

Oracle Integrated Lights Out Manager (ILOM) 3.0

Daily Management – CLI Procedures Guide



Part No.: E21445-06
February 2014

Copyright © 2008, 2014, Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related software documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT END USERS. Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

Copyright © 2008, 2014, Oracle et/ou ses affiliés. Tous droits réservés.

Ce logiciel et la documentation qui l'accompagne sont protégés par les lois sur la propriété intellectuelle. Ils sont concédés sous licence et soumis à des restrictions d'utilisation et de divulgation. Sauf disposition de votre contrat de licence ou de la loi, vous ne pouvez pas copier, reproduire, traduire, diffuser, modifier, breveter, transmettre, distribuer, exposer, exécuter, publier ou afficher le logiciel, même partiellement, sous quelque forme et par quelque procédé que ce soit. Par ailleurs, il est interdit de procéder à toute ingénierie inverse du logiciel, de le désassembler ou de le décompiler, excepté à des fins d'interopérabilité avec des logiciels tiers ou tel que prescrit par la loi.

Les informations fournies dans ce document sont susceptibles de modification sans préavis. Par ailleurs, Oracle Corporation ne garantit pas qu'elles soient exemptes d'erreurs et vous invite, le cas échéant, à lui en faire part par écrit.

Si ce logiciel, ou la documentation qui l'accompagne, est concédé sous licence au Gouvernement des Etats-Unis, ou à toute entité qui délivre la licence de ce logiciel ou l'utilise pour le compte du Gouvernement des Etats-Unis, la notice suivante s'applique :

U.S. GOVERNMENT END USERS. Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

Ce logiciel ou matériel a été développé pour un usage général dans le cadre d'applications de gestion des informations. Ce logiciel ou matériel n'est pas conçu ni n'est destiné à être utilisé dans des applications à risque, notamment dans des applications pouvant causer des dommages corporels. Si vous utilisez ce logiciel ou matériel dans le cadre d'applications dangereuses, il est de votre responsabilité de prendre toutes les mesures de secours, de sauvegarde, de redondance et autres mesures nécessaires à son utilisation dans des conditions optimales de sécurité. Oracle Corporation et ses affiliés déclinent toute responsabilité quant aux dommages causés par l'utilisation de ce logiciel ou matériel pour ce type d'applications.

Oracle et Java sont des marques déposées d'Oracle Corporation et/ou de ses affiliés. Tout autre nom mentionné peut correspondre à des marques appartenant à d'autres propriétaires qu'Oracle.

Intel et Intel Xeon sont des marques ou des marques déposées d'Intel Corporation. Toutes les marques SPARC sont utilisées sous licence et sont des marques ou des marques déposées de SPARC International, Inc. AMD, Opteron, le logo AMD et le logo AMD Opteron sont des marques ou des marques déposées d'Advanced Micro Devices. UNIX est une marque déposée d'The Open Group.

Ce logiciel ou matériel et la documentation qui l'accompagne peuvent fournir des informations ou des liens donnant accès à des contenus, des produits et des services émanant de tiers. Oracle Corporation et ses affiliés déclinent toute responsabilité ou garantie expresse quant aux contenus, produits ou services émanant de tiers. En aucun cas, Oracle Corporation et ses affiliés ne sauraient être tenus pour responsables des pertes subies, des coûts occasionnés ou des dommages causés par l'accès à des contenus, produits ou services tiers, ou à leur utilisation.



Adobe PostScript

Contents

Using This Documentation xiii

- ▼ Download Product Software and Firmware xiv

CLI Overview 1

Oracle ILOM CLI — DMTF Server Management Command-Line Protocol
User-Interface 2

Oracle ILOM CLI Connection 2

Server SP or CMM Network Addresses Accepted by Oracle ILOM CLI 3

Examples for Entering an IPv6 Address 3

Oracle ILOM CLI Firmware and CLI Prompt 4

Oracle ILOM CLI Management Namespace 4

Oracle ILOM CLI Target Namespace 5

CLI Management Target Namespace 5

DMTF Supported CLP Commands 6

CLI Command Options 7

Basic Command-Line Editing Keystrokes 8

Server SP — CLI Target Tree 10

Entering CLI Command Syntax and Executing Commands 11

Entering CLI Command Syntax 11

Executing Commands 11

▼ Execute Commands Individually 12

▼ Execute Combined Commands 12

Common CLI Commands 12

Logging In to ILOM, Displaying Banner Messages, and Setting the CLI Session Time-out 19

Logging In and Out of ILOM and Recovering a Password 20

Before Your Initial Login 20

- ▼ Log In Using the Root Account (CLI) 21
- ▼ Log In to Oracle ILOM With User Account (CLI) 22
- ▼ Log Out of Oracle ILOM CLI 22
- ▼ Recover a Lost Password (CLI) 23

Setting Up Banner Messages and CLI Session Time-Out 24

- ▼ Display Banner Messages on Login Page (CLI) 24
- ▼ Set CLI Session Time-Out Property Value 25

Configuring Network, Secure Shell, and Local Interconnect Settings 27

Configuring Network Settings (CLI) 28

Before You Begin — Network Settings (CLI) 28

- ▼ View and Configure IPv4 Network Settings (CLI) 30
- ▼ Edit Existing IPv4 Addresses (CLI) 31
- ▼ View and Configure Dual-Stack IPv4 and IPv6 Network Settings (CLI) 32
- ▼ Test IPv4 or IPv6 Network Configuration (CLI) 38
- ▼ Assign Host Name and System Identifier (CLI) 39
- ▼ View and Configure DNS Settings (CLI) 40
- ▼ View and Configure Serial Port Settings (CLI) 41
- ▼ Enable HTTP or HTTPS Web Access (CLI) 42
- ▼ Switch Serial Port Output (CLI) 44

Configuring Secure Shell Settings (CLI) 45

- ▼ Establish a Remote SSH Connection (CLI) 45
- ▼ Enable or Disable SSH (CLI) 45

- ▼ View the SSH Authentication Keys (CLI) 46
 - ▼ Generate a New SSH Authentication Key (CLI) 48
 - ▼ Restart the SSH Server (CLI) 48
- Configuring the Local Interconnect Interface (CLI) 49
- Local Interconnect Requirements (CLI) 49
- ▼ Configure Local Interconnect Interface Between Server SP and Host OS (CLI) 50

Managing User Accounts (CLI) 55

- Configuring User Accounts (CLI) 56
- ▼ Configure Single Sign On (CLI) 56
 - ▼ Add a User Account (CLI) 57
 - ▼ Change a User Account Password (CLI) 57
 - ▼ Assign Roles to a User Account (CLI) 58
 - ▼ Delete a User Account (CLI) 59
 - ▼ View Individual User Accounts (CLI) 60
 - ▼ View a List of User Accounts (CLI) 60
 - ▼ View a List of User Sessions (CLI) 61
 - ▼ View an Individual User Session (CLI) 61
- Configuring SSH User Keys (CLI) 62
- ▼ Add an SSH Key 62
 - ▼ Delete an SSH Key (CLI) 63
- Configuring Active Directory (CLI) 64
- ▼ Enable Active Directory `strictcertmode` (CLI) 64
 - ▼ Check Active Directory `certstatus` (CLI) 65
 - ▼ Remove an Active Directory Certificate (CLI) 66
 - ▼ View and Configure Active Directory Settings (CLI) 67
 - ▼ Troubleshoot Active Directory Authentication and Authorization (CLI) 74
- Configuring Lightweight Directory Access Protocol (LDAP) (CLI) 76

- ▼ Configure the LDAP Server (CLI) 76
- ▼ Configure Oracle ILOM for LDAP (CLI) 77

Configuring LDAP/SSL (CLI) 78

- ▼ Enable LDAP/SSL `strictcertmode` 78
- ▼ Check LDAP/SSL `certstatus` 79
- ▼ Remove an LDAP/SSL Certificate (CLI) 80
- ▼ View and Configure LDAP/SSL Settings (CLI) 80
- ▼ Troubleshoot LDAP/SSL Authentication and Authorization (CLI) 85

Configuring RADIUS (CLI) 87

- ▼ Configure RADIUS (CLI) 87

Managing Component Status and Service Actions (CLI) 89

- ▼ View Component Information (CLI) 89
- ▼ Prepare to Remove a Component (CLI) 91
- ▼ Return a Component to Service (CLI) 91
- ▼ Enable and Disable Component State (CLI) 92
- ▼ View and Clear Faults (CLI) 92

Monitoring System Sensors and Managing Event Log Entries and Clock Settings (CLI) 95

Monitoring System Sensors, Indicators, Event Logs (CLI) 96

- ▼ View Sensor Readings (CLI) 96
- ▼ Configure System Status Indicators (CLI) 98
- ▼ Configure Clock Properties (CLI) 99
- ▼ Filter Oracle ILOM Event Log List (CLI) 100
- ▼ Scroll, Dismiss, or Clear the Oracle ILOM Event Log List 100
- ▼ Configure Remote Syslog Receiver IP Addresses (CLI) 102
- ▼ View and Manage SP Console Log Output (CLI) 103

Monitoring Storage Components and Zone Manager 107

- ▼ Monitor Storage Component Details on x86 Servers (CLI) 107
- Accessing Sun Blade Zone Manager Functions 112

Managing System Alerts (CLI) 117

- Managing Alert Rule Configurations (CLI) 118
 - Requirements for Setting Alert Rules (CLI) 118
 - ▼ Create or Edit Alert Rules (CLI) 118
 - ▼ Disable an Alert Rule (CLI) 120
 - ▼ Enable Test Alerts (CLI) 121
- CLI Commands: Alert Rules 122
 - ▼ Configure the SMTP Client (CLI) 123

Redirecting Storage Media and Locking the Oracle ILOM Remote Console Display 127

- Redirect Storage Media (CLI) 127
- Manage Oracle ILOM Remote Console Lock Options (CLI) 128

Power Monitoring and Managing of Hardware Interfaces 129

- Summary of Power Management Feature Updates (CLI) 129
- Monitoring System Power Consumption (CLI) 132
 - Requirements — Power Consumption Monitoring (CLI) 132
 - ▼ Monitor Total System Power Consumption (CLI) 133
 - ▼ Monitor Actual Power Consumption (CLI) 134
 - ▼ Monitor Individual Power Supply Consumption (CLI) 135
 - ▼ Monitor Available Power (CLI) 136
 - ▼ Monitor Server Hardware Maximum Power Consumption (CLI) 136
 - ▼ Monitor Permitted Power Consumption (CLI) 137
 - ▼ Monitor Power Consumption History (CLI) 137
- Configuring the Power Policy and Notification Threshold Values (CLI) 140
 - ▼ Configure Server SP Power Policy Value (CLI) 140

- ▼ View and Configure the Power Wattage Notification Threshold Value (CLI) 141

Monitoring Component Power Allocation Distributions (CLI) 143

Special Considerations for Power Allocation (CLI) 143

- ▼ View Server Power Allocations for All System Components (CLI) 144
- ▼ View Server Component Category Power Allocations (CLI) 144
- ▼ View CMM Power Allocations for All Chassis Components (CLI) 146
- ▼ View CMM Component Category Power Allocations (CLI) 146
- ▼ View Blade Slots Granted Power or Reserved Power as of Oracle ILOM 3.0.10 (CLI) 147
- ▼ View Granted Power or Grant Limit for Blade as of Oracle ILOM 3.0.10 (CLI) 148

Configuring Power Limit Properties (CLI) 149

Special Considerations for Setting Power Limits (CLI) 149

- ▼ Set Permitted Power for Chassis Blade Slots (CLI) 150
- ▼ Set Server Power Budget Properties (CLI) 151
- ▼ Set CMM Grant Limit to Blade Server as of Oracle ILOM 3.0.10 (CLI) 153

Manage CMM Power Supply Redundancy Properties (CLI) 154

- ▼ View or Set CMM Power Supply Redundancy Properties (CLI) 154

Managing Remote Host Power States, BIOS Boot Device, and Host Server Console 157

Issuing Remote Power State Commands From Server SP CLI or CMM CLI 157

- ▼ Configure BIOS Host Boot Device Override (CLI) 159

Managing the SP Host Console 161

- ▼ View and Configure Host Console Properties 161
- ▼ Start Host Console and Display Console History and Bootlog 163

bootManaging TPM and LDom States on SPARC Servers (CLI) 165

- ▼ Control TPM State on a SPARC Server (CLI) 165

Managing LDom Configurations on SPARC Servers (CLI)	168
Requirements — LDom Configuration (CLI)	168
▼ View Targets and Properties for Stored LDom Configurations on SPARC T3 Series Server (CLI)	169
▼ Specify Host Power to a Stored LDom Configuration (CLI)	170
▼ Enable or Disable the Control Domain Property Values (CLI)	170

CLI Command Reference 173

cd Command	173
Syntax	174
Options	174
Targets and Properties	174
Examples	174
create Command	174
Syntax	175
Options	175
Targets, Properties, and Values	175
Example	175
delete Command	176
Syntax	176
Options	176
Targets	176
Examples	176
dump Command	177
Syntax	177
Options	177
exit Command	177
Syntax	177
Options	177

help Command	178
Syntax	178
Options	178
Commands	178
Examples	179
load Command	179
Syntax	179
Options	179
Example	180
reset Command	180
Syntax	180
Options	180
Targets	181
Examples	181
set Command	181
Syntax	181
Options	181
Targets, Properties, and Values	182
Examples	191
show Command	191
Syntax	192
Options	192
Targets and Properties	193
Examples	203
start Command	203
Syntax	203
Options	204
Targets	204

Examples	204
stop Command	204
Syntax	204
Options	204
Targets	205
Examples	205
version Command	205
Syntax	205
Options	205
Example	206

Diagnosing IPv4 or IPv6 Oracle ILOM Connection Issues 207

Diagnosing Oracle ILOM Connection Issues	207
--	-----

Manual Host OS Configuration Guidelines for Local Interconnect Interface
209

Configuring Internal USB Ethernet Device on Host OS	209
---	-----

Index 213

Using This Documentation

This command-line interface (CLI) procedures guide describes the Oracle Integrated Lights Out Manager (ILOM) daily management features that are common to Oracle's Sun rack-mounted servers, server modules, and CMMs supporting Oracle ILOM 3.0.

Use this guide in conjunction with other guides in the Oracle ILOM 3.0 Documentation Collection. This guide is intended for technicians, system administrators, authorized Oracle service providers, and users who have experience managing system hardware.

This preface contains the following topics:

- "Related Documentation" on page xiii
- "Documentation Feedback" on page xiv
- "Product Downloads" on page xiv
- "Oracle ILOM 3.0 Firmware Version Numbering Scheme" on page xv
- "Support and Accessibility" on page xvi

Related Documentation

Documentation	Links
All Oracle products	http://www.oracle.com/documentation
Oracle Integrated Lights Out Manager (ILOM) 3.0 Documentation Library	http://www.oracle.com/pls/topic/lookup?ctx=ilom30

Documentation	Links
System management, single system management (SSM) security, and diagnostic documentation	http://www.oracle.com/technetwork/documentation/sys-mgmt-networking-190072.html
Oracle Hardware Management Pack 2.0	http://docs.oracle.com/cd/E19960-01/index.html

Note: To locate Oracle ILOM 3.0 documentation that is specific to your Sun server platform, see the Oracle ILOM section of the administration guide that is available for your server.

Documentation Feedback

Provide feedback on this documentation at:

<http://www.oracle.com/goto/docfeedback>

Product Downloads

Updates to the Oracle ILOM 3.0 firmware are available through standalone software updates that you can download from the My Oracle Support (MOS) web site for each Sun server or Sun blade chassis system. To download these software updates from the MOS web site, see the instructions that follow.

▼ Download Product Software and Firmware

1. Go to <http://support.oracle.com>.
2. Sign in to My Oracle Support.
3. At the top of the page, click the Patches & Updates tab.
4. In the Patch Search panel, select Product or Family (Advanced).
5. In the Product Is list box, type a full or partial product name until a list of product matches appears in the list box, and then select the product name of interest.
6. In the Release Is list box:

- a. **Click the Down arrow in the Release Is list box to display a list of matching product folders.**
A list of one or more product software releases appears.
 - b. **Select the check box next to the software release of interest.**
7. **In the Patch Search Results screen, select the Patch Name of interest.**
 8. **In the Patch Name selection, click one of the following actions:**
 - **Readme** – Opens the selected patch Readme file.
 - **Add to Plan** – Adds the selected patch to a new or existing plan.
 - **Download** – Downloads the selected patch

Oracle ILOM 3.0 Firmware Version Numbering Scheme

Oracle ILOM 3.0 uses a firmware version numbering scheme that helps you to identify the firmware version you are running on your server or CMM. This numbering scheme includes a five-field string, for example, a.b.c.d.e, where:

- a - Represents the major version of Oracle ILOM.
- b - Represents a minor version of Oracle ILOM.
- c - Represents the update version of Oracle ILOM.
- d - Represents a micro version of Oracle ILOM. Micro versions are managed per platform or group of platforms. See your platform Product Notes for details.
- e - Represents a nano version of Oracle ILOM. Nano versions are incremental iterations of a micro version.

For example, Oracle ILOM 3.1.2.1.a would designate:

- Oracle ILOM 3 as the major version
- Oracle ILOM 3.1 as a minor version
- Oracle ILOM 3.1.2 as the second update version
- Oracle ILOM 3.1.2.1 as a micro version
- Oracle ILOM 3.1.2.1.a as a nano version of 3.1.2.1

Support and Accessibility

Description	Links
Access electronic support through My Oracle Support	http://support.oracle.com For hearing impaired: http://www.oracle.com/accessibility/support.html
Learn about Oracle's commitment to accessibility	http://www.oracle.com/us/corporate/accessibility/index.html

CLI Overview

Description	Links
Learn about the Oracle ILOM CLI industry-standard user interface model.	<ul style="list-style-type: none">• “Oracle ILOM CLI — DMTF Server Management Command-Line Protocol User-Interface” on page 2
Learn about Oracle ILOM CLI connection requirements, installed firmware, and CLI prompt.	<ul style="list-style-type: none">• “Oracle ILOM CLI Connection” on page 2• “Server SP or CMM Network Addresses Accepted by Oracle ILOM CLI” on page 3• “Oracle ILOM CLI Firmware and CLI Prompt” on page 4
Understand Oracle ILOM CLI management namespace.	<ul style="list-style-type: none">• “Oracle ILOM CLI Management Namespace” on page 4• “Oracle ILOM CLI Target Namespace” on page 5• “CLI Management Target Namespace” on page 5• “DMTF Supported CLP Commands” on page 6• “CLI Command Options” on page 7• “Basic Command-Line Editing Keystrokes” on page 8• “Server SP — CLI Target Tree” on page 10
Identify syntax requirements and examples for executing CLI commands.	<ul style="list-style-type: none">• “Entering CLI Command Syntax and Executing Commands” on page 11
Review common CLI commands.	<ul style="list-style-type: none">• “Common CLI Commands” on page 12
Compare previous Oracle ILOM 2.0 properties with later Oracle ILOM 3.0 properties.	<ul style="list-style-type: none">• “Oracle ILOM 3.0 Properties Versus Oracle ILOM 2.x Properties” on page 17

Related Information

- *Oracle ILOM 3.0 Daily Management Concepts*, Oracle ILOM overview
- *Oracle ILOM 3.0 Daily Management Web Procedures*, web interface overview
- *Oracle ILOM 3.0 Protocol Management Reference*, SNMP overview
- *Oracle ILOM 3.0 Protocol Management Reference*, IPMI overview

- *Oracle ILOM 3.0 Maintenance and Diagnostics*, maintenance and diagnostics overview
 - *Oracle ILOM 3.0 Feature Updates and Release Notes*, new or updated features
-

Oracle ILOM CLI — DMTF Server Management Command-Line Protocol User-Interface

The Oracle ILOM CLI is based on the Distributed Management Task Force specification, *Server Management Command-Line Protocol Specification, version 11.0a.8 Draft* (DMTF CLP). You can view the entire specification at the following site:

<http://www.dmtf.org/>

The DMTF CLP provides a management user-interface for one or more servers regardless of server state, method of access, or installed operating system.

The DMTF CLP architecture models a hierarchical namespace, a predefined tree that contains every managed object in the system. In this model, a small number of commands operate on a large namespace of targets, which can be modified by options and properties. This namespace defines the targets for each command verb.

For more information about managing objects in the Oracle ILOM CLI namespace, see “[Oracle ILOM CLI Management Namespace](#)” on page 4.

Oracle ILOM CLI Connection

You can use a command-line interface to access Oracle ILOM on the chassis monitoring module (CMM) or the server service processor (SP) through a network connection, or through a direct terminal connection to the serial port on the CMM or server SP. In addition, on some Oracle Sun servers you can use the Local Interconnect Interface feature in Oracle ILOM to manage the server directly from the host operating system without any physical network or local connection to the server.

Note – For more information about how to use the Local Interconnect Interface feature in Oracle ILOM, refer to *Oracle ILOM 3.0 Daily Management Concepts Guide*. For instructions about how to connect a local serial device to a server or how to connect a network cable to the NET MGT port on a server or CMM, refer to the installation guide provided with your server or CMM.

Topics discussed in this section include:

- “Server SP or CMM Network Addresses Accepted by Oracle ILOM CLI” on page 3
- “Examples for Entering an IPv6 Address” on page 3
- “Oracle ILOM CLI Firmware and CLI Prompt” on page 4

Server SP or CMM Network Addresses Accepted by Oracle ILOM CLI

As of Oracle ILOM 3.0.12 or later, the following network addresses are accepted by the Oracle ILOM service processor (SP) CLI.

- **IPv4 address**, such as `10.8.183.106`
- **IPv6 address**, such as `fec0:a:8:b7:214:4fff:5eca:5f7e/64`
- **Link Local IPv6 address**, such as `fe80::214:4fff:feca:5f7e/64`
- **DNS host domain address**, such as `company.com`

Examples for Entering an IPv6 Address

When you specify an IPv6 address to log in to Oracle ILOM using an SSH connection, the IPv6 address should *not be enclosed* in brackets. When you specify an IPv6 address in a URL with a web browser or when you transfer a file, the IPv6 address *must be enclosed* in brackets to work correctly.

Examples:

- When entering the URL in a web browser, type:
https://[ipv6address]
- When establishing an Oracle ILOM CLI session using SSH and the default Oracle ILOM root user account, type:
ssh root@ipv6address

Note that when you specify an IPv6 address to log in to Oracle ILOM using an SSH connection, the IPv6 address should *not be enclosed* in brackets.

- When transferring a file using the CLI `load -source` command and `tftp`, type:

```
load -source tftp://[ipv6address]filename.extension
```

For additional information about entering IPv6 addresses, refer to the *Oracle ILOM 3.0 Daily Management – Concepts Guide*. For help with diagnosing IPv4 and IPv6 connection issues, see “[Diagnosing IPv4 or IPv6 Oracle ILOM Connection Issues](#)” on page 207.

Oracle ILOM CLI Firmware and CLI Prompt

After establishing a connection to the CLI session on a server SP or a CMM, the Oracle ILOM firmware version installed on the system is identified and the copyright information and CLI prompt appears.

For example:

```
Oracle(R) Integrated Lights Out Manager

Version 3.0.0.0 r54408

Copyright (c) 2010, Oracle and/or its affiliates. All rights
reserved.

->
```

Note – As of Oracle ILOM 3.0.10, you can change the CLI prompt on the CMM to differentiate between a CMM CLI prompt and a server module (blade) CLI prompt. For more information about the new CLI prompt properties and how to make the CLI prompt specific to a CMM or a blade, refer to *Oracle ILOM CMM Administration Guide*.

Oracle ILOM CLI Management Namespace

The Oracle ILOM CLI management namespace includes a hierarchical predefined tree that contains every managed object in the system. Within the Oracle ILOM CLI, a small number of commands operate on a large namespace of targets that are modified by options and properties.

