIUS implementation in your network uses a shared secret, you must configure the shared secret on the switch also. Use this task to configure the shared secret on the switch.

1. **Choose ILOM Administration → User Management, and then click the RADIUS tab.**

2. **Select the Enabled checkbox for State.**

3. **For Shared Secret, click Change.**

4. **Type the shared secret passphrase for the server.**

   Note - You can also reset this field to its previous value by clicking Revert.

5. **Click Save.**

Related Information

- "Enable RADIUS User Access through Oracle ILOM (Oracle ILOM Web)" on page 468
- "Add Alternate RADIUS Servers (Oracle ILOM Web)" on page 470
- "Configure Roles for RADIUS Users (Oracle ILOM Web)" on page 470
- "Disable RADIUS User Access Through Oracle ILOM (Oracle ILOM Web)" on page 471

- “Display the RADIUS Client Information (Oracle ILOM Web)” on page 146

▼ Add Alternate RADIUS Servers (Oracle ILOM Web)

Typically, RADIUS networks have multiple alternate RADIUS servers to avoid a single point of failure. The switch supports a maximum of five RADIUS servers plus the primary.

1. **Choose ILOM Administration → User Management, and click the RADIUS tab.**
2. **Click the Alternate Servers link.**

   The pane scrolls the Alternate Servers table.
3. **Click Edit.**

   A pop-up window is displayed.
4. **Type the IP address or host name of the alternate RADIUS server.**
5. **Type the port number for communication with the RADIUS server.**
6. **Specify the shared RADIUS shared secret.**

   See “(Optional) Set the RADIUS Shared Secret (Oracle ILOM Web)” on page 469.
7. **Click Save.**

Related Information

- “Enable RADIUS User Access through Oracle ILOM (Oracle ILOM Web)” on page 468
- “(Optional) Set the RADIUS Shared Secret (Oracle ILOM Web)” on page 469
- “Configure Roles for RADIUS Users (Oracle ILOM Web)” on page 470
- “Disable RADIUS User Access Through Oracle ILOM (Oracle ILOM Web)” on page 471
- “Display the RADIUS Client Information (Oracle ILOM Web)” on page 146

▼ Configure Roles for RADIUS Users (Oracle ILOM Web)

For RADIUS users accessing the switch, you can set the specific roles and privileges that the user has on the switch.

1. **Choose ILOM Administration → User Management, and click the RADIUS tab.**

2. **Select the Enabled checkbox for State.**

3. **Choose the appropriate roles.**

   - **Select the preconfigured Administrator or Operator role.**
   - **To create an advanced role with custom privileges, select Advanced Roles.**

4. **For advanced roles, select the checkboxes as needed to apply privileges to the custom role.**

   For more information, see "User Roles and Permissions" on page 27.

5. **Click Save.**

Related Information

- "Enable RADIUS User Access through Oracle ILOM (Oracle ILOM Web)" on page 468
- "(Optional) Set the RADIUS Shared Secret (Oracle ILOM Web)" on page 469
- "Add Alternate RADIUS Servers (Oracle ILOM Web)" on page 470
- "Disable RADIUS User Access Through Oracle ILOM (Oracle ILOM Web)" on page 471
- "Display the RADIUS Client Information (Oracle ILOM Web)" on page 146

▼ Disable RADIUS User Access Through Oracle ILOM (Oracle ILOM Web)

You can selectively disable RADIUS without having to delete or reset any of the RADIUS properties. When disabled, RADIUS users are not allowed access to the switch.

1. **Choose ILOM Administration → User Management, and click the RADIUS tab.**

2. **Clear the Enabled checkbox for State.**

3. **Click Save.**

Related Information

- "Enable RADIUS User Access through Oracle ILOM (Oracle ILOM Web)" on page 468
- "(Optional) Set the RADIUS Shared Secret (Oracle ILOM Web)" on page 469
- "Add Alternate RADIUS Servers (Oracle ILOM Web)" on page 470
- "Configure Roles for RADIUS Users (Oracle ILOM Web)" on page 470
- "Display the RADIUS Client Information (Oracle ILOM Web)" on page 146

Managing Notifications and Event Logging (Oracle ILOM Web)

These topics describe how to configure the state and properties of events, notifications, and event logging through the Oracle ILOM Web interface.

- "Configure the SMTP Client (Oracle ILOM Web)" on page 472
- "Managing Alerts and Events (Oracle ILOM Web)" on page 473
- "Managing Logs (Oracle ILOM Web)" on page 478

Related Information

- "Oracle ILOM Web Interface Overview" on page 126
- "Get Help on Oracle ILOM Targets (Oracle ILOM Web)" on page 128
- "Managing Switch Components and Identification (Oracle ILOM Web)" on page 428
- "Managing Authentication and Access (Oracle ILOM Web)" on page 441
- "Managing Management Networking (Oracle ILOM Web)" on page 487
- "Managing Management Connections to the Switch (Oracle ILOM Web)" on page 493
- "Managing Switch Interface Methods (Oracle ILOM Web)" on page 498
- "Configuring ASR Client Properties (Oracle ILOM Web)" on page 519
- "Managing User Accounts (Oracle ILOM Web)" on page 521
- "Managing Other Switch Components and Services (Oracle ILOM Web)" on page 527

▼ Configure the SMTP Client (Oracle ILOM Web)

The switch contains an SMTP email client that is used to email notification and alerts to a specified email address. The email address can be an alias or individual recipient's email, for example, the switch administrator.

Note - To send messages, the SMTP client must be enabled and configured for email alert rules from the Oracle ILOM Alert Settings page. See "Enable Alerts to Send Email Alerts (Oracle ILOM Web)" on page 474.

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1. **Choose ILOM Administration → Notifications, and click the SMTP Client tab.**
2. **Select the Enabled checkbox, and provide the SMTP server IP address or host name, the SMTP server port, and the custom sender string into the respective fields.**

3. **Click Save.**

4. **(Optional) Send a test email to verify SMTP client settings.**

   a. **Type an accessible email address into the Address field.**

   b. **Click Send Test.**

   c. **Verify that the email was received.**

Related Information

- “Configure the SMTP Client (Oracle ILOM Web)” on page 472
- “Display the Oracle ILOM Event Log (Oracle ILOM Web)” on page 149

Managing Alerts and Events (Oracle ILOM Web)

These topics describe information about how to use the Oracle ILOM Web interface to configure the switch's notification system to send alerts and events.

- “Enable Alerts to Send SNMP Traps (Oracle ILOM Web)” on page 473
- “Enable Alerts to Send Email Alerts (Oracle ILOM Web)” on page 474
- “Enable Alerts to Send PETs (Oracle ILOM Web)” on page 475
- “Disable Alerts (Oracle ILOM Web)” on page 476
- “Clear Faulted System Components (Oracle ILOM Web)” on page 477
- “Set the Remote Log Host (Oracle ILOM Web)” on page 477

Related Information

- “Configure the SMTP Client (Oracle ILOM Web)” on page 472
- “Managing Logs (Oracle ILOM Web)” on page 478

▼ Enable Alerts to Send SNMP Traps (Oracle ILOM Web)

Alerts are sent when conditions in the switch match an alert level that you create by editing a preconfigured rule already on the switch. Part of configuring the rule is specifying the alert level, and also, specifying the alert type, which can be an SNMP trap. When an alert of the specified level or greater occurs, the switch then sends an SNMP trap. By default, alerts are disabled.

1. **Choose ILOM Administration → Notifications, and click the Alerts tab.**
2. **In the Alerts table, select an existing alert and click Edit.**
3. **Select the alert level from the Level drop-down menu.**
4. **Select SNMP Trap from the Type drop-down menu.**
5. **Type the SNMP trap destination address or host name into the Address field.**
6. **If you want to specify the port, uncheck the Autoselect box, and type the port number into the Destination Port field.**
7. **Select the SNMP version from the SNMP Version drop-down menu.**
8. **Type the SNMP name:**
   a. **For SNMP v3, enter the secure user name.**
   b. **For SNMP v1 or v2c, enter the community name.**
9. **Click Save.**

Related Information

- “Enable Alerts to Send Email Alerts (Oracle ILOM Web)” on page 474
- “Enable Alerts to Send PETs (Oracle ILOM Web)” on page 475
- “Disable Alerts (Oracle ILOM Web)” on page 476
- “Clear Faulted System Components (Oracle ILOM Web)” on page 477
- “Display the Alert Properties (Oracle ILOM Web)” on page 148
- “Managing Logs (Oracle ILOM Web)” on page 478
- “Display the Oracle ILOM Event Log (Oracle ILOM Web)” on page 149
- “Display the Oracle ILOM Audit Log (Oracle ILOM Web)” on page 150

▼ Enable Alerts to Send Email Alerts (Oracle ILOM Web)

Alerts are sent when conditions in the switch match an alert level that you create by editing a preconfigured rule already on the switch. Part of configuring the rule is specifying the alert level, and also, specifying the alert type, which can be an email. When an alert of the specified level or greater occurs, the switch then sends an email. By default, alerts are disabled.

1. **Choose ILOM Administration → Notifications, and click the Alerts tab.**
2. **In the Alerts table, select an existing alert and click Edit.**

The Edit Alert window opens.

3. **Select the alert level from the Level drop-down menu.**
4. **Select Email from the Type drop-down menu.**
5. **Type the destination email address into the Email Address field.**
6. **(Optional) Select the Event Class Filter and Event Type Filter from their respective drop-down menus.**
7. **If needed, type a custom sender identifier into the Custom Sender field.**
8. **(Optional) Type a message prefix into the Message Prefix field.**
9. **Click Save.**

Related Information

- “Enable Alerts to Send SNMP Traps (Oracle ILOM Web)” on page 473
- “Configure the SMTP Client (Oracle ILOM Web)” on page 472
- “Enable Alerts to Send PETs (Oracle ILOM Web)” on page 475
- “Disable Alerts (Oracle ILOM Web)” on page 476
- “Clear Faulted System Components (Oracle ILOM Web)” on page 477
- “Display the Alert Properties (Oracle ILOM Web)” on page 148
- “Managing Logs (Oracle ILOM Web)” on page 478
- “Display the Oracle ILOM Event Log (Oracle ILOM Web)” on page 149
- “Display the Oracle ILOM Audit Log (Oracle ILOM Web)” on page 150

▼ Enable Alerts to Send PETs (Oracle ILOM Web)

Alerts are sent when conditions in the switch match an alert level that you create by editing a preconfigured rule already on the switch. Part of configuring the rule is specifying the alert level, and also, specifying the alert type, which can be an IPMI PET. When an alert of the specified level or greater occurs, the switch then sends an IPM PET. By default, alerts are disabled.

1. **Choose ILOM Administration → Notifications, and click the Alerts tab.**
2. **In the Alerts table, select an existing alert and click Edit.**
3. **Select the alert level from the Level drop-down menu.**

4. **Select IPMI PET from the Type drop-down menu.**
5. **Type the IPMI PET destination IP address into the IP Address field.**
6. **If you want to specify the port, uncheck the Autoselect box and type the port number into the Destination Port field.**
7. **Click Save.**

Related Information

- “Enable Alerts to Send SNMP Traps (Oracle ILOM Web)” on page 473
- “Enable Alerts to Send Email Alerts (Oracle ILOM Web)” on page 474
- “Disable Alerts (Oracle ILOM Web)” on page 476
- “Clear Faulted System Components (Oracle ILOM Web)” on page 477
- “Display the Alert Properties (Oracle ILOM Web)” on page 148
- “Managing Logs (Oracle ILOM Web)” on page 478
- “Display the Oracle ILOM Event Log (Oracle ILOM Web)” on page 149
- “Display the Oracle ILOM Audit Log (Oracle ILOM Web)” on page 150

▼ Disable Alerts (Oracle ILOM Web)

By default, alerts are disabled. For enabled alerts, you can selectively disable individual rules. When alerts are disabled, the SNMP trap, email, or IPMI PET associated with that rule is no longer sent. The condition that caused the alert still exists, but you are not notified.

1. **Choose ILOM Administration → Notifications, and click the Alerts tab.**
2. **In the Alerts table, select an existing alert, and click Edit.**

   The Edit Alert window opens.
3. **Select Disable level from the Level drop-down menu.**
4. **Click Save.**

Related Information

- “Enable Alerts to Send SNMP Traps (Oracle ILOM Web)” on page 473
- “Enable Alerts to Send Email Alerts (Oracle ILOM Web)” on page 474
- “Enable Alerts to Send PETs (Oracle ILOM Web)” on page 475
- “Clear Faulted System Components (Oracle ILOM Web)” on page 477
- “Display the Alert Properties (Oracle ILOM Web)” on page 148

- “Managing Logs (Oracle ILOM Web)” on page 478
- “Display the Oracle ILOM Event Log (Oracle ILOM Web)” on page 149
- “Display the Oracle ILOM Audit Log (Oracle ILOM Web)” on page 150

▼ Clear Faulted System Components (Oracle ILOM Web)

If any system component encounters a fault, that component is listed on the Open Problems page. You can clear individual faulted components as needed.

1. **Choose Open Problems.**
2. **Correct the condition that is causing the faulted component.**
3. **When a faulted component is corrected, click Clear.**
4. **Click OK.**

Related Information

- “Enable Alerts to Send SNMP Traps (Oracle ILOM Web)” on page 473
- “Enable Alerts to Send Email Alerts (Oracle ILOM Web)” on page 474
- “Enable Alerts to Send PETs (Oracle ILOM Web)” on page 475
- “Disable Alerts (Oracle ILOM Web)” on page 476
- “Display the Alert Properties (Oracle ILOM Web)” on page 148
- “Managing Logs (Oracle ILOM Web)” on page 478
- “Display the Oracle ILOM Event Log (Oracle ILOM Web)” on page 149
- “Display the Oracle ILOM Audit Log (Oracle ILOM Web)” on page 150

▼ Set the Remote Log Host (Oracle ILOM Web)

The Oracle ILOM implementation in the SP provides a protocol for transmitting Oracle ILOM events to a remote log host. The events transmitted are similar to those displayed in the local log.

1. **Choose ILOM Administration → Notifications, and click the Syslog tab.**
2. **Type the IP address or hostname of the remote log hosts into the respective fields.**

Note - Setting a remote log host IP address to `0.0.0.0` disables that functionality.

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3. **Click Save.**

Related Information

- "Managing Logs (Oracle ILOM Web)" on page 478

Managing Logs (Oracle ILOM Web)

The Oracle ILOM has two files that automatically record pertinent information:

- The event log records all switch hardware-related events logged to the SP.
- The audit log records user-issued commands that result in a configuration change on the switch.

These topics describes how to control the display and behavior of entries in the event and audit logs.

- "Set the Number of Oracle ILOM Log Entries Per Page (Oracle ILOM Web)" on page 478
- "Display an Oracle ILOM Log in a Single Page (Oracle ILOM Web)" on page 479
- "Filter the Oracle ILOM Event Log by Using Predefined Conditions (Oracle ILOM Web)" on page 480
- "Filter the Oracle ILOM Audit Log By Using Predefined Conditions (Oracle ILOM Web)" on page 481
- "Create a Custom Filter for an Oracle ILOM Log (Oracle ILOM Web)" on page 482
- "Clear an Oracle ILOM Log (Oracle ILOM Web)" on page 483
- "Controlling the System Log (Oracle ILOM Web)" on page 484

Related Information

- "Configure the SMTP Client (Oracle ILOM Web)" on page 472
- "Managing Alerts and Events (Oracle ILOM Web)" on page 473

▼ Set the Number of Oracle ILOM Log Entries Per Page (Oracle ILOM Web)

Over time, an Oracle ILOM log can accumulate numerous entries. Use this task to control the number of rows displayed per page of an Oracle ILOM log.

1. **Choose ILOM Administration → Logs, and click the appropriate tab:**

- Event tab, to control the number of entries per page in the event log.
- Audit tab, to control the number of entries per page in the audit log.