Topics discussed in this section include:

- “Oracle ILOM CLI Target Namespace” on page 5
- “CLI Management Target Namespace” on page 5
- “DMTF Supported CLP Commands” on page 6
- “CLI Command Options” on page 7
- “Basic Command-Line Editing Keystrokes” on page 8
- “Server SP — CLI Target Tree” on page 10

Oracle ILOM CLI Target Namespace

The following table describes the CLI management target namespace provided in Oracle ILOM for either a Sun server platform or a Sun blade chassis platform.

TABLE: Oracle ILOM Management Target Namespace

Target	Description
* /SP	The targets and properties below this target type are used on a Sun server for configuring the Oracle ILOM service processor (SP) and for viewing logs and consoles.
* /CMM	On blade chassis platforms, this target type replaces /SP and is used for configuring the Oracle ILOM chassis monitoring module (CMM).
* /SYS	The targets and properties below this target type are used on a Sun server to monitor inventory status and environmental sensors, as well as to manage service components. The targets under this target type directly correspond to the names of the hardware components, some of which are printed on the physical hardware.
* /CH	On blade chassis platforms, this target type replaces /SYS and provides inventory status, environmental status, and hardware management at the chassis level. The target types directly correspond to nomenclature names for all hardware components, some of which are printed onto the physical hardware.
* /HOST	The targets and properties below this target type are used on a Sun server to monitor and manage the host operating system.

CLI Management Target Namespace

Oracle ILOM provides separate CLI namespaces for server management and chassis management, for instance:

- **Server SP CLI Management** – From the server SP CLI, you can access the `/SP` namespace to manage and configure the server SP. You can also from the SP namespace, to access the `/SYS` and `/HOST` namespaces.
- **Chassis CLI Management** – From the CMM CLI, you can access the `/CMM` namespace and the chassis component namespace, which could include: `/CH/BLn`, `/CH/BLn/NodeN`, or `/CH/NEM`. In the `/CMM` namespace you can manage and configure the CMM. In the `/CH` namespaces you can access and configure properties for managed chassis components such as single SP server modules (blades), multiple SP server modules, and NEMs.

The following table summarizes the CLI server and CMM management targets you can navigate in Oracle ILOM.

TABLE: CMM and Server SP CLI Management Targets

Managed Device	CLI Management Target Descriptions
Server	<ul style="list-style-type: none"> • <code>/SP</code> is used to configure the server module SP and for viewing logs and consoles. • <code>/SYS</code> is used to monitor inventory status, environmental sensors, and manage hardware components at the blade level.
CMM, chassis server module (blade), SPs, or NEM	<ul style="list-style-type: none"> • <code>/CMM</code> is used to manage Oracle ILOM on the CMM. • <code>/CH</code> is used to provide inventory, environmental, and hardware management at the chassis level. The <code>/CH</code> address space replaces <code>/SYS</code> on Sun Blade Modular Systems. • <code>/CH/BLn</code> is used to access and configure server module SP properties and options from the CMM CLI session. • <code>/CH/BLn/NodeN</code> where <code>NodeN</code> is used to access and configure properties and options on a specific SP node on a server module that supports multiple SPs. • <code>/CH/NEMn/</code> is used to access NEM targets and properties from the CMM CLI session.
Host OS on Server	<ul style="list-style-type: none"> • <code>/HOST</code> is used to monitor and manage the host server operating system interactions.

DMTF Supported CLP Commands

The Oracle ILOM CLI supports the following DMTF system management CLP commands.

Note – CLI commands are case-sensitive.

TABLE: CLI Commands

Command	Description
cd	Navigates the object namespace.
create	Sets up an object in the namespace.
delete	Removes an object from the namespace.
exit	Terminates a CLI session.
help	Displays Help information for commands and targets.
load	Transfers a file from an indicated source to an indicated target.
dump	Transfers a file from a target to a remote location specified by the URI.
reset	Resets the state of the target.
set	Sets target properties to the specified value.
show	Displays information about targets and properties.
start	Starts the target.
stop	Stops the target.
version	Displays the version of service processor running.

CLI Command Options

The following table describes CLI options supported by some CLI commands.

Note – To determine CLI options supported by a CLI command use the `help` command.

TABLE: CLI Options

Option	Long Form	Short Form	Description
-default			Causes the command to perform its default functions only.
-destination			Specifies the destination for data.
-display		-d	Shows the data the user wants to display.
-force		-f	Specifies that the action will be performed immediately.
-help		-h	Displays Help information.

TABLE: CLI Options (*Continued*)

Option Long Form	Short Form	Description
-level	-l	Executes the command for the current target and all targets contained through the level specified.
-output	-o	Specifies the content and form of command output. Oracle ILOM supports only <code>-o table</code> , which displays targets and properties in tabular form.
-script		Skips warnings or prompts normally associated with the command.
-source		Indicates the location of a source image.

Basic Command-Line Editing Keystrokes

The Oracle ILOM CLI supports the following command-line editing keystrokes:

- [TABLE: Cursor Movement CLI Editing Keystrokes on page 8](#)
- [TABLE: Text Deletion CLI Editing Keystrokes on page 9](#)
- [TABLE: Text Input CLI Editing Keystrokes on page 9](#)
- [TABLE: Command History CLI Editing Keystrokes on page 9](#)

TABLE: Cursor Movement CLI Editing Keystrokes

To:	Press:
Move the cursor to the right.	Right arrow -or- Ctrl+f
Move the cursor to the left.	Left arrow -or- Ctrl+b
Move the cursor to the beginning of the command line.	Ctrl+a
Move the cursor to the end of the command line.	Ctrl+e
Move the cursor forward by one word.	Esc+f
Move the cursor backward by one word.	Esc+b

TABLE: Text Deletion CLI Editing Keystrokes

To:	Press:
Delete the character before the cursor.	Backspace -or- Ctrl+h
Delete the character at the cursor.	Ctrl+d
Delete the characters starting from the cursor location to the end of the command line.	Ctrl+k
Delete the word before the cursor.	Ctrl+w -or- Esc+h -or- Esc+Backspace
Delete the word at the cursor.	Esc+d

TABLE: Text Input CLI Editing Keystrokes

To:	Press:
Complete the input of the target or property name.	Tab
Abort the command-line input.	Ctrl+c
Complete the end of multi-line input when using the commands for: <code>load -source console</code> or <code>set load_uri=console</code> .	Ctrl+z

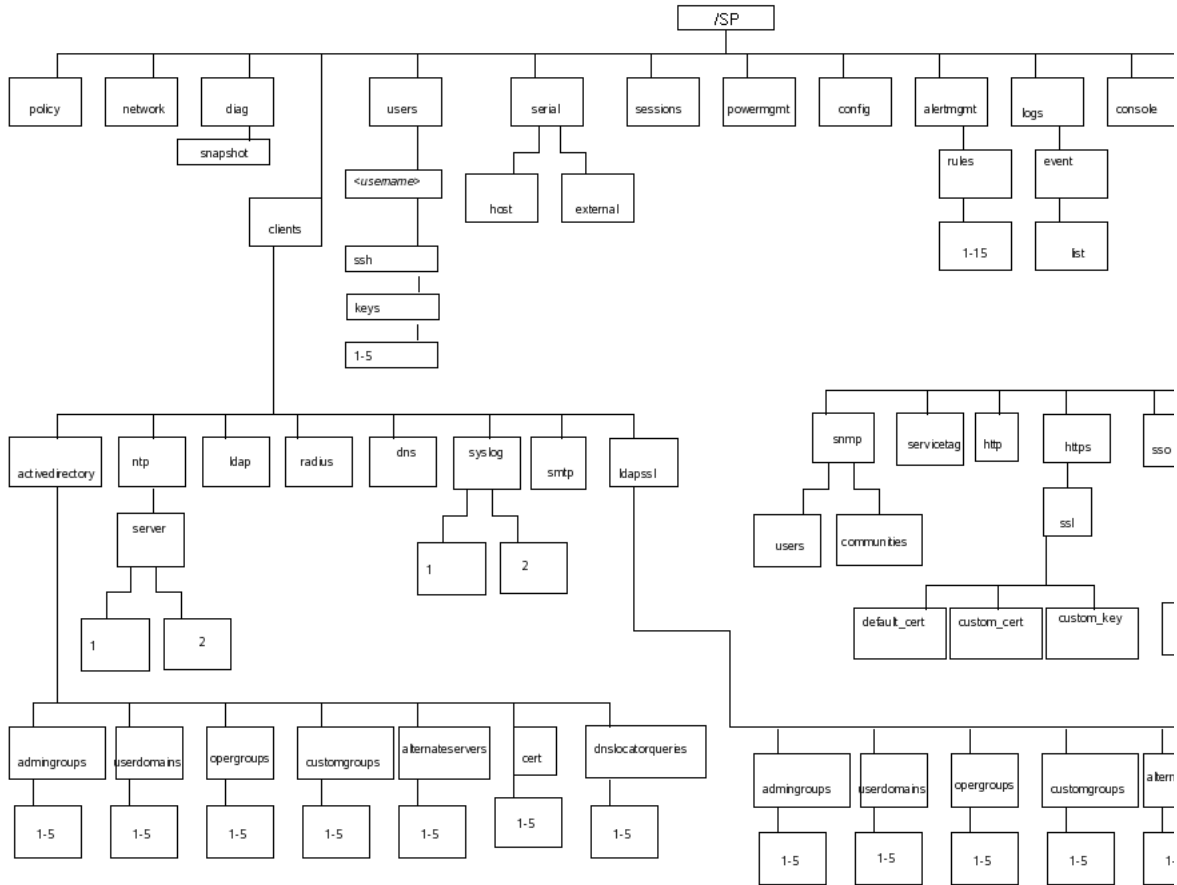
TABLE: Command History CLI Editing Keystrokes

To:	Press:
Display the command-line history.	Ctrl+L
Scroll backward through the command-line history.	Up arrow -or- Ctrl+p
Scroll forward through the command-line history.	Down arrow -or- Ctrl+n

Server SP — CLI Target Tree

Every object in the CLI namespace is considered a target.

FIGURE: /SP Example of the Oracle ILOM CLI Target Tree



Entering CLI Command Syntax and Executing Commands

To specify target locations and successfully execute CLI commands in Oracle ILOM, you must apply the required command-line syntax when entering and executing commands. For more details, see the following topics:

- [“Entering CLI Command Syntax” on page 11](#)
- [“Executing Commands” on page 11](#)

Entering CLI Command Syntax

When using the Oracle ILOM CLI, the command syntax is as follows:
[command name] [option] [target] [property] [value]

For example:

```
-> set /SP/services/https port=portnumber servicestate=  
enabled|disabled
```

Note – Syntax examples in this chapter use the target starting with */SP/*, which could be interchanged with the target starting with */CMM/* depending on your server platform. Sub-targets are common across all server platforms.

Executing Commands

To execute most commands, specify the location of the target and then enter the command. You can perform these actions individually, or you can combine them on the same command line.

- [“Execute Commands Individually” on page 12](#)
- [“Execute Combined Commands” on page 12](#)

▼ Execute Commands Individually

1. **Navigate to the namespace using the `cd` command.**

For example:

```
cd /SP/services/http
```

2. **Enter the command, target, and value.**

For example:

```
-> set port=80
```

or

```
-> set prop1=x
```

```
-> set prop2=y
```

▼ Execute Combined Commands

- **Using the syntax `<command><target>=value`, enter the command on a single command line.**

For example:

```
-> set /SP/services/http port=80
```

or

```
-> set /SP/services/http prop1=x prop2=y
```

Common CLI Commands

Note – For more information about Oracle ILOM CLI commands, see [“CLI Command Reference” on page 173](#).

TABLE: General Commands

Description	Command
Display information about commands and targets.	help
Display information about a specific command.	help <string>
Show all valid targets.	help targets

TABLE: General Commands *(Continued)*

Description	Command
Change and display the current target.	cd
Transfer a file from a target to a remote location specified by the URI.	dump
Log out of the CLI.	exit
Display the version of Oracle ILOM firmware running on the system.	version
Reset a target.	reset
Display clock information.	show /SP/clock
Display active Oracle ILOM sessions.	show /SP/sessions
Update Oracle ILOM and BIOS firmware.	load -source tftp://newSPimage
Display a list of Oracle ILOM event logs.	show /SP/logs/event/list

TABLE: User Commands

Description	Command
Add a local user.	create /SP/users/user1 password=password role=[a u c r o s]
Delete a local user.	delete /SP/users/user1
Change a local user role.	set /SP/users/user1 role=operator
Display information about all local users.	show -display [targets properties all] -level all /SP/users
Display information about LDAP settings.	show /SP/clients/ldap
Change LDAP settings.	set /SP/clients/ldap binddn=proxyuser bindpw=proxyuserpassword defaultrole=[a u c r o s] address=ipaddress

TABLE: Network and Serial Port Setting Commands

Description	Command
Display network configuration information.	show /SP/network
Change network properties for Oracle ILOM. Changing certain network properties, like the IP address, will disconnect your active session.	set /SP/network pendingipaddress=ipaddress pendingipdiscovery=[dhcp static] pendingipgateway=ipgateway pendingipnetmask=ipnetmask commitpending=true
Display information about the external serial port.	show /SP/serial/external
Change the external serial port configuration.	set /SP/serial/external pendingspeed=integer commitpending=true
Display information about the serial connection to the host.	show /SP/serial/host
Change the host serial port configuration.	set /SP/serial/host pendingspeed=integer commitpending=true
Note - This speed setting must match the speed setting for serial port 0, COM1, or /dev/ttyS0 on the host operating system.	

TABLE: Alert Management Commands

Description	Command
Display information about alerts. You can configure up to 15 alerts.	show /SP/alertmgmt/rules/1...15
Configure an IPMI PET alert.	set /SP/alertmgmt/rules/1...15 type=ipmipet destination=ipaddress level=[down critical major minor]
Configure a SNMPv3 trap alert.	set /SP/alertmgmt/rules/1...15 type=snmptrap snmp_version=3 community_or_username=username destination=ipaddress level=[down critical major minor]
Configure an email alert.	set /SP/alertmgmt/rules/1...15 type=email destination=email_address level=[down critical major minor]

TABLE: System Management Access Commands

Description	Command
Display information about HTTP settings.	show /SP/services/http
Change HTTP settings, such as enabling automatic redirection to HTTPS.	set /SP/services/http port=portnumber securedirect= [enabled disabled] servicestate=[enabled disabled]
Display information about HTTPS access.	show /SP/services/https
Change HTTPS settings.	set /SP/services/https port=portnumber servicestate= [enabled disabled]
Display SSH DSA key settings.	show /SP/services/ssh/keys/dsa
Display SSH RSA key settings.	show /SP/services/ssh/keys/rsa

TABLE: Clock Settings Commands

Description	Command
Set Oracle ILOM clock to synchronize with a primary NTP server.	set /SP/clients/ntp/server/1 address=ntpIPAddress
Set Oracle ILOM clock to synchronize with a secondary NTP server.	set /SP/clients/ntp/server/2 address=ntpIPAddress2

TABLE: SNMP Commands

Description	Command
Display information about SNMP settings. By default, the SNMP port is 161 and v3 is enabled.	show /SP/services/snmp engineid=snmpengineid port=snmpportnumber sets=[enabled disabled] v1= [enabled disabled] v2c=[enabled disabled] v3=[enabled disabled]
Display SNMP users.	show /SP/services/snmp/users
Add an SNMP user.	create /SP/services/snmp/users/snmpusername authenticationpassword=password authenticationprotocol= [MD5 SHA] permissions=[rw ro] privacypassword=password privacyprotocol=[none DES AES]
Delete an SNMP user.	delete /SP/services/snmp/users/snmpusername

TABLE: SNMP Commands (*Continued*)

Description	Command
Display SNMP MIBs.	show /SP/services/snmp/mibs
Display information about SNMP public (read-only) communities.	show /SP/services/snmp/communities/public
Display information about SNMP private (read-write) communities.	show /SP/services/snmp/communities/private
Add an SNMP public community.	create /SP/services/snmp/communities/public/comm1 permission=[ro rw]
Add an SNMP private community.	create /SP/services/snmp/communities/private/comm2 permission=[ro rw]
Delete an SNMP community.	delete /SP/services/snmp/communities/comm1

TABLE: Host System Commands

Description	Command
Start the host system or chassis power.	start /SYS or start /CH
Stop the host system or chassis power (graceful shutdown).	stop /SYS or stop /CH
Stop the host system or chassis power (forced shutdown).	stop [-f force] /SYS or stop [-f force] /CH
Reset the host system or chassis.	reset /SYS or reset /CH
Start a session to connect to the host console.	start /SP/console
Stop the session connected to the host console (graceful shutdown).	stop /SP/console
Stop the session connected to the host console (forced shutdown).	stop [-f force] /SP/console

TABLE: Filtering Output Options for Commands

Description	Filtered Command
Display active Oracle ILOM sessions that were started on July 17th.	<code>show /SP/sessions -level all starttime=="*Jul 17"</code>
Display users that have admin roles.	<code>show /SP/users -level all role=="a"</code>
Display users that have only user and console roles.	<code>show /SP/users -level all role=="uc"</code>
Display all SNMP trap alerts.	<code>show /SP/alertmgmt -level all type=="snmptrap"</code>
Display all disabled services.	<code>show /SP/services -level all servicestate==disabled</code>
Display NTP clients that use the NTP address server IP 1.2.3.4	<code>show /SP/clients/ntp -level all address=="1.2.3.4"</code>
Display all FRUs with serial number that starts with 0D01B.	<code>show /SYS fru_serial_number=="0D01B*" -level all</code>
Display all memory modules manufactured by INFINEON.	<code>show /SYS -level all type=="DIMM" fru_manufacturer="INFINEON"</code>
Display all power supplies whose alarm state is major.	<code>show /SYS -level all type=="Power Supply" alarm_status==major</code>
Display all components that are DIMMs or hard disks.	<code>show /SYS type=("Hard Disk",DIMM) -level all</code>
Display all voltage sensors whose upper_nonrecov_threshold value is 2.89 or 60 volts.	<code>show /SYS type==Voltage upper_nonrecov_threshold=("2.*", "60.*")</code>

Oracle ILOM 3.0 Properties Versus Oracle ILOM 2.x Properties

Note – Properties are the configurable attributes specific to each object.

If you are upgrading from Oracle ILOM 2.x to Oracle ILOM 3.0 and you want to update your 2.x scripts, you need to be familiar with the new methods that Oracle ILOM 3.0 uses to implement Oracle ILOM 3.0 commands. The following table compares the Oracle ILOM 2.x properties with the later ILOM 3.0 properties.

TABLE: Oracle ILOM 2.x Properties and New Oracle ILOM 3.0 Implementations

Oracle ILOM 2.x Property	Oracle ILOM 3.0 Implementation
/SP/clients/syslog/destination_ip1	/SP/clients/syslog/1/address
/SP/clients/syslog/destination_ip2	/SP/clients/syslog/2/address
/SP/clients/activedirectory/ getcertfile (load a certificate)	Use load command with this target /SP/clients/activedirectory/cert
/SP/clients/activedirectory/getcer tfile (remove a certificate)	Use set command with /SP/client/activedirectory/cert clear_action=true
/SP/clients/activedirectory/ getcertfile (restore a certificate)	No longer a feature
/SP/clients/activedirectory/ certfilestatus	/SP/clients/activedirectory/cert/ certstatus
/SP/clients/activedirectory/ ipaddress	/SP/clients/activedirectory/ address
/SP/clients/activedirectory/alerna tiveservers/getcertfile (load a certificate)	Use load command with /SP/clients/activedirectory/ alternativeservers/cert as target
/SP/clients/activedirectory/ alternativeservers/getcertfile (remove a certificate)	Use set command with /SP/client/activedirectory/alernat iveservers/cert clear_action=true
/SP/clients/activedirectory/ getcertfile/alternativeservers/ (restore a certificate)	No longer a feature
/SP/clients/activedirectory/ alternativeservers/certfilestatus	/SP/clients/activedirectory/ alternativeservers/cert/certstatus
/SP/clients/activedirectory/ alternativeservers/ipaddress	/SP/clients/activedirectory/ alternativeservers/address
/SP/clients/radius/ipaddress	/SP/clients/radius/address
/SP/clients/ldap/ipaddress	/SP/clients/ldap/address
/SP/cli/commands	Use help command with a target name
/SP/diag/state	/HOST/diag/state
/SP/diag/generate_host_nmi	/HOST/generate_host_nmi
/SP/diag/mode	/HOST/diag/mode
/SP/diag/level	/HOST/diag/level
/SP/diag/verbosity	/HOST/diag/verbosity

Logging In to ILOM, Displaying Banner Messages, and Setting the CLI Session Time-out

Description	Links
CLI procedures for logging in or out of ILOM, as well as procedures for recovering a password	<ul style="list-style-type: none">• “Logging In and Out of ILOM and Recovering a Password” on page 20
CLI procedures for setting up banner messages and the CLI session time-out	<ul style="list-style-type: none">• “Setting Up Banner Messages and CLI Session Time-Out” on page 24

Related Information

- *Oracle ILOM 3.0 Quick Start*, logging in to Oracle ILOM
- *Oracle ILOM 3.0 Quick Start*, mandatory setup tasks (CLI)
- *Oracle ILOM 3.0 Daily Management Web Procedures*, logging in to Oracle ILOM
- *Oracle ILOM 3.0 Daily Management Web Procedures*, displaying banner messages
- *Oracle ILOM 3.0 Daily Management Concepts*, banner messages

Logging In and Out of ILOM and Recovering a Password

Description	Links	Platform Feature Support
Initial requirements for logging in to Oracle ILOM	<ul style="list-style-type: none">• “Before Your Initial Login” on page 20	<ul style="list-style-type: none">• x86 system server SP• SPARC system server SP• CMM
CLI procedures for logging in to Oracle ILOM	<ul style="list-style-type: none">• “Log In Using the Root Account (CLI)” on page 21• “Log In to Oracle ILOM With User Account (CLI)” on page 22	
CLI procedure for logging out of Oracle ILOM	<ul style="list-style-type: none">• “Log Out of Oracle ILOM CLI” on page 22	
CLI procedure for recovering a password	<ul style="list-style-type: none">• “Recover a Lost Password (CLI)” on page 23	

Before Your Initial Login

Prior to performing the procedures in this section, ensure that the following requirements are met:

- Ensure that a physical serial or network management connection to the system (server or CMM) is established. For instructions about how to establish a physical connection to the SER MGT port or NET MGT port on your system, refer to the installation guide provided with your server or CMM.

The login procedures in this section assume you are logging in to the Oracle ILOM CLI through a physical network connection.

Note – Alternatively, for Oracle’s Sun servers supporting a Local Interconnect Interface connection, you can connect directly to Oracle ILOM from the host operating system. For more details about connecting to Oracle ILOM using a Local Interconnect Interface connection, see [“Configuring the Local Interconnect Interface \(CLI\)” on page 49](#).

- Obtain the server SP or CMM network address.

Oracle ILOM, by default, will automatically assign an IPv4 or IPv6 address for the server SP or CMM. To determine the default IP address assigned to the server SP or CMM, establish a local serial management connection to the server SP or CMM and view the `/network` (or `/network/ipv6`) properties.

For more information about how to establish a local serial management connection to Oracle ILOM, refer to the *Oracle ILOM 3.0 Quick Start Guide* or refer to the documentation provided with your Sun server or Sun blade chassis system.

For information about modifying the default IP address assigned to your server SP or CMM, refer to [“Configuring Network Settings \(CLI\)” on page 28](#).

Note – As of Oracle ILOM 3.0.12, network configuration settings for dual-stack IPv4 and IPv6 are provided. Prior to Oracle ILOM 3.0.12, network configuration settings for IPv4 are provided.

- Obtain an Oracle ILOM user account.

If you are setting up Oracle ILOM for this first-time, use the default `root` account and `changeme` password to log in. It is highly recommended after your system is set up that a new user account is created for each Oracle ILOM user. For more information about user accounts, see [“Managing User Accounts \(CLI\)” on page 55](#).

▼ Log In Using the Root Account (CLI)

1. Using a Secure Shell (SSH) session, log in to the Oracle ILOM CLI by specifying the default `root` user account, and IP address of the server SP or CMM.