2. **On the ILOM Log toolbar, click the Show Table View Preferences button.**

3. **In the Rows Per Page field, type the number of rows that you want displayed on each page.**

4. **Click OK.**

   The number of rows you set is not persistent across sessions, so if you log out, the number of rows displayed per page resets to the default value (25).

Related Information

- “Display an Oracle ILOM Log in a Single Page (Oracle ILOM Web)” on page 479
- “Filter the Oracle ILOM Event Log by Using Predefined Conditions (Oracle ILOM Web)” on page 480
- “Filter the Oracle ILOM Audit Log By Using Predefined Conditions (Oracle ILOM Web)” on page 481
- “Create a Custom Filter for an Oracle ILOM Log (Oracle ILOM Web)” on page 482
- “Clear an Oracle ILOM Log (Oracle ILOM Web)” on page 483
- “Display the Oracle ILOM Event Log (Oracle ILOM Web)” on page 149
- “Display the Oracle ILOM Audit Log (Oracle ILOM Web)” on page 150

▼ Display an Oracle ILOM Log in a Single Page (Oracle ILOM Web)

An Oracle ILOM log can be displayed as a single, scrollable page containing all log entries, instead of a multipage display.

1. **Choose ILOM Administration → Logs, and click the appropriate tab:**

   - Event tab, to control the event log.
   - Audit tab, to control the audit log.

2. **On the ILOM toolbar, click the Show Data In a Single Page button.**

   The log is displayed as one large table that you can scroll vertically.

3. **(Optional) To return to a multipage table, click Show Data in a Single Page again.**

   The button is a toggle, so you can switch the display between single and multiple page by consecutive clicks.

Related Information

- “Set the Number of Oracle ILOM Log Entries Per Page (Oracle ILOM Web)” on page 478
- “Filter the Oracle ILOM Event Log by Using Predefined Conditions (Oracle ILOM Web)” on page 480
- “Filter the Oracle ILOM Audit Log By Using Predefined Conditions (Oracle ILOM Web)” on page 481
- “Create a Custom Filter for an Oracle ILOM Log (Oracle ILOM Web)” on page 482
- “Clear an Oracle ILOM Log (Oracle ILOM Web)” on page 483
- “Display the Oracle ILOM Event Log (Oracle ILOM Web)” on page 149
- “Display the Oracle ILOM Audit Log (Oracle ILOM Web)” on page 150

▼ Filter the Oracle ILOM Event Log by Using Predefined Conditions (Oracle ILOM Web)

You can filter the Oracle ILOM event log so that it displays entries that match a criterion you select. The switch has predefined filter criteria based on subsystem and event type, but you also can create custom filters.

1. **Choose ILOM Administration → Logs, and click the Event tab.**
2. **From the Filter drop-down menu, select the subsystem or event type to use for filtering.**
   - **To filter the Event log by all events, or to reset the Event log to its original state after its been filtered, select All Events.**
   - **To filter by a certain fault type, select Class:Fault.**
   - **To filter by a certain object affected, select Type:Action.**
   - **To filter by a critical events, select Severity:Critical.**
   - **To filter by any component in the “down” state, select Severity:Down.**

   The log contains only entries that match the criterion you selected.
3. **In the Rows Per Page field, type the number of rows that you want displayed on each page.**

   The number of rows you set is not persistent across sessions, so if you log out, the number of rows displayed per page resets to the default value (25).

4. **Click OK.**

Related Information

- "Set the Number of Oracle ILOM Log Entries Per Page (Oracle ILOM Web)" on page 478
- "Display an Oracle ILOM Log in a Single Page (Oracle ILOM Web)" on page 479
- "Filter the Oracle ILOM Audit Log By Using Predefined Conditions (Oracle ILOM Web)" on page 481
- "Create a Custom Filter for an Oracle ILOM Log (Oracle ILOM Web)" on page 482
- "Clear an Oracle ILOM Log (Oracle ILOM Web)" on page 483
- "Display the Oracle ILOM Event Log (Oracle ILOM Web)" on page 149
- "Display the Oracle ILOM Audit Log (Oracle ILOM Web)" on page 150

▼ Filter the Oracle ILOM Audit Log By Using Predefined Conditions (Oracle ILOM Web)

You can filter the Oracle ILOM Audit log so that it displays entries that match a criterion you select. The switch has predefined filter criteria based on subsystem and event type, but you also can create custom filters. Use this task to filter the Oracle ILOM Audit log by predefined conditions.

1. **Choose ILOM Administration → Logs, and click the Audit tab.**
2. **From the Filter drop-down menu, select the filtering criterion.**

   - **To filter the Event log by all events, or to reset the Event log to its original state after its been filtered, select All Events.**
   - **To filter by all IPMI events, select Type:IPMI.**
   - **To filter by all user interface events, select Type:UI.**
   - **To filter by events that are persistent, not transitory, select Type:Persistence.**
   - **To filter by all events related to an upgrade, select Type:Upgrade.**
   - **To filter all events that are severity of major, select Severity:Major.**
   - **To filter by all Audit Events, select All Audit Events.**
   - **To filter by all events related to the restricted shell, select All RestrictedShell Events.**

- **To filter by all events related to the captive shell, select All CaptiveShell Events.**

The log contains only entries that match the criterion you selected.

3. **In the Rows Per Page field, type the number of rows that you want displayed on each page.**

   The number of rows you set is not persistent across sessions, so if you log out, the number of rows displayed per page resets to the default value (25).

4. **Click OK.**

Related Information

- "Set the Number of Oracle ILOM Log Entries Per Page (Oracle ILOM Web)" on page 478
- "Display an Oracle ILOM Log in a Single Page (Oracle ILOM Web)" on page 479
- "Filter the Oracle ILOM Event Log by Using Predefined Conditions (Oracle ILOM Web)" on page 480
- "Create a Custom Filter for an Oracle ILOM Log (Oracle ILOM Web)" on page 482
- "Clear an Oracle ILOM Log (Oracle ILOM Web)" on page 483
- "Display the Oracle ILOM Event Log (Oracle ILOM Web)" on page 149
- "Display the Oracle ILOM Audit Log (Oracle ILOM Web)" on page 150

▼ Create a Custom Filter for an Oracle ILOM Log (Oracle ILOM Web)

Whereas predefined filters enable comparison of a log's entries to one criterion, custom filters enable up to three criteria to be used for displaying a log's contents.

1. **Choose ILOM Administration → Logs, and click the Event or Audit tab depending on the log you want to affect:**

   - Event tab, to clear the event log.
   - Audit tab, to clear the audit log.

2. **From the Filter drop-down menu, select Custom Filter.**

   The log contains only entries that match the criterion you selected.

   Note - You can display the entire log by selecting All Entries from the Filter drop-down.

3. **From the Event Class dropdown menu, select an appropriate value.**

4. **From the Event Type dropdown menu, select an appropriate value.**

5. **From the Severity dropdown menu, select an appropriate value.**

6. **Click OK.**

Related Information

- "Set the Number of Oracle ILOM Log Entries Per Page (Oracle ILOM Web)" on page 478
- "Display an Oracle ILOM Log in a Single Page (Oracle ILOM Web)" on page 479
- "Filter the Oracle ILOM Event Log by Using Predefined Conditions (Oracle ILOM Web)" on page 480
- "Filter the Oracle ILOM Audit Log By Using Predefined Conditions (Oracle ILOM Web)" on page 481
- "Clear an Oracle ILOM Log (Oracle ILOM Web)" on page 483
- "Display the Oracle ILOM Event Log (Oracle ILOM Web)" on page 149
- "Display the Oracle ILOM Audit Log (Oracle ILOM Web)" on page 150

▼ Clear an Oracle ILOM Log (Oracle ILOM Web)

When an Oracle ILOM log gets large, you might want to clear it to facilitate locating and managing log contents. If you clear an Oracle ILOM log, it begins to fill again when new events occur.

1. **Choose ILOM Administration → Logs, and click the Event or Audit tab.**

2. **In the appropriate table, click Clear Log.**

   A dialog prompts you for confirmation.

3. **Click OK.**

Related Information

- "Set the Number of Oracle ILOM Log Entries Per Page (Oracle ILOM Web)" on page 478
- "Display an Oracle ILOM Log in a Single Page (Oracle ILOM Web)" on page 479
- "Filter the Oracle ILOM Event Log by Using Predefined Conditions (Oracle ILOM Web)" on page 480
- "Filter the Oracle ILOM Audit Log By Using Predefined Conditions (Oracle ILOM Web)" on page 481
- "Create a Custom Filter for an Oracle ILOM Log (Oracle ILOM Web)" on page 482

- “Display the Oracle ILOM Event Log (Oracle ILOM Web)” on page 149
- “Display the Oracle ILOM Audit Log (Oracle ILOM Web)” on page 150

Controlling the System Log (Oracle ILOM Web)

These topics describe how to control the system log and its properties.

- “Set the Number of System Log Entries per Page (Oracle ILOM Web)” on page 484
- “Filter the System Log by Using Predefined Conditions (Oracle ILOM Web)” on page 485
- “Create a Custom Filter for the System Log (Oracle ILOM Web)” on page 485
- “Clear the System Log (Oracle ILOM Web)” on page 486

Related Information

- “Set the Number of Oracle ILOM Log Entries Per Page (Oracle ILOM Web)” on page 478
- “Display an Oracle ILOM Log in a Single Page (Oracle ILOM Web)” on page 479
- “Filter the Oracle ILOM Event Log by Using Predefined Conditions (Oracle ILOM Web)” on page 480
- “Filter the Oracle ILOM Audit Log By Using Predefined Conditions (Oracle ILOM Web)” on page 481
- “Create a Custom Filter for an Oracle ILOM Log (Oracle ILOM Web)” on page 482
- “Clear an Oracle ILOM Log (Oracle ILOM Web)” on page 483

▼ Set the Number of System Log Entries per Page (Oracle ILOM Web)

Over time, the system log can accumulate numerous entries.

1. **Choose system log.**
2. **On the system log toolbar, click the Show Table View Preferences button.**
3. **In the Rows Per Page field, type the number of rows that you want displayed on each page of the system log.**
4. **Click OK.**

   The number of rows you set is not persistent across sessions, so if you log out, the number of rows displayed per page resets to the default value (25).

Related Information

- “Filter the System Log by Using Predefined Conditions (Oracle ILOM Web)” on page 485
- “Create a Custom Filter for the System Log (Oracle ILOM Web)” on page 485
- “Clear the System Log (Oracle ILOM Web)” on page 486
- “Display the Switch System Log (Oracle ILOM Web)” on page 147

▼ Filter the System Log by Using Predefined Conditions (Oracle ILOM Web)

You can filter the system log so that it displays entries that match a criterion you select. The switch has predefined filter criteria based on subsystem and event type, but you also can create custom filters. Use this task to filter the system log by using predefine conditions.

1. **Choose System Log.**
2. **From the Filter drop-down menu, select the subsystem or event type to use for filtering.**

   The system log contains only entries that match the criterion you selected.

   Note - You can display the entire system log by selecting All Entries from the Filter drop-down menu.

3. **In the Rows Per Page field, type the number of rows that you want displayed on each page of the system log.**
4. **Click OK.**

   The number of rows you set is not persistent across sessions, so if you log out, the number of rows displayed per page resets to the default value (25).

Related Information

- “Set the Number of System Log Entries per Page (Oracle ILOM Web)” on page 484
- “Create a Custom Filter for the System Log (Oracle ILOM Web)” on page 485
- “Clear the System Log (Oracle ILOM Web)” on page 486
- “Display the Switch System Log (Oracle ILOM Web)” on page 147

▼ Create a Custom Filter for the System Log (Oracle ILOM Web)

Whereas predefined filters enable comparison of the system log entries to one criterion, custom filters enable up to three criteria to be used for displaying system log contents.

1. **Choose System Log.**
2. **From the Filter drop-down menu, select Custom Filter.**

   The system log contains only entries that match the criterion you selected.

   Note - You can display the entire system log by selecting All Entries from the Filter drop-down menu.

3. **Specify as many of the filter criteria as needed:**
   a. **In the Component field, type the component that you want to be displayed.**
   b. **In the Type field, type the event type that you want to be displayed.**
   c. **From the Subsystem drop-down menu, select the subsystem that you want to be displayed.**
4. **Click OK.**

Related Information

- "Set the Number of System Log Entries per Page (Oracle ILOM Web)" on page 484
- "Filter the System Log by Using Predefined Conditions (Oracle ILOM Web)" on page 485
- "Clear the System Log (Oracle ILOM Web)" on page 486
- "Display the Switch System Log (Oracle ILOM Web)" on page 147

▼ Clear the System Log (Oracle ILOM Web)

Over time, the system log can contain numerous entries. When the system log gets full, you can clear all entries as needed.

1. **Choose System Log.**
2. **On the toolbar, select Clear Log.**

   A pop-up window appears and prompts you for confirmation.
3. **Click OK.**

Related Information

- "Set the Number of System Log Entries per Page (Oracle ILOM Web)" on page 484

- "Filter the System Log by Using Predefined Conditions (Oracle ILOM Web)" on page 485
- "Create a Custom Filter for the System Log (Oracle ILOM Web)" on page 485
- "Display the Switch System Log (Oracle ILOM Web)" on page 147

Managing Management Networking (Oracle ILOM Web)

These topics describe how to control the switch's IPv4 and IPv6 network configuration and individual network controllers through the Oracle ILOM web interface.

- "Set the Network Management Parameters (Oracle ILOM Web)" on page 487
- "Set Network Management Properties (Oracle ILOM Web)" on page 488
- "Set the Switch's IPv4 Management Network Properties (Oracle ILOM Web)" on page 489
- "Set the Switch's IPv4 Management Network Dynamic Addresses (Oracle ILOM Web)" on page 490
- "Set the Switch's IPv6 Management Network Properties (Oracle ILOM Web)" on page 491
- "Test the Management Network Configuration (Oracle ILOM Web)" on page 492

Related Information

- "Managing Switch Components and Identification (Oracle ILOM Web)" on page 428
- "Managing Authentication and Access (Oracle ILOM Web)" on page 441
- "Managing Notifications and Event Logging (Oracle ILOM Web)" on page 472
- "Managing Switch Interface Methods (Oracle ILOM Web)" on page 498
- "Configuring ASR Client Properties (Oracle ILOM Web)" on page 519
- "Managing User Accounts (Oracle ILOM Web)" on page 521
- "Managing Other Switch Components and Services (Oracle ILOM Web)" on page 527

▼ Set the Network Management Parameters (Oracle ILOM Web)

The switch's network management parameters allow the Oracle ILOM to automatically learn the SP's IP address.

1. **Choose ILOM Administration → Connectivity, and click the Network tab.**

2. **For the version of IP in use, select the Enabled checkbox for State to enable the protocol.**
3. **Select the IP Discovery Mode, either DHCP or Static.**
4. **If you select Static, type the SP's IP address, netmask, and IPv4 gateway IP address into their respective fields.**
5. **Click Save.**
6. **Re-establish the connection to the network management to continue administering the SP.**

   See "Access Oracle ILOM From the Web Interface" on page 29.

Related Information

- "Set Network Management Properties (Oracle ILOM Web)" on page 488
- "Set the Switch's IPv4 Management Network Properties (Oracle ILOM Web)" on page 489
- "Set the Switch's IPv4 Management Network Dynamic Addresses (Oracle ILOM Web)" on page 490
- "Set the Switch's IPv6 Management Network Properties (Oracle ILOM Web)" on page 491
- "Test the Management Network Configuration (Oracle ILOM Web)" on page 492
- "Display the Management Network Configuration (Oracle ILOM Web)" on page 151
- "Display the System-Level Health of Management Networking (Oracle ILOM Web)" on page 152

▼ Set Network Management Properties (Oracle ILOM Web)

The switch's network management interface can be either IPv4 or IPv6. Use this task to set the networking properties for the switch's network management interface.

1. **Choose ILOM Administration → Connectivity, and click the Network tab.**
2. **Select Enabled for the 802.1Q VLAN Tagging checkbox if you want the switch to support VLANs.**
3. **Type the VLAN ID range that the switch can transmit and receive.**
4. **Configure the protocol-specific properties.**

See “Set the Switch's IPv4 Management Network Properties (Oracle ILOM Web)” on page 489 and “Set the Switch's IPv6 Management Network Properties (Oracle ILOM Web)” on page 491.

Note - Both protocols can run on the same switch.

5. **Click Save.**

Related Information

- “Set the Network Management Parameters (Oracle ILOM Web)” on page 487
- “Set the Switch's IPv4 Management Network Properties (Oracle ILOM Web)” on page 489
- “Set the Switch's IPv4 Management Network Dynamic Addresses (Oracle ILOM Web)” on page 490
- “Set the Switch's IPv6 Management Network Properties (Oracle ILOM Web)” on page 491
- “Test the Management Network Configuration (Oracle ILOM Web)” on page 492
- “Display the Management Network Configuration (Oracle ILOM Web)” on page 151
- “Display the System-Level Health of Management Networking (Oracle ILOM Web)” on page 152

▼ Set the Switch's IPv4 Management Network Properties (Oracle ILOM Web)

If the network management interface is configured on an IPv4 network, use this task to configure the SP and network management interface properties.

1. **Choose ILOM Administration → Connectivity, and click the Network tab.**
2. **In the IPv4 section, click the Enabled checkbox for State.**
3. **Select the address discovery mode for IPv4 addresses:**
   - DHCP for the switch to obtain its address dynamically from a DHCP server.
   - Static for the switch to receive a static address that you explicitly assign.
4. **Complete the configuration based on the IP address discovery mode.**
   - **For DHCP, select the DHCP Client ID from the drop-down menu.**

- **For Static, enter the static IP address, netmask, and network gateway address.**

5. **For DHCP, configure the DHCP addresses.**
   See "Set the Switch's IPv4 Management Network Dynamic Addresses (Oracle ILOM Web)" on page 490

6. **Click Save.**

7. **If the switch must also support IPv6, configure these properties.**
   See "Set the Switch's IPv6 Management Network Properties (Oracle ILOM Web)" on page 491.

Related Information

- "Set the Network Management Parameters (Oracle ILOM Web)" on page 487
- "Set Network Management Properties (Oracle ILOM Web)" on page 488
- "Set the Switch's IPv4 Management Network Dynamic Addresses (Oracle ILOM Web)" on page 490
- "Set the Switch's IPv6 Management Network Properties (Oracle ILOM Web)" on page 491
- "Test the Management Network Configuration (Oracle ILOM Web)" on page 492
- "Display the Management Network Configuration (Oracle ILOM Web)" on page 151
- "Display the System-Level Health of Management Networking (Oracle ILOM Web)" on page 152

▼ Set the Switch's IPv4 Management Network Dynamic Addresses (Oracle ILOM Web)

If the SP and network management interface use dynamic addressing (DHCP), use this task to configure the dynamic address parameters. This task assumes that you have already enabled IPv4 for DHCP. See "Set the Switch's IPv4 Management Network Properties (Oracle ILOM Web)" on page 489.

1. **Choose ILOM Administration → Connectivity, and click the Network tab.**

2. **Click the Dynamic Addresses link.**

Related Information

- "Set the Network Management Parameters (Oracle ILOM Web)" on page 487

- “Set Network Management Properties (Oracle ILOM Web)” on page 488
- “Set the Switch's IPv4 Management Network Properties (Oracle ILOM Web)” on page 489
- “Set the Switch's IPv6 Management Network Properties (Oracle ILOM Web)” on page 491
- “Test the Management Network Configuration (Oracle ILOM Web)” on page 492
- “Display the Management Network Configuration (Oracle ILOM Web)” on page 151
- “Display the System-Level Health of Management Networking (Oracle ILOM Web)” on page 152

▼ Set the Switch's IPv6 Management Network Properties (Oracle ILOM Web)

If the network management interfaces is configured on an IPv6 network, use this task to configure the SP and network management interface properties.

1. **Choose ILOM Administration → Connectivity, and click the Network tab.**
2. **In the IPv6 section, click the Enabled checkbox for State.**
3. **Select the AutoConfig mode for the protocol.**
4. **Select the DHCPv6 AutoConfig mode for the protocol.**
5. **Type the static IP address.**
6. **Type the static gateway address.**
7. **Click Save.**

Related Information

- “Set the Network Management Parameters (Oracle ILOM Web)” on page 487
- “Set Network Management Properties (Oracle ILOM Web)” on page 488
- “Set the Switch's IPv4 Management Network Properties (Oracle ILOM Web)” on page 489
- “Set the Switch's IPv4 Management Network Dynamic Addresses (Oracle ILOM Web)” on page 490
- “Test the Management Network Configuration (Oracle ILOM Web)” on page 492
- “Display the Management Network Configuration (Oracle ILOM Web)” on page 151

- “Display the System-Level Health of Management Networking (Oracle ILOM Web)” on page 152

Test the Management Network Configuration (Oracle ILOM Web)

The switch can send IPv4 `ping` and IPv6 `ping6` packets to a specified destination to ensure that networking is configured correctly.

1. **Choose ILOM Administration → Connectivity, and click the Network tab.**
2. **Click the Network Tools link.**
3. **Click Tools.**
   A pop-up window is displayed that supports running a `ping` test.
4. **From the Test Type drop-down menu, select the type of `ping` test:**
   - **For an IPv4 network, select ping.**
   - **For an IPv6 networking, select ping6.**
5. **Enter the IP address you want to `ping`, for example, the gateway address.**
6. **Click Test.**
   The ping results are displayed in the pop-up window.
7. **When you are done testing, click Close.**

Related Information

- “Set the Network Management Parameters (Oracle ILOM Web)” on page 487
- “Set Network Management Properties (Oracle ILOM Web)” on page 488
- “Set the Switch's IPv4 Management Network Properties (Oracle ILOM Web)” on page 489
- “Set the Switch's IPv4 Management Network Dynamic Addresses (Oracle ILOM Web)” on page 490
- “Set the Switch's IPv6 Management Network Properties (Oracle ILOM Web)” on page 491
- “Display the Management Network Configuration (Oracle ILOM Web)” on page 151
- “Display the System-Level Health of Management Networking (Oracle ILOM Web)” on page 152

Managing Management Connections to the Switch (Oracle ILOM Web)

These topics describe how to manage connections to the switch through the Oracle ILOM web interface.

- "Controlling Remote Sessions (Oracle ILOM Web)" on page 493
- "Set the Oracle ILOM CLI Session Timeout (Oracle ILOM Web)" on page 495
- "Set the Connection Banner Message (Oracle ILOM Web)" on page 496
- "Delete the Connection Banner Message (Oracle ILOM Web)" on page 496
- "Set the Login Banner Message (Oracle ILOM Web)" on page 497
- "Delete the Banner Login Message (Oracle ILOM Web)" on page 497

Related Information

- "Managing Switch Components and Identification (Oracle ILOM Web)" on page 428
- "Managing Authentication and Access (Oracle ILOM Web)" on page 441
- "Managing Notifications and Event Logging (Oracle ILOM Web)" on page 472
- "Managing Management Networking (Oracle ILOM Web)" on page 487
- "Managing Switch Interface Methods (Oracle ILOM Web)" on page 498
- "Configuring ASR Client Properties (Oracle ILOM Web)" on page 519
- "Managing User Accounts (Oracle ILOM Web)" on page 521
- "Managing Other Switch Components and Services (Oracle ILOM Web)" on page 527

Controlling Remote Sessions (Oracle ILOM Web)

The switch can be managed remotely by a local machine, if remote session properties are configured for serial redirection, for example, keyboard, video, mouse, and storage (KVMS) properties.

- "Enable Video Redirection (Oracle ILOM Web)" on page 494
- "Enable Serial Redirection (Oracle ILOM Web)" on page 494
- "Launch a Remote Session (Oracle ILOM Web)" on page 495

Related Information

- "Set the Oracle ILOM CLI Session Timeout (Oracle ILOM Web)" on page 495
- "Set the Connection Banner Message (Oracle ILOM Web)" on page 496

- “Delete the Connection Banner Message (Oracle ILOM Web)” on page 496
- “Set the Login Banner Message (Oracle ILOM Web)” on page 497
- “Delete the Banner Login Message (Oracle ILOM Web)” on page 497

▼ Enable Video Redirection (Oracle ILOM Web)

You can enable the switch's console video display to be visible on a local machine by using video redirection. Use this task to redirect a GUI-based management session to the Oracle ILOM window.

1. **Choose Remote Control → Redirection.**
2. **Click Use Video Redirection.**
3. **(Optional) Launch a remote session.**
   See “Launch a Remote Session (Oracle ILOM Web)” on page 495.

Related Information

- “Enable Serial Redirection (Oracle ILOM Web)” on page 494
- “Launch a Remote Session (Oracle ILOM Web)” on page 495
- “Display the Redirection Information (Oracle ILOM Web)” on page 154
- “Display the Host Storage Device Settings (Oracle ILOM Web)” on page 155

▼ Enable Serial Redirection (Oracle ILOM Web)

You can enable the switch's console video display to be visible on a local machine by using video redirection. Use this task to redirect a text-based management session to the Oracle ILOM window.

1. **Choose Remote Control → Redirection.**
2. **Click Use Serial Redirection.**
3. **(Optional) Launch a remote session.**
   See “Launch a Remote Session (Oracle ILOM Web)” on page 495.

Related Information

- “Enable Video Redirection (Oracle ILOM Web)” on page 494
- “Launch a Remote Session (Oracle ILOM Web)” on page 495
- “Display the Redirection Information (Oracle ILOM Web)” on page 154

- “Display the Host Storage Device Settings (Oracle ILOM Web)” on page 155

▼ Launch a Remote Session (Oracle ILOM Web)

With either serial or video redirection selected, you can launch a remote session to manage the switch through your local machine.

1. **Click Remote Control → Redirection.**
2. **Click Launch Remote Console.**
   A pop-up window indicates that a JNLP package must be downloaded.
3. **Click OK to allow the download.**
4. **Locate the downloaded file and unzip it.**
5. **Run the JNLP video redirection application.**
   The management session is redirected to the Oracle ILOM window in either serial or video mode.

Related Information

- “Enable Video Redirection (Oracle ILOM Web)” on page 494
- “Enable Serial Redirection (Oracle ILOM Web)” on page 494
- “Display the Redirection Information (Oracle ILOM Web)” on page 154
- “Display the Host Storage Device Settings (Oracle ILOM Web)” on page 155

▼ Set the Oracle ILOM CLI Session Timeout (Oracle ILOM Web)

The switch supports an inactivity timer that closes any open CLI sessions after a configured number of minutes. The maximum timeout supported is 1440 minutes (24 hours). A timeout value of zero (`0`) indicates that the timeout is disabled, and inactive CLI sessions remain open indefinitely.

1. **Choose ILOM Administration → Management Access, and then click the CLI tab.**
2. **Click the Enabled box for Session Timeout, and type the number of minutes into the Minutes field.**
3. **Click Save.**

Related Information

- “Display the CLI Session Timeout (Oracle ILOM Web)” on page 156

Set the Connection Banner Message (Oracle ILOM Web)

The switch supports banner messages that are displayed as users connect to, or log in to, the switch.

1. **Choose ILOM Administration → Management Access, and click the Banner Messages tab.**
2. **In the Connect Message text box, type the message that you want displayed when users connect to the switch, but before they log in.**
3. **Click Update.**
4. **Click Save.**

Related Information

- “Delete the Connection Banner Message (Oracle ILOM Web)” on page 496
- “Set the Login Banner Message (Oracle ILOM Web)” on page 497
- “Delete the Banner Login Message (Oracle ILOM Web)” on page 497
- “Display the System Banner Messages (Oracle ILOM Web)” on page 155

Delete the Connection Banner Message (Oracle ILOM Web)

You can delete the connection banner message at any time so that user are not greeted with a custom message when they connect to the switch.

1. **Choose ILOM Administration → Management Access, and click the Banner Messages tab.**
2. **Select the current banner connection message.**
3. **Click Delete.**
4. **Click Save.**

Related Information

- “Set the Connection Banner Message (Oracle ILOM Web)” on page 496
- “Set the Login Banner Message (Oracle ILOM Web)” on page 497
- “Delete the Banner Login Message (Oracle ILOM Web)” on page 497
- “Display the System Banner Messages (Oracle ILOM Web)” on page 155

▼ Set the Login Banner Message (Oracle ILOM Web)

The switch supports banner messages that are displayed as users connect to, or log in to, the switch.

1. **Choose ILOM Administration → Management Access, and click the Banner Messages tab.**
2. **In the Connect Message text box, type the message that you want displayed when users connect to the switch, but before they log in.**
3. **Click Update.**
4. **(Optional) To require users to accept the login message as a condition of logging in, select the Enabled checkbox for Login Message Acceptance.**
5. **Click Save.**

Related Information

- “Set the Connection Banner Message (Oracle ILOM Web)” on page 496
- “Delete the Connection Banner Message (Oracle ILOM Web)” on page 496
- “Delete the Banner Login Message (Oracle ILOM Web)” on page 497
- “Display the System Banner Messages (Oracle ILOM Web)” on page 155

▼ Delete the Banner Login Message (Oracle ILOM Web)

You can delete the login banner message at any time so that users are not greeted with a custom message when they log in to the switch.

1. **Choose ILOM Administration → Management Access, and click the Banner Messages tab.**

2. **Select the current banner login message.**
3. **Click Delete.**
4. **Click Save.**

Related Information

- “Set the Connection Banner Message (Oracle ILOM Web)” on page 496
- “Delete the Connection Banner Message (Oracle ILOM Web)” on page 496
- “Set the Login Banner Message (Oracle ILOM Web)” on page 497
- “Display the System Banner Messages (Oracle ILOM Web)” on page 155

Managing Switch Interface Methods (Oracle ILOM Web)

These topics describe how to use the Oracle ILOM web to manage various methods of interfacing with the switch.

- “Enable the HTTPS Service (Oracle ILOM Web)” on page 499
- “Install a Custom SSL Certificate and Key (Oracle ILOM Web)” on page 499
- “Remove the Custom SSL Certificate (Oracle ILOM Web)” on page 501
- “Remove a Private Key (Oracle ILOM Web)” on page 501
- “Disable the HTTPS Service (Oracle ILOM Web)” on page 502
- “Enable the HTTP Service (Oracle ILOM Web)” on page 503
- “Disable the HTTP Service (Oracle ILOM Web)” on page 504
- “Controlling SSH Access (Oracle ILOM Web)” on page 504
- “Controlling IPMI Services (Oracle ILOM Web)” on page 506
- “Controlling SNMP Services (Oracle ILOM Web)” on page 509

Related Information

- “Managing Switch Components and Identification (Oracle ILOM Web)” on page 428
- “Managing Authentication and Access (Oracle ILOM Web)” on page 441
- “Managing Notifications and Event Logging (Oracle ILOM Web)” on page 472
- “Managing Management Networking (Oracle ILOM Web)” on page 487
- “Managing Management Connections to the Switch (Oracle ILOM Web)” on page 493
- “Configuring ASR Client Properties (Oracle ILOM Web)” on page 519
- “Managing User Accounts (Oracle ILOM Web)” on page 521

- “Managing Other Switch Components and Services (Oracle ILOM Web)” on page 527

▼ Enable the HTTPS Service (Oracle ILOM Web)

The HTTPS service on the switch supports the web access and encryption levels required for your network environment. HTTPS is the default service and is enabled by default, but HTTP is also supported. HTTP is disabled by default.

Note - Performing this task on an already active HTTPS server effectively resets the server.