For example:

```
$ ssh root@system_ipaddress
```

If Oracle ILOM is operating in a dual-stack network environment, the `system_ipaddress` can be entered using either an IPv4 or IPv6 address format. For example,

- IPv4 address format: `10.8.183.106`
- or
- IPv6 address format: `fec0:a:8:b7:214:4fff:5eca:5f7e/64`

For more information about entering IP addresses in a dual-stack environment, see [“Server SP or CMM Network Addresses Accepted by Oracle ILOM CLI” on page 3](#). For help with diagnosing IPv4 and IPv6 connection issues, see [“Diagnosing IPv4 or IPv6 Oracle ILOM Connection Issues” on page 207](#).

The system prompts you for a password.

2. Type `changeme` as the default password.

For example:

Password: **changeme**

The Oracle ILOM CLI prompt appears (->).

Note – As of Oracle ILOM 3.0.4, you can set the amount of time a CLI session can remain idle before the session times out and closes. For instructions, see [“Set CLI Session Time-Out Property Value”](#) on page 25.

▼ Log In to Oracle ILOM With User Account (CLI)

Follow these steps to log in to Oracle ILOM using a user account that was created for you by the Oracle ILOM system administrator.

1. Using a Secure Shell (SSH) session, log in to Oracle ILOM by specifying your user name and the IP address of the server SP or CMM.

For example:

```
$ ssh username@system_ipaddress
```

If Oracle ILOM is operating in a dual-stack network environment, the *system_ipaddress* can be entered using either an IPv4 or IPv6 address format. For example,

- IPv4 address format: 10.8.183.106
- IPv6 address format: fec0:a:8:b7:214:4fff:5eca:5f7e/64

For more information about entering IP addresses in a dual-stack environment, see [“Server SP or CMM Network Addresses Accepted by Oracle ILOM CLI”](#) on page 3. For help with diagnosing IPv4 and IPv6 connection issues, see [“Diagnosing IPv4 or IPv6 Oracle ILOM Connection Issues”](#) on page 207.

The system prompts you for your Oracle ILOM password.

2. Type your Oracle ILOM password.

For example:

Password: *password*

The Oracle ILOM CLI prompt appears (->).

▼ Log Out of Oracle ILOM CLI

To log out of Oracle ILOM, follow this step.

- At the command prompt, type:

-> **exit**

▼ Recover a Lost Password (CLI)

Before You Begin

- You must be physically present at the server to perform this procedure.
 - This procedure uses the `default` user account to enable you to recover a lost password or to re-create the `root` user account.
 - You cannot change or delete the `default` user account.
1. **Establish a local serial management connection to ILOM and log in to ILOM using the `default` user account.**

For example:

```
SUNSP-0000000000 login:default  
Press and release the physical presence button.  
Press return when this is completed...
```

2. **Prove physical presence at your server.**

Refer to your platform documentation for instructions on how to prove physical presence. If the platform documentation does not mention physical presence, contact your Oracle service representative.

3. **Return to your serial console and press Enter.**

You will be prompted for a password.

4. **Type the password for the `default` user account: `defaultpassword`**

5. **Reset the account password or re-create the `root` account.**

For instructions, refer to “Change a User Account Password (CLI)” on page 57 or “Add a User Account (CLI)” on page 57.

Related Information

- *Oracle ILOM 3.0 Quick Start*, connect to Oracle ILOM
- *Oracle ILOM 3.0 Quick Start*, add new user account
- *Oracle ILOM 3.0 Concepts*, default and root user account

Setting Up Banner Messages and CLI Session Time-Out

Description	Links	Feature Support Platform
Configure banner messages to appear on the Oracle ILOM Login page.	<ul style="list-style-type: none">• “Display Banner Messages on Login Page (CLI)” on page 24	<ul style="list-style-type: none">• x86 system server SP• SPARC system server SP• CMM
Configure the CLI session time-out property.	<ul style="list-style-type: none">• “Set CLI Session Time-Out Property Value” on page 25	

▼ Display Banner Messages on Login Page (CLI)

Before You Begin

- The Admin (a) role is required to configure banner messages in Oracle ILOM.
- You must be using Oracle ILOM 3.0.8 or later.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.

2. To navigate to the banner target, use the `cd` command.

- For a server SP, type:
-> **cd /SP/preferences/banner**
- For a CMM, type:
-> **cd /CMM/preferences/banner**

3. To display the current banner properties and supported commands, use the `show` command.

For example:

```
-> show

/SP/preferences/banner
  Targets:

  Properties:
    connect_message = (none)
```



```
login_message = (none)
login_message_acceptance = disabled
```

Commands:

```
cd
set
show
```

4. To create a banner message, perform any of the following tasks:

Task	Instructions
To create a banner message to appear on the Login page	Type: -> set /SP/preferences/banner connect_message=message Where <i>message</i> is the content you want to appear on the Login page.
To create a banner message to appear in a dialog box after a user logs in to Oracle ILOM	Type: -> set /SP/preferences/banner login_message=message Where <i>message</i> is the content you want to appear after logging in to Oracle ILOM.

Note - Banner messages are limited to 1000 characters. To create a new line within the message, use one of the following CLI characters: */r* or */n*.

5. To enable the system to display the banner messages, type:

```
-> set /SP/preferences/banner/ login_message_acceptance=enabled
```

6. To disable the system from displaying the banner messages type:

```
-> set /SP/preferences/banner/ login_message_acceptance=disabled
```

▼ Set CLI Session Time-Out Property Value

Before You Begin

- The Admin (a) role is required to change the CLI timeout property value.
- You must be using Oracle ILOM 3.0.4 or later to change the CLI timeout property value.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.

2. To navigate to the cli target, use the `cd` command.

- For a server SP, type:

```
-> cd /SP/cli
```

- For a CMM, type:

```
-> cd /CMM/cli
```

3. To view the current settings, type:

```
-> show
```

4. To set the CLI `timeout` property value, type the following command:

```
-> set timeout=n
```

Where *n* is a number between 0 and 1440.

Note – 0 (zero) indicates that the CLI session time-out is disabled, so that the CLI session will not close regardless of the amount of time the session is idle.

For example, to set the time-out value to 60 minutes, type:

```
-> set timeout=60
Set 'timeout' to '60'
```

Configuring Network, Secure Shell, and Local Interconnect Settings

Description	Links
Configure network properties for IP, host name, DNS, serial port output, as well as HTTP web access.	<ul style="list-style-type: none">• “Configuring Network Settings (CLI)” on page 28
Configure Secure Shell settings.	<ul style="list-style-type: none">• “Configuring Secure Shell Settings (CLI)” on page 45
Configure the Local Interconnect Interface.	<ul style="list-style-type: none">• “Configuring the Local Interconnect Interface (CLI)” on page 49

Related Information

- *Oracle ILOM 3.0 Quick Start*, establish a network management connection
- *Oracle ILOM 3.0 Quick Start*, modify default network settings
- *Oracle ILOM 3.0 Daily Management Concepts*, network communication settings
- *Oracle ILOM 3.0 Daily Management Concepts*, switch serial port console output
- *Oracle ILOM 3.0 Daily Management Web Procedures*, configure network settings
- *Oracle ILOM 3.0 Daily Management Web Procedures*, configure secure shell settings
- *Oracle ILOM 3.0 Daily Management Web Procedures*, configure serial port sharing
- *Oracle ILOM 3.0 Protocol Management Reference*, configure network settings
- *Oracle ILOM 3.0 Daily Management Web Procedures*, configure the local interconnect interface

Configuring Network Settings (CLI)

Description	Links	Platform Feature Support
Review the prerequisites.	<ul style="list-style-type: none">• “Before You Begin — Network Settings (CLI)” on page 28	<ul style="list-style-type: none">• x86 system server SP• SPARC system server SP
View and configure IPv4 network settings.	<ul style="list-style-type: none">• “View and Configure IPv4 Network Settings (CLI)” on page 30	<ul style="list-style-type: none">• CMM
Edit existing IPv4 addresses.	<ul style="list-style-type: none">• “Edit Existing IPv4 Addresses (CLI)” on page 31	
View and configure dual-stack IPv4 and IPv6 network settings.	<ul style="list-style-type: none">• “View and Configure Dual-Stack IPv4 and IPv6 Network Settings (CLI)” on page 32	
Test IPv4 or IPv6 network configuration.	<ul style="list-style-type: none">• “Test IPv4 or IPv6 Network Configuration (CLI)” on page 38	
Assign a host name and system identifier.	<ul style="list-style-type: none">• “Assign Host Name and System Identifier (CLI)” on page 39	
View and configure DNS settings.	<ul style="list-style-type: none">• “View and Configure DNS Settings (CLI)” on page 40	
View and configure serial port settings.	<ul style="list-style-type: none">• “View and Configure Serial Port Settings (CLI)” on page 41	
Enable HTTP or HTTPS web access.	<ul style="list-style-type: none">• “Enable HTTP or HTTPS Web Access (CLI)” on page 42	
Switch serial port output between the SP console and the host console.	<ul style="list-style-type: none">• “Switch Serial Port Output (CLI)” on page 44	<ul style="list-style-type: none">• x86 system server SP

Before You Begin — Network Settings (CLI)

Review the following information before you view or configure Oracle ILOM network settings.

Network Environment	Before You Begin
IPv4-only	<ul style="list-style-type: none"> To easily locate Oracle ILOM on the network, you should ensure the same IP address is always assigned to Oracle ILOM. Oracle ILOM by default will attempt to obtain IPv4 network settings using DHCP.
Dual-stack IPv4 and IPv6	<ul style="list-style-type: none"> Oracle ILOM is shipped with IPv4 DHCP and IPv6 Stateless default network settings. Verify that your server or CMM has Oracle ILOM firmware 3.0.12 or later installed. The IPv4 network state must always be enabled in order for Oracle ILOM to operate in an IPv4 network environment or in a dual-stack IPv4 and IPv6 network environment. For IPv6 Stateless auto-configurations, Oracle ILOM (3.0.12 or later) requires a network router to be configured for IPv6. For DHCPv6 auto-configuration options, Oracle ILOM (3.0.14 or later) requires a network DHCPv6 server to provide the IPv6 address(es) and DNS information for the device. <p>Note - DHCP and DHCPv6 are separate protocols. In a dual-stack network environment, DHCP and DHCPv6 operate as follows: (1) the DHCPv6 server can provide IPv6 addresses to a network node and the network node always uses the IPv6 protocol to communicate with a DHCPv6 server; and (2) the DHCP server can provide IPv4 addresses to a network node and the network node will always use the IPv4 protocol to communicate with a DHCP server</p> <ul style="list-style-type: none"> For DHCP and DHCPv6 auto-configurations, you should choose to receive the DNS information from either an IPv6 DHCP server or from an IPv4 DHCP server, but not from both. You can manually configure the settings for the DNS name server in the Oracle ILOM CLI under the <code>/SP/clients/dns</code> target. For instructions, see “View and Configure DNS Settings (CLI)” on page 40. <p>Note - For a list of legacy platform servers not supporting IPv6 configurations in Oracle ILOM, refer to Legacy Sun Systems Not Supporting IPv6 in the <i>ILOM 3.0 Daily Management Concepts Guide</i>.</p>
Network settings described in this section	<ul style="list-style-type: none"> You need to have the Admin (a) role enabled to modify any server SP or CMM network properties or options.

▼ View and Configure IPv4 Network Settings (CLI)

Note – This procedure provides instructions for configuring Oracle ILOM to operate in an IPv4-only network environment. If you are configuring Oracle ILOM to operate in an dual-stack IPv4 and IPv6 network environment, see [“View and Configure Dual-Stack IPv4 and IPv6 Network Settings \(CLI\)”](#) on page 32.

1. Log in to the Oracle ILOM SP CLI or the CMM CLI.
2. To navigate to the network target, use the `cd` command.
 - For a server SP, type:
-> `cd /SP/network`
 - For a CMM, type:
-> `cd /CMM/network`
3. To view the network settings, type:
-> `show`
4. To modify the network settings, type:
-> `set property=value`

You can modify multiple properties within a combined command. See [“Execute Combined Commands”](#) on page 12.

Note – Change a complete set of properties and commit to `true` only when the pending values are all typed into the command.

Note – Settings take effect as soon you set `commitpending=true`. Configuring network settings might disconnect your active session if you are connected to Oracle ILOM over a network. Configure all your systems before you commit the changes. After you commit the changes you will have to reconnect to Oracle ILOM.

For example, to change multiple network settings from DHCP to static assigned settings, type:

```
-> set pendingipdiscovery=static pendingipaddress=nnn.nn.nn.nn
pendingipgateway=nnn.nn.nn.nn pendingipnetmask=
nnn.nn.nn.nn commitpending=true
```

The following target, properties, and values are valid for Oracle ILOM network settings.

Target	Property	Value	Default
/SP/network	ipaddress	Read-only; values are updated by the system	
	ipdiscovery		
	ipgateway		
	ipnetmask		
	macaddress	MAC address of Oracle ILOM	
	commitpending	[true none]	none
	pendingipaddress	[ipaddress none]	none
	pendingipdiscover	[dhcp static]	dhcp
	Y	[ipaddress none]	none
	pendingipgateway	ipdotteddecimal	255.255.255.0
	pendingipnetmask		
	dhcp_server_ip	Read-only; value is updated when the SP receives a DHCP address	
	state	[enabled disabled]	none

▼ Edit Existing IPv4 Addresses (CLI)

1. Log in to the Oracle ILOM SP CLI or the CMM CLI.
2. To navigate to the network target, use the `cd` command.
 - For a rackmounted standalone server SP, type:

```
-> cd /SP/network
```
 - For a chassis blade server module SP from a CMM, type:

```
-> cd /CH/BLn/SP/network
```
 - For a chassis CMM, type:

```
-> cd /CMM/network
```
3. To view the IP address assigned and other network settings, type:

```
-> show
```
4. To modify the existing network settings, type:

```
-> set property=value
```

where possible properties and values are described in the table below.

Command	Description and Example
<code>set pendingipaddress= ipaddress</code>	Type this command followed by the static IP address that you want to assign to the server SP or CMM. For example: -> set pendingipaddress=129.144.82.26
<code>set pendingipnetmask= ipnetmask</code>	Type this command followed by the static Netmask address that you want to assign to the server SP or CMM. For example: -> set pendingipnetmask=255.255.255.0
<code>set pendingipgateway= ipgateway</code>	Type this command followed by the static Gateway address that you want to assign to the server SP or CMM. For example: -> set pendingipgateway=129.144.82.254
<code>set pendingipdiscovery= static</code>	Type this command to set a static IP address on the server SP or CMM.
<code>set commitpending=true</code>	Type this command to assign the network settings specified.

Note – If you connected to Oracle ILOM through a remote SSH connection, the connection made to Oracle ILOM using the former IP address will time-out. Use the newly assigned settings to connect to Oracle ILOM.

▼ View and Configure Dual-Stack IPv4 and IPv6 Network Settings (CLI)

Note – This procedure provides instructions for configuring Oracle ILOM to operate in a dual-stack IPv4 and IPv6 network environment. If you are configuring Oracle ILOM to operate in an IPv4-only network environment, as supported in Oracle ILOM 3.0.10 and earlier versions, see [“View and Configure IPv4 Network Settings \(CLI\)”](#) on page 30.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.

Establish a local serial console connection or SSH connection to the server SP or CMM.

2. Perform the network configuration instructions that apply to your network environment:
 - To configure IPv4 network settings, perform [Step 3](#) to [Step 5](#) in this procedure.
 - To configure IPv6 network settings, perform [Step 6](#) to [Step 9](#) in this procedure.
3. For IPv4 network configurations, use the `cd` command to navigate to the `/x/network` working directory for the device.
 - For a rackmounted standalone server SP, type:
 - > `cd /SP/network`
 - For a chassis blade server module SP, type:
 - > `cd /CH/BLn/SP/network`
 - For a chassis blade server with multiple SP nodes, type:
 - > `cd /CH/BLn/Noden/network`
 - For a chassis CMM, type:
 - > `cd /CMM/network`
4. To view the IPv4 network settings configured on the device, type:
 - > `show`
5. To configure the IPv4 network settings, use the `set` command.
 - To configure DHCP IPv4 network settings, set the values described in the following table:

Property	Set Property Value	Description
state	set state=enabled	The network state is enabled by default for IPv4. Note - To enable the DHCP network option for IPv4 the state must be set to enabled.
pendingipdiscovery	set pendingipdiscovery=dhcp	The property value for ipdiscovery is set to dhcp by default for IPv4. Note - If the dhcp default property value was changed to static, you will need to set the property value to dhcp.
commitpending	set commitpending=true	Type set commitpending=true to commit the changes made to the state and ipdiscovery property values.

- To configure static IPv4 network settings, set the values described in the following table:

Property	Set Property Value	Description
state	set state=enabled	The network state is enabled by default for IPv4. Note - To enable the static IPv4 network option the state must be set to enabled.
pendingipdiscovery	set pendingipdiscovery=static	To enable a static IPv4 network configuration, you need to set the pendingipdiscovery property value to static. Note - The pendingipdiscovery property is set to dhcp by default for IPv4.
pendingipaddress pendingipnetmask pendingipgateway	set pendingipaddress= <ip_address> pendingipnetmask= <netmask> pendingipgateway= <gateway>	To assign multiple static network settings, type the set command followed by the pending command for the each property value (IP address, netmask, and gateway), then type the static value that you want to assign.
commitpending=	set commitpending=true	Type set commitpending=true to commit the changes made to the IPv4 network properties.

6. For IPv6 network configurations, use the cd command to navigate to the /x/network/ipv6 working directory for the device.

- For a rackmounted standalone server SP, type:
-> **cd /SP/network/ipv6**
- For a chassis blade server module SP, type:
-> **cd /CH/BLn/SP/network/ipv6**
- For a chassis blade server with multiple SP nodes, type:
-> **cd /CH/BLn/NodeN/network/ipv6**
- For a chassis CMM, type:
-> **cd /CMM/network/ipv6**

7. To view the IPv6 network settings configured on the device, type:

-> **show**

For example:

```
-> show
   /SP/network/ipv6
   Targets:
```

```
Properties:
  state = enabled
  autoconfig = stateless
  dhcpv6_server_duid = (none)
  link_local_ipaddress = fe80::214:4fff:feca:5f7e/64
  static_ipaddress = ::/128
  ipgateway = fe80::211:5dff:febe:5000/128
  pending_static_ipaddress = ::/128
  dynamic_ipaddress_1 = fec0:a:8:b7:214:4fff:feca:5f7e/64

Commands:
  cd
  show
```

Note – When the `autoconfig` property is set to `dhcpv6_stateful` or `dhcpv6_stateless`, the read-only property for `dhcpv6_server_duid` will identify the DHCP unique ID of the DHCPv6 server that was last used by Oracle ILOM to retrieve the DHCP information.

Note – The default IPv6 `autoconfig` property value provided in Oracle ILOM 3.0.14 (and later) is `autoconfig=stateless`. However, if you have Oracle ILOM 3.0.12 installed on your CMM or server, the default property value for `autoconfig` appears as `autoconfig=stateless_only`.

8. To configure an IPv6 network settings, use the `set` command.

- **To configure the IPv6 auto-configuration option**, set the values described in the following table:

Property	Set Property Value	Description
state	set state=enabled	The IPv6 network state is enabled by default. To enable an IPv6 auto-configuration option this state must be set to enabled.
autoconfig	set autoconfig=<value>	Specify this command followed by the autoconf value you want to set. Options include: <ul style="list-style-type: none"> stateless (default setting provided in Oracle ILOM 3.0.14 or later) or stateless_only (default setting provided in Oracle ILOM 3.0.12) Automatically assigns IP address learned from the IPv6 network router. dhcpv6_stateless Automatically assigns DNS information learned from the DHCP server The dhcpv6_stateless property value is available in Oracle ILOM as of 3.0.14. dhcpv6_stateful Automatically assigns the IPv6 address learned from the DHCPv6 server. The dhcpv6_stateful property value is available in Oracle ILOM as of 3.0.14. disable Disables all auto-configuration property values and sets the read-only property value for link local address.

Note – The IPv6 configuration options take affect after they are set. You do not need to commit these changes under the `/network` target.

Note – Newly learned auto-configuration IPv6 addresses will not affect any active Oracle ILOM sessions to the device. You can verify the newly learned auto-configured IPv4 addresses under the `/network/ipv6` target.

Note – As of Oracle ILOM 3.0.14 or later, you can enable the `stateless` auto-configuration option to run at the same time as when the option for `dhcpv6_stateless` is enabled or as when the option for `dhcpv6_stateful` is enabled. However, the auto-configuration options for `dhcpv6_stateless` and `dhcpv6_stateful` should not be enabled to run at the same time.

- To set a static IPv6 address, do the following:
 - a. To set a pending static IPv6 address, specify the property values in the following table:

Property	Set Property Value	Description
<code>state</code>	<code>set state=enabled</code>	The IPv6 network state is enabled by default. This state must be enabled to configure a static IP address.
<code>pendingipaddress</code>	<code>set pending_static_ipaddress=<ip6_address>/<subnet mask length in bits></code>	Type this command followed by the property value for the static IPv6 address and net mask that you want to assign to the device. IPv6 address example: <code>fec0:a:8:b7:214:4fff:feca:5f7e/64</code>

- b. To commit (save) the pending IPv6 static network parameters, perform the steps in the following table:

Step	Description
1	Use the <code>cd</code> command to change the directory to the device <code>network</code> target. <ul style="list-style-type: none"> • For a rackmounted server, type: -> <code>cd /SP/network</code> • For a chassis blade server module SP, type: -> <code>cd /CH/BLn/SP/network</code> • For a chassis blade server SP with multiple nodes, type: -> <code>cd /CH/BLn/NodeN/network</code> • For a chassis CMM, type: -> <code>cd /CMM/network</code>
2	Type the following command to commit the changed property values for IPv6: <code>set commitpending=true</code>

Note – Assigning a new static IP address to the device (SP or CMM) will end all active Oracle ILOM sessions to the device. To log back in to Oracle ILOM, you will need to create a new browser session using the newly assigned IP address.

9. To test the IPv4 or IPv6 network configuration from Oracle ILOM, use the network test tools (Ping and Ping6). For details, see [“Test IPv4 or IPv6 Network Configuration \(CLI\)”](#) on page 38.

▼ Test IPv4 or IPv6 Network Configuration (CLI)

1. Log in to the Oracle ILOM SP CLI or the CMM CLI.

Establish a local serial console connection or SSH connection to the server SP or CMM.

2. To navigate to the `/x/network/test` working directory for the device use the `cd` command.

- For a rackmounted standalone server SP, type:

```
-> cd /SP/network/test
```

- For a chassis blade server module SP, type:

```
-> cd /CH/BLn/SP/network/test
```

- For a chassis blade server with multiple SP nodes, type:

```
-> cd /CH/BLn/NodeN/network/test
```

- For a chassis CMM, type:

```
-> cd /CMM/network/test
```

3. To view the network test target and properties, type:

```
-> show
```

For example:

```
-> show
/CMM/network/test
Targets:

Properties:
  ping = (Cannot show property)
  ping6 = (Cannot show property)

Commands:
```

```
cd
set
show
```

4. Test the connection between the device and a specified network destination by using the `set ping` or `set ping6` command, described in the following table:

Property	Set Property Value	Description
ping	<code>set ping=<IPv4_address></code>	Type the <code>set ping</code> command at the command prompt followed by the IPv4 test destination address. For example: -> <code>set ping=10.8.183.106</code> If the test failed, an error message appears. On some Oracle servers if the test succeeded, a succeed message appears.
ping6	<code>set ping6=<IPv6_address></code>	Type the <code>set ping6</code> command followed by the IPv6 test destination address. For example: -> <code>set ping6=fe80::211:5dff:febe:5000</code> If the test failed, an error message appears. On some Oracle servers if the test succeeded, a succeed message appears.