1. **Choose ILOM Administration → Management Access, and click the Web Server tab.**
2. **Check the Enabled box for HTTPS Webserver.**
3. **Type the web server port into the HTTPS Port field.**
4. **Type the timeout value into the HTTPS Session Timeout field.**
5. **Click the appropriate Enabled checkboxes for the SSL and TLS versions you want used.**
6. **Click Save.**

Related Information

- “Install a Custom SSL Certificate and Key (Oracle ILOM Web)” on page 499
- “Remove the Custom SSL Certificate (Oracle ILOM Web)” on page 501
- “Remove a Private Key (Oracle ILOM Web)” on page 501
- “Disable the HTTPS Service (Oracle ILOM Web)” on page 502
- “Enable the HTTP Service (Oracle ILOM Web)” on page 503
- “Disable the HTTP Service (Oracle ILOM Web)” on page 504
- “Display the HTTPS Service Status (Oracle ILOM Web)” on page 157
- “Display the HTTP Service Status (Oracle ILOM Web)” on page 157

▼ Install a Custom SSL Certificate and Key (Oracle ILOM Web)

The switch has an integrated web server and contains a default SSL certificate and self-signing key for HTTPS access, but also supports a custom SSL certificate if you have one.

Note - To use a custom certificate, you must install both a custom SSL certificate and key.

1. **Choose ILOM Administration → Management Access, and click the SSL Certificate tab.**
2. **Click the Custom Certificate link.**

   The page scrolls to the Custom Certificate pane.
3. **Click Load.**

   The Custom Certificate Upload pane is displayed.
4. **Select the transfer protocol from the Transfer Method drop-down menu.**
5. **For the protocol selected, type the file name, host IP address, file path, user name, and password into the respective fields.**
6. **Click Load.**
7. **Under Custom Private Key, click Load.**

   The Custom Private Key Upload pane is displayed.
8. **Select the transfer protocol from the Transfer Method drop-down menu.**
9. **For the protocol selected, type the file name, host IP address, file path, user name, and password into the respective fields.**
10. **Click Load.**
11. **Re-establish the connection to the network management interface to continue administering the SP.**

    See “Access Oracle ILOM From the Web Interface” on page 29.

Related Information

- “Enable the HTTPS Service (Oracle ILOM Web)” on page 499
- “Remove the Custom SSL Certificate (Oracle ILOM Web)” on page 501
- “Remove a Private Key (Oracle ILOM Web)” on page 501
- “Disable the HTTPS Service (Oracle ILOM Web)” on page 502
- “Enable the HTTP Service (Oracle ILOM Web)” on page 503
- “Disable the HTTP Service (Oracle ILOM Web)” on page 504
- “Display the HTTPS Service Status (Oracle ILOM Web)” on page 157
- “Display the HTTP Service Status (Oracle ILOM Web)” on page 157

Remove the Custom SSL Certificate (Oracle ILOM Web)

If the switch has a custom SSL certificate that you no longer want, for example, if the certificate expired, use this task to remove the custom certificate. This task does not remove the private key, just the certificate.

1. **Choose ILOM Administration→Management Access, and click the SSL Certificate tab.**
2. **Click the Custom Certificate link.**
   The page scrolls to the Custom Certificate section.
3. **Click Remove.**
   A dialog prompts you for confirmation.
4. **Click OK.**
5. **Remove the private key.**
   See “Remove a Private Key (Oracle ILOM Web)” on page 501

Related Information

- “Enable the HTTPS Service (Oracle ILOM Web)” on page 499
- “Install a Custom SSL Certificate and Key (Oracle ILOM Web)” on page 499
- “Remove a Private Key (Oracle ILOM Web)” on page 501
- “Disable the HTTPS Service (Oracle ILOM Web)” on page 502
- “Enable the HTTP Service (Oracle ILOM Web)” on page 503
- “Disable the HTTP Service (Oracle ILOM Web)” on page 504
- “Display the HTTPS Service Status (Oracle ILOM Web)” on page 157
- “Display the HTTP Service Status (Oracle ILOM Web)” on page 157

Remove a Private Key (Oracle ILOM Web)

1. **Remove the custom SSL certificate from the switch.**
   See “Remove the Custom SSL Certificate (Oracle ILOM Web)” on page 501.
2. **Re-establish the connection to the network management interface to continue administering the SP.**
   See “Access Oracle ILOM From the Web Interface” on page 29.

3. **Choose ILOM Administration → Management Access, and the click the SSL Certificate tab.**

4. **Click the Custom Private Key link.**

   The page scrolls the Custom Private Key section.

5. **Click Remove.**

   A dialog prompts you for confirmation.

6. **Click OK.**

Related Information

- “Enable the HTTPS Service (Oracle ILOM Web)” on page 499
- “Install a Custom SSL Certificate and Key (Oracle ILOM Web)” on page 499
- “Remove the Custom SSL Certificate (Oracle ILOM Web)” on page 501
- “Disable the HTTPS Service (Oracle ILOM Web)” on page 502
- “Enable the HTTP Service (Oracle ILOM Web)” on page 503
- “Disable the HTTP Service (Oracle ILOM Web)” on page 504
- “Display the HTTPS Service Status (Oracle ILOM Web)” on page 157
- “Display the HTTP Service Status (Oracle ILOM Web)” on page 157

▼ Disable the HTTPS Service (Oracle ILOM Web)

You can selectively disable the HTTP server on the switch without having to change any of the HTTPS properties. When you disable the HTTPS service, you can enable HTTP to retain web server access to Oracle ILOM. If you want no web server functionality, you can leave HTTP disabled.

Note - Performing this task on an already active HTTPS server effectively resets the server.

---

1. **Choose ILOM Administration → Management Access, and click the Web Server tab.**

2. **Clear the Enabled checkbox for the HTTPS web server.**

3. **Click Save.**

Related Information

- “Enable the HTTPS Service (Oracle ILOM Web)” on page 499

- "Install a Custom SSL Certificate and Key (Oracle ILOM Web)" on page 499
- "Remove the Custom SSL Certificate (Oracle ILOM Web)" on page 501
- "Remove a Private Key (Oracle ILOM Web)" on page 501
- "Enable the HTTP Service (Oracle ILOM Web)" on page 503
- "Disable the HTTP Service (Oracle ILOM Web)" on page 504
- "Display the HTTPS Service Status (Oracle ILOM Web)" on page 157
- "Display the HTTP Service Status (Oracle ILOM Web)" on page 157

▼ Enable the HTTP Service (Oracle ILOM Web)

The HTTP service on the switch supports the web access required for your network environment. Although HTTP is supported, this service is not enabled by default. Instead, the switch uses HTTPS by default.

Note - Performing this task on an already active HTTP server effectively resets the server.

---

1. **Choose ILOM Administration → Management Access, and click the Web Server tab.**
2. **Select either Enabled or Redirect HTTP Connection to HTTPS from the HTTP Web server drop-down menu.**
3. **Type the web server port number into the HTTP Port field.**
4. **(Optional) If you want to enable HTTP connections, but transfer them to HTTPS, select Redirect HTTP Connection to HTTPS.**
5. **If HTTP will be redirected to HTTPS, configure the HTTPs parameters.**

   See "Enable the HTTPS Service (Oracle ILOM Web)" on page 499.
6. **Click Save.**

Related Information

- "Enable the HTTPS Service (Oracle ILOM Web)" on page 499
- "Install a Custom SSL Certificate and Key (Oracle ILOM Web)" on page 499
- "Remove the Custom SSL Certificate (Oracle ILOM Web)" on page 501
- "Remove a Private Key (Oracle ILOM Web)" on page 501
- "Disable the HTTPS Service (Oracle ILOM Web)" on page 502
- "Disable the HTTP Service (Oracle ILOM Web)" on page 504

- "Display the HTTPS Service Status (Oracle ILOM Web)" on page 157
- "Display the HTTP Service Status (Oracle ILOM Web)" on page 157

▼ Disable the HTTP Service (Oracle ILOM Web)

HTTP is not enabled by default, so you must disable it only if you explicitly enabled it. Use this task to disable the switch's HTTP service.

Note - Performing this task on an already active HTTP server effectively resets the server.

1. **Choose ILOM Administration → Management Access, and click the Web Server tab.**
2. **Select Disabled from the HTTP web server drop-down menu.**
3. **Click Save.**

Related Information

- "Enable the HTTPS Service (Oracle ILOM Web)" on page 499
- "Install a Custom SSL Certificate and Key (Oracle ILOM Web)" on page 499
- "Remove the Custom SSL Certificate (Oracle ILOM Web)" on page 501
- "Remove a Private Key (Oracle ILOM Web)" on page 501
- "Disable the HTTPS Service (Oracle ILOM Web)" on page 502
- "Enable the HTTP Service (Oracle ILOM Web)" on page 503
- "Display the HTTPS Service Status (Oracle ILOM Web)" on page 157
- "Display the HTTP Service Status (Oracle ILOM Web)" on page 157

Controlling SSH Access (Oracle ILOM Web)

The switch contains an SSH server to provide secure shell connections and key generation.

- "Enable SSH (Oracle ILOM Web)" on page 505
- "Generate SSH Keys (Oracle ILOM Web)" on page 505
- "Disable SSH (Oracle ILOM Web)" on page 506

Related Information

- "Set the Oracle ILOM CLI Session Timeout (Oracle ILOM Web)" on page 495

- "Set the Connection Banner Message (Oracle ILOM Web)" on page 496
- "Delete the Connection Banner Message (Oracle ILOM Web)" on page 496
- "Set the Login Banner Message (Oracle ILOM Web)" on page 497
- "Delete the Banner Login Message (Oracle ILOM Web)" on page 497

▼ Enable SSH (Oracle ILOM Web)

The switch contains an SSH server that sets properties for management access through SSH and supports generating new SSH keys whenever needed. By default, switch generates a set of default RSA and DSA keys when the switch boots up for the first time, so keys should always be present.

1. **Choose ILOM Administration → Management Access, and then click the SSH Server tab.**
2. **In Settings, select the Enabled checkbox for State.**
3. **Click Save.**

Related Information

- "Generate SSH Keys (Oracle ILOM Web)" on page 505
- "Disable SSH (Oracle ILOM Web)" on page 506
- "Display the SSH Server Status (Oracle ILOM Web)" on page 159

▼ Generate SSH Keys (Oracle ILOM Web)

The switch can generate RSA and DSA keys for SSH connections. Generating new keys requires a restart of the SSH server, which terminates any in-process SSH sessions.

1. **Choose ILOM Administration → Management Access, and click the SSH Server tab.**
2. **Select the Enable checkbox for State.**
3. **Choose a key type to generate.**
   - **For an RSA key, click Generate RSA Key.**
   - **For a DSA key, click Generate DSA Key.**

You can configure and use both key types, but must configure them one at a time.

4. **If you are configuring both key types, generate the other key type.**
5. **Click Save.**
6. **Click Restart.**

   The SSH server must be restarted to use the newly generated keys.

Related Information

- “Enable SSH (Oracle ILOM Web)” on page 505
- “Disable SSH (Oracle ILOM Web)” on page 506
- “Display the SSH Server Status (Oracle ILOM Web)” on page 159

▼ Disable SSH (Oracle ILOM Web)

You can selectively disable the SSH server on the switch at any time without having to change the SSH configuration. When SSH is disabled, the switch terminates all active SSH CLI sessions running on the SP.

1. **Choose ILOM Administration → Management Access, and then click the SSH Server tab.**
2. **Deselect the Enabled checkbox for State.**
3. **Click Save.**

Related Information

- “Enable SSH (Oracle ILOM Web)” on page 505
- “Generate SSH Keys (Oracle ILOM Web)” on page 505
- “Display the SSH Server Status (Oracle ILOM Web)” on page 159

Controlling IPMI Services (Oracle ILOM Web)

The switch runs a service that supports IPMI management of the switch. The switch's IPMI service supports both IPMI version 1.5 and 2.0. The Oracle implementation of IPMI supports such features as:

- FRU-component inventory identification and control.
- System monitoring and event reporting, for example through IPMI PETs. (See “Enable Alerts to Send PETs (Oracle ILOM Web)” on page 475.)

- Logging of system of events, for example, through the Oracle ILOM event log.
- System power management, for example, system reset, power off, and power on.

These topics describe how to configure the switch's IPMI service.

- "Enable the IPMI Service (Oracle ILOM Web)" on page 507
- "Disable the IPMI Service (Oracle ILOM Web)" on page 508
- "Enable IPMI Version 1.5 Sessions (Oracle ILOM Web)" on page 508
- "Disable IPMI Version 1.5 Sessions (Oracle ILOM Web)" on page 509

Related Information

- "Enable the HTTPS Service (Oracle ILOM Web)" on page 499
- "Enable the HTTP Service (Oracle ILOM Web)" on page 503
- "Controlling SSH Access (Oracle ILOM Web)" on page 504
- "Controlling SNMP Services (Oracle ILOM Web)" on page 509

▼ Enable the IPMI Service (Oracle ILOM Web)

The switch runs a service that supports IPMI management of the switch. The switch's IPMI service supports both IPMI version 1.5 and 2.0 (the default).

Oracle's implementation of IPMI supports IPMItool. If your network uses IPMItool, you must configure users with the appropriate roles and privileges (such as administrator or operator) for the IPMI management tasks that you will be using. Some considerations apply to IPMItool and IPMI version 1.5. See "Enable IPMI Version 1.5 Sessions (Oracle ILOM Web)" on page 508.

Note - The IPMI service is enabled for version 2.0 by default.

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1. **Choose System Information → Management Access, and click the IPMI tab.**
2. **Select the Enabled checkbox for State.**
3. **Click Save.**

Related Information

- "Disable the IPMI Service (Oracle ILOM Web)" on page 508
- "Enable IPMI Version 1.5 Sessions (Oracle ILOM Web)" on page 508
- "Disable IPMI Version 1.5 Sessions (Oracle ILOM Web)" on page 509
- "Display the IPMI Service Status (Oracle ILOM Web)" on page 160

▼ Disable the IPMI Service (Oracle ILOM Web)

You can selectively disable the versions of IPMI running on the switch.

1. **Choose System Information → Management Access, and click the IPMI tab.**
2. **Clear the Enabled checkbox for State.**
3. **Click Save.**

Related Information

- "Enable the IPMI Service (Oracle ILOM Web)" on page 507
- "Enable IPMI Version 1.5 Sessions (Oracle ILOM Web)" on page 508
- "Disable IPMI Version 1.5 Sessions (Oracle ILOM Web)" on page 509
- "Display the IPMI Service Status (Oracle ILOM Web)" on page 160

▼ Enable IPMI Version 1.5 Sessions (Oracle ILOM Web)

By default, the switch supports IPMI version 2.0, but you can enable IPMI v 1.5 sessions if needed. The switch can support both 1.5 and 2.0 sessions simultaneously.

- If IPMI 1.5 sessions are enabled, IPMItool users can use the `-I lan` option.
- If IPMI 1.5 sessions are disabled, IPMItool users must use the IPMI version 2.0 `-I lanplus` option.
- IPMI 1.5 sessions can be enabled only if FIPS service is disabled. See "Disable FIPS (Oracle ILOM Web)" on page 531.

Note - IPMI v 1.5 is disabled by default because it is less secure than IPMI v 2.0.

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1. **Choose System Information → Management Access, and click the IPMI tab.**
2. **Select the Enabled checkbox for State.**
3. **Select the Enabled checkbox for v1.5 Sessions.**
4. **Click Save.**

Related Information

- "Enable the IPMI Service (Oracle ILOM Web)" on page 507
- "Disable the IPMI Service (Oracle ILOM Web)" on page 508

- “Disable IPMI Version 1.5 Sessions (Oracle ILOM Web)” on page 509
- “Display the IPMI Service Status (Oracle ILOM Web)” on page 160

▼ Disable IPMI Version 1.5 Sessions (Oracle ILOM Web)

You can selectively disable the IPMI version 1.5 sessions at any time. When you disable IPMI version 1.5 sessions, any existing sessions are terminated and future version 1.5 session requests are blocked. If IPMI 1.5 sessions are disabled, IPMItool users must use the IPMI version 2.0 `-I lanplus` option.

1. **Choose System Information → Management Access, and click the IPMI tab.**
2. **Select the Enabled checkbox for State.**
3. **Deselect the Enabled checkbox for v1.5 Sessions.**

   When the IPMI checkbox is enabled, but the v1.5 Sessions checkbox is empty, the IPMI service is operating without supporting v.1.5.
4. **Click Save.**

Related Information

- “Enable the IPMI Service (Oracle ILOM Web)” on page 507
- “Disable the IPMI Service (Oracle ILOM Web)” on page 508
- “Enable IPMI Version 1.5 Sessions (Oracle ILOM Web)” on page 508
- “Display the IPMI Service Status (Oracle ILOM Web)” on page 160

Controlling SNMP Services (Oracle ILOM Web)

The switch has an SNMP client that interacts with SNMP servers to allow access to the Oracle ILOM.

- “SNMP Client Overview (Oracle ILOM Web)” on page 510
- “Enable the SNMP Service (Oracle ILOM Web)” on page 511
- “Configure the SNMP Service (Oracle ILOM Web)” on page 511
- “Add SNMP Service User Accounts (Oracle ILOM Web)” on page 512
- “Modify SNMP Service User Accounts (Oracle ILOM Web)” on page 513
- “Delete SNMP Service User Accounts (Oracle ILOM Web)” on page 514
- “Add SNMP Service Communities (Oracle ILOM Web)” on page 515

- “Modify SNMP Service Communities (Oracle ILOM Web)” on page 516
- “Delete SNMP Service Communities (Oracle ILOM Web)” on page 517
- “Disable the SNMP Service (Oracle ILOM Web)” on page 518
- “Download SNMP Service MIBs (Oracle ILOM Web)” on page 518

Related Information

- “Enable the HTTPS Service (Oracle ILOM Web)” on page 499
- “Enable the HTTP Service (Oracle ILOM Web)” on page 503
- “Controlling SSH Access (Oracle ILOM Web)” on page 504
- “Controlling IPMI Services (Oracle ILOM Web)” on page 506

SNMP Client Overview (Oracle ILOM Web)

The switch has an SNMP client that supports SNMP v1, v2c, and v3. SNMP v3 is enabled by default because it is more secure than either v1 or v2c.

For SNMP v3, which is the default:

- SNMP users control user authentication and authorization. Communities do not.
- The user management (u) role in Oracle's roles model is required to configure users.
- For SNMP set requests, v3 users require read-write privilege.
- To receive and decode v3 traps, the SNMP user name must be configured in Oracle ILOM. If not, the switch receives v3 traps, but they cannot be decoded.

For SNMP v1 and v2c, which are disabled by default because they are much less secure than v3:

- SNMP communities control user authentication and authorization. Users do not.
- The user management (u) role in Oracle's roles model is required to configure SNMP communities.
- For SNMP set requests, communities require read-write privilege.

Related Information

- “Enable the SNMP Service (Oracle ILOM Web)” on page 511
- “Configure the SNMP Service (Oracle ILOM Web)” on page 511
- “Add SNMP Service User Accounts (Oracle ILOM Web)” on page 512
- “Modify SNMP Service User Accounts (Oracle ILOM Web)” on page 513
- “Delete SNMP Service User Accounts (Oracle ILOM Web)” on page 514

- "Add SNMP Service Communities (Oracle ILOM Web)" on page 515
- "Modify SNMP Service Communities (Oracle ILOM Web)" on page 516
- "Delete SNMP Service Communities (Oracle ILOM Web)" on page 517
- "Disable the SNMP Service (Oracle ILOM Web)" on page 518
- "Download SNMP Service MIBs (Oracle ILOM Web)" on page 518

▼ Enable the SNMP Service (Oracle ILOM Web)

The switch contains a preinstalled SNMP agent that supports Oracle ILOM functions only, not standard SNMP network management functions. By default, the SNMP service is enabled.

1. **Choose ILOM Administration → Management Access, and click the SNMP tab.**
2. **Under Settings, select the Enabled checkbox for State.**
3. **(Optional) Set additional parameters.**

   See "Configure the SNMP Service (Oracle ILOM Web)" on page 511.
4. **Click Save.**

Related Information

- "Configure the SNMP Service (Oracle ILOM Web)" on page 511
- "Add SNMP Service User Accounts (Oracle ILOM Web)" on page 512
- "Modify SNMP Service User Accounts (Oracle ILOM Web)" on page 513
- "Delete SNMP Service User Accounts (Oracle ILOM Web)" on page 514
- "Add SNMP Service Communities (Oracle ILOM Web)" on page 515
- "Modify SNMP Service Communities (Oracle ILOM Web)" on page 516
- "Delete SNMP Service Communities (Oracle ILOM Web)" on page 517
- "Disable the SNMP Service (Oracle ILOM Web)" on page 518
- "Download SNMP Service MIBs (Oracle ILOM Web)" on page 518
- "Display the SNMP Service Status (Oracle ILOM Web)" on page 158
- "Display the SNMP Service User Accounts (Oracle ILOM Web)" on page 158
- "Display the SNMP Service Communities (Oracle ILOM Web)" on page 159

▼ Configure the SNMP Service (Oracle ILOM Web)

1. **Choose ILOM Administration → Management Access, and click the SNMP tab.**
2. **Click the Enabled checkbox for State.**

3. **Type the port number into the Port field.**
4. **For SNMP v3, type the v3 SNMP engine ID number in the Engine ID field.**
5. **Select the Enabled checkbox for Set Requests to enable SNMP sets.**
6. **Select the checkboxes for the protocols that you want to enable.**
7. **Click Save.**

Related Information

- "Enable the SNMP Service (Oracle ILOM Web)" on page 511
- "Add SNMP Service User Accounts (Oracle ILOM Web)" on page 512
- "Modify SNMP Service User Accounts (Oracle ILOM Web)" on page 513
- "Delete SNMP Service User Accounts (Oracle ILOM Web)" on page 514
- "Add SNMP Service Communities (Oracle ILOM Web)" on page 515
- "Modify SNMP Service Communities (Oracle ILOM Web)" on page 516
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▼ Add SNMP Service User Accounts (Oracle ILOM Web)

SNMP user accounts are supported in SNMP v3 only. The user account can be from 1 to 32 characters long.

1. **Choose ILOM Administration → Management Access, and click the SNMP tab.**
2. **Click the Users link.**

   The page scrolls to the SNMP Users table.
3. **Click Add.**

   A pop-up window opens.
4. **Type the user name into the User Name field.**
5. **Select the authentication protocol from the Authentication Protocol drop-down menu.**

6. **Type the authentication password into the Authentication Password and Confirm Password fields.**

Note - The authentication password is 8 to 12 characters in length and is case-sensitive.

7. **Select the user permissions from the Permission drop-down menu.**

8. **(Optional) Select the privacy protocol from the Privacy Protocol drop-down menu.**

9. **If required, type the privacy password into the Privacy Password and Confirm Password fields.**

Note - The privacy password is exactly 8 characters in length and is case-sensitive.

10. **Click Save.**

Related Information

- "Enable the SNMP Service (Oracle ILOM Web)" on page 511
- "Configure the SNMP Service (Oracle ILOM Web)" on page 511
- "Modify SNMP Service User Accounts (Oracle ILOM Web)" on page 513
- "Delete SNMP Service User Accounts (Oracle ILOM Web)" on page 514
- "Add SNMP Service Communities (Oracle ILOM Web)" on page 515
- "Modify SNMP Service Communities (Oracle ILOM Web)" on page 516
- "Delete SNMP Service Communities (Oracle ILOM Web)" on page 517
- "Disable the SNMP Service (Oracle ILOM Web)" on page 518
- "Download SNMP Service MIBs (Oracle ILOM Web)" on page 518
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- "Display the SNMP Service Communities (Oracle ILOM Web)" on page 159

▼ Modify SNMP Service User Accounts (Oracle ILOM Web)

Use this task to modify a configured SNMP v3 user account.

1. **Choose ILOM Administration → Management Access, and click the SNMP tab.**

2. **Click the Users link.**

The page scrolls to the SNMP Users table.

3. **Select the user you want to modify and click Edit.**

   A pop-up window opens.

4. **Select the authentication protocol from the Authentication Protocol drop-down menu.**

5. **Type the authentication password into the Authentication Password and Confirm Password fields.**

6. **Select the user permissions from the Permission drop-down menu.**

7. **(Optional) Select the privacy protocol from the Privacy Protocol drop-down menu.**

8. **If required, type the privacy password into the Privacy Password and Confirm Password fields.**

9. **Click Save.**

Related Information

- “Enable the SNMP Service (Oracle ILOM Web)” on page 511
- “Configure the SNMP Service (Oracle ILOM Web)” on page 511
- “Add SNMP Service User Accounts (Oracle ILOM Web)” on page 512
- “Delete SNMP Service User Accounts (Oracle ILOM Web)” on page 514
- “Add SNMP Service Communities (Oracle ILOM Web)” on page 515
- “Modify SNMP Service Communities (Oracle ILOM Web)” on page 516
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▼ Delete SNMP Service User Accounts (Oracle ILOM Web)

You can selectively delete SNMP v3 user accounts without having to change other SNMP properties. When an SNMP v3 user account is deleted, that user can no longer access the switch.

Note - If you delete an SNMP v3 user account from Oracle ILOM, the switch can no longer decode any traps sent to that user account.

---

1. **Choose ILOM Administration → Management Access, and click the SNMP tab.**
2. **Click the Users link.**

   The page scrolls to the SNMP Users table.
3. **Select the user to deleted and click Delete.**

   A dialog prompts you for confirmation.
4. **Click OK.**

Related Information

- “Enable the SNMP Service (Oracle ILOM Web)” on page 511
- “Configure the SNMP Service (Oracle ILOM Web)” on page 511
- “Add SNMP Service User Accounts (Oracle ILOM Web)” on page 512
- “Modify SNMP Service User Accounts (Oracle ILOM Web)” on page 513
- “Add SNMP Service Communities (Oracle ILOM Web)” on page 515
- “Modify SNMP Service Communities (Oracle ILOM Web)” on page 516
- “Delete SNMP Service Communities (Oracle ILOM Web)” on page 517
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- “Display the SNMP Service Communities (Oracle ILOM Web)” on page 159

▼ Add SNMP Service Communities (Oracle ILOM Web)

SNMP communities are supported in SNMP v1 and v2c only. Each community account can be from 1 to 32 characters long. The switch is configured with two default communities `public` and `private`, but you can configure custom communities. Custom communities names:

- Must be from one to 35 characters in length
- Must start with an alphabetic character
- Cannot contain blank spaces

1. **Choose ILOM Administration → Management Access, and click the SNMP tab.**
2. **Click the Communities link.**

   The page scrolls to the SNMP Communities table.
3. **In the SNMP Communities table, click Add.**

A pop-up window opens.

4. **Type the community name into the Community Name field.**
5. **Select the permissions from the Permission drop-down menu.**
   - **Select Read-Only for the ability to read, but not change, information on the switch.**
   - **Select Read-Write for the ability to read, and make changes to, information on the switch.**
6. **Click Save.**

Related Information

- "Enable the SNMP Service (Oracle ILOM Web)" on page 511
- "Configure the SNMP Service (Oracle ILOM Web)" on page 511
- "Add SNMP Service User Accounts (Oracle ILOM Web)" on page 512
- "Modify SNMP Service User Accounts (Oracle ILOM Web)" on page 513
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▼ Modify SNMP Service Communities (Oracle ILOM Web)

Use this task to change an existing SNMP v1 or v2c community.

1. **Choose ILOM Administration → Management Access, and click the SNMP tab.**
2. **Click the Communities link.**
   The page scrolls to the SNMP Communities table.
3. **Select the community that you want to modify, then click Edit.**
   A pop-up window prompts you for confirmation.
4. **Select the permissions from the Permission drop-down menu.**

5. **Click Save.**

Related Information

- “Enable the SNMP Service (Oracle ILOM Web)” on page 511
- “Configure the SNMP Service (Oracle ILOM Web)” on page 511
- “Add SNMP Service User Accounts (Oracle ILOM Web)” on page 512
- “Modify SNMP Service User Accounts (Oracle ILOM Web)” on page 513
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▼ Delete SNMP Service Communities (Oracle ILOM Web)

You can selectively delete SNMP v1 or v2c communities without having to change other SNMP properties. When an SNMP community is deleted, that members of that community can no longer access the switch. Other SNMP communication (for example, traps or notifications) operates normally.

1. **Choose ILOM Administration → Management Access, and click the SNMP tab.**

2. **Click the Communities link.**

   The page scrolls to the SNMP Communities table.

3. **Click the community you want to delete, then click Delete.**

   A dialog prompts you for confirmation.

4. **Click OK.**

Related Information

- “Enable the SNMP Service (Oracle ILOM Web)” on page 511
- “Configure the SNMP Service (Oracle ILOM Web)” on page 511
- “Add SNMP Service User Accounts (Oracle ILOM Web)” on page 512
- “Modify SNMP Service User Accounts (Oracle ILOM Web)” on page 513
- “Add SNMP Service Communities (Oracle ILOM Web)” on page 515

- "Modify SNMP Service Communities (Oracle ILOM Web)" on page 516
- "Delete SNMP Service Communities (Oracle ILOM Web)" on page 517
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▼ Disable the SNMP Service (Oracle ILOM Web)

When the SNMP service is disabled, the switch receives no SNMP communication (for example, traps) from the SNMP servers in your network. Any configured SNMP users cannot access the switch.

1. **Choose ILOM Administration → Management Access, and click the SNMP tab.**
2. **Under Settings, clear the Enabled checkbox for State.**
3. **Click Save.**

Related Information

- "Enable the SNMP Service (Oracle ILOM Web)" on page 511
- "Configure the SNMP Service (Oracle ILOM Web)" on page 511
- "Add SNMP Service User Accounts (Oracle ILOM Web)" on page 512
- "Modify SNMP Service User Accounts (Oracle ILOM Web)" on page 513
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- "Display the SNMP Service Communities (Oracle ILOM Web)" on page 159

▼ Download SNMP Service MIBs (Oracle ILOM Web)

The SNMP MIBs are contained on the switch as individual files, but you can download them to a remote device, typically an SNMP host. This task creates a compressed file, `ilom-mibs.zip`, that contains the following MIBs:

- ENTITY-MIB.mib
- SUN-HW-CTRL-MIB.mib
- SUN-HW-TRAP-MIB.mib
- SUN-ILOM-CONTROL-MIB.mib
- SUN-ILOM-SYSTEM-MIB.mib
- SUN-PLATFORM-MIB.mib

1. **Choose ILOM Administration → Management Access, and click the SNMP tab.**
2. **Click the MIBs link.**

   The page scrolls to MIBs.
3. **Click Download.**

   Depending on how your web browser is configured, you might either open or save the file.
4. **If you are downloading the files, specify the download location and save the file.**
5. **Find the downloaded files, and unzip them.**

Related Information

- “Understanding SNMP MIB OIDs” on page 195
- “Oracle ILOM Web Interface Overview” on page 126
- “Get Help on Oracle ILOM Targets (Oracle ILOM Web)” on page 128
- “SNMP Client Overview (Oracle ILOM Web)” on page 510
- “Enable the SNMP Service (Oracle ILOM Web)” on page 511

Configuring ASR Client Properties (Oracle ILOM Web)

The switch contains clients that enable easy, and sometimes, proactive support for the switch if hardware issues should occur. These topics document how to manage the properties related to service and support of the switch.