▼ Assign Host Name and System Identifier (CLI)

1. Log in to the Oracle ILOM SP CLI or the CMM CLI.
2. To navigate to the SP or CMM working directory, use the `cd` command.
 - For a server SP, type:
-> `cd /SP`
 - For a CMM, type:
-> `cd /CMM`
3. To set the SP host name and system identifier text, type:
-> `set hostname=text_string system_identifier=text_string`
where:
 - The host name can consist of alphanumeric characters and can include hyphens. Host names can contain up to 60 characters.

- The system identifier can consist of a text string using any standard keyboard keys except quotation marks.

For example:

```
-> set /SP hostname=Lab2-System1 system_identifier=
DocSystemforTesting
```

With these settings, the show command produces the following output:

```
-> show /SP
/SP
Targets:
  alertmgmt
  .
  .
  .
  users
Properties:
  check_physical_presence = false
  hostname = Lab2-System1
  system_contact = (none)
  system_description = SUN BLADE X3-2 SERVER MODULE, Oracle ILOM
v 3.0.0.0, r31470
system_identifier = DocSystemforTesting
  system_location = (none)
Commands:
  cd
  reset
  set
  show
  version
```

▼ View and Configure DNS Settings (CLI)

1. Log in to the Oracle ILOM SP CLI or the CMM CLI.

2. To view the dns target, use the show command.

- For a server SP, type:

```
-> show /SP/clients/dns
```

- For a CMM, type:

```
-> show /CMM/clients/dns
```

3. To change DNS property values, type:

```
-> set property=value
```

where possible properties and values are described in the following table:

Property	Value	Default
auto_dns	enabled disabled	disabled
nameserver	<i>ip_address</i>	
retries	Integer between 0 and 4	
searchpath	Up to six comma-separated search suffixes	
timeout	Integer between 1 and 10	

▼ View and Configure Serial Port Settings (CLI)

1. Log in to the Oracle ILOM SP CLI or the CMM CLI.
2. To navigate to the serial port target, use the `cd` command.
 - For a server SP, type:

```
-> cd /SP/serial
```
 - For a CMM, type:

```
-> cd /CMM/serial
```
3. To display serial port setting, use the `show` command.
 - To display settings for the external serial port, type:

```
-> show external
```
 - To display settings for the host serial port, type:

```
-> show host
```
4. To change the serial port property values, type:

```
-> set target property=value commitpending=true
```

where possible targets, properties, and values are described in the following table:

Target	Property	Value	Default
/SP CMM/serial/external	commitpending	true (none)	(none)
	flowcontrol	software	software
	pendingspeed	<integer>	9600
	speed	Read-only value; configured using the pendingspeed property	
/SP CMM/serial/host	commitpending	true (none)	(none)
	pendingspeed	<integer>	(none)
	speed	Read-only value; configured using the pendingspeed property	

For example, to change the baud rate for the host serial port from 9600 to 57600, use the `set` command.

- For x86-based servers, type:

```
-> set /SP/serial/host pendingspeed=57600 commitpending=true
```

- For SPARC-based servers, type:

```
-> set /SP/serial/external pendingspeed=57600 commitpending=true
```

Note – On x86-based systems, the speed of the host serial port must match the speed setting for serial port 0, COM1, or /dev/ttyS0 on the host operating system for Oracle ILOM to communicate properly with the host.

▼ Enable HTTP or HTTPS Web Access (CLI)

1. Log in to the Oracle ILOM SP CLI or the CMM CLI.

2. To navigate to the `services` target, use the `cd` command.

- For a server SP, type:

```
-> cd /SP/services
```

- For a CMM, type:

```
-> cd /CMM/services
```

3. To configure the web access property values, type:

-> **set** [http|https] [*property=value*]

where possible properties and values are described in the following table:

Target	Property	Value	Default
/SP CMM/services/ http	secureremote	enabled disabled	enabled
	servicestate	enabled disabled	disabled
	port	<portnum>	80
/SP CMM/services/ https	servicestate	enabled disabled	enabled
	port	<portnum>	443

Common web access settings are shown in the following table:

Desired State	Target	Property	Value
Enable HTTP only	/SP/services/http	secureremote	disabled
	/SP/services/http	servicestate	enabled
	/SP/services/https	servicestate	disabled
Enable HTTP and HTTPS	/SP/services/http	secureremote	disabled
	/SP/services/http	servicestate	enabled
	/SP/services/https	servicestate	enabled
Enable HTTPS only	/SP/services/http	secureremote	disabled
	/SP/services/http	servicestate	disabled
	/SP/services/https	servicestate	enabled
Automatically redirect HTTP to HTTPS	/SP/services/http	secureremote	enabled
	/SP/services/http	servicestate	disabled
	/SP/services/https	servicestate	enabled

▼ Switch Serial Port Output (CLI)

Note – To determine whether serial port sharing is supported for your server, refer to the platform Oracle ILOM supplement guide or platform administration guide provided for your server.



Caution – You should set up the network on the SP before attempting to switch the serial port owner to the host server. If a network is not set up, and you switch the serial port owner to the host server, you will be unable to connect using the CLI or web interface to change the serial port owner back to the SP. To return the serial port owner setting to the SP, you will need to restore access to the serial port on the server. For more details about restoring access to the server port on your server, refer to the platform documentation supplied with your server.

1. Log in to the Oracle ILOM SP CLI.
2. To set the serial port owner, type:
-> **set /SP/serial/portsharing /owner=host**

Note – The serial port sharing value by default is `owner=SP`.

3. Connect a serial host to the serial port on the server using a dongle or multi-port cable.

For details on how to use attach devices to the server, refer to the platform installation documentation supplied with your server.

Configuring Secure Shell Settings (CLI)

Description	Links	Platform Feature Support
Procedures for configuring Secure Shell settings	<ul style="list-style-type: none">• “Establish a Remote SSH Connection (CLI)” on page 45• “Enable or Disable SSH (CLI)” on page 45• “View the SSH Authentication Keys (CLI)” on page 46• “Generate a New SSH Authentication Key (CLI)” on page 48• “Restart the SSH Server (CLI)” on page 48	<ul style="list-style-type: none">• x86 system server SP• SPARC system server SP• CMM

▼ Establish a Remote SSH Connection (CLI)

Before You Begin

- To configure Secure Shell (SSH) settings, you need the Admin (a) role enabled.

Perform the following step to establish a remote SSH connection to Oracle ILOM:

- To establish an SSH connection to Oracle ILOM, type the following:

```
$ ssh -l username server_ipaddress
```

```
Password: *****
```

The default CLI prompt appears and the system is ready for you to run the CLI commands to establish network settings.

Related Information

- *Oracle ILOM 3.0 Quick Start*, connect to Oracle ILOM
- *Oracle ILOM 3.0 Quick Start*, log in to Oracle ILOM

▼ Enable or Disable SSH (CLI)

Before You Begin

- To configure Secure Shell (SSH) settings, you need the Admin (a) role enabled.

Note – SSH is enabled by default in Oracle ILOM.

Follow these steps to enable or disable SSH:

1. **Log in to the Oracle ILOM SP CLI or the CMM CLI.**
2. **To navigate to the SSH target, use the `cd` command.**
 - For a server SP, type:
-> `cd /SP/services/ssh`
 - For a CMM, type:
-> `cd /CMM/services/ssh`
3. **If you do not want to provide access over the network, or if you do not want to use SSH, type:**
-> `set state=[enabled|disabled]`

▼ View the SSH Authentication Keys (CLI)

Before You Begin

- To configure Secure Shell (SSH) settings, you need the Admin (a) role enabled.

Note – All of the properties below `/SP/services/ssh/keys/rsa|dsa` are read only.

Follow one of these steps to view the current SSH keys:

1. **Log in to the Oracle ILOM SP CLI or CMM CLI.**
2. **To navigate to the SSH keys target, use the `cd` command.**
 - For a server SP, type:
-> `cd /SP/services/ssh/keys`
 - For a CMM, type:
-> `cd /CMM/services/ssh/keys`

3. To view the RSA key, type:

-> **show rsa**

For example:

```
-> show rsa
/SP/services/ssh/keys/rsa
  Targets:
    Properties:
      fingerprint =
ca:c0:05:ff:b7:75:15:a0:30:df:1b:a1:76:bd:fe:e5
      length = 1024
      publickey =
AAAAB3NzaC1yc2EAAAABIwAAAIEAthvlggXbPIxN40EvkukKupdFPr8GDaOsKGg
BESVlnny4nX8yd8JC/hrw3qDHmXIZ8JAFwoLQgjtZCbEsgpn9nNIMb6nSfu6Y1t
TtUZXSqGFBZ48R0mU0SqgFR3i3bgDUR0siphlpGv6Yu0Zd1h3549wQ+RWk3vxqHQ
Ffzhv9c=
    Commands:
      cd
      show
```

4. To view the DSA key, type:

-> **show dsa**

For example:

```
-> show dsa
/SP/services/ssh/keys/dsa
  Targets:

  Properties:
    fingerprint =
6a:90:c7:37:89:e6:73:23:45:ff:d6:8e:e7:57:2a:60
    length = 1024
    publickey =
AAAAB3NzaC1kc3MAAACBAInrYecNH86imBbUqE+3FoUfm/fei2ZZtQzqrMx5zBm
bHFIAFdRQKeoQ7gqjc9jQb07ajLxwk2vZzkG3ntnmqHz/hwHvdho2KaolBtAFGc
fLIIdzGVxi4I3phVb6anmTlbqI2AILAa7JvQ8dEGbyATYR9A/pf5VTac/TQ700/J
AAAAFQCIUavkex7wtEhC0CH3s25ON0I3CwAAAIBNFHUop6ZN7i46ZuQOKhd7Mkj
gdHy+8MTBkupVfXqfRE9Zw9yrBZCNsoD8XEeIeyP+pu05k5dJvzkzqSqrTVoAXyY
qewyZMFE7stutugw/XEmyj+XqBWaiOAQskdiMvNHa3MSg8PKJyWP8eIMxD3rIu
PTzkV632uBxzwSwfAQAAAIAtA8/3odDJUprnxLgHTowc8ksGBj/wJDgPfpGGJHB
B1FDBMhSsRbwh6Z+s/gAf1f+S67HJBTUPsVSMz+czmamc1oZeOazT4+zeNG6uC1
u/5/JmJSDkguc1FcoxtBFqf0/fKjyR0ecWaU7L4kqvWoSsydHJ0pMHasEecEBER
lg==

  Commands:
    cd
    show
```

▼ Generate a New SSH Authentication Key (CLI)

1. Log in to the Oracle ILOM SP CLI or the CMM CLI.

2. To navigate to the ssh target, use the `cd` command.

- For a server SP, type:

```
-> cd /SP/services/ssh
```

- For a CMM, type:

```
-> cd /CMM/services/ssh
```

3. Set the key type by typing the following:

```
-> set generate_new_key_type=dsa|rsa
```

4. Set the action to `true`.

```
-> set generate_new_key_action=true
```

The fingerprint and key will look different. The new key will take effect immediately for new connections.

▼ Restart the SSH Server (CLI)

1. Log in to the Oracle ILOM SP CLI or the CMM CLI.

2. To navigate to the SSH target, use the `cd` command.

- For a server SP, type:

```
-> cd /SP/services/ssh
```

- For a CMM, type:

```
-> cd /CMM/services/ssh
```

3. To restart the SSH server, type:

```
-> set restart_sshd_action=true
```

Configuring the Local Interconnect Interface (CLI)

Description	Links	Platform Feature Support
Review the prerequisites	<ul style="list-style-type: none">• “Local Interconnect Requirements (CLI)” on page 49	<ul style="list-style-type: none">• x86 system server SP• SPARC system server SP
Configure the Local Interconnect Interface	<ul style="list-style-type: none">• “Configure Local Interconnect Interface Between Server SP and Host OS (CLI)” on page 50	

Local Interconnect Requirements (CLI)

The following requirements must be met prior to performing the procedure for configuring the Local Interconnect Interface:

- Review the concepts describing the use of a Local Interconnect Interface between the Oracle ILOM SP and the host OS. For details, refer to “Local Connection to Oracle ILOM From Host Operating System” in the *Oracle ILOM 3.0 Daily Management Concepts Guide*.
- Review the Oracle ILOM descriptions for the Local Host Interconnect configuration settings. For details, refer to “Local Host Interconnect Configuration Settings in Oracle ILOM” in the *Oracle ILOM 3.0 Daily Management Concepts Guide*.
- Verify that your server is running Oracle ILOM 3.0.12 or a later version of Oracle ILOM.
- Verify that your platform server supports the Local Interconnect Interface. Refer to your platform server administration guide or Oracle ILOM supplement.

Note – The settings for configuring the Local Interconnect Interface are not supported on the CMM. However you can access and configure these settings for a Sun blade server through the Oracle ILOM CMM CLI or web interface connection.

- Automatic configuration of the Local Interconnect Interface requires the Host Managed (`hostmanaged`) setting in Oracle ILOM to be enabled (set to `True`), as well as the installation of the Oracle Hardware Management Pack 2.1.0 or later

software on the server. For more information about installing the Oracle Hardware Management Pack 2.1.0 software, refer to the *Oracle Server Hardware Management Pack User's Guide*.

- Manual configuration of the Local Interconnect Interface between the Oracle ILOM SP and the host operating system requires the Host Managed (`hostmanaged`) setting in Oracle ILOM to be disabled (set to `False`), as well as other configuration settings to be set on the host operating system.

For guidelines for configuring the host OS connection point on the Local Interconnect Interface, see [“Manual Host OS Configuration Guidelines for Local Interconnect Interface”](#) on page 209.

- The host operating system must support the internal USB Ethernet device that is presented from the Oracle ILOM SP. Therefore, prior to configuring the Local Interconnect Interface in Oracle ILOM, you should verify that an internal USB Ethernet device driver was included in the operating system distribution and installed on your server. If an internal USB Ethernet device driver was not installed by the operating system distribution, you can obtain the device driver for your operating system from the Oracle Hardware Management Pack 2.1.0 software. For more details, refer to the *Oracle Server Hardware Management Pack User's Guide*.
- Network parameter changes to the settings in Oracle ILOM for the Local Interconnect Interface are considered pending until you commit the changes in the Oracle ILOM. For example, in the Oracle ILOM CLI, you must issue the `commitpending=true` command to save the `pendingipaddress` and the `pendingipnetmask` under the `network/interconnect` target. In the Oracle ILOM web interface, network parameter changes entered on the Configure USB Ethernet Parameters dialog box are committed after you click Save.
- An Oracle ILOM user account with Administrator (a) role privileges is required in order to change any of the settings in Oracle ILOM for the Local Interconnect Interface.
- To determine the operating systems supported on your server, refer to the platform server installation guide or operating system guide(s).

▼ Configure Local Interconnect Interface Between Server SP and Host OS (CLI)

1. Log in to the Oracle ILOM SP CLI.

Establish a local serial console connection or SSH connection to the server SP or CMM.

2. Navigate to the `/x/network/interconnect` working directory on the server using the `cd` command.

- For a standalone rackmounted server SP, type:
-> **cd /SP/network/interconnect**
- For a chassis blade server module SP, type:
-> **cd /CH/BLn/SP/network/interconnect**

3. View the network interconnect targets and properties using the show command.

Example outputs:

- hostmanaged property under the network/interconnect property is set to true. In this configuration example, the host managed state is enabled for auto-configuration by the Oracle Hardware Management Pack 2.1.0 or later software.

```
-> show

/SP/network/interconnect
  Targets:
  Properties:
    hostmanaged = true
    type = USB Ethernet
    ipaddress = 169.254.182.76
    ipnetmask = 255.255.255.0
    spmacaddress = 02:21:28:57:47:16
    hostmacaddress = 02:21:28:57:47:17
  Commands:
    cd
    set
    show
```

- hostmanaged property under the network/interconnect property is set to false. In this configuration example, the host managed state is disabled allowing you to manually configure the Oracle ILOM SP and host OS connection points on the Local Interconnect Interface.

```
-> show

/SP/network/interconnect
  Targets:
  Properties:
    hostmanaged = false
    state = enabled
    type = USB Ethernet
    ipaddress = 169.254.182.76
    ipnetmask = 255.255.255.0
    spmacaddress = 02:21:28:57:47:16
    hostmacaddress = 02:21:28:57:47:17
```

```
pendingipaddress = 169.254.182.76
pendingipnetmask = 255.255.255.0
commitpending = (Cannot show property)
Commands:
  cd
  set
  show
```

4. To configure the assignment of the non-routable IPv4 addresses to the connection points on the Local Interconnect Interface, you can either:

- Automatically assign non-routable IPv4 addresses to each connection point on the Local Interconnect Interface by setting the `hostmanaged` property to `true`.

-> **set hostmanaged=true**

When you set the `hostmanaged` property to `true`, you must also install the Oracle Hardware Management Pack 2.1.0 (or later) software on your server and accept the installation default for enabling Local ILOM Interconnect. For more information, refer to the section about configuring the Local ILOM Interconnect in the *Oracle Server Hardware Management Pack User's Guide*.

- or -

- Manually assign non-routable IPv4 addresses to each connection point on the Local Interconnect Interface by setting the `hostmanaged` property to `false`.

-> **set hostmanaged=false**

When you set the `hostmanaged` property to `false`, you must also manually set the values for the following `/network/interconnect` properties:

Property	Set Property Value	Description
state	set state=enabled	Type set state=enabled to manually enable the Local Interconnect Interface between the Oracle ILOM SP and host OS. The <code>state</code> property under the <code>interconnect</code> target is disabled by default.
pendingipaddress	set pendingipaddress=169.254.182.76	Oracle ILOM, by default, provides a non-routable IPv4 address for the Oracle ILOM SP connection point on the Local Interconnect Interface. This default IPv4 address (169.254.182.76) should not be changed unless a conflict exists on the host OS with this IPv4 address. To change the default IPv4 address, type set pendingipaddress= followed by the internal IPv4 address that you want to assign to the Oracle ILOM SP connection point on the Local Interconnect Interface.
pendingipnetmask	set pendingipnetmask=255.255.255.0	Oracle ILOM, by default, provides an IPv4 netmask address for the Oracle ILOM SP connection point on the Local Interconnect Interface. This default IPv4 netmask (255.255.255.0) address should not be changed unless a conflict exists in your network environment with this address. To change the default netmask address, type set pendingipnetmask= follow by the internal IPv4 netmask that you want to assign to the Oracle ILOM SP connection point on the Local Interconnect Interface.
commitpending	set commitpending=<value>	Changes under the <code>network/interconnect</code> target for both <code>pendingipaddress</code> and <code>pendingipnetmask</code> are considered pending until they are committed. To commit the changes, type: -> set commitpending=true To cancel the changes, type: -> set commitpending=false

Note – To prevent the Oracle Hardware Management Pack software from auto-configuring the connection points on the Local Interconnect Interface, you must set the `hostmanaged` property value to `False`. To prevent the use of Local Interconnect Interface between the Oracle ILOM SP and the host OS, you must set the `state` property value to `disabled` and the `hostmanaged` property value to `False`.

5. If you chose to manually configure the Local Interconnect Interface in Oracle ILOM without the use of the Oracle Hardware Management Pack 2.1.0 software, you need to perform some additional configuration on the host operating system.

For general details about these additional host OS configuration settings, see [“Manual Host OS Configuration Guidelines for Local Interconnect Interface”](#) on page 209.

6. For additional information about the values required for the manual local host interconnect configuration properties, use the `help` command.

For example, for information about configurable properties, type any of the following:

- `-> help hostmanaged`
- `-> help state`
- `-> help pendingipaddress`
- `-> help pendingipnetmask`
- `-> help commitpending`

For additional information about the read-only properties, type any of the following:

- `-> help type`
- `-> help ipaddress`
- `-> help ipnetmask`
- `-> help spmacaddress`
- `-> help hostmacaddress`

Managing User Accounts (CLI)

Description	Links
CLI procedures for configuring user accounts	<ul style="list-style-type: none">• “Configuring User Accounts (CLI)” on page 56
CLI procedures for configuring SSH user keys	<ul style="list-style-type: none">• “Configuring SSH User Keys (CLI)” on page 62
CLI procedure for configuring Active Directory settings	<ul style="list-style-type: none">• “Configuring Active Directory (CLI)” on page 64
CLI procedures for configuring LDAP settings	<ul style="list-style-type: none">• “Configuring Lightweight Directory Access Protocol (LDAP) (CLI)” on page 76
CLI procedures for configuring LDAP/SSL settings	<ul style="list-style-type: none">• “Configuring LDAP/SSL (CLI)” on page 78
CLI procedures for configuring RADIUS settings	<ul style="list-style-type: none">• “Configuring RADIUS (CLI)” on page 87

Related Information

- [“Recover a Lost Password \(CLI\)”](#) on page 23
- *Oracle ILOM 3.0 Quick Start*, add user account
- *Oracle ILOM 3.0 Daily Management Concepts*, user account management
- *Oracle ILOM 3.0 Daily Management Concepts*, guidelines for managing user accounts
- *Oracle ILOM 3.0 Daily Management Web Procedures*, managing user accounts
- *Oracle ILOM 3.0 Protocol Management*, managing user accounts

Configuring User Accounts (CLI)

Description	Links	Platform Feature Support
Procedures for managing user accounts in Oracle ILOM	<ul style="list-style-type: none">• “Configure Single Sign On (CLI)” on page 56• “Add a User Account (CLI)” on page 57• “Change a User Account Password (CLI)” on page 57• “Assign Roles to a User Account (CLI)” on page 58• “Delete a User Account (CLI)” on page 59	<ul style="list-style-type: none">• x86 system server SP• SPARC system server SP• CMM
Procedures for viewing Oracle ILOM user accounts and user sessions	<ul style="list-style-type: none">• “View Individual User Accounts (CLI)” on page 60• “View a List of User Accounts (CLI)” on page 60• “View a List of User Sessions (CLI)” on page 61• “View an Individual User Session (CLI)” on page 61	

▼ Configure Single Sign On (CLI)

Before You Begin

- You need the Admin (a) role enabled to configure Single Sign On.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.

2. To enable or disable Single Sign On, use the `set` command.

- For a server SP, type:

```
-> set /SP/services/sso state=[disabled|enabled]
```

- For a CMM, type:

```
-> set /CMM/services/sso state=[disabled|enabled]
```


▼ Add a User Account (CLI)

Before You Begin

- You need the User Management (u) role enabled to create a user account.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.

2. To add a local user account, use the `create` command.

- For a server SP, type:

```
-> create /SP/users/username password=password role=[administrator|operator|a|u|c|r|o]
```

- For a CMM, type:

```
-> create /CMM/users/username password=password role=[administrator|operator|a|u|c|r|o]
```

Note – When adding a user account, it is not necessary to configure the `role` or `password` property. The `role` property will default to Read Only (o), and the CLI will prompt you to provide and confirm a password.

For example:

```
-> create /SP/users/user5
Creating user...
Enter new password: *****
Enter new password again: *****
Created /SP/users/user5
```

▼ Change a User Account Password (CLI)

Before You Begin

- You need the User Management (u) role enabled to modify user account properties.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.

2. To change a user account password use the `set` command.

- For a server SP, type:

```
-> set /SP/users/user password
```

- For a CMM, type:

```
-> set /CMM/users/user password
```

For example:

```
-> set /SP/users/user5 password
Enter new password: *****
Enter new password again: *****
```

▼ Assign Roles to a User Account (CLI)

Before You Begin

- You need the User Management (u) role enabled to add or modify user account role properties.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.