- “Configure Oracle ASR (Oracle ILOM Web)” on page 520
- “Configure Oracle ASR Proxy Properties (Oracle ILOM Web)” on page 521

Related Information

- “Managing Switch Components and Identification (Oracle ILOM Web)” on page 428

- "Managing Authentication and Access (Oracle ILOM Web)" on page 441
- "Managing Notifications and Event Logging (Oracle ILOM Web)" on page 472
- "Managing Management Networking (Oracle ILOM Web)" on page 487
- "Managing Management Connections to the Switch (Oracle ILOM Web)" on page 493
- "Managing Switch Interface Methods (Oracle ILOM Web)" on page 498
- "Managing User Accounts (Oracle ILOM Web)" on page 521
- "Managing Other Switch Components and Services (Oracle ILOM Web)" on page 527

▼ Configure Oracle ASR (Oracle ILOM Web)

Oracle Auto Service Request (ASR) speeds and facilitates reporting and issues and opening service requests in the unlikely event that the switch encounters a problem. For more information about Oracle ASR, see "Oracle Auto Service Request Software" on page 24.

If the switch encounters a problem, the ASR client sends ASR information to an endpoint, which is either a URL directly in the Oracle Services organization, or an ASR relay which indirectly connects to Oracle Services. By default, Oracle ASR is disabled.

1. **Set up a valid user name and password with My Oracle Support.**
2. **Choose ILOM Administration → Notifications, and click the ASR Client tab.**
3. **Click the Enabled for the State checkbox.**
4. **In the Endpoint field, type an HTTPS or HTTP URL of the destination that will receive ASR messages.**

   For example, this could be a specific URL in the Oracle Support organization. The default URL can be used, or you can point the endpoint at an ASR relay.
5. **In the User Name field, type a valid user name for My Oracle Support.**
6. **In the Password field, type the password for your My Oracle Support user name.**
7. **(Optional) If needed, click Change to change the password for your My Oracle Support user name.**
8. **Decide if you will be configuring a proxy for ASR.**

   - **If yes, go to "Configure Oracle ASR Proxy Properties (Oracle ILOM Web)" on page 521.**
   - **If no, go to the next step.**

9. **Click Save.**

Related Information

- “Configure Oracle ASR Proxy Properties (Oracle ILOM Web)” on page 521
- “Display the ASR Service Status (Oracle ILOM Web)” on page 160

▼ Configure Oracle ASR Proxy Properties (Oracle ILOM Web)

You can configure a proxy account and proxy server to send ASR message to Oracle. This task assumes that the general ASR properties have been configured. If not, configure them now. See “Configure Oracle ASR (Oracle ILOM Web)” on page 520.

1. **Choose ILOM Administration → Notifications, and click the ASR Client tab.**
2. **In the Proxy Address field, type the IP address of the proxy server that will be sending ASR information, and as an option, type a port delimited by a colon (:).**

   For example, a proxy address with a port could look like this, `192.168.15.102:114`.
3. **In the Proxy User field, type the user account that will be sending the ASR information.**
4. **In the Proxy Password field, type the password for the proxy user name.**
5. **(Optional) If needed, click Change to change the Proxy password.**
6. **Click Save.**

Related Information

- “Configure Oracle ASR (Oracle ILOM Web)” on page 520
- “Display the ASR Service Status (Oracle ILOM Web)” on page 160

Managing User Accounts (Oracle ILOM Web)

These topics describe how to use the Oracle ILOM Web interface to manage information about the ILOM user accounts and sessions on the switch.

- "Add an Oracle ILOM User Account (Oracle ILOM Web)" on page 522
- "Change an Oracle ILOM User's Password or Role (Oracle ILOM Web)" on page 523
- "Add SSH Keys to Oracle ILOM User Accounts (Oracle ILOM Web)" on page 524
- "Delete an Oracle ILOM User Account (Oracle ILOM Web)" on page 525
- "Set the Switch Password Policy for Local Users (Oracle ILOM Web)" on page 526

Related Information

- "Managing Switch Components and Identification (Oracle ILOM Web)" on page 428
- "Managing Authentication and Access (Oracle ILOM Web)" on page 441
- "Managing Notifications and Event Logging (Oracle ILOM Web)" on page 472
- "Managing Management Networking (Oracle ILOM Web)" on page 487
- "Managing Management Connections to the Switch (Oracle ILOM Web)" on page 493
- "Managing Switch Interface Methods (Oracle ILOM Web)" on page 498
- "Configuring ASR Client Properties (Oracle ILOM Web)" on page 519
- "Managing Other Switch Components and Services (Oracle ILOM Web)" on page 527

▼ Add an Oracle ILOM User Account (Oracle ILOM Web)

Oracle ILOM local user accounts must be configured on the switch to enable Oracle ILOM access to the SP. Oracle ILOM local users are limited to a maximum of 10, and the local user accounts are tracked in the Users table.

1. **Choose ILOM Administration → User Management, and click the User Accounts tab.**
2. **Click the Users link.**

   The page scrolls to the Users table.
3. **Click Add.**

   A pop-up window opens.
4. **If you want to enable the user to access the ILOM Remote Console without being prompted for a password, click Enabled for the Single Sign on checkbox.**
5. **Type the name of the new user account into the User Name field.**
6. **Type the password into the New Password and Confirm New Password fields.**

7. **Select a default role or create a custom role through the Role drop-down menu.**

8. **Select a default role or create a custom role through the Role dropdown menu.**

   - **Select either Administrator for full typical administrator privileges or Operator for standard operator privileges.**
   - **Select Advanced Roles to activate the privilege checkboxes to create a custom privilege set.**

9. **For Advanced Roles, select the privileges for the new user from the Roles dropdown menu.**

   If a checkbox is not grayed out, you can add that privilege to the selected role. For more information, see "User Roles and Permissions" on page 27.

10. **Click Save.**

Related Information

- "Change an Oracle ILOM User's Password or Role (Oracle ILOM Web)" on page 523
- "Add SSH Keys to Oracle ILOM User Accounts (Oracle ILOM Web)" on page 524
- "Delete an Oracle ILOM User Account (Oracle ILOM Web)" on page 525
- "Set the Switch Password Policy for Local Users (Oracle ILOM Web)" on page 526
- "Display the Oracle ILOM Sessions (Oracle ILOM Web)" on page 161
- "Display the Oracle ILOM User Accounts (Oracle ILOM Web)" on page 162
- "Display the Password Policy for Local Users (Oracle ILOM Web)" on page 162

▼ Change an Oracle ILOM User's Password or Role (Oracle ILOM Web)

When Oracle ILOM users are initially created, you assign them a password and roles that govern their privileges. On occasion, a user might need to have roles or the password changed. For example, if a user changes jobs within your company, the roles might also need to change. You can change an Oracle ILOM user's password and roles at any time without having to delete and recreate the user account.

Note - To change the `root` user's password, refer to *Switch Administration*, changing the `root` user's password.

---

1. **Choose ILOM Administration → User Management, and click the User Accounts tab.**

2. **Click the Users link.**

   The page scrolls to the Users table.

3. **Select the user whose password and roles you want to change, then click Edit.**

   A pop-up window opens.

4. **Type the new password for the user and or select the new abilities of the user from the Roles drop-down menu.**

   If a checkbox is not grayed out, you can add that ability to the selected role. For more information, see "User Roles and Permissions" on page 27.

5. **Click Save.**

6. **(Optional) Add an SSH key to the Oracle ILOM user account.**

   See "Add SSH Keys to Oracle ILOM User Accounts (Oracle ILOM Web)" on page 524.

Related Information

- "Add an Oracle ILOM User Account (Oracle ILOM Web)" on page 522
- "Add SSH Keys to Oracle ILOM User Accounts (Oracle ILOM Web)" on page 524
- "Delete an Oracle ILOM User Account (Oracle ILOM Web)" on page 525
- "Set the Switch Password Policy for Local Users (Oracle ILOM Web)" on page 526
- "Display the Oracle ILOM Sessions (Oracle ILOM Web)" on page 161
- "Display the Oracle ILOM User Accounts (Oracle ILOM Web)" on page 162
- "Display the Password Policy for Local Users (Oracle ILOM Web)" on page 162

▼ Add SSH Keys to Oracle ILOM User Accounts (Oracle ILOM Web)

The switch supports SSH key-based authentication for Oracle ILOM user accounts. With SSH keys, password authentication is automatic for Oracle ILOM users. The switch supports custom-generated DSA or RSA key pairs for individual Oracle ILOM user accounts, with the public key being uploaded to Oracle ILOM. If you are configuring an SSH key for your own account, you need only the operator role (`o`) in Oracle's roles model, but to configure SSH keys for other users, you need the admin role (`a`).

Use this task to add SSH keys to Oracle ILOM user accounts.

1. **Choose ILOM Administration → User Management, and click the User Accounts tab.**

2. **Click the SSH Keys link.**

   The page scrolls to the SSH Keys table.

3. **Click Add.**

4. **From the User drop-down menu, select the user to which you want to add an SSH key.**

5. **From the Key Upload section, select the desired transfer method.**

6. **Provide additional information.**

7. **Provide additional information.**

   - **For Browser, click Browse and select the file.**
   - **For TFTP, provide the host name and file path.**
   - **For FTP, SFTP, SCP, HTTP, or HTTPS, provide the host name, file path, username, and password.**
   - **For Paste, paste the text of the key into the Data field.**

8. **Click Load.**

Related Information

- “Add an Oracle ILOM User Account (Oracle ILOM Web)” on page 522
- “Change an Oracle ILOM User's Password or Role (Oracle ILOM Web)” on page 523
- “Delete an Oracle ILOM User Account (Oracle ILOM Web)” on page 525
- “Set the Switch Password Policy for Local Users (Oracle ILOM Web)” on page 526
- “Display the Oracle ILOM Sessions (Oracle ILOM Web)” on page 161
- “Display the Oracle ILOM User Accounts (Oracle ILOM Web)” on page 162
- “Display the Password Policy for Local Users (Oracle ILOM Web)” on page 162

▼ Delete an Oracle ILOM User Account (Oracle ILOM Web)

At any time you can delete a configure Oracle ILOM user account. When you delete a user account, that user can no longer access the Oracle ILOM.

1. **Choose ILOM Administration → User Management, and click the User Accounts tab.**
2. **Click the Users link.**

   The page scrolls to the Users table.
3. **Select the user you want to delete, then click Delete.**

   A dialog prompts you for confirmation.
4. **Click OK.**

Related Information

- “Add an Oracle ILOM User Account (Oracle ILOM Web)” on page 522
- “Change an Oracle ILOM User's Password or Role (Oracle ILOM Web)” on page 523
- “Add SSH Keys to Oracle ILOM User Accounts (Oracle ILOM Web)” on page 524
- “Set the Switch Password Policy for Local Users (Oracle ILOM Web)” on page 526
- “Display the Oracle ILOM Sessions (Oracle ILOM Web)” on page 161
- “Display the Oracle ILOM User Accounts (Oracle ILOM Web)” on page 162
- “Display the Password Policy for Local Users (Oracle ILOM Web)” on page 162

▼ Set the Switch Password Policy for Local Users (Oracle ILOM Web)

The passwords used to log in to the switch can be configured with different requirements for password strength. For example, the switch password policy can require an upper-case letter, a number, a special character, and so on. The switch enforces the password policy so that passwords that do not comply with the required password policy cannot be created.

1. **Choose ILOM Administration → User Management, and click the Password Policy tab.**
2. **Specify the minimum number of characters that the password must contain.**
3. **Choose the checkboxes as needed to require a minimum of one upper case, lower case, numbers, symbols, and special characters in the password.**
4. **If you want to disallow reuse of any of the last five passwords, select the History checkbox.**
5. **Click Save.**

Related Information

- “Add an Oracle ILOM User Account (Oracle ILOM Web)” on page 522
- “Change an Oracle ILOM User's Password or Role (Oracle ILOM Web)” on page 523
- “Add SSH Keys to Oracle ILOM User Accounts (Oracle ILOM Web)” on page 524
- “Delete an Oracle ILOM User Account (Oracle ILOM Web)” on page 525
- “Display the Oracle ILOM Sessions (Oracle ILOM Web)” on page 161
- “Display the Oracle ILOM User Accounts (Oracle ILOM Web)” on page 162
- “Display the Password Policy for Local Users (Oracle ILOM Web)” on page 162

Managing Other Switch Components and Services (Oracle ILOM Web)

These topics describe how to manage information about additional services that might be required in your network.

- “Controlling Keyboard, Video, Mouse, and Storage (Oracle ILOM Web)” on page 527
- “Controlling FIPS (Oracle ILOM Web)” on page 530

Related Information

- “Managing Switch Components and Identification (Oracle ILOM Web)” on page 428
- “Managing Authentication and Access (Oracle ILOM Web)” on page 441
- “Managing Notifications and Event Logging (Oracle ILOM Web)” on page 472
- “Managing Management Networking (Oracle ILOM Web)” on page 487
- “Managing Management Connections to the Switch (Oracle ILOM Web)” on page 493
- “Managing Switch Interface Methods (Oracle ILOM Web)” on page 498
- “Configuring ASR Client Properties (Oracle ILOM Web)” on page 519
- “Managing User Accounts (Oracle ILOM Web)” on page 521

Controlling Keyboard, Video, Mouse, and Storage (Oracle ILOM Web)

The switch supports a keyboard, video, mouse, storage, (KVMS) and serial redirection service that enables interaction with the switch through a redirected management session. These topics describe how to configure the switch's KVMS services.

- "Enable KVMS Client Properties (Oracle ILOM Web)" on page 528
- "Configure KVMS Host Lock Properties (Oracle ILOM Web)" on page 528
- "Disable KVMS Services (Oracle ILOM Web)" on page 529

Related Information

- "Controlling FIPS (Oracle ILOM Web)" on page 530

▼ Enable KVMS Client Properties (Oracle ILOM Web)

The switch's KVMS properties control launching a remote console session from Oracle ILOM.

1. **Choose Remote Control → KVMS.**
2. **Click Enabled for the State checkbox.**
3. **From the Max Client Session Count drop-down menu, select the highest number of sessions allowed.**
4. **From the Mouse Mode drop-down menu, select the mode.**
5. **(Optional) Set the KVMS OS lock sequence.**
   See "Configure KVMS Host Lock Properties (Oracle ILOM Web)" on page 528.

Related Information

- "Enable KVMS Client Properties (Oracle ILOM Web)" on page 528
- "Configure KVMS Host Lock Properties (Oracle ILOM Web)" on page 528
- "Disable KVMS Services (Oracle ILOM Web)" on page 529
- "Display Information for Keyboard, Video, Mouse, Storage, and Serial Redirection Service (Oracle ILOM Web)" on page 164

▼ Configure KVMS Host Lock Properties (Oracle ILOM Web)

Use this task to determine conditions for how the KVMS host OS is locked when you finish managing the switch. This task assumes that the KVMS service is enabled.

1. **Choose Remote Control → KVMS.**
2. **From the Lock Mode drop-down menu, select the correct mode:**
   - Disabled, for no lock mode.

- Windows, for a standard Ctrl + Alt+ Del key sequence to the lock the Microsoft Windows host.
- Custom, for a custom sequence to lock the OS on a KVMS host.

3. **Determine your next step.**

   - **For Windows or Disabled, click Save.**
   - **For Custom, go to the next step.**

4. **Select a host OS lock.**

   - **For multiple keys to lock the OS, select up to four modifiers from the Custom Host Lock drop-down menu.**
   - **For a single-key lock, select the key.**

5. **Click Save.**

Related Information

- “Enable KVMS Client Properties (Oracle ILOM Web)” on page 528
- “Configure KVMS Host Lock Properties (Oracle ILOM Web)” on page 528
- “Disable KVMS Services (Oracle ILOM Web)” on page 529
- “Display Information for Keyboard, Video, Mouse, Storage, and Serial Redirection Service (Oracle ILOM Web)” on page 164

▼ Disable KVMS Services (Oracle ILOM Web)

When KVMS is disabled, remote console sessions can no longer be launched from Oracle ILOM.

1. **Choose Remote Control → KVMS.**
2. **Remove the checkmark from the State checkbox.**
3. **Click Save.**

Related Information

- “Enable KVMS Client Properties (Oracle ILOM Web)” on page 528
- “Configure KVMS Host Lock Properties (Oracle ILOM Web)” on page 528
- “Disable KVMS Services (Oracle ILOM Web)” on page 529

- “Display Information for Keyboard, Video, Mouse, Storage, and Serial Redirection Service (Oracle ILOM Web)” on page 164

Controlling FIPS (Oracle ILOM Web)

FIPs provides a high-level of encryption and security to certain data when it is transmitted and received.

- “Enable FIPS (Oracle ILOM Web)” on page 530
- “Disable FIPS (Oracle ILOM Web)” on page 531

Related Information

- “Controlling Keyboard, Video, Mouse, and Storage (Oracle ILOM Web)” on page 527

▼ Enable FIPS (Oracle ILOM Web)

The switch has a FIPS service that enables Oracle ILOM to use cryptographic algorithms in compliance with the FIPS 140-2 security standards issued by the National Institute of Standards and Technology (NIST). By default, FIPS is disabled. When you enable FIPS, some other services might not be available, for example, IPMI 1.5 sessions.

- LDAP cannot be enabled if FIPS is enabled.
- RADIUS cannot be enabled if FIPS is enabled.
- IPMI 1.5 sessions cannot be enabled if FIPS is enabled.

To enable FIPS, you must reboot the SP, which also clears the configuration.

1. **Choose ILOM Administration → Management Access, and click the FIPS tab.**
2. **Select the Enabled checkbox for State.**

Note - All configuration data will be removed on the next boot. The state cannot be modified if there is already a pending configuration reset.

---

3. **Click Save.**
4. **Click Maintenance.**
5. **Click the Reset SP tab.**

6. **Click Reset SP.**

   A pop-up window prompts you for confirmation.

7. **Click OK.**

   The SP is reset. Any active sessions are terminated.

Related Information

- "Disable FIPS (Oracle ILOM Web)" on page 531
- "Display the FIPS Service Status (Oracle ILOM Web)" on page 163
- "Disable LDAP User Access Through Oracle ILOM (Oracle ILOM Web)" on page 455
- "Disable RADIUS User Access Through Oracle ILOM (Oracle ILOM Web)" on page 471
- "Disable IPMI Version 1.5 Sessions (Oracle ILOM Web)" on page 509

▼ Disable FIPS (Oracle ILOM Web)

You can disable the FIPS service if a data transmissions is not pending. Some other services are blocked when FIPS is enabled, so disabling FIPS enables some other features to become available, such as:

- LDAP can be enabled when FIPS is disabled
- RADIUS can be enabled when FIPS is disabled.
- IPMI 1.5 sessions can be enabled when FIPS is disabled.

To enable FIPS, you must reboot the SP, which also clears the configuration.

1. **Choose ILOM Administration → Management Access, and click the FIPS tab.**

2. **Clear the Enabled checkbox for State.**

Note - All configuration data will be removed on the next boot. The state cannot be modified if there is already a pending configuration reset.

---

3. **Click Maintenance.**

4. **Click the Reset SP tab.**

5. **Click Reset SP.**

   A pop-up window prompts you for confirmation.

6. **Click OK.**

The SP is reset. Any active sessions are terminated.

7. **Click Save.**

Related Information

- “Enable FIPS (Oracle ILOM Web)” on page 530
- “Display the FIPS Service Status (Oracle ILOM Web)” on page 163
- “Disable LDAP User Access Through Oracle ILOM (Oracle ILOM Web)” on page 455
- “Disable RADIUS User Access Through Oracle ILOM (Oracle ILOM Web)” on page 471
- “Disable IPMI Version 1.5 Sessions (Oracle ILOM Web)” on page 509

Updating the Firmware

These topics describe how to update the switch firmware.

- "Firmware Overview" on page 533
- "Firmware Versions and Update Methods" on page 534
- "Download the Switch Firmware Package" on page 534
- "Upgrading the Switch Firmware (`nm3tool`)" on page 536
- "Upgrading the Switch Firmware (Oracle Fabric OS)" on page 542

Related Information

- "Understanding System Administration Resources" on page 19
- "Accessing the Switch" on page 27
- "Monitoring the Switch (Oracle ILOM CLI)" on page 35
- "Monitoring the Switch (Oracle ILOM Web)" on page 125
- "Understanding Oracle ILOM Targets" on page 165
- "Understanding SNMP MIB OIDs" on page 195
- "Understanding the EMS Module" on page 265
- "Controlling the Switch (Oracle ILOM CLI)" on page 301
- "Controlling the Switch (Oracle ILOM Web)" on page 427

Firmware Overview

There are many components within the switch that use updatable firmware. The firmware package available from My Oracle Support includes firmware for each of these components. When you perform a firmware update, each of these components are updated as a function of the operation. It is not necessary to update each component separately.

The SP firmware includes:

- Basic I/O system for initial start up of the controller.
- Linux OS that enables the SP to function as a service processor and host for the switch.

- File system that contains the many hardware and IB commands, Subnet Manager, and other applications for the administration of the switch and IB fabric.

The switch chip has firmware that instructs how to route links, set data rates, and configure signal parameters.

When improvements to the operation of the switch are made or features are added, these enhancements are delivered through a firmware upgrade.

Related Information

- “Firmware Overview” on page 533
- “Download the Switch Firmware Package” on page 534
- “Upgrading the Switch Firmware (`nm3tool`)” on page 536
- “Upgrading the Switch Firmware (Oracle Fabric OS)” on page 542

Firmware Versions and Update Methods

Chassis firmware exists on various components in the switch. Depending on which starting version of the chassis firmware, you will use different tools to perform the upgrade.

Version	Method	Links
1.0.0.0	`nm3tool` utility	“Upgrading the Switch Firmware (`nm3tool`)” on page 536
1.0.1.0 and later	`system upgrade` in Oracle Fabric OS	“Upgrading the Switch Firmware (Oracle Fabric OS)” on page 542

Related Information

- “Firmware Overview” on page 533
- “Download the Switch Firmware Package” on page 534

▼ Download the Switch Firmware Package

Note - Refer to the switch's product notes for the most up-to-date method of acquiring the firmware. If no information is provided there, use these instructions.

1. **Open a web browser on a host that is on the same Ethernet network as the SP that will receive the firmware update.**

2. **Go to this URL and sign in.**

   http://support.oracle.com

   Note - If you do not have an account, you must register.

3. **Click the Patches & Updates tab.**

4. **In the Patch Search window, click the Search tab.**

5. **Click the Product or Family (Advance) link.**

6. **In the Product Is drop-down menu, select Oracle EDR IB Switch.**

7. **In the Release Is drop-down menu, select Oracle EDR IB Switch** *w.x.y.z***.**

   where *w.x.y.z* is the version number of the firmware package to be acquired. For example, 1.0.1.0.

8. **Click outside of the drop-down menu, then click Search.**

   The Patch Search window expands with the search results.

9. **In the Patch Name column, click the respective patch number link, then click Download.**

10. **(Optional) Click Read Me to display the README file.**

    The README file contains the latest information about the firmware release.

11. **Click the** *filename*`.zip` **link to initiate the download.**

    For example, `p15678345_101_Generic.zip`.

12. **Indicate where the file should be saved, and in that directory, decompress the** *filename*`.zip` **file.**

    Find the firmware image file. The firmware is a `.tar` file with the same name as the link you clicked in the previous step.

13. **Unpack the `.gz` file.**

    For example, type:

    ```
    $ gtar -zxvf filename_w.x.y.z.tar.gz
    ```

    The extracted files are displayed.

14. **Move the switch firmware package (*filename*.pkg) to a directory on a host that is accessible by Oracle ILOM.**

15. **Perform the upgrade.**

    See "Upgrading the Switch Firmware (nm3tool)" on page 536.

Related Information

- "Firmware Overview" on page 533
- "Upgrade the Firmware (nm3tool Command)" on page 538
- "Verify the Firmware Upgrade (nm3tool)" on page 541
- "Display the Oracle ILOM Firmware Version (Oracle ILOM Web)" on page 135
- "Display the Switch BIOS Version (Oracle ILOM Web)" on page 136
- "Display the Ethernet Switch Firmware (Oracle ILOM Web)" on page 136

Upgrading the Switch Firmware (nm3tool)

The switch supports a streamlined upgrade process by using a utility called the nm3Tool. This utility has multiple uses, including:

- Downloading and installing the firmware and related software for the switch, the EMS switch, and Oracle ILOM, then performing an upgrade of all pertinent software though one command.
- Upgrading the switch with the new firmware and software.

The nm3tool can be used either in command mode by issuing the nm3tool command, or in menu mode by starting the tool, then selecting the appropriate menu item.

Note - The nm3tool is used for upgrading a switch that is running only version 1.0.0.0.

These topics document how to upgrade the switch firmware through the nm3tool:

- "Upgrade the Firmware (nm3tool Command)" on page 538
- "Upgrade the Firmware (nm3tool Menu)" on page 540
- "Verify the Firmware Upgrade (nm3tool)" on page 541

Related Information

- "Firmware Overview" on page 533
- "Download the Switch Firmware Package" on page 534

nm3tool Command Syntax

If you use the nm3tool in command mode, use the following syntax:

nm3tool
apply|*help*|*hostname*| |*import_ilom_configipaddress*|*menu*|*show*|*timezone*|*upgrade*|*verify*|*version*

where:

- *apply* commits the pending nm3tool options.
- *help* displays the nm3tool help text.
- *hostname* sets the system host name. This function is available through Oracle ILOM also.
- *import_ilom_config* brings the Oracle ILOM configuration back to memory from another location.
- *ipaddress* sets the system IP address for the SCP.
- *menu* switches the tool to menu mode, in which a numbered menu of some nm3tool functions are available.
- *show* displays the nm3tool options configured.
- *timezone* sets the timezone for the system. This function is available through Oracle ILOM also.
- *upgrade* sets the switch into upgrade mode. This function is available through Oracle ILOM also.
- *verify* runs a short integrity check on the switch and any installed firmware.
- *version* displays version information for switch firmware controlled by the nm3tool.

Related Information

- "Download the Switch Firmware Package" on page 534
- "Upgrade the Firmware (nm3tool Command)" on page 538
- "Display Configurable Switch Properties (nm3tool Command)" on page 537

Display Configurable Switch Properties (nm3tool Command)

If you use the nm3tool, you can display a list of all the properties that the tool controls by issuing help.

Note - Depending on what version of switch firmware your switch is running, not all of these properties might be available. For example, the listed properties might be different between firmware version 1.0.1.0 and 1.0.2.0.

- **Type:**

```
[root@switch1 ~]# nm3tool help

/usr/local/bin/nm3tool:
    apply                                Write config to OS config files
    ip proto     <dhcp|static>
    ip address   <x.x.x.x>
    ip netmask   <x.x.x.x>
    ip broadcast <remove|x.x.x.x>
    ip gateway   <enable|disable|x.x.x.x>

    dns source <ilom|local|none>
        ilom:  retrieve values from ilom xml
        local: use locally stored values
        none:  disable dns
    dns auto   <yes|no>
        yes: use settings from dhcp, override other settings
    dns search  <domain>    [<domain> ...]
         domain: Up to 6 domains
    dns servers <server_ip> [<server_ip> ...]
         server_ip: Max 3 servers
    dns timeout <seconds>
         seconds: Silently capped at 30
    dns retries <attempts>
         attempts: Silently capped at 5

    ssh root <yes|no>


Usage:
nm3tool <apply|help|hostname|import_ilom_config|ipaddress|menu|show|timezone|upgrade|
verify|version>
[root@ovn82-102 ~]#
```

Related Information

- "Firmware Overview" on page 533
- "Download the Switch Firmware Package" on page 534
- "Upgrade the Firmware (nm3tool Menu)" on page 540
- "Verify the Firmware Upgrade (nm3tool)" on page 541

Upgrade the Firmware (nm3tool Command)

To perform a direct upgrade, you issue the `nm3tool upgrade` command and supply the required arguments on the command line.

1. **Start a remote root session to NM3 using `ssh` or the Oracle ILOM console.**

   For example, to establish an SSH session to the switch, type:

   `ssh root@`*host_IP_address*

   When you login, you will be at the switch's bash prompt.

2. **Type:**

   `nm3tool upgrade --host=`*host_name* **`--user=`***user_name* **`--file=`***path_to_NM3_leaf_SW_or_FW_bundle***`.tar.gz`**

   where:

   - *host_name* is the name of the host where the software or firmware repository is located.
   - *user_name* is the name of the user for SCP access to the host.
   - *path_to_NM3_leaf_SW_or_FW_bundle* is the complete path to the file in the repository.

   If the switch has been upgraded before, you will see a message about the presence of an existing upgrade file.

3. **If prompted to choose which upgrade file to use, select:**

   - **`y` to use the new upgrade file.**
   - **`n` to use the existing upgrade file, which is the file already on the switch.**

4. **Allow the upgrade to complete, then reboot the Oracle ILOM.**

   This reboot is required for post installation tasks and cleanup.

5. **Allow the upgrade to complete, then reboot the SCP.**

   This reboot is required for post installation tasks and cleanup. As part of the post installation tasks, if Oracle ILOM firmware has been upgraded, the SCP requires an additional reboot after the EMS is upgraded.

   After all post installation tasks are complete, the SCP automatically reboots to complete the installation.

6. **Verify the upgrade.**

   See “Verify the Firmware Upgrade (`nm3tool`)” on page 541.

Related Information

- “Firmware Overview” on page 533
- “Download the Switch Firmware Package” on page 534
- “Upgrade the Firmware (`nm3tool` Menu)” on page 540
- “Verify the Firmware Upgrade (`nm3tool`)” on page 541

Upgrade the Firmware (nm3tool Menu)

You can upgrade the switch firmware and other switch elements by using the nm3tool menu.

1. **Start a remote root session to NM3 using ssh or the Oracle ILOM console.**

   For example, to establish an SSH session to the switch, type:

   ssh root@*host_IP_address*

   When you login, you will be at the switch's bash prompt.

2. **Start the nm3tool in menu mode.**

   ```
   [root@switch1 ~]# nm3tool menu
   ```

   When the tool starts, a menu and some on-screen instructions are displayed.

   Note - When nm3tool starts, it performs a quick health check on the switch. If nm3tool determines that a problem might exist, you are prompted to run the nm3tool verify command before proceeding. Follow the on-screen instructions, and when nm3tool completes verification, return to this task.

3. **From the menu, select 4 to upgrade the switch, then complete the on-screen prompts for a transfer method, IP address or host name, path to the firmware image file, and a username and password.**

   If the switch has been upgraded before, you will see a message about the presence of an existing upgrade file.

   ```
   Main Menu (1.0.0.0)

   1. Change IP address     (current config: 10.11.12.13 current active: 10.11.12.13)
   2. Change hostname       (current config: switch1.us.company.com current active:
    switch1.us.company.com)
   3. Change timezone       (current config: US/Pacific current active: US/Pacific)
   4. Perform chassis upgrade
   (q to quit)
   Select:4
   Transfer method? (scp,http,ftp,tftp): scp
   ip or hostname: 123.45.67.89
   path/filename: firmware-0.1.6.0
   username: root
   password: ********
   ...

   Upgrade complete.
   [root@switch1 ~]#
   ```

4. **If prompted to choose which upgrade file to use, select:**

   - **`y` to use the new upgrade file.**
   - **`n` to use the existing upgrade file, which is the file already on the switch.**

5. **Allow the upgrade to complete, then reboot the Oracle ILOM.**

   This reboot is required for post-installation tasks and cleanup.

6. **Allow the upgrade to complete, then reboot the SCP.**

   This reboot is required for post-installation tasks and cleanup. As part of the post-installation tasks, if Oracle ILOM firmware has been upgraded, the SCP requires an additional reboot after the EMS is upgraded.

   After all post-install tasks are complete, the SCP will automatically reboot to complete the installation.

7. **Verify the upgrade.**

   See "Verify the Firmware Upgrade (nm3tool)" on page 541.