2. To assign roles to a user account, use the `set` command.

- For a server SP, type:

```
-> set /SP/users/user password=password role=
[administrator|operator|a|u|c|r|o|s]
```

- For a CMM, type:

```
-> set /CMM/users/user password=password role=
[administrator|operator|a|u|c|r|o|s]
```

For example:

```
-> set /SP/users/user5 role=auc
Set 'role' to 'auc'
-> show /SP/users/user5
Targets:
  ssh

Properties:
  role = auc
  password = *****

Commands:
  cd
  set
  show
```

User Role (CLI)	User Role Permissions Granted (CLI)
(a)	Admin (a). Read and write permissions are granted to all Oracle ILOM system management functions with the exception of the functions that would require the Admin to have these additional user roles enabled: User Management (u), Reset and Console (c), Host Control (r), and Services (s).
(u)	User Management (u). Read and write permissions are granted to a user for all Oracle ILOM user account management functions.
(c)	Console (c). Read and write permissions are granted to a user to perform these remote console management functions: manage remote console lock options, manage SP console history log options, launch and use Oracle ILOM Remote Console, and launch and use Oracle ILOM Storage Redirection CLI.
(r)	Reset and Host Control (r). Read and write permissions are granted to a user to perform these remote host management functions: host boot device control, run and configure diagnostics utilities, reset SP, reset CMM, component management service actions, fault management actions, SPARC TPM management actions, and downloads of SNMP MIBs.
(o)	Read Only (o). Read only permissions are granted to a user to view the state of all ILOM configuration properties. In addition, write permissions are granted to a user to change only the password and session time-out properties assigned to their own user account.
(s)	Services (s). Read and write permissions are granted to a user to assist Oracle service engineers in the event that on-site service is required.
(aucro)	A combination of all these users roles (aucro) grant read and write permissions to a user to perform backup and restore configuration functions. Note - aucro is equivalent to the Administrator user role profile in the web interface.

▼ Delete a User Account (CLI)

Before You Begin

- You need the User Management (u) role enabled to remove a user account.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.

2. To delete a local user account, use the `delete` command.

- **For a server SP**, type:

```
-> delete /SP/users/username
```

- **For a CMM**, type:

```
-> delete /CMM/users/username
```

For example:

```
-> delete /SP/users/user5
Are you sure you want to delete /SP/users/user5 (y/n)?y
Deleted /SP/users/user5
```

▼ View Individual User Accounts (CLI)

1. Log in to the Oracle ILOM SP CLI or CMM CLI.
2. To display information about one specific user account, use the `show` command.
 - For a server SP, type:

```
-> show /SP/users/username
```
 - For a CMM, type:

```
-> show /CMM/users/username
```

For example:

```
-> show /SP/users/user1

/SP/users/user1
Targets:
  ssh

Properties:
  role = aucros
  password = *****

Commands:
  cd
  set
  show
```

▼ View a List of User Accounts (CLI)

1. Log in to the Oracle ILOM SP CLI or CMM CLI.
2. To display information about all local user accounts, use the `show` command.
 - For a server SP, type:

```
-> show /SP/users
```

- For a CMM, type:
-> **show /CMM/users**

For example:

```
-> show /SP/users
/SP/users
  Targets:
    user1
    user2
    user3
    user4
```

▼ View a List of User Sessions (CLI)

1. Log in to the Oracle ILOM SP CLI or CMM CLI.
2. To display information about all local user sessions, use the `show` command.

- For a server SP, type:
-> **show /SP/sessions**
- For a CMM, type:
-> **show /CMM/sessions**

For example:

```
-> show /SP/sessions
/SP/sessions
  Targets
    12 (current)

  Properties:

  Commands:
    cd
    show
```

▼ View an Individual User Session (CLI)

Note – To view an individual user's role, you must be using Oracle ILOM 3.0.4 or a later version of Oracle ILOM.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.

2. To display information about an individual user session, use the `show` command.

- For a server SP, type:

-> `show /SP/sessions/session_number`

- For a CMM, type:

-> `show /CMM/sessions/session_number`

For example:

```
-> show /SP/sessions/12

/SP/sessions/12
Targets:

Properties:
  username = user4
  role = aucro
  starttime = Mon Apr 13 06:25:19 2009
  type = shell
  mode = normal

Commands:
  cd
  show
```

Configuring SSH User Keys (CLI)

Description	Links	Platform Feature Support
Procedures for managing an SSH user key properties	<ul style="list-style-type: none">• “Add an SSH Key” on page 62• “Delete an SSH Key (CLI)” on page 63	<ul style="list-style-type: none">• x86 system server SP• SPARC system server SP• CMM

▼ Add an SSH Key

Before You Begin

- You need the User Management (u) role enabled to add SSH keys for other users.
- You need the Read Only (o) role enabled to add an SSH key to your user account.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.
2. To navigate to the directory location of a user's SSH key, use the `cd` command.
 - For a server SP, type:


```
-> cd /SP/users/user/ssh/keys/n
```
 - For a CMM, type:


```
-> cd /CMM/users/user/ssh/keys/n
```

where *n* is the number of the ssh key you want to configure.

3. To add a key to the user's account, type:

```
-> set load_uri=
```

```
transfer_method://username:password@ipaddress_or_hostname/directorypath/filename
```

where:

- *transfer_method* can be tftp, ftp, sftp, scp, http, or https.
- *username* is the name of the user account on the remote system. (*username* is required for scp, sftp, and ftp. *username* is not used for tftp, and is optional for http and https.)
- *password* is the password for the user account on the remote system. (*password* is required for scp, sftp, and ftp. *password* is not used for tftp, and is optional for http and https.)
- *ipaddress_or_hostname* is the IP address or the host name of the remote system.
- *directorypath* is the location of the SSH key on the remote system.
- *filename* is the name assigned to the SSH key file.

For example:

```
-> set load_uri=
scp://adminuser:userpswd@1.2.3.4/keys/sshkey_1.pub
Set 'load_uri' to
'scp://adminuser:userpswd@1.2.3.4/keys/sshkey_1.pub'
```

▼ Delete an SSH Key (CLI)

Before You Begin

- You need the User Management (u) role enabled to delete SSH keys for other users.
- You need the Read Only (o) role enabled to delete your own SSH key.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.
2. To navigate to the directory location of a user's SSH key, use the `cd` command.

■ For a server SP, type:
-> `cd /SP/users/user/ssh/keys/n`

■ For a CMM, type:
-> `cd /CMM/users/user/ssh/keys/n`

where *n* is the number of the ssh key you want to configure.

3. To delete a key from the user's account, type:

-> `set clear_action=true`

For example:

```
-> set clear_action=true
Are you sure you want to clear /SP/users/user1/ssh/keys/1 (y/n)? y
Set 'clear_action' to 'true'
```

Configuring Active Directory (CLI)

Description	Links	Platform Feature Support
Procedures for managing Active Directory settings	<ul style="list-style-type: none">• “Enable Active Directory strictcertmode (CLI)” on page 64• “Check Active Directory certstatus (CLI)” on page 65• “Remove an Active Directory Certificate (CLI)” on page 66• “View and Configure Active Directory Settings (CLI)” on page 67• “Troubleshoot Active Directory Authentication and Authorization (CLI)” on page 74	<ul style="list-style-type: none">• x86 system server SP• SPARC system server SP• CMM

▼ Enable Active Directory strictcertmode (CLI)

Before You Begin

- You need the User Management (u) role enabled to configure Active Directory settings.

Note – By default, `strictcertmode` is disabled. When this variable is disabled, the channel is secure, but limited validation of the certificate is performed. If `strictcertmode` is enabled, then the server's certificate must have already been uploaded to the server so that the certificate signatures can be validated when the server certificate is presented.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.

2. To access the Active Directory certificate settings, use the `cd` command.

- For a server SP, type:

-> `cd /SP/clients/activedirectory`

- For a CMM, type:

-> `cd /CMM/clients/activedirectory`

3. To load a certificate, type:

-> `set cert load_uri=[tftp|ftp|scp]://IP address/file-path/filename`

Note – You can use TFTP, FTP, or SCP to load a certificate. Alternatively, you can load an SSL certificate for Active Directory using the `load -source` command from anywhere on the CLI. For example:

-> `load -source URI_to_SSL_certificate target`

4. To enable `strictcertmode`, type:

-> `set strictcertmode=enabled`

Note – Data is always protected, even if `strictcertmode` is disabled.

▼ Check Active Directory `certstatus` (CLI)

Before You Begin

- You need the User Management (u) role enabled to configure Active Directory settings.

Note – `certstatus` is an operational variable that should reflect the current certificate state. Neither `certstatus` nor `state` is required to exist if `strictcertmode` is disabled. However, for the `strictcertmode` to be enabled, a certificate must be loaded.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.

2. To check the status of the certificate, use the `show` command.

- For a server SP, type:

```
-> show /SP/clients/activedirectory/cert
```

- For a CMM, type:

```
-> show /CMM/clients/activedirectory/cert
```

For example:

```
-> show /SP/clients/activedirectory/cert
Targets:

Properties:
  certstatus = certificate present
  clear_action = (none)
  issuer = /DC=com/DC=oracle/DC=east/DC=sales/CN=
CAforActiveDirectory
  load_uri = (none)
  serial_number =
08:f3:2e:c0:8c:12:cd:bb:4e:7e:82:23:c4:0d:22:60
  subject = /DC=com/DC=oracle/DC=east/DC=sales/CN=
CAforActiveDirectory
  valid_from = Oct 25 22:18:26 2006 GMT
  valid_until = Oct 25 22:18:26 2011 GMT
  version = 3 (0x02)

Commands:
  cd
  load
  reset
  set
  show
```

▼ Remove an Active Directory Certificate (CLI)

Before You Begin

- You need the User Management (u) role enabled to configure Active Directory settings.

Note – The Authentication Server Certificate can be removed only when `strictcertmode` is disabled.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.
2. To navigate to the Active Directory target, use the `cd` command.
 - For a server SP, type:
-> `cd /SP/clients/activedirectory/cert`
 - For a CMM, type:
-> `cd /CMM/clients/activedirectory/cert`
3. To remove a certificate, type one of the following commands:
 - -> `set clear_action=true`
 - -> `reset target`

For example:

```
-> reset /SP/clients/activedirectory/cert
Are you sure you want to reset /SP/clients/activedirectory/cert
(y/n)? y
```

▼ View and Configure Active Directory Settings (CLI)

Before You Begin

- You need the User Management (u) role enabled to configure Active Directory settings.
- The name field for configuring Active Directory Group properties support up to 128 characters. If the chosen format is over 128 characters, you should use a supported format that can be specified with fewer characters.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.
2. To navigate to the Active Directory target, use the `cd` command.
 - For a server SP, type:
-> `cd /SP/clients/activedirectory`
 - For a CMM, type:

```
-> cd /CMM/clients/activedirectory
```

3. To view and modify the active directory properties, use the `show` and `set` commands.

■ To view information in the `admingroups` target, type:

```
-> show admingroups/n
```

where *n* can be an integer between 1 and 5.

For example:

```
-> show admingroups/1
/SP/clients/activedirectory/admingroups/1
Targets:

Properties: name = CN=SpSuperAdmin,OU=Groups,DC=sales,DC=
east,DC=oracle,DC=com
```

■ To modify properties in the `admingroups` target, type:

```
-> set admingroups/n property=value
```

where *n* can be an integer between 1 and 5.

For example:

```
-> set admingroups/1 name=CN=spSuperAdmin,OU=Groups,DC=sales,DC=
oracle,DC=com
Set 'name' to 'CN=spSuperAdmin,OU=Groups,DC=sales,DC=oracle,
DC=com'
```

4. To view and modify information in the `opergroups` target, use the `show` and `set` commands.

■ To view information in the `opergroups` target, type:

```
-> show opergroups/n
```

where *n* can be an integer between 1 and 5.

For example:

```
-> show opergroups/1
/SP/clients/activedirectory/opergroups/1
Targets:

Properties: name = CN=SpSuperOper,OU=Groups,DC=sales,DC=
east,DC=oracle,DC=com
```

■ To modify properties in the `opergroups` target, type:

```
-> set opergroups/n property=value
```

where n can be an integer between 1 and 5.

For example:

```
-> set opergroups/1 name=CN=spSuperOper,OU=Groups,DC=sales,DC=oracle,DC=com
Set 'name' to 'CN=spSuperOper,OU=Groups,DC=sales,DC=oracle,DC=com'
```

5. To view and modify information in the customgroups target, use the show and set commands.

- To view information in the customgroups target, type:

```
-> show customgroups/ $n$ 
```

where n can be an integer between 1 and 5.

For example:

```
-> show customgroups/1
/SP/clients/activedirectory/customgroups/1
Targets:

Properties
  name = custom_group_1
  roles = aucro
```

- To modify properties in the customgroups target, type:

```
-> set customgroups/ $n$  property=value
```

For example:

```
-> set customgroups/1 name=CN=spSuperCust,OU=Groups,DC=sales,DC=oracle,DC=com
Set 'name' to 'CN=spSuperCust,OU=Groups,DC=sales,DC=oracle,DC=com'
-> set /SP/clients/activedirectory/customgroups/1 roles=au
Set 'roles' to 'au'
```

6. To view and modify information in the userdomains target, use the show and set commands.

- To view information in the userdomains target, type:

```
-> show userdomains/ $n$ 
```

where n can be an integer between 1 and 5.

For example:

```
-> show userdomains/1
/SP/clients/activedirectory/userdomains/1
Targets:

Properties:
  domain = <USERNAME>@sales.example.oracle.com
```

- To modify properties in the `userdomains` target, type:

```
-> set userdomains/n property=value
```

For example:

```
-> set userdomains/1 domain=<USERNAME>@sales.example.oracle.com
Set 'domain' to '<username>@sales.example.oracle.com'
```

Note – In the preceding example, `<USERNAME>` will be replaced with the user's login name. During authentication, the user's login name replaces `<USERNAME>`. Names can take the form of fully qualified domain name (FQDN), `domain\name` (NT), or simple name.

7. To view and modify information in the `alternateservers` target, use the `show` and `set` commands.

- To view information in the `alternateservers` target, type:

```
-> show alternateservers/n
```

where `n` can be an integer between 1 and 5.

For example:

```
-> show alternateservers/1
/SP/clients/activedirectory/alternateservers/1
Targets:
  cert

Properties:
  address = 10.8.168.99
  port = 0
```

Note – The address property can be either the IP address or DNS (host name). If using DNS, DNS must be enabled. For more information on enabling DNS, see [“View and Configure DNS Settings \(CLI\)”](#) on page 40.

- To modify properties in the `alternateservers` target, type:

-> **set alternateservers/n property=value**

where *n* can be an integer between 1 and 5.

For example:

```
-> set alternateservers/1 port=636
```

8. To view and modify alternateservers certificate properties, use the show and set commands.

- **To view the alternate server certificate information, type:**

-> **show alternateservers/n/cert**

where *n* can be an integer between 1 and 5.

For example:

```
-> show alternateservers/1/cert  
/SP/clients/activedirectory/alternateservers/1/cert  
Targets:  
  
Properties:  
  certstatus = certificate present  
  clear_action = (none)  
  issuer = /DC=com/DC=oracle/DC=east/DC=sales/CN  
CAforActiveDirectory  
  load_uri = (none)  
  serial_number =  
08:f3:2e:c0:8c:12:cd:bb:4e:7e:82:23:c4:0d:22:60  
  subject = /DC=com/DC=oracle/DC=east/DC=sales/CN=  
CAforActiveDirectory  
  valid_from = Oct 25 22:18:26 2006 GMT  
  valid_until = Oct 25 22:18:26 2011 GMT  
  version = 3 (0x02)
```

- **To copy a certificate for an alternative server, type:**

-> **set alternateservers/n/cert load_uri=**

[tftp|ftp|scp] : [/username:password@] / [ipAddress / |hostName /]filePath
/fileName

The following is an example of a certificate copied using TFTP:

```
-> set alternateservers/n/cert load_uri=  
tftp://10.8.172.152/sales/cert.cert  
Set 'load_uri' to 'tftp://10.8.172.152/sales/cert.cert'
```

Note – The TFTP transfer method does not require a user name and password.

The following is an example of a certificate copied using FTP:

```
-> set load_uri=  
ftp://sales:XpasswordX@129.148.185.50/8275_put/cert.cert  
Set 'load_uri' to  
'ftp://sales:XpasswordX@129.148.185.50/8275_put/cert.cert'
```

The following is an example of a certificate copied using SCP:

```
-> set load_uri=  
scp://sales:XpasswordX@129.148.185.50/home/dc150698/8275_put/cert  
.cert  
Set 'load_uri' to  
'scp://sales:XpasswordX@129.148.185.50/home/dc150698/8275_put/  
cert.cert'
```

- To remove a certificate for an alternate server, type:

```
-> set alternateservers/n/cert clear_action=true
```

For example:

```
-> set alternateservers/1/cert clear_action=true  
Are you sure you want to clear  
/SP/clients/activedirectory/alternateservers/1/cert (y/n)? y  
Set 'clear_action' to 'true'
```

9. To view and modify information in the `dnslocatorqueries` target, use the `show` and `set` commands.

- To view information in the `dnslocatorqueries` target, type:

```
-> show dnslocatorqueries/n
```

where *n* can be an integer between 1 and 5.

For example:

```
-> show dnslocatorqueries/1  
/SP/clients/activedirectory/dnslocatorqueries/1  
Targets:  
  
Properties:  
    service = _ldap._tcp.gc._msdcs.<DOMAIN>.<PORT:3269>  
  
Commands:  
    cd  
    set  
    show
```

Note – DNS and DNS Locator Mode must be enabled for DNS locator queries to work. For information about enabling DNS, see “[View and Configure DNS Settings \(CLI\)](#)” on page 40.

The DNS locator service query identifies the named DNS service. The port ID is generally part of the record, but you can override it by using the format <PORT:636>. In addition, you can use the <DOMAIN> substitution marker to specify named services for a specific domain being authenticated.

- To modify properties in the `dnslocatorqueries` **target**, type:

-> **set dnslocatorqueries/n service=DNSLocatorServiceQuery**

For example:

```
-> set dnslocatorqueries/1 service=
_ldap._tcp.gc._msdcs.<DOMAIN>.<PORT:3269>
```

10. To view and modify the `expsearchmode` property, use the `show` and `set` commands.

Note – To view and configure the `expsearchmode` property, you must be using Oracle ILOM 3.0.4 or a later.

- To view the `expsearchmode` property, type:

-> **show expsearchmode**

For example:

```
-> show expsearchmode

/SP/clients/activedirectory
  Properties:
    expsearchmode = disabled
```

- To enable or disable the `expsearchmode` property, type:

-> **set expsearchmode=[enabled|disabled]**

For example:

```
-> set expsearchmode=enabled
Set 'expsearchmode' to 'enabled'
```

11. To view and modify the `strictcredentialerrormode` property use the `show` and `set` commands.

Note – As of Oracle ILOM 3.0.10, the `strictcredentialalerrormode` is available to control how user credential errors are processed. If this mode is enabled, a credential error reported from any server fails those user credentials. When the mode is disabled (default setting), the credentials can be presented to other servers for authentication.

- To view the `strictcredentialalerrormode` property, type:

-> **show /SP/clients/activedirectory**

For example:

```
-> show /SP/clients/activedirectory

/SP/clients/activedirectory

Properties
  strictcredentialalerrormode = disabled
```

- To enable or disable the `strictcredentialalerrormode` property, type:

-> **set strictcredentialalerrormode=[enabled|disabled]**

For example:

```
-> set strictcredentialalerrormode=enabled
Set 'strictcredentialalerrormode' to 'enabled'
```

▼ Troubleshoot Active Directory Authentication and Authorization (CLI)

Before You Begin

- You need the User Management (u) role enabled to configure Active Directory settings.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.
2. To navigate to the Active Directory target, use the `cd` command.

- For a server SP, type:

-> **cd /SP/clients/activedirectory**

3. To set the debug event level for the Active Directory authentication module to trace, type:

```
-> set logdetail=trace
Set 'logdetail' to 'trace'
```

4. Perform another authorization attempt by logging out, and then logging back in to the Oracle ILOM CLI.
5. To view the Event Log output for the authorization attempt, use the show command.

- For a server SP, type:

```
-> show /SP/logs/event/list Class==ActDir Type==Log
```

- For a CMM, type:

```
-> show /CMM/logs/event/list Class==ActDir Type==Log
```

For example:

```
-> show /SP/logs/event/list Class==ActDir Type==Log

ID      Date/Time                Class      Type      Severity
-----  -----
26      Thu Jul 10 09:40:46 2008  ActDir    Log       minor
      (ActDir) authentication status: auth-OK
25      Thu Jul 10 09:40:46 2008  ActDir    Log       minor
      (ActDir) server-authenticate: auth-success idx 100/0
      dns-server 10.8.143 .231
24      Thu Jul 10 09:40:46 2008  ActDir    Log       debug
      (ActDir) custRoles
23      Thu Jul 10 09:40:46 2008  ActDir    Log       debug
      (ActDir) role-name administrator
```

For more information on configuring event log detail, see [“Scroll, Dismiss, or Clear the Oracle ILOM Event Log List”](#) on page 100.

Configuring Lightweight Directory Access Protocol (LDAP) (CLI)

Description	Links	Platform Feature Support
Procedures for managing LDAP settings	<ul style="list-style-type: none">• “Configure the LDAP Server (CLI)” on page 76• “Configure Oracle ILOM for LDAP (CLI)” on page 77	<ul style="list-style-type: none">• x86 system server SP• SPARC system server SP• CMM

▼ Configure the LDAP Server (CLI)

Before You Begin

- You need the User Management (u) role enabled to configure LDAP settings.

1. Ensure that passwords for user accounts authenticating to Oracle ILOM are in crypt format, using a GNU extension, commonly referred to as MD5 crypt.

Oracle ILOM only supports LDAP authentication for passwords stored in either of the following two variations of the crypt format:

- `userPassword: {CRYPT}ajCa2He4PJhNo`
- `userPassword: {CRYPT}1pzKng1$du1Bf0NWBjh9t3FbUgf46.`

2. Add object classes `posixAccount` and `shadowAccount`, and populate the required property values for this schema (RFC 2307).

Required Property	Description
<code>uid</code>	User name for logging in to Oracle ILOM
<code>uidNumber</code>	Any unique number
<code>gidNumber</code>	Any unique number
<code>userPassword</code>	Password
<code>homeDirectory</code>	Any value (this property is ignored by Oracle ILOM)
<code>loginShell</code>	Any value (this property is ignored by Oracle ILOM)

3. Configure the LDAP server to enable LDAP server access to Oracle ILOM user accounts.

Either enable your LDAP server to accept anonymous binds, or create a proxy user on your LDAP server that has read-only access to all user accounts that will authenticate through Oracle ILOM.

See your LDAP server documentation for more details.

▼ Configure Oracle ILOM for LDAP (CLI)

Before You Begin

- You need the User Management (u) role enabled to configure LDAP settings.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.

2. To navigate to the LDAP target, use the `cd` command.

- For a server SP, type:

```
-> cd /SP/clients/ldap
```

- For a CMM, type:

```
-> cd /CMM/clients/ldap
```

3. To enter the proxy user name and password, type:

```
-> set binddn="cn=proxyuser, ou=people, ou=sales, dc=oracle, dc=com"  
bindpw=password
```

4. To enter the IP address of the LDAP server, type:

```
-> set address=[ldapipaddress | DNS name]
```

Note – If using a DNS name, DNS must be configured and functioning.

5. To assign the port used to communicate with the LDAP server, type:

```
-> set port=ldapport
```

The default port is 389.

6. To enter the Distinguished Name of the branch of your LDAP tree that contains users and groups, type:

```
-> set searchbase="ou=people, ou=sales, dc=oracle, dc=com"
```

This is the location in your LDAP tree that you want to search for user authentication.

7. To set the state of the LDAP service to `enabled`, type:

```
-> set state=enabled
```

8. To verify that LDAP authentication works, log in to Oracle ILOM using an LDAP user name and password.

Note – Oracle ILOM searches local users before LDAP users. If an LDAP user name exists as a local user, Oracle ILOM uses the local account for authentication.

Configuring LDAP/SSL (CLI)

Description	Links	Platform Feature Support
Procedures for configuring LDAP/SSL settings	<ul style="list-style-type: none">• “Enable LDAP/SSL <code>strictcertmode</code>” on page 78• “Check LDAP/SSL <code>certstatus</code>” on page 79• “Remove an LDAP/SSL Certificate (CLI)” on page 80• “View and Configure LDAP/SSL Settings (CLI)” on page 80• “Troubleshoot LDAP/SSL Authentication and Authorization (CLI)” on page 85	<ul style="list-style-type: none">• x86 system server SP• SPARC system server SP• CMM

▼ Enable LDAP/SSL `strictcertmode`

Before You Begin

- You need the User Management (u) role enabled to configure LDAP/SSL settings.

Note – By default, `strictcertmode` is disabled. When this variable is disabled, the channel is secure, but limited validation of the certificate is performed. If `strictcertmode` is enabled, then the server’s certificate must have already been uploaded to the server so that the certificate signatures can be validated when the server certificate is presented.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.

2. To navigate to the LDAP/SSL target, use the `cd` command.

- For a server SP, type:
-> `cd /SP/clients/ldapssl`
- For a CMM, type:
-> `cd /CMM/clients/ldapssl`

3. To load a certificate, type:

-> `set cert load_uri=[tftp|ftp|scp]://IP address/file-path/filename`

Note – You can use TFTP, FTP, or SCP to load a certificate.

4. To enable `strictcertmode`, type:

-> `set strictcertmode=enabled`

▼ Check LDAP/SSL certstatus

Note – `certstatus` is an operational variable that should reflect the current state of the certificate if `strictcertmode` is disabled. However, for `strictcertmode` to be enabled, a certificate must be loaded.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.

2. To check the status of the certificate, use the `show` command.

- For a server SP, type:
-> `show /SP/clients/ldapssl/cert`
- For a CMM, type:
-> `show /CMM/clients/ldapssl/cert`

For example:

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

Targets:

Properties:
  certstatus = certificate present
  clear_action = (none)
  issuer = /C=US/O=Entrust PKI Demonstration Cerificates
  load_uri = (none)
  serial_number =
```

```
08:f23:2e:c0:8c:12:cd:bb:4e:7e:82:23:c4:0d:22:60
    subject = /C=US/O=Entrust PKI Demonstration
Certificates/OU=Entrust/Web Connector/OU=No Liability as per
http://freecerts.entrust
    valid_from = Oct 25 22:18:26 2006 GMT
    valid_until = Oct 25 22:18:26 2011 GMT
    version = 3 (0x02)
```

▼ Remove an LDAP/SSL Certificate (CLI)

Before You Begin

- You need the User Management (u) role enabled to configure LDAP/SSL settings.

Note – To remove the Authentication Server Certificate, `strictcertmode` must be disabled.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.
2. To navigate to the LDAP/SSL certificate target, use the `cd` command.
 - For a server SP, type:
-> `cd /SP/clients/ldapssl/cert`
 - For a CMM, type:
-> `cd /CMM/clients/ldapssl/cert`
3. To remove a certificate, type:

```
-> set clear_action=true
Are you sure you want to clear /SP/clients/ldapssl/cert (y/n)? y
```

▼ View and Configure LDAP/SSL Settings (CLI)

Before You Begin

- You need the User Management (u) role enabled to configure LDAP/SSL settings.

Note – To view and configure the `optionalUserMapping` target, you must be using Oracle ILOM 3.0.4 or a later version of Oracle ILOM.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.

2. To navigate to the LDAP/SSL target, use the `cd` command.

- For a server SP, type:
-> `cd /SP/clients/ldapssl`
- For a CMM, type:
-> `cd /CMM/clients/ldapssl`

3. To view and modify LDAP/SSL properties in the `admingroups` target, use the `show` and `set` commands.

- To view information in the `admingroups` target, type:

-> `show admingroups/n`

where *n* can be an integer between 1 and 5.

For example:

```
-> show /SP/clients/ldapssl/admingroups/1
/SP/clients/ldapssl/admingroups/1
Targets:
Properties: name = CN=SpSuperAdmin,OU=Groups,DC=sales,DC=
east,DC=oracle,DC=com
```

- To modify information in the `admingroups` target, type:

-> `set admingroups/n property=value`

where *n* can be an integer between 1 and 5.

For example:

```
-> set admingroups/1/ name=CN=spSuperAdmin,OU=Groups,DC=sales,DC=
oracle,DC=com
Set 'name' to 'CN=spSuperAdmin,OU=Groups,DC=sales,DC=oracle,
DC=com'
```

4. To view and modify information in the `opergroups` target, use the `show` and `set` commands.

- To view information in the `opergroups` target, type:

-> `show opergroups/n`

where *n* can be an integer between 1 and 5.

For example:

```
-> show opergroups/1
/SP/clients/ldapssl/opergroups/1
Targets:
Properties: name = CN=SpSuperOper,OU=Groups,DC=sales,DC=
east,DC=oracle,DC=com
```

- To modify the name property in the opergroups target, type:

-> **set opergroups/n name=value**

For example:

```
-> set name=CN=spSuperOper,OU=Groups,DC=sales,DC=oracle,DC=com
Set 'name' to 'CN=spSuperOper,OU=Groups,DC=sales,DC=oracle,DC=com'
```

5. To view and modify information in the customgroups target, use the show and set commands.

- To view information in the customgroups target, type:

-> **show customgroups/n**

For example:

```
-> show customgroups/1
/SP/clients/ldapssl/customgroups/1
Targets:

Properties:
  name = <fully qualified distinguished name only>
  roles = (none)

Commands:
  cd
  set
  show
```

- To modify properties in the customgroups target, type:

-> **set customgroups/n property=value**

For example:

```
-> set customgroups/1 name=CN=spSuperCust,OU=Groups,DC=sales,DC=oracle,DC=com
Set 'name' to 'CN=spSuperCust,OU=Groups,DC=sales,DC=oracle,DC=com'
-> set customgroups/1 roles=au
Set 'roles' to 'au'
```

6. To view and modify information in the userdomains target, use the show and set commands.

- To view information in the userdomains target, type:

-> **show userdomains/n**

where *n* can be an integer between 1 and 5.

For example:

```
-> show userdomains/1
Targets:

Properties:
  domain = uid=<USERNAME>,ou=people,dc=oracle,dc=com

Commands:
  cd
  set
  show
```

- To modify the domain property in the userdomains target, type:

```
-> set userdomains/n domain=value
```

For example:

```
-> set userdomains/1 domain=uid=<USERNAME>, ou=people,dc=oracle, dc=oracle
```

Note – In the preceding example, <USERNAME> will be replaced with the user's login name during authentication. Names can take the form of a fully qualified domain name (FQDN).

7. To view and modify information in the alternateservers target, use the show and set commands.

- To view information in the alternateservers target, type:

```
-> show alternateservers/n
```

where *n* can be an integer between 1 and 5.

For example:

```
-> show alternateservers/1

/SP/clients/ldapssl/alternateservers/1
Targets:
  cert

Properties:
  address = 10.8.168.99
  port = 0
```

Note – In the preceding example, address can be either the IP address or DNS name. If using DNS, DNS must be enabled. For more information about enabling DNS, see “View and Configure DNS Settings (CLI)” on page 40.

- **To modify properties in the alternateservers target, type:**

-> **set alternateservers/n property=value**

For example:

```
-> set /SP/clients/ldapssl/alternateservers/1 port=636
```

8. To view and modify information in the alternateservers certificate target, use the show and set commands.

- **To copy a certificate for an alternate server, type:**

-> **set alternateservers/n/cert load_uri=**

[tftp|ftp|scp]: [username:password@] // [ipAddress | HostName] /filePath/filename

The following is an example of a certificate copied using TFTP:

```
-> set load_uri=tftp://10.8.172.152/sales/cert.cert
Set 'load_uri' to 'tftp://10.8.172.152/sales/cert.cert'
```

Note – The TFTP transfer method does not require a user name and password.

The following is an example of a certificate copied using FTP:

```
-> set load_uri=
ftp://sales:XpasswordX@129.148.185.50/8275_put/cert.cert
Set 'load_uri' to
'ftp://sales:XpasswordX@129.148.185.50/8275_put/cert.cert'
```

The following is an example of a certificate copied using SCP:

```
-> set load_uri=.cert
scp://sales:XpasswordX@129.148.185.50/home/dc150698/8275_put/cert.cert
Set 'load uri' to
'scp://sales:XpasswordX@129.148.185.50/home/dc150698/8275_put/cert.cert'
```

- **To remove a certificate for an alternate server, type:**

-> **set clear_action=true**

For example:

```
-> set clear_action=true  
Are you sure you want to clear /SP/clients/ldapssl/cert (y/n)? y  
Set 'clear_action' to 'true'
```

9. To view and modify information in the `optionalUserMapping` target, use the `show` and `set` commands.

■ To view information in the `optionalUserMapping` target, type:

```
-> show optionalUserMapping
```

For example:

```
-> show optionalUserMapping  
Targets:  
  
Properties:  
  attributeInfo = (&(objectclass=person)(uid=<USERNAME>))  
  binddn = cn=Manager,dc=oracle,dc=com  
  bindpw = (none)  
  searchbase = ou=people,dc=oracle,dc=com  
  state = disabled  
  
Commands:  
  cd  
  set  
  show
```

■ To modify properties in the `optionalUserMapping` target, type:

```
-> set property=value
```

For example:

```
-> set state=enabled  
Set 'state' to 'enabled'
```

▼ Troubleshoot LDAP/SSL Authentication and Authorization (CLI)

Before You Begin

■ You need the User Management (u) role enabled to configure LDAP/SSL settings.

1. Log in to the Oracle ILOM SP CLI or CMM CLI.

2. To navigate to the LDAP/SSL target, use the `cd` command.

- For a server SP, type:
 - > **cd /SP/clients/ldapssl**
 - For a CMM, type:
 - > **cd /CMM/clients/ldapssl**
3. To set the debug event level for the LDAP/SSL authentication module to `trace`, type:
 - > **set logdetail=trace**
 4. Perform another authorization attempt by logging out, and then logging back in to the Oracle ILOM CLI.
 5. To view the Event Log output for the authorization attempt, use the `show` command.
 - For a server SP, type:
 - > **show /SP/logs/event/list Class==ldapssl Type==Log**
 - For a CMM, type:
 - > **show /CMM/logs/event/list Class==ldapssl Type==Log**

For example:

```
-> show /SP/logs/event/list Class==ldapssl Type==Log Severity==
Trace

ID      Date/Time                Class      Type      Severity
-----
3155    Thu Nov 13 06:21:00 2008  LdapSsl   Log       critical
        (LdapSSL) authentication status: auth-ERROR
3154    Thu Nov 13 06:21:00 2008  LdapSsl   Log       major
        (LdapSSL) server-authenticate: auth-error idx 0 cfg-server
10.8.xxx.xxx
3153    Thu Nov 13 06:21:00 2008  LdapSsl   Log       major
        (LdapSSL) ServerUserAuth - Error 0, error binding user to
ActiveDirectory server
```

For more information about configuring event log detail, see [“Scroll, Dismiss, or Clear the Oracle ILOM Event Log List”](#) on page 100.

Configuring RADIUS (CLI)

Description	Links	Platform Feature Support
Procedures for configuring RADIUS settings	<ul style="list-style-type: none">• “Configure RADIUS (CLI)” on page 87	<ul style="list-style-type: none">• x86 system server SP• SPARC system server SP• CMM

▼ Configure RADIUS (CLI)

Before You Begin

- You need the User Management (u) role enabled to configure RADIUS settings.
- After the RADIUS server is properly configured, you can use RADIUS authentication to provide access to Oracle ILOM beyond the 10 local user accounts.

1. Collect the appropriate information about your RADIUS environment.

2. Log in to the Oracle ILOM SP CLI or the CMM CLI.

3. To navigate to the RADIUS target, use the `cd` command.

- For a server SP, type:
-> `cd /SP/clients/radius`
- For a CMM, type:
-> `cd /CMM/clients/radius`

4. To view the RADIUS properties, type:

-> `show`

For example:

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

Properties:
  defaultrole = Operator
  address = 129.144.36.142
  port = 1812
  secret = (none)
```

```
state = enabled
Commands:
  cd
  set
  show
```

5. To configure the RADIUS properties described in the table below, type:

```
-> set [defaultrole=[Administrator|Operator|a|u|c|r|o|s]
address=radius_server_IPaddress port=port# secret=radius_secret state=
[enabled|disabled]]
```

For example:

```
-> set /SP/clients/radius state=enabled address=10.8.145.77
Set 'state' to 'enabled'
Set 'address' to '10.8.145.77'
```

Property (CLI)	Default	Description
state	Disabled	Enabled Disabled Specifies whether the RADIUS client is enabled or disabled.
defaultrole a u c r o s Administrator Operator	Operator	Administrator Operator <i>Advanced Roles</i> Access role granted to all authenticated RADIUS users. This property supports the legacy roles of Administrator or Operator, or any of the individual role ID combinations of a, u, c, r, o, and s. For example, aucros, where a=Admin, u=User Management, c=Console, r=Reset and Host Control, and s=Service.
ipaddress	0.0.0.0	IP address or DNS name of the RADIUS server. If the DNS name is used, DNS must be configured and functional.
port	1812	Specifies the port number used to communicate with the RADIUS server. The default port is 1812.
secret	(none)	Specifies the shared secret that is used to protect sensitive data and to ensure that the client and server recognize each other.

Managing Component Status and Service Actions (CLI)

Descriptions	Links
CLI procedures for managing system component status and service actions	<ul style="list-style-type: none">• “Prepare to Remove a Component (CLI)” on page 91• “Return a Component to Service (CLI)” on page 91• “Enable and Disable Component State (CLI)” on page 92• “View and Clear Faults (CLI)” on page 92

Related Information

- *Oracle ILOM 3.0 Daily Management Concepts*, fault management
- *Oracle ILOM 3.0 Daily Management Web Procedures*, manage system components
- *Oracle ILOM 3.0 Protocol Management*, managing system component information

▼ View Component Information (CLI)

1. Log in to the Oracle ILOM SP CLI or CMM CLI.
2. To view inventory information for a component, use the `show` command.
 - For a rackmounted server component, type:
-> `show /SYS/component_name`
 - For a chassis component, type:

-> **show** /CH/component_name

For example:

```
-> show /SYS/MB type
Targets:
.
.
.

Properties:
  type = Motherboard
  ipmi_name = MB
  fru_name = MB
  fru_description = BD, ASY, MB
.
.
.

Commands:
  cd
  set
  show
```

The properties that display inventory information are listed below. The properties that you are able to view depend on the target type you use.

- fru_part_number
- fru_manufacturer
- fru_serial_number
- fru_name
- fru_description
- fru_version
- chassis_serial_number
- chassis_part_number
- product_name
- product_serial_number
- product_part_number
- customer_frudata

▼ Prepare to Remove a Component (CLI)

Before You Begin

- You need the Reset and Host Control (r) role enabled to prepare to remove a component in Oracle ILOM.

To prepare a chassis component for removal, follow these steps:

1. Log in to the Oracle ILOM SP CLI or CMM CLI.

2. To prepare to remove a component, type:

```
-> set target prepare_to_remove_action=true
```

For example:

```
-> set /CH/RFM0 prepare_to_remove_action=true
Set 'prepare_to_remove_action' to 'true'
```

After you prepare the component for removal, you can verify that it is ready to be physically removed.

3. To verify that a component is ready to be removed, type:

```
-> show target prepare_to_remove_status
```

For example:

```
-> show /CH/RFM0 prepare_to_remove_status
Properties:
  prepare_to_remove_status = [Ready|NotReady]
```

The [Ready|NotReady] statement in the example shows whether the device is ready to be removed.

▼ Return a Component to Service (CLI)

Before You Begin

- You need the Reset and Host Control (r) role enabled to notify Oracle ILOM that you are returning a component to service.

Note – If you have already prepared a component for removal, and you wish to undo the action, you can do so remotely.

To return a chassis component to service, follow these steps:

1. Log in to the Oracle ILOM SP CLI or CMM CLI.
2. At the Oracle ILOM command prompt, type:

-> **set target return_to_service_action=true**

For example:

```
-> set /CH/RFM0 return_to_service_action=true
Set 'return_to_service_action' to 'true'
```

▼ Enable and Disable Component State (CLI)

Before You Begin

- You need the Reset and Host Control (r) role enabled to manage the state of chassis components in Oracle ILOM.

To enable or disable the state of a chassis component, follow these steps:

1. Log in to the Oracle ILOM SP CLI or CMM CLI.
2. At the Oracle ILOM command prompt, type:

-> **set target component_state=[enabled|disabled]**

For example:

```
-> set /SYS/MB/CMP0/P0/C0 component_state=enabled
Set 'component_state' to 'enabled'
```

▼ View and Clear Faults (CLI)

Before You Begin

- You need the Admin (a) role enabled to clear component faults reported in Oracle ILOM.
- The server SP or CMM must have Oracle ILOM firmware 3.0.3 or later installed.

To view and clear faults in Oracle ILOM, follow these steps:

1. Log in to the Oracle ILOM SP CLI or CMM CLI.
2. To view a list of components that have been faulted:
 - From a server SP, type:
-> **show /SP/faultmgmt**
 - From a CMM, type:
-> **show /CMM/faultmgmt**
3. To display fault messages in the Oracle ILOM event log:
 - From a server SP, type:
-> **show /SP/logs/event/list**
 - From a CMM, type:
-> **show /CMM/logs/event/list**
4. Fix or replace the faulted component.
5. To clear a fault on a component, type the following command:

-> **set component_path clear_fault_action=true**

where *component_path* is one of the following faulted components:

- Processor
- Memory
- Motherboard
- Fan module
- Power supply
- CMM
- NEM
- PCI card

For example, to clear a fault on processor 0, you would type the following:

```
-> set /SYS/MB/P0 clear_fault_action=true
Are you sure you want to clear /SYS/MB/P0 (y/n)? y
Set 'clear_fault_action' to 'true'
```


Monitoring System Sensors and Managing Event Log Entries and Clock Settings (CLI)

Description	Links
CLI procedures for monitoring system sensors, indicators, and logs	<ul style="list-style-type: none">• “Monitoring System Sensors, Indicators, Event Logs (CLI)” on page 96
CLI procedure for viewing and managing the SP console history log	<ul style="list-style-type: none">• “View and Manage SP Console Log Output (CLI)” on page 103
CLI procedure for setting the SP clock properties	<ul style="list-style-type: none">• “Configure Clock Properties (CLI)” on page 99

Related Information

- *Oracle ILOM 3.0 Daily Management Concepts*, system monitoring and alert management
- *Oracle ILOM 3.0 Daily Management Web Procedures*, monitoring system sensors, indicators, and event log
- *Oracle ILOM 3.0 Protocol Management*, inventory and component management

Monitoring System Sensors, Indicators, Event Logs (CLI)

Description	Links	Platform Feature Support
View and configure LEDs and system indicators	<ul style="list-style-type: none">• “View Sensor Readings (CLI)” on page 96• “Configure System Status Indicators (CLI)” on page 98	<ul style="list-style-type: none">• x86 system server SP• SPARC system server SP• CMM
Set the clock and timezone	<ul style="list-style-type: none">• “Configure Clock Properties (CLI)” on page 99	
Filter, view, and clear event logs	<ul style="list-style-type: none">• “Filter Oracle ILOM Event Log List (CLI)” on page 100• “Scroll, Dismiss, or Clear the Oracle ILOM Event Log List” on page 100• “Configure Remote Syslog Receiver IP Addresses (CLI)” on page 102	

▼ View Sensor Readings (CLI)

To view sensor readings, follow these steps:

1. **Log in to the Oracle ILOM SP CLI or CMM CLI.**
2. **To view the sensor properties, use the `show` command.**
 - For a server SP, type:
-> `show /SYS/sensor`
 - For a CMM, type:


```
-> show /CH/sensor
```

where *sensor* is the target for the threshold or discrete sensor whose properties you want to view.

For example:

On some of Sun servers you can view the temperature reading for the ambient air intake by typing the following:

```
-> show /SYS/T_AMB
/SYS/T_AMB
  Targets:

  Properties:
    type = Temperature
    class = Threshold Sensor
    value = 27.000 degree C
    upper_nonrecov_threshold = 45.00 degree C
    upper_critical_threshold = 40.00 degree C
    upper_noncritical_threshold = 35.00 degree C
    lower_noncritical_threshold = 10.00 degree C
    lower_critical_threshold = 4.00 degree C
    lower_nonrecov_threshold = 0.00 degree C
    alarm_status = cleared
```

On some Sun servers, you can determine whether a hard drive is present in a slot 0 by typing the following:

```
-> show /SYS/HDD0_PRSNT
/SYS/HDD0_PRSNT
  Targets:

  Properties:
    Type = Entity Presence
    Class = Discrete Indicator
    Value = Present

  Commands:
    cd
    show
```

For specific details about the type of discrete sensor targets you can manage, refer to the user documentation provided with the Sun system hardware.

▼ Configure System Status Indicators (CLI)

Before You Begin

- For you to configure the state of a system indicator using Oracle ILOM, you need the User Management (u) role enabled.

To configure the state of a system indicator, follow these steps:

1. **Log in to the Oracle ILOM SP CLI or CMM CLI.**
2. **To determine whether the `set` command is available to change the state of a system indicator, use the `help` command.**

- For a server SP, type:

-> **help /SYS/status_indicator**

- For a CMM, type:

-> **help /CH/status_indicator**

For example, to determine whether the locator indicator LED is configurable on a rackmounted server, type the following:

```
-> help /SYS/LOCATE
/SYS/LOCATE : Indicator
  Targets:

  Properties:
    type : Type of component

    ipmi_name : IPMI Name of component

    value : Value of component.
    value : Possible values = On, Off, Standby_Blink,
Slow_Blink, Fast_Blink
    value : User role required for set = a
```

3. **To modify the state of the system indicator, use the `set` command.**

- For a server SP, type:

-> **set /SYS/status_indicator property=value**

- For a CMM, type:

-> **set /CH/status_indicator property=value**

For more information about which system indicators are supported on your system, and the paths for accessing them, consult the user documentation provided with the Sun server.

▼ Configure Clock Properties (CLI)

Before You Begin

- You need the Admin (a) role enabled to configure the clock property values in Oracle ILOM.
- Refer to the Oracle Sun platform server documentation to determine whether:
 - The current time in Oracle ILOM can persist across SP reboots.
 - The current time in Oracle ILOM can be synchronized with the host at host boot time.
 - The system supports a real-time clock element that stores the time.

To configure clock property values using Oracle ILOM, follow these steps:

1. **Log in to the Oracle ILOM SP CLI or CMM CLI.**
2. **To navigate to the clock target, use the `cd` command.**
 - For a server SP, type:
-> `cd /SP/clock`
 - For a CMM, type:
-> `cd /CMM/clock`
3. **To view the clock property values currently set on the server SP, type:**
-> `show`
4. **To manually set the Oracle ILOM clock property values, type:**
-> `set property_name=value`
For example:
-> `set datetime=MMDDhhmmYYYY`
5. **To synchronize the clock property values on the server SP with other servers on your network, do the following:**
 - a. **To set the NTP server IP address, use the `set` command.**
 - For a server SP, type:
-> `set /SP/clients/ntp/server/1 address=ip_address`
 - For a CMM, type:
-> `set /CMM/clients/ntp/server/1 address=ip_address`
 - b. **To enable NTP synchronization, type the following:**
 - For a server SP, type:
-> `set /SP/clock usentpserver=enabled`
 - For a CMM, type:

```
-> set /CMM/clock usentpserver=enabled
```

6. To set the timezone, type:

```
-> set timezone=UTC/GMT_timezone
```

Note – Oracle ILOM captures time stamps in the event log based on the host server UTC/GMT timezone. However, if you view the event log from a client system that is located in a different timezone, the time stamps are automatically adjusted to the timezone of the client system. Therefore, a single event in the Oracle ILOM event log might appear with two timestamps.

▼ Filter Oracle ILOM Event Log List (CLI)

To filter the Oracle ILOM event log list, follow these steps:

1. Log in to the Oracle ILOM SP CLI or CMM CLI.

2. To navigate to the Event Log target, use the `cd` command.

- For a server SP, type:

```
-> cd /SP/logs/event
```

- For a CMM, type:

```
-> cd /CMM/logs/event
```

3. At the command prompt, type:

```
-> show list Class==[Audit|IPMI|Chassis|Fault|System|Software]  
Type==[Log|State|Action|Fault|Repair] Severity==  
[debug|down|critical|major|minor]
```

▼ Scroll, Dismiss, or Clear the Oracle ILOM Event Log List

Before You Begin

- You need the Admin (a) role enabled to modify the Oracle ILOM event log list.

To view or clear the Oracle ILOM event log, follow these steps:

1. Log in to the Oracle ILOM SP CLI or CMM CLI.

2. To navigate to the Event Log target, use the `cd` command.

- For a rackmounted server SP, type:

-> **cd /SP/logs/event**

- For a blade server SP in a chassis, type:

-> **cd /CH/BLⁿ/SP/logs/event**

- For a CMM, type:

-> **cd /CMM/logs/event**

3. To display the Event Log output, type:

-> **show list**

The contents of the event log appear.

For example:

```
-> show list
ID      Date/Time                Class      Type      Severity
-----
578     Wed Jun 11 06:39:47 2008  Audit     Log       minor
      user1 : Open Session : object = /session/type : value = shell
      : success
577     Wed Jun 11 06:34:53 2008  Audit     Log       minor
      user1 : Set : object =
      /clients/activedirectory/userdomains/3/domain : value =
      <USERNAME>@joe.customer.example.sun.com : success
576     Wed Jun 11 06:25:06 2008  Audit     Log       minor
      user1 : Open Session : object = /session/type : value =
      www : success
575     Wed Jun 11 06:07:29 2008  Audit     Log       minor
      user1 : Close Session : object = /session/type : value =
      www : success
574     Wed Jun 11 06:02:01 2008  Audit     Log       minor
      root : Set : object =
      /clients/activedirectory/dnslocatorqueries/2/service :
      value = _ldap._tcp.pc._msdcs.<DOMAIN>.<PORT:636> : success
573     Wed Jun 11 06:01:50 2008  Fault     Fault     critical
      Fault detected at time = Wed Jun 11 06:01:41 2008. The
      suspect component:/CH/PS3/EXTERNAL/AC_INPUT has
      fault.powersupply.no_ac with probability=100 Please consult
      the Sun Blade 8000 Fault Diagnosis Document (Document ID:
      85878) at http://sunsolve.sun.com to determine the correct
      course of action.
```

4. In the event log, perform any of the following tasks:

- **To scroll the list entries**, press any key except 'q'. The following table provides descriptions about each column in the Event Log:

Column Label	Description
Event ID	The number of the event, in sequence from number 1.
Class/Type	Common Class/Type pairs include the following: <ul style="list-style-type: none"> • Audit/ Log – Commands that result in a configuration change. Description includes user, command, command parameters, and success/fail. • IPMI/Log – Any event that is placed in the IPMI SEL is also put in the management log. • Chassis/State – For changes to the inventory and general system state. • Chassis/Action – Category for shutdown events for server module/chassis, hot insert/removal of FRU components, as well as Reset Parameters button when pushed. • Fault/Fault – For Fault Management faults. Description gives the time fault was detected and the suspect component. • Fault/Repair – For Fault Management repairs. Description gives component.
Severity	Debug, Down, Critical, Major, or Minor.
Date/Time	The day and time the event occurred. If the Network Time Protocol (NTP) server is enabled to set the Oracle ILOM time, the Oracle ILOM clock will use Universal Coordinated Time (UTC).
Description	A description of the event.

- **To dismiss the Event Log** (stop displaying the log), press the **q** key.
- **To clear the Event Log entries**, dismiss the Event Log, and then type:

```
-> set clear=true
```

Are you sure you want to clear /SPorCMM/logs/event (y/n)? **y**

▼ Configure Remote Syslog Receiver IP Addresses (CLI)

Before You Begin

- You need the Admin (a) role enabled to configure a destination IP address for the remote syslog receiver in Oracle ILOM, .

To configure a destination IP address, follow these steps:

1. **Log in to the Oracle ILOM SP or CMM.**
2. **To navigate to the syslog target, use the `cd` command.**

- For a rackmounted server SP, type:
 - > `cd /SP/clients/syslog/[1|2]`
- For a blade server SP in chassis, type:
 - > `cd /CH/BLn/SP/clients/syslog/[1|2]`
- For a CMM, type:
 - > `cd /CMM/clients/syslog/[1|2]`

3. To display the syslog receiver properties, type:

-> `show`

For example, if you are setting up the syslog receiver property on a server SP for the first time, the factory default property appears:

```
-> show
/SP/clients/syslog/1
  Targets:

  Properties:
    address = 0.0.0.0

  Commands:
    cd
    set
    show
```

4. To identify a destination IP address for IP 1 (and, if applicable, IP 2), use the `set` command.

For example, to set the destination IP address to 111.222.33.4, you would type:

```
-> set address=111.222.33.4
Set 'address' to '111.222.33.4'
```



▼ View and Manage SP Console Log Output (CLI)

Before You Begin

- You must have the Console (c) role enabled to modify the SP console output properties in Oracle ILOM .

- To view the SP console history log output on an x86 server, the server must be running Oracle ILOM firmware version 3.0.8 or later.

The SP console history log, prior to firmware version 3.0.8, was only accessible in Oracle ILOM from a SPARC server SP.

1. Log in to the Oracle ILOM SP CLI.

2. To display the SP console log target, properties, and available commands, use the `show` command.

For example:

```
-> show /SP/console
/SP/console
  Targets
    history

  Properties
    line_count = 0
    pause_count = 0
    start_from = end

  Commands
    cd
    show
    start
    stop
```

3. To view details about the SP console target and property values, use the `help` command.

For example:

```
-> help /SP/console
/SP/console : Redirection of console stream to SP
  Targets
    history : console history

  Properties
    line_count : total number of lines to display
    line_count : Possible values = 0-2048 where 0 means no limit
    line_count : User role required for set = c

    pause_count : number of lines to display before each pause
    pause_count : Possible values = 0-2048 where 0 means no limit
    pause_count: User role required for set = c
```



```

start_from : from which end of the available history to list
start_from : Possible values = beginning,end
start_from : User role required for set = c

```

4. To specify SP console history log file property values, type:

-> **set /SP/console** *property=value* [*property=value*] [*property=value*]

where *property* and *value* can be any of the following parameters specified in the following table:

Property	Values	Example
line_count	Accepts a line value within the range of 0 to 2048, where 0 means no limit. Note - The default value for line_count is 0.	To specify Oracle ILOM to display four lines of the SP console history log, you would type: -> set /SP/console line_count=4
pause_count	Accepts a pause value within the range of 0 to 2048, where 0 means not to pause the display. Note - The default value for pause_count is 0.	To specify Oracle ILOM to display four lines of the SP console history log and pause the display after displaying two lines, you would type: -> set /SP/console line_count=4 pause_count=2
start_from	Values include: • end – The last line (most recent) in the history log. • beginning - The first line in the history log. Note - The default value for start_from is end.	To specify Oracle ILOM to display the first four lines of the SP console history log and pause the display after displaying two lines, you would type: -> set /SP/console line_count=4 pause_count=2 start_from=beginning

Note – The UTC timestamps recorded in the SP console history log reflect the local time configured on the server.

Monitoring Storage Components and Zone Manager

Description	Links
CLI procedures for displaying storage details for hard drives and RAID controllers installed on an x86 Oracle Sun server platform	<ul style="list-style-type: none">• “Monitor Storage Component Details on x86 Servers (CLI)” on page 107
Reference to information about the Oracle Sun Blade 6000 and 6048 zone manager features	<ul style="list-style-type: none">• “Accessing Sun Blade Zone Manager Functions” on page 112

Related Information

- *Oracle ILOM 3.0 Daily Management Concepts*, storage monitoring
- *Oracle ILOM 3.0 Daily Management Web Procedures*, monitor storage components
- *Oracle Server Hardware Management Pack User’s Guide*, get software download
- *Oracle ILOM 3.0 CMM Administration*, zone manager

▼ Monitor Storage Component Details on x86 Servers (CLI)

Before You Begin

- Ensure that the storage monitoring functions are supported on your x86 server. To determine whether your x86 server supports these features, see the administration guide or Oracle ILOM supplement for your server.
- Ensure that the x86 server is running Oracle ILOM firmware version 3.0.6 or a later version.

- Download and install the Oracle Hardware Management Pack prior to using the Oracle ILOM storage monitoring features for the first time. For information about how to download the Oracle Hardware Management Pack software, refer to *Oracle Server Hardware Management Pack User's Guide*.

To show property details for hard drive and RAID controller storage components, follow these steps:

1. Log in to the Oracle ILOM SP CLI for your x86 server.

2. To navigate to the storage component targets, use the `cd` command.

- To monitor the hard drive storage components, type:

```
-> cd /SYS
```

- To monitor the RAID controller storage components, type:

```
-> cd /STORAGE/raid
```

3. To display storage component properties, use the `show` command.

- To view storage details for a specific hard drive storage component installed on the remote server, type:

```
-> show /SYS/target
```

where *target* is the path to the hard drive storage component.

For example, to view storage details for hard drive 0, type:

```
-> show /SYS/DBP/HDD0
/SYS/DBP/HDD0
Targets:
  OK2RM
  PRSNT
  SERVICE

Properties:
  type = Hard Disk
  ipmi_name = DBP/HDD0
  fru_name = H101414SCSSUN146G
  fru_manufacturer = HITACHI
  fru_version = SA25
  fru_serial_number = 000852E6LJY          P4X6LJYA
  controller_id = 0d:00.0
  disk_id = 0
  capacity = 136
  device_name = /dev/sg8
  disk_type = sata
  wwn = 5764832510609242989
  raid_status = OK
  raid_ids = 0
```

```
Commands:
  cd
  show
```

- **To display property details associated with a RAID controller and its associated disk IDs, do the following:**
 - a. **To list the RAID controller targets configured, type:**

```
-> show /STORAGE/raid
/STORAGE/raid
Targets:
  controller@0d:00.0

Properties:

Commands:
  cd
  show
```

- b. **To show the property details associated with a controller, as well as to list the `raid_id` targets configured, type:**

```
-> show /STORAGE/raid/controller@od:00.0
```

where `od:00.0` is the ID that corresponds to the PCI address of the controller.

For example:

```
-> show /STORAGE/raid/controller@0d:00.0
/STORAGE/raid/controller@0d:00.0
Targets:
  raid_id0
  disk_id0
  disk_id1
  disk_id2
  disk_id3
  disk_id4
  disk_id5
  disk_id6
  disk_id7
  raid_id1

Properties:
  fru_manufacturer = Adaptec
  fru_model = 0x0285
  pci_vendor_id = 36869
  pci_device_id = 645
```

```

pci_subvendor_id = 645
pci_subdevice_id = 645
raid_levels = 0, 1, 1E, 5, 5EE, 10, 50, Spanned, RAID
max_disks = 0
max_raids = 24
max_hot_spares = 64
max_global_hot_spares = 64
min_stripe_size = 16
max_stripe_size = 1024

```

c. To list the available `disk_id` targets, as well as to view the properties associated with a controller `raid_id`, type:

```
-> show /STORAGE/raid/controller@od:00.0/raid_id0
```

Where:	Is:
od:00.0	The PCI address for the controller that was found installed on your server
raid_id0	The target RAID disk that is configured on the controller

For example:

```

-> show /STORAGE/raid/controller@0d:00.0/raid_id0
/STORAGE/raid/controller@0d:00.0/raid_id0
Targets:
  disk_id0

Properties:
  level = Simple
  status = OK
  disk_capacity = 136
  device_name = /dev/sda
  mounted = true

Commands:
  cd
  show

```

d. To view the property details for a `disk_id` that is associated with a `raid_id` on the controller, type:

```
-> show /STORAGE/raid/controller@od:00.0/raid_id0/disk_id0
```

Where:	Equals:
od:00.0	The PCI address for the controller that was found installed on your server
raid_id0	The target RAID disk that is configured on the controller.
disk_id0	The target disk that is associated with the raid_id.

For example:

```
-> show /STORAGE/raid/controller@0d:00.0/raid_id0/disk_id0
/STORAGE/raid/controller@0d:00.0/raid_id0/disk_id0
Target:

Properties:
  fru_manufacturer = HITACHI
  fru_serial_number = 000852E6LJYA      P4X6LJYA
  fru_version = SA25
  status = OK
  capacity = 136
  device_name = /dev/sg8
  disk_type = sata
  wwn = 5764832510609242989
  raid_ids = 0
  system_drive_slot = /SYS/DBP/HDD0

Commands:
  cd
  show
```

4. To exit the CLI, type:

-> **exit**

Accessing Sun Blade Zone Manager Functions

If you are using Oracle Sun Blade 6000 or Sun Blade 6048 Modular Systems, a new zone management feature was added as of Oracle ILOM firmware version 3.0.10. The zone management feature is available for SAS-2 storage devices that are installed in Oracle Sun Blade 6000 or Sun Blade 6048 Modular Systems. For more information about how to manage SAS-2 chassis storage devices from Oracle ILOM, refer to *Oracle ILOM 3.0 CMM Administration Guide for Sun Blade 6000 and Sun Blade 6048 Modular Systems*.

Managing System Alerts (CLI)

Description	Links
CLI procedures for managing alert rule configurations	<ul style="list-style-type: none">• “Managing Alert Rule Configurations (CLI)” on page 118
CLI command examples for managing alert rules	<ul style="list-style-type: none">• “CLI Commands: Alert Rules” on page 122
CLI procedure for configuring SMTP email server	<ul style="list-style-type: none">• “Configure the SMTP Client (CLI)” on page 123

Related Information

- *Oracle ILOM 3.0 Daily Management Concepts*, system monitoring and alert management
- *Oracle ILOM 3.0 Daily Management Web Procedures*, manage system alerts
- *Oracle ILOM 3.0 Protocol Management*, inventory and component management

Managing Alert Rule Configurations (CLI)

Description	Links	Platform Feature Support
Review the prerequisites.	<ul style="list-style-type: none">• “Requirements for Setting Alert Rules (CLI)” on page 118	<ul style="list-style-type: none">• x86 system server SP• SPARC system server SP• CMM
Configure alert configurations.	<ul style="list-style-type: none">• “Create or Edit Alert Rules (CLI)” on page 118• “Disable an Alert Rule (CLI)” on page 120	
Generate test alerts to confirm that an alert configuration is working.	<ul style="list-style-type: none">• “Enable Test Alerts (CLI)” on page 121	
Notify a recipient of system alerts via email.	<ul style="list-style-type: none">• “Configure the SMTP Client (CLI)” on page 123	

Requirements for Setting Alert Rules (CLI)

- When defining an email notification alert, the outgoing email server must be configured in Oracle ILOM. If the outgoing email server is not configured, Oracle ILOM will not be able to successfully generate the email notification. For details, see [“Configure the SMTP Client \(CLI\)” on page 123](#).
- When defining an SNMPv3 trap alert, the SNMP user name must be defined as an SNMP user. If the user is not defined as an SNMP user, the receiver of the SNMPv3 alert will not be able to decode the SNMP alert message.
- To manage Oracle ILOM alert rule configurations, you need the Admin (a) role enabled.
- To issue a test email alert from Oracle ILOM, the platform server or CMM must be running Oracle ILOM firmware version 3.0.4 or a later firmware version
- Review the [“CLI Commands: Alert Rules” on page 122](#).

▼ Create or Edit Alert Rules (CLI)

Before You Begin

- Review the “Requirements for Setting Alert Rules (CLI)” on page 118 prior to performing the steps in the following procedure.

To configure an alert rule using the Oracle ILOM CLI, follow these steps:

1. Log in to the Oracle ILOM CLI on the server SP or CMM.

2. To navigate to the alert rule target, use the `cd` command.

- For a rackmounted server SP, type:

-> `cd /SP/alertmgmt/rules/n`

- For a blade server module, type:

-> `cd /CH/BLn/SP/alertmgmt/rules/n`

- For a CMM, type:

-> `cd /CMM/alertmgmt/rules/n`

3. To view properties associated with an alert rule, type:

-> `show`

For example:

```
-> show
/SP/alertmgmt/rules/1

Properties:
  community_or_username = public
  destination = 172.31.250.251
  level = minor
  snmp_version = 1
  type = snmptrap
```

4. To assign values to the alert rule properties, type:

-> `set property=value`

Alert rule properties are described in the following table:

Property	Description
level	critical, major, minor, down, disable
type	ipmipet, snmptrap, email <ul style="list-style-type: none"> • If the alert type you specify is for <code>ipmipet</code>, you need to define an IPMI Pet destination address. • If the alert type you specify is an <code>snmptrap</code>, you need to define an SNMP destination address and port, as well as the SNMP version and community name authenticating the receipt of the SNMP test alert. • If the alert type you specify is <code>email</code>, you need to define a destination email address. <p>Note - You can specify one destination address for each alert rule type.</p>
destination	IP/hostname for SNMP traps, IP address for IPMI PETs, email address for email

For example, to set `email` as the alert type, you would type the following:

```
-> set type=email
```

To send an email alert to a specific email address, you would type the following:

```
-> set destination=example@example.com
```

where `example@example.com` is the destination email address.

Note – The SMTP client must be configured for email destination notifications. For instructions, see [“Configure the SMTP Client \(CLI\)” on page 123](#).

For more information about the property values you can specify for an alert rule, refer to section about alert management in the *Oracle ILOM 3.0 Daily Management Concepts Guide*.

▼ Disable an Alert Rule (CLI)

Before You Begin

- Review the [“Requirements for Setting Alert Rules \(CLI\)” on page 118](#) prior to performing the steps in the following procedure.

To disable an alert rule, follow these steps:

1. Log in to Oracle ILOM CLI on the server SP or CMM.
2. To navigate to the alert rule target, use the `cd` command.
 - For a rackmount server SP, type:
-> `cd /SP/alertmgmt/rules/n`
 - For a blade server SP, type:
-> `cd /CH/BLn/SP/alertmgmt/rules/n`
 - For a CMM, type:
-> `cd /CMM/alertmgmt/rules/n`

where `BLn` is the blade server module location in the chassis, and `n` is the number of the alert rule. Alert rules can be numbered from 1 to 15.

3. To disable the alert rule configuration, type:
-> `set level=disable`

▼ Enable Test Alerts (CLI)

Before You Begin

Review the “[Requirements for Setting Alert Rules \(CLI\)](#)” on page 118 prior to performing the steps in the following procedure.

Follow these steps to enable test alerts:

1. Log in to the Oracle ILOM CLI on the server SP or CMM.
2. Navigate to the alert rule target using the `cd` command.
 - For a rackmounted server, type:
-> `cd /SP/alertmgmt/rules/n`
 - For a blade server module, type:
-> `cd /CH/BLn/SP/alertmgmt/rules/n`
 - For a CMM, type:
-> `cd /CMM/alertmgmt/rules/n`

where `BLn` is the blade server module location in the chassis, and `n` is the number of the alert rule. Alert rules can be numbered from 1 to 15.

3. To enable a test alert for an alert rule configuration, type:
-> `set testalert=true`

CLI Commands: Alert Rules

The following table describes the CLI commands that you will need to use to manage alert rule configurations using the Oracle ILOM CLI.

TABLE: CLI Commands for Managing Alert Rule Configurations

CLI Command	Description
show	<p>The <code>show</code> command enables you to display any level of the alert management command tree by specifying either the full or relative path. For example:</p> <ul style="list-style-type: none">• To display all the properties for the first alert rule using a full path, type: -> show /SPorCMM/alertmgmt/rules/1 <code>/SPorCMM/alertmgmt/rules/1</code> Properties: community_or_username = public destination = 172.16.132.251 level = minor snmp_version = 1 type = snmptrap Commands: cd set show• To display only the <code>type</code> property for the first alert rule using a full path, type: -> show /SPorCMM/alertmgmt/rules/1 type <code>/SPorCMM/alertmgmt/rules/1</code> Properties: type = snmptrap Commands: set show

TABLE: CLI Commands for Managing Alert Rule Configurations (*Continued*)

CLI Command	Description
	<ul style="list-style-type: none">• To display all the properties for the first alert rule using a relative path if the current tree location is <code>/SP/alertmgmt/rules</code>, type: -> show 1 <code>/SP/alertmgmt/rules/1</code> Targets: Properties: community_or_username = public destination = 129.148.185.52 level = minor snmp_version = 1 type = snmptrap Commands: cd set show
cd	The <code>cd</code> command enables you to set the working directory. For example, to set alert management as the working directory on a server SP, type: -> cd /SP/alertmgmt
set	The <code>set</code> command enables you to set values for properties from any place in the tree. You can specify either a full or relative path for the property depending on your location in the tree. For example: <ul style="list-style-type: none">• To set the alert <code>type</code> for the first alert rule to <code>ipmipet</code> using a full path, type: -> set /SPorCMM/alertmgmt/rules/1 type=ipmipet• To set the alert <code>type</code> for the first alert rule to <code>ipmipet</code> using a relative path if the current tree location is <code>/SP/alertmgmt</code>, type: -> set rules/1 type=ipmipet• To set the alert <code>type</code> for the first alert rule to <code>ipmipet</code> using a relative path if the current tree location is <code>/SP/alertmgmt/rules/1</code>, type: -> set type=ipmipet

▼ Configure the SMTP Client (CLI)

Before You Begin

- To enable SMTP clients in the Oracle ILOM CLI you need the Admin (a) role enabled.
- The SMTP client function is accessible from the Oracle ILOM CLI on the following Oracle devices: x86 system server SP, SPARC system server SP, and Sun blade CMM.
- To generate configured email notification alerts, you must enable the Oracle ILOM client to act as an SMTP client to send the email alert messages.

Prior to enabling the Oracle ILOM client as an SMTP client, determine the IP address and port number of the outgoing SMTP email server that will process the email notification.

To enable the SMTP client, follow these steps:

1. **Log in to the Oracle ILOM CLI on the server SP or CMM.**
2. **To navigate to the `/clients/smtp` working directory, use the `cd` command.**
 - **For a rackmounted server, type:**
-> **`cd /SP/clients/smtp`**
 - **For a blade server module, type:**
-> **`cd /CH/BLn/SP/clients/smtp`**
 - **For a CMM, type:**
-> **`cd /CMM/clients/smtp`**
3. **To display the SMTP client properties, type:**
-> **`show`**
For example:

```
-> show
/SP/clients/smtp
Targets:
Properties:
  address = 0. 0. 0. 0
  port = 25
  state = enabled
Commands:
  cd
  set
  show
```

4. To specify an IP address for the SMTP client or to change the port or state property value, type:

-> **set** *property=value*

For example, to assign 222.333.44.5 to the IP address, you would type:

-> **set address=222.333.44.5**

Redirecting Storage Media and Locking the Oracle ILOM Remote Console Display

Description	Links
Details for locating instructions for using the Oracle ILOM Storage Redirection CLI feature	<ul style="list-style-type: none">• “Redirect Storage Media (CLI)” on page 127
Details for locating CLI instructions for securing the Oracle ILOM Remote Console	<ul style="list-style-type: none">• “Redirect Storage Media (CLI)” on page 127

Related Information

- *Oracle ILOM 3.0 Remote Redirection Consoles*, remote redirections console options
- *Oracle ILOM 3.0 Remote Redirection Consoles*, lock Oracle ILOM remote console display using the CLI or web interface

Redirect Storage Media (CLI)

The storage redirection CLI feature in Oracle ILOM 3.0 is supported on all of Oracle’s Sun x86 servers, as well as some SPARC processor-based servers.

For instructions for using the Oracle ILOM Storage Redirection CLI, refer to:

- *Oracle ILOM 3.0 Storage Redirection Consoles*, initial set up tasks for redirecting storage media
- *Oracle ILOM 3.0 Storage Redirection Consoles*, redirect storage devices using the storage redirection CLI

Note – The Oracle ILOM storage redirection feature is not supported on chassis monitoring modules (CMMs) or x86 servers running Oracle ILOM 2.0.

Manage Oracle ILOM Remote Console Lock Options (CLI)

For CLI instructions for locking the Oracle ILOM Remote Console, refer to manage remote console lock options in the *Oracle ILOM 3.0 Remote Redirection Consoles CLI and Web Guide*.

Power Monitoring and Managing of Hardware Interfaces

Description	Links
Power monitoring and management feature updates per Oracle ILOM firmware point release	<ul style="list-style-type: none">• “Summary of Power Management Feature Updates (CLI)” on page 129
CLI procedures for power monitoring and management of hardware interfaces	<ul style="list-style-type: none">• “Monitoring System Power Consumption (CLI)” on page 132• “Configuring the Power Policy and Notification Threshold Values (CLI)” on page 140• “Monitoring Component Power Allocation Distributions (CLI)” on page 143• “Configuring Power Limit Properties (CLI)” on page 149

Related Information

- *Oracle ILOM 3.0 Daily Management Concepts*, power consumption
- *Oracle ILOM 3.0 Daily Management Web Procedures*, monitor and manage power consumption
- *Oracle ILOM 3.0 Protocol Management*, monitor and manage power consumption

Summary of Power Management Feature Updates (CLI)

The following table identifies the common power management feature enhancements and documentation updates made since Oracle ILOM 3.0:

TABLE: Power Management Feature Updates per Oracle ILOM Firmware Point Release

New or Enhanced Feature	Firmware Point Release	Documentation Updates	For Updated CLI Procedures, See:
Monitor power consumption metrics	Oracle ILOM 3.0	<ul style="list-style-type: none">• New terms and definitions for power management metrics• New System Monitoring > Power Management consumption metric properties• New CLI and web procedures added for monitoring device power consumption	<ul style="list-style-type: none">• “Monitoring System Power Consumption (CLI)” on page 132
Configure power policy properties	Oracle ILOM 3.0	<ul style="list-style-type: none">• New power policy properties explained• New CLI and web procedures added for configuring power policy settings	<ul style="list-style-type: none">• “Configuring the Power Policy and Notification Threshold Values (CLI)” on page 140
Monitor power consumption history	Oracle ILOM 3.0.3	<ul style="list-style-type: none">• New power consumption history metrics• New CLI and web procedures added for monitoring power consumption	<ul style="list-style-type: none">• “Monitor Power Consumption History (CLI)” on page 137
Configure power consumption notification thresholds	Oracle ILOM 3.0.4	<ul style="list-style-type: none">• New power consumption notification threshold settings• New CLI and web procedures added for configuring the power consumption thresholds	<ul style="list-style-type: none">• “Configuring the Power Policy and Notification Threshold Values (CLI)” on page 140
Monitor allocation power distribution metrics	Oracle ILOM 3.0.6	<ul style="list-style-type: none">• New component allocation distribution metrics• New CLI and web procedures added for monitoring power allocations• New CLI and web procedures added for configuring permitted power for blade slots	<ul style="list-style-type: none">• “Monitoring Component Power Allocation Distributions (CLI)” on page 143
Configure power budget properties	Oracle ILOM 3.0.6	<ul style="list-style-type: none">• New power budget properties• New CLI and web procedures added for configuring power budget properties	<ul style="list-style-type: none">• “Configuring Power Limit Properties (CLI)” on page 149

TABLE: Power Management Feature Updates per Oracle ILOM Firmware Point Release *(Continued)*

New or Enhanced Feature	Firmware Point Release	Documentation Updates	For Updated CLI Procedures, See:
Configure power supply redundancy properties for CMM systems	Oracle ILOM 3.0.6	<ul style="list-style-type: none">• New power supply redundancy properties for CMM• New CLI and web procedures added for configuring power supply redundancy properties on CMM	<ul style="list-style-type: none">• “Manage CMM Power Supply Redundancy Properties (CLI)” on page 154
CLI update for CMM power management	Oracle ILOM 3.0.10	<ul style="list-style-type: none">• New top-level tab added to Oracle ILOM web interface for power management• Revised CLI commands for CMM• Power Management Metrics tab removed from CMM Oracle ILOM web interface• Updated CLI procedure for configuring a grant limit for blade slots (previously known as allocatable power)	<ul style="list-style-type: none">• “View Blade Slots Granted Power or Reserved Power as of Oracle ILOM 3.0.10 (CLI)” on page 147• “View Granted Power or Grant Limit for Blade as of Oracle ILOM 3.0.10 (CLI)” on page 148• “Set CMM Grant Limit to Blade Server as of Oracle ILOM 3.0.10 (CLI)” on page 153

Monitoring System Power Consumption (CLI)

Description	Links	Platform Feature Support
Prerequisites for monitoring system power consumption	<ul style="list-style-type: none">• “Requirements — Power Consumption Monitoring (CLI)” on page 132	<ul style="list-style-type: none">• x86 system server SP• SPARC system server SP• CMM
CLI procedures for monitoring power consumption	<ul style="list-style-type: none">• “Monitor Total System Power Consumption (CLI)” on page 133• “Monitor Actual Power Consumption (CLI)” on page 134• “Monitor Individual Power Supply Consumption (CLI)” on page 135• “Monitor Available Power (CLI)” on page 136• “Monitor Server Hardware Maximum Power Consumption (CLI)” on page 136• “Monitor Permitted Power Consumption (CLI)” on page 137	
CLI procedure for monitoring power consumption history	<ul style="list-style-type: none">• “Monitor Power Consumption History (CLI)” on page 137	

Requirements — Power Consumption Monitoring (CLI)

Prior to performing the procedures described in this section, you should ensure that the following requirements are met:

- To determine whether the Oracle ILOM power consumption monitoring features are supported on your server or CMM, refer to the administration guide or Oracle ILOM supplement provided for your server or CMM.

- To view the power consumption metrics provided in Oracle ILOM, the server must be running Oracle ILOM firmware version 3.0 or a later version.
- To access the power consumption history provided in Oracle ILOM, the server must be running Oracle ILOM firmware version 3.0.3 or a later version.

Note – Power consumption history is available only through the Oracle ILOM CLI and web interface.

- Some platform servers might provide additional power metrics under the `/SP/powermgmt/advanced` node. To determine whether your system supports these additional power metrics, refer to the Oracle ILOM supplement guide or administration guide provided for your server.
- For definitions of the power monitoring terms used in the procedures, refer to the power monitoring terminology section in the *Oracle ILOM 3.0 Daily Management Concepts Guide*.

▼ Monitor Total System Power Consumption (CLI)

Before You Begin

Review the “[Requirements — Power Consumption Monitoring \(CLI\)](#)” on page 132

To monitor the total system power consumption, follow these steps:

1. **Log in to the Oracle ILOM SP CLI or CMM CLI.**
2. **To display the total power consumption, use the `show` command.**
 - For a server SP, type:
-> **show /SYS/VPS**
 - For a CMM, type:
-> **show /CH/VPS**

For example:

```
-> show /CH/VPS
/CH/VPS
  Targets:
    history

  Properties:
    type = Power Unit
    ipmi_name = VPS
    class = Threshold Sensor
    value = 898.503 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

  Commands:
    cd
    show
```

The properties for the total power consumption sensor in the Oracle ILOM CLI are as follows:

- type
- class
- value
- upper_nonrecov_threshold
- upper_critical_threshold
- upper_noncritical_threshold
- lower_noncritical_threshold
- lower_critical_threshold
- lower_nonrecov_threshold

Threshold values are platform specific. Refer to your server documentation for details.

▼ Monitor Actual Power Consumption (CLI)

Before You Begin

Review the “Requirements — Power Consumption Monitoring (CLI)” on page 132

To monitor the actual power consumption, follow these steps:

1. Log in to the Oracle ILOM SP CLI or CMM CLI.
2. To display the actual power consumption use the `show` command.
 - For a server SP, type:
-> `show /SP/powermgmt actual_power`
 - For a CMM, type:
-> `show /CMM/powermgmt actual_power`

Note – The `actual_power` is the same as `/SYS/VPS` (power consumption history). The `actual_power` is the value returned by the sensor.

▼ Monitor Individual Power Supply Consumption (CLI)

Before You Begin

Review the “Requirements — Power Consumption Monitoring (CLI)” on page 132

To monitor individual power supply consumption, follow these steps:

1. Log in to the Oracle ILOM SP CLI or CMM CLI.
2. To display the individual power supply consumption use the `show` command.
 - For a rackmounted server, type:
-> `show /SYS/platform_path_to_powersupply/ [INPUT_POWER | OUTPUT_POWER]`
 - For a CMM, type:
-> `show /CH/platform_path_to_powersupply/ [INPUT_POWER | OUTPUT_POWER]`

The following table lists and describes the properties for the CLI sensors. Both sensors, `INPUT_POWER` and `OUTPUT_POWER`, have the same properties.

Property	Description
type	Power Unit
class	Threshold Sensor
value	<total consumed power in watts, for example "1400">
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

Note – Power sensors are not supported on server modules (blades).

▼ Monitor Available Power (CLI)

Before You Begin

Review the [“Requirements — Power Consumption Monitoring \(CLI\)”](#) on page 132

To monitor available power, follow these steps:

1. Log in to the Oracle ILOM SP CLI or CMM CLI.
2. To display the available power on the system use the `show` command.
 - For a rackmounted server, type:


```
-> show /SP/powermgmt available_power
```
 - For a CMM, type:


```
-> show /CMM/powermgmt available_power
```

▼ Monitor Server Hardware Maximum Power Consumption (CLI)

Before You Begin

Review the “Requirements — Power Consumption Monitoring (CLI)” on page 132

To monitor the maximum power consumption for the server’s hardware, follow these steps:

1. Log in to the Oracle ILOM SP CLI.
2. To display the hardware configuration maximum power consumption on the server, use the `show` command. Type:

```
-> show /SP/powermgmt hwconfig_power
```

▼ Monitor Permitted Power Consumption (CLI)

Before You Begin

Review the “Requirements — Power Consumption Monitoring (CLI)” on page 132

To monitor the permitted power consumption, follow these steps:

1. Log in to the Oracle ILOM SP CLI or CMM CLI.
2. To display the permitted power consumption on the system, use the `show` command.

- For a rackmounted server, type:

```
-> show /SP/powermgmt permitted_power
```

- For a CMM, type:

```
-> show /CMM/powermgmt permitted_power
```

▼ Monitor Power Consumption History (CLI)

Before You Begin

Review the “Requirements — Power Consumption Monitoring (CLI)” on page 132

To monitor the power consumption history, follow these steps:

1. Log in to the Oracle ILOM SP CLI or CMM CLI.
2. View actual power consumption using the `show` command.

- For a server SP, type:

```
-> show /SYS/VPS
```

- For a blade server SP, type:

```
-> show /CMM/BL1/VPS
```

- For a CMM, type:

-> **show /CH/VPS**

For example:

```
->show /CH/VPS
/CH/VPS
Targets:
  history

Properties:
  type = Power Unit
  ipmi_name = VPS
  class = Threshold Sensor
  value = 1400.000 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

Commands:
  cd
  show
```

3. To display the 15-, 30-, and 60-second rolling power usage averages, and to display a choice of targets for average consumption history, use the **show** command.

- For a server SP, type:

-> **show /SYS/VPS/history**

- For a CMM, type:

-> **show /CH/VPS/history**

For example:

```
->show /CH/VPS/history
/CH/VPS/history
Targets:
  0 (1 Minute Average, 1 Hour History)
  1 (1 Hour Average, 14 Day History)

Properties:
  15sec_average = 1210.000
  30sec_average = 1400.000
  60sec_average = 1800.000
```

```
Commands:
  cd
  show
```

4. To display the average consumption history by the minute or hour, use the `show` command.

- For a server SP, type:
-> `show /SYS/VPS/history/0`

- For a CMM, type:
-> `show /CH/VPS/history/0`

For example:

```
->show /CH/VPS/history/0
/CH/VPS/history/
Targets:
  list

Properties:
  average = 1500.000
  minimum = 1500.000 at Mar  4 08:51:24
  maximum = 1500.000 at Mar  4 08:51:23
  period = 1 Minute Average
  depth = 1 Hour History

Commands:
  cd
  show
```

5. To display details about the history sample, such as the time stamp and the power wattage consumed, use the `show` command.

- For a server SP, type:
-> `show /SYS/VPS/history/0/list`

- For a CMM, type:
-> `show /CH/VPS/history/0/list`

For example:

```
->show /CH/VPS/history/0/list
/CH/VPS/history/0/list
Targets:

Properties:
  Mar  4 08:52:23 = 1500.000
```

```

Mar  4 08:51:24 = 1500.000
Mar  4 08:50:24 = 1500.000
Mar  4 08:49:24 = 1500.000
Mar  4 08:48:24 = 1500.000
Mar  4 08:47:23 = 1500.000

```

```

Commands:
cd
show

```

Configuring the Power Policy and Notification Threshold Values (CLI)

Description	Links	Platform Feature Support
CLI procedure for configuring the power policy usage on a server	<ul style="list-style-type: none"> • “Configure Server SP Power Policy Value (CLI)” on page 140 	<ul style="list-style-type: none"> • x86 system server SP (prior to Oracle ILOM 3.0.4) • SPARC system server SP
CLI procedure for viewing or configuring the power consumption threshold values for notification	<ul style="list-style-type: none"> • “View and Configure the Power Wattage Notification Threshold Value (CLI)” on page 141 	<ul style="list-style-type: none"> • x86 system server SP • SPARC system server SP • CMM

▼ Configure Server SP Power Policy Value (CLI)

Before You Begin

- The Oracle ILOM power policy properties are not supported on all of Oracle’s Sun servers. To determine whether the power policy feature is supported on your server, refer to the administration guide or Oracle ILOM supplement provided for your server.
- The admin (a) role must be enabled to modify the Power Policy properties in Oracle ILOM.
- For x86 platform servers, Oracle ILOM firmware version 3.0.3 or earlier must be running on the server.

- For SPARC platform servers, Oracle ILOM firmware version 3.0 or later must be running on the server.
- For definitions of the power monitoring terms used in this procedure, refer to the power monitoring terminology section in the *Oracle ILOM 3.0 Daily Management Concepts Guide*.

To define power policy settings to manage the server's power usage, follow these steps:

1. **Log in to the Oracle ILOM server SP CLI.**
2. **To view the current power policy property value set on server use the `show` command. Type:**
 -> `show /SP/powermgmt policy`
3. **To modify the power policy property value set on the server use the `set` command. Type:**
 -> `set /SP/powermgmt policy=[Performance|Elastic]`

Policy property value	Description
Performance	Enables the system to use all of the power that is available.
Elastic	Enables the system power usage to adapt to the current utilization level. For example, the system will power up or down just enough to keep relative utilization at 70% at all times, even if the workload fluctuates.

▼ View and Configure the Power Wattage Notification Threshold Value (CLI)

Before You Begin

- The platform server or CMM must be running Oracle ILOM firmware version 3.0.4 or later.
- You must have the admin (a) role enabled in Oracle ILOM to modify the power wattage notification threshold value.
- For definitions of the power monitoring terms used in this procedure, refer to the power monitoring terminology section in the *Oracle ILOM 3.0 Daily Management Concepts Guide*.

To set a notification threshold based on the power wattage consumed by the system, follow these steps:

1. **Log in to the Oracle ILOM server SP CLI or CMM CLI.**

2. To view the current power management settings, use the `show` command.

- For a CMM, type:

-> **show /CMM/powermgmt**

- For a rackmounted server, type:

-> **show /SP/powermgmt**

For example:

```
-> show /SP/powermgmt
/SP/powermgmt
Targets:
  budget
  powerconf
Properties:
  actual_power = 103
  permitted_power = 497
  allocated_power = 497
  available_power = 1500
  threshold1 = 0
  threshold2 = 0
Commands:
  cd
  set
  show
```

3. To set the notification threshold value based on the power wattage the system consumes, type:

-> **set threshold[1|2]=*n***

where *n* represents watts.

Note – Setting the notification threshold value to 0 (zero) will disable the notification threshold option.

Monitoring Component Power Allocation Distributions (CLI)

Description	Links	Platform Feature Support
Power allocation considerations	<ul style="list-style-type: none">• “Special Considerations for Power Allocation (CLI)” on page 143	<ul style="list-style-type: none">• x86 system server SP• SPARC system server SP• CMM
CLI procedures for viewing component allocation metrics on a server or CMM	<ul style="list-style-type: none">• “View Server Power Allocations for All System Components (CLI)” on page 144• “View Server Component Category Power Allocations (CLI)” on page 144• “View CMM Power Allocations for All Chassis Components (CLI)” on page 146• “View CMM Component Category Power Allocations (CLI)” on page 146• “View Blade Slots Granted Power or Reserved Power as of Oracle ILOM 3.0.10 (CLI)” on page 147• “View Granted Power or Grant Limit for Blade as of Oracle ILOM 3.0.10 (CLI)” on page 148	

Special Considerations for Power Allocation (CLI)

Prior to performing the CLI power allocation procedures, consider the following:

- The server or CMM must be running Oracle ILOM firmware version 3.0.6. In addition, where noted, some power allocation procedures require the server or CMM to be running Oracle ILOM firmware version 3.0.10 or later.
- The following CMM and blade server power allocation properties were updated as of Oracle ILOM firmware version 3.0.10:
 - `allocated_power` was renamed to `granted_power`
 - `allocatable_power` was renamed to `grantable_power`
 - `permitted_power` was renamed to `grant_limit`

Updated CLI property	Description
granted_power	The sum of the maximum power consumed by either a single server component (such as, memory module), a category of server components (all memory modules), or all server power consuming components.
grantable_power	The total remaining power (watts) available to allocate from the CMM to the blade slots without exceeding the grant limit
grant_limit	The maximum power the CMM will grant to a blade slot.

- For definitions of power monitoring terms used in the CLI procedures, refer to the power monitoring terminology section in the *Oracle ILOM 3.0 Daily Management Concepts Guide*.

▼ View Server Power Allocations for All System Components (CLI)

Before You Begin

Review the [“Special Considerations for Power Allocation \(CLI\)”](#) on page 143.

To view the sum of power allocated to all server components, follow these steps:

1. Log in to the Oracle ILOM server SP CLI.

Alternatively, you can log in to the CMM and drill-down to the server SP to view the sum of power allocated to all power-consuming components.

2. To view the sum of power allocated to all components in the system, type:

```
-> show /SP/powermgmt allocated_power
```

▼ View Server Component Category Power Allocations (CLI)

Before You Begin

Review the [“Special Considerations for Power Allocation \(CLI\)”](#) on page 143.

To view the sum of power allocated to a server component category, follow these steps:

1. Log in to the Oracle ILOM server SP CLI.

Alternatively, you can log in to the CMM and drill-down the server SP to view the sum of power that is allocated to a component category.

2. To view power allocated to a component category (fans, CPUs, and so forth), type:

-> **show /SP/powermgmt/powerconf/component_type**

where *component_type* is the name of the component category.

For example, to view the power allocated to all CPUs (component category), type:

-> **show /SP/powermgmt/powerconf/CPUs**

Note – For each command, the read-only value for the maximum power consumed by the component is returned, measured in watts.

3. To view the power allocated to a specific component, type:

-> **show /SP/powermgmt/powerconf/component_type/component_name**

where *component_type* is the name of the component category, and *component_name* is the name of the component.

For example:

To view the power allocated to a CPU0, type:

-> **show /SP/powermgmt/powerconf/CPUs/CPU0**

To view power allocated to other *rackmount server components*, type any of the following:

■ **show /SP/powermgmt/powerconf/Fans/FB0_FMn**

■ **show /SP/powermgmt/powerconf/PSUs/PSn**

■ **show /SP/powermgmt/powerconf/CPUs/MB_Pn**

■ **show /SP/powermgmt/powerconf/memory/MB_P0_Dn**

■ **show /SP/powermgmt/powerconf/IO/DBP_HDDn**

To view power allocated to other *blade server components*, type any of the following:

■ **show /SP/powermgmt/powerconf/CPUs/MB_Pn**

■ **show /SP/powermgmt/powerconf/memory/MB_P0_Dn**

■ **show /SP/powermgmt/powerconf/IO/DBP_HDDn**

▼ View CMM Power Allocations for All Chassis Components (CLI)

Before You Begin

Review the [“Special Considerations for Power Allocation \(CLI\)”](#) on page 143.

To view the sum of power allocated to all CMM chassis components, follow these steps:

1. Log in to the Oracle ILOM CMM CLI.
2. To view the sum of power allocated to all chassis system components, perform one of the following:
 - If the CMM is running Oracle ILOM 3.0.8 or earlier, type:
-> **show /CMM/powermgmt allocated_power**
 - If the CMM is running Oracle ILOM 3.0.10 or later, type:
-> **show /CMM/powermgmt granted_power**
3. To view the remaining power available to allocate to blade slots, type:
-> **show /CMM/powermgmt allocatable_power**

▼ View CMM Component Category Power Allocations (CLI)

Before You Begin

Review the [“Special Considerations for Power Allocation \(CLI\)”](#) on page 143.

To view the sum of power allocated to a CMM component category, follow these steps:

1. Log in to the Oracle ILOM CMM CLI.
2. To view the sum of power allocated to a CMM component category (fans, blade slots, and so forth), type:
-> **show /CMM/powermgmt/powerconf/component_type**
where *component_type* is the name of the component category.
For example, to view the power allocated to all blade slots (component category), type:
-> **show /CMM/powermgmt/powerconf/bladeslots**

Note – For each command, the read-only value for the maximum power consumed by the component is returned, measured in watts.

3. To view the power allocated to a specific CMM chassis component, type:

-> **show /CMM/powermgmt/powerconf/component_type/component_name**

where *component_type* is the name of the component category, and *component_name* is the name of the component.

For example:

To view the power allocated to blade slot 0, type:

-> **show /CMM/powermgmt/powerconf/bladeslots/BL0**

To view the power allocated to other CMM components (such as, NEMs, fans, power supply units), type any of the following:

- **show /CMM/powermgmt/powerconf/NEMs/NEM*n***
- **show /CMM/powermgmt/powerconf/Fans/FM*n***
- **show /CMM/powermgmt/powerconf/PSUs/PS*n***

▼ View Blade Slots Granted Power or Reserved Power as of Oracle ILOM 3.0.10 (CLI)

Before You Begin

Review the “[Special Considerations for Power Allocation \(CLI\)](#)” on page 143.

To view the sum of power allocated to chassis blade slots, follow these steps:

1. Log in to the Oracle ILOM CMM CLI.
2. To view the sum of power granted to all blade slots or the sum of power reserved for all auto-powered I/O blade slots, type:

-> **show /CMM/powermgmt/powerconf/bladeslots**

The *granted_power* value and *reserved_power* value allocated to all chassis blade slots appears.

For example:

```
-> show /CMM/powermgmt/powerconf/bladeslots
/CMM/powermgmt/powerconf/bladeslots
Targets:
    BL0
    BL1
    BL2
```

```
BL3
BL4
BL5
BL6
BL7
BL8
BL9

Properties:
  granted_power = 952
  reserved_power = 876

Commands:
  cd
  show
```

▼ View Granted Power or Grant Limit for Blade as of Oracle ILOM 3.0.10 (CLI)

Before You Begin

Review the [“Special Considerations for Power Allocation \(CLI\)”](#) on page 143.

To view the granted power or the power grant limit for an individual blade server, follow these steps:

1. Log into the Oracle ILOM CMM CLI.
2. To view the sum of power granted to an individual blade or the grant limit value set for a blade, type:

```
-> show /CMM/powermgmt/powerconf/bladeslot/BLn
```

where *n* represents the slot location for the blade.

For example:

```
-> show /CMM/powermgmt/powerconf/bladeslots/BL1
/CMM/powermgmt/powerconf/bladeslots/BL1
Targets:

Properties:
  granted_power = 0
  grant_limit = 800

Commands:
```

```
cd
set
show
```

Configuring Power Limit Properties (CLI)

Description	Links	Platform Feature Support
Special considerations when setting power limits	<ul style="list-style-type: none">• “Special Considerations for Setting Power Limits (CLI)” on page 149	<ul style="list-style-type: none">• x86 system server SP• SPARC system server SP
CLI procedures for configuring server SP power limit properties	<ul style="list-style-type: none">• “Set Permitted Power for Chassis Blade Slots (CLI)” on page 150• “Set Server Power Budget Properties (CLI)” on page 151• “Set