Related Information

- "Firmware Overview" on page 533
- "Download the Switch Firmware Package" on page 534
- "Upgrade the Firmware (nm3tool Command)" on page 538
- "Verify the Firmware Upgrade (nm3tool)" on page 541

▼ Verify the Firmware Upgrade (`nm3tool`)

After the upgrade is complete, and the SCP has completed its reboots, you can verify that the installation was successful and check the versions of installed components.

1. **List installed components:**

   ```
   nm3tool verify
   ```

   For example:

   ```
   [root@switch1 ~]# nm3tool verify
   Verifying nm3repo.manifest-LEAF-0.1.5.0-109
    cce8812e13aa586689b4e72a38133ff7 [OK]
   Verifying BUILD
    9c989687e9415c7275432f6be7f071a7 [OK]
   ```

```
Verifying 50_ems.py
 62a5603326e1aa29d7c46f5bc4e040b7 [OK]
Verifying 20_ib.py
 7018d881bffb0021323862223c04acc4 [OK]
Verifying 30_ofos.py
 8059a85e47593fd90978bcbbae789d3c [OK]
Verifying 01_precheck.py
 86635c255a6f4de97eb475192c869eef [OK]
Verifying nm3init
 dafe7c55bf57da486491211687c39d4c [OK]
Verifying nm3tool                                                    25063752f2700712
```

2. **List currently used software and firmware:**

   `nm3tool version`

   For example:

```
[root@switch1 ~]# nm3tool version
BASE OS:                2016-06-10_13-46-06
SATURN:                 1.0
PSIF 0x00100000:        1.0
PSIF 0x00200000:        1.0
PSIF Bootloader:        1.0
OFOS:                   1.0.0-OFOS
OFM:                    5.0.0_OFM
JRE:                    1.8.0_77
EMS version readout is currently not supported
ILOM version readout is currently not supported
FPGA version readout is currently not supported
version completed with 0 error(s)
```

Related Information

- “Firmware Overview” on page 533
- “Download the Switch Firmware Package” on page 534
- “Upgrade the Firmware (`nm3tool` Command)” on page 538
- “Upgrade the Firmware (`nm3tool` Menu)” on page 540

Upgrading the Switch Firmware (Oracle Fabric OS)

Through Oracle Fabric OS, you update switch firmware through the `system upgrade` command, which retrieves the firmware package as an `.xpf` file, loads it into switch memory, and upgrades appropriate system elements with relevant firmware.

Note - The `system upgrade` command is used for a switch that is running a minimum version of 1.0.1.0.

These topics document how to upgrade the switch through the Oracle Fabric OS's `system upgrade` command:

- "`system upgrade` Syntax" on page 543
- "Upgrade the Firmware (Oracle Fabric OS)" on page 543
- "Verify the Firmware Upgrade (Oracle Fabric OS)" on page 544

Related Information

- "Firmware Overview" on page 533
- "Download the Switch Firmware Package" on page 534

`system upgrade` Syntax

The system upgrade command has the following syntax:

`system upgrade` *file_transfer_protocol*`:`*user_account*`@`*switch_ID*`:path_to_filename.`**`xpf`**

where:

- *file_transfer_protocol* is the method of downloading the firmware package to the switch, either SCP, FTP, HTTP, or HTTPS.
- *user_account* is the name of an authorized user with appropriate privileges on the device that contains the firmware package.
- *device_ID* is the IP address or host name of the device from which the firmware image can be downloaded.

Note - You must include the colon (**`:`**) between *file_transfer_protocol* and *user_account*.

- *path_and-filename* is the file path to the firmware package you downloaded, and the firmware package name including the **`.xpf`** suffix.

Related Information

- "Download the Switch Firmware Package" on page 534
- "Upgrading the Switch Firmware (Oracle Fabric OS)" on page 542

▼ Upgrade the Firmware (Oracle Fabric OS)

1. **Log in to the leaf switch.**

```
% ssh root@switch_host_IP_address
root@switch_host_IP_address's password: password
Last login: Fri Dec 14 16:20:27 2012
[root@switch_hostname ~]#
```

2. **Access Oracle Fabric OS.**

```
[root@SCP_hostname ~]# su admin
                  Welcome to OFOS Controller
    Copyright (c) 2012-2016 Oracle Corp.  All rights reserved.
       Enter "help" for information on available commands.
Enter the command "show system copyright" for licensing information
admin@SCP_hostname[OFOS]
```

3. **Run the `system upgrade` command to update all relevant firmware on the leaf switch.**

   For example:

```
admin@SCP_hostname[OFOS]
system upgrade scp://admin@192.168.112.126/oracle/updates/firmware/releases/OFOS-1.0.1-46978.xpf
admin@SCP_hostname[OFOS]
```

4. **Answer any onscreen prompts to start the upgrade.**

   While the firmware is upgrading, progress messages are displayed.

5. **Allow the upgrade to run to completion.**

6. **Verify the upgrade occurred successfully.**

   See "Verify the Firmware Upgrade (Oracle Fabric OS)" on page 544.

Related Information

- "Firmware Overview" on page 533
- "Download the Switch Firmware Package" on page 534
- "`system upgrade` Syntax" on page 543
- "Verify the Firmware Upgrade (Oracle Fabric OS)" on page 544

▼ Verify the Firmware Upgrade (Oracle Fabric OS)

If you are updating from firmware version 1.0.1.0 to a later version, use this task to validate that the update has occurred successfully.

1. **If you are not already in the Oracle Fabric OS, access it now.**

a. Log in to the leaf switch.

```
% ssh root@switch_host_IP_address
root@switch_host_IP_address's password: password
Last login: Fri Dec 14 16:20:27 2012
[root@switch_hostname ~]#
```

b. Access Oracle Fabric OS.

```
[root@switch_hostname ~]# su admin
                  Welcome to OFOS Controller
    Copyright (c) 2012-2016 Oracle Corp.  All rights reserved.
       Enter "help" for information on available commands.
Enter the command "show system copyright" for licensing information
admin@switch_hostname[OFOS]
```

The Oracle Fabric OS configuration wizard starts.

2. Display the firmware versions.

```
[root@SCP_hostname ~]# show system
BASE OS:                2016-06-20_14-04-26
PSIF FW:                0.067
PSIF Bootloader:        0.036
SATURN:                 1.0  BUILD-20160624-916
OFOS:                   1.0.1-OFOS
OFM:                    5.0.1_OFM_PB_1.5
ILOM:                   3.2.6.60 - 110640
EMS:                    1.0.0
version completed with 0 error(s)
[root@SCP_hostname ~]#
```

3. Verify the firmware update.

```
[admin@switch_hostname ~]# system verify
Verifying...        ################################################ [100%]
[admin@switch_hostname ~]#
```

4. (Optional) Configure the switch features through your chosen interface:

See:

- *Oracle Fabric OS 1.0.2 Administration Guide*
- *Oracle Fabric Manager 5.0.2 Administration Guide*

Related Information

- “Firmware Overview” on page 533
- “Download the Switch Firmware Package” on page 534

- "`system upgrade` Syntax" on page 543
- "Upgrade the Firmware (Oracle Fabric OS)" on page 543

Glossary

1

10GbE/40GbE module I/O module for the Oracle Fabric Interconnect F2-12 that supports 10GbE and 40GbE interfaces.

16G Fibre Channel module I/O module for the Oracle Fabric Interconnect F2-12 that supports Fibre Channel interfaces.

A

AD Abbreviation for Active Directory.

adapter Physical device, such as an HCA or NIC, that enables a host to communicate through a fabric or network.

ASR Automatic Service Request. A feature of Oracle hardware that automatically opens service requests when specific hardware faults occur. ASR is integrated with My Oracle Support (MOS) and requires a support agreement. See also MOS.

C

CFM Cubic feet per minute. A standard of measuring airflow.

CMB Abbreviation for cable management bracket. A component that supports and groups cables extending from the chassis.

D

DN Abbreviation for distinguished name. An Active Directory term.

DSA key Digital Signature Algorithm key. A component of SSH authentication. See also RSA and SSH.

E

EDR Extended Data Rate. A throughput of InfiniBand (IB) technology, typically 100Gbps. See also IB.

EMS module Embedded Management Switch module. A component within the switch chassis that provides an Ethernet switch and management controller, using the SEFOS operating system. See also SEFOS.

Ethernet gateway A device that either enables data transference from one protocol to another, for example IB to Ethernet. Or a device that serves as a routing node for an Ethernet network.

Ethernet management switch An Ethernet switch that enables single point management of multiple service processors (SP) or hosts through their respective network management interfaces. See also SP.

F

fabric card A component of an IB switch chassis that provides a spine topology construct. See also IB SFM module.

fabric interconnect Short name for an IB switch that provides gateway services and additional functionality.

fan module A hot-swappable replaceable component that provides cooling air to the chassis interior.

Fibre Channel A data transference technology used primarily for storage systems.

FM Abbreviation of fan module. See also fan module.

G

GB Abbreviation of GigaByte. 1 GB is approximately 1000 MB.

GbE Abbreviation of Gigabit Ethernet. A unit of throughput for Ethernet technology.

GUID Globally unique identifier. A 32-digit hexadecimal number that uniquely identifies an IB node. See also IB.

H

HCA Host channel adapter. A physical device that is the terminating point of an IB node used in a computing instance, such as a server or host.

housing The colored plastic portion of the PrizmMT connector, magenta for 4x, black for 12x. Though it functions as a release device and not as a containment, the term "housing" was assigned by the manufacturer, USConec.

I

I/O module A user-replaceable physical interface component for the Oracle Fabric Interconnect F2-12 and Oracle InfiniBand Switch IS2-254.

I^2C A hardware bus employing the IPMI protocol to query and affect I^2C nodes. See also IPMI and Oracle ILOM.

IB InfiniBand. A high bandwidth messaging technology, used for very high performance computing.

IB SFM module I/O module for the Oracle InfiniBand Switch IS2-254 that provides a spine topology construct. Is used in conjunction with the IB SLM modules. See also fabric card and IB SLM module.

IB SLM module I/O module for the Oracle InfiniBand Switch IS2-254 that provides a leaf topology construct. Is used in conjunction with the IB SFM modules. See also line card and IB SFM module.

IB switch A physical device that provides connections between nodes within an IB fabric.

ILOM See Oracle ILOM.

IPMI Intelligent Platform Management Interface. A protocol for monitoring and controlling chassis components over the I^2C bus.

K

KVMS Abbreviation for keyboard, video, mouse, and storage. A means of providing remote operation of a host.

L

LDAP Lightweight Directory Access Protocol. A protocol for providing directory services over IP.

LDAP over SSL A scheme of securing LDAP through a Secure Sockets Layer tunnel. See also LDAP.

leaf switch A switch utilizing a leaf topology. In Oracle documentation, a commonly used term to describe the Oracle InfiniBand Switch IS2-46.

line card A component of an IB switch chassis, that provides a leaf topology construct. See also IB SLM module.

long-range IB module I/O module for the Oracle Fabric Interconnect F2-12 that supports QDR IB throughput over distances up to 40 kilometers.

LR IB IOM I/O module for the Oracle Fabric Interconnect F2-12 that supports QDR IB throughput over distances up to 40 kilometers.

LR transceiver A transceiver used for long range Fibre Channel communication.

M

MAC Machine Allocation Code. A 12-digit hexadecimal number that uniquely identifies a network node.

MIB Management Information Base. A plain text file that contains a collection of object identifiers (OID). Used when managing a switch with the SNMP protocol. See also OID and SNMP.

module A user-replaceable component for a chassis, typically externally accessible. See also I/O module and fan module.

MOS My Oracle Support, at: http://support.oracle.com

N

network management A means of managing an SP or SCP through an Ethernet network. See also serial management, SP, and SCP.

O

OID Object identifier. Component of a MIB that serves a particular purpose and has parameters that are interpreted by the SNMP protocol. See also MIB and SNMP.

Oracle F2 10 Gb and 40Gb Ethernet Module An I/O module that provides either 10GbE or 40GbE functionality.

Oracle F2 Dual Port 16G Fibre An I/O module that provides 16Gb Fibre Channel functionality.

Channel Module	
Oracle F2 Long Range InfiniBand Module	An I/O module that provides QDR InfiniBand functionality over long distances.
Oracle F2 Quad Port 10GBASE-T Module	An I/O module that provides four 10GbE interface functionality.
Oracle Fabric Interconnect F2-12	A virtualization switch. See also virtualization switch.
Oracle Fabric Manager	A web-based GUI to administer the switch and fabric.
Oracle Fabric OS	Oracle Fabric Operating System. The operating system within the SCP, that manages the fabric. See also SCP.
Oracle ILOM	Oracle Integrated Lights-Out Manager. An interface using the IPMI protocol and the I^2C bus to monitor and control the hardware components of a chassis.
Oracle InfiniBand Switch IS2-254	A spine switch supporting InfiniBand topologies. See also spine switch.
Oracle InfiniBand Switch IS2-46	A leaf switch supporting InfiniBand topologies. See also leaf switch.
Oracle Linux OS	Oracle Linux operating system. A UNIX-based operating system, often embedded into service processors. See also SP.
Oracle Solaris OS	Oracle Solaris operating system. A UNIX-based operating system, typically used for high-performance enterprise computing platforms.

P

PrizmMT cable	An optical fiber connector and cable used for IB 4x and 12x technology. Is configured with a PrizmMT ferrule. Appears similar to, but is not compatible with standard MT cables and connectors. See also standard MT cable.

Q

QSFP Quad small form-factor pluggable. A form-factor for high-speed data interconnects.

R

RADIUS Remote Authentication Dial-In User Service. A protocol that provides authentication, authorization, and accounting for users.

RJ-45 Standard for an eight-pin modular form-factor for Ethernet interconnects.

RSA key Rivest Shamir Adleman algorithm key. A component of SSH authentication. See also DSA and SSH.

S

SCP System control processor. A type of service processor that manages more complex and resource intensive services, such as IB technology, fabric management interfaces, the Subnet Manager, and so on. The SCP might also be the chassis host. See also SP.

SEFOS Sun Ethernet Fabric Operating System. The operating system used by the EMS module to administer the Ethernet network. See also EMS module.

SER MGT Serial management. A low-speed serial datastream used to interface with the SP. See also SP.

serial management A means of managing an SP or SCP through a serial datastream. See also SER MGT, network management, SP, and SCP.

SFP+ Small form-factor pluggable. A form-factor for high-speed data interconnects.

SNMP Simple Network Management Protocol. A machine interface for remote monitoring and controlling of a switch. Uses MIBs and OIDs to exchange messages containing data or instructions. See also MIB and OID.

SP Service processor. A device that monitors and controls a chassis, regardless of the chassis host state, through an Oracle ILOM interface. See also Oracle ILOM and SCP.

spine switch A switch utilizing a spine topology. In Oracle documentation, a commonly used term to describe the Oracle InfiniBand Switch IS2-254.

SR transceiver A transceiver used for short range optical or electrical communication.

SSH Secure Shell. A secure network communication protocol, utilizing DSA and RSA algorithms. See also DSA and RSA.

standard MT cable An optical fiber connector and cable used for IB 4x technology. Appears similar to, but is not compatible with PrizmMT cables and connectors. See also PrizmMT cable.

switch front The intake end of the switch chassis that faces the cold aisle when mounted in a rack. Typically is the end with fan modules and power supplies.

switch rear The exhaust end of the switch chassis that faces the hot aisle when mounted in a rack. Typically is the end populated with high-speed data connections.

V

VAC Voltage alternating current.

VDC Voltage direct current.

W

WWN World Wide Name. An identifier used for Fibre Channel and other storage interface devices.

WWNN World Wide Node Name. A Fibre Channel name specifically for a node.

WWPN World Wide Port Name. A Fibre Channel name specifically for a port.

virtualization switch A switch supporting multiple interfaces having virtualization capabilities. In Oracle documentation, a commonly used term to describe the Oracle Fabric Interconnect F2-12 Virtualized I/O System.

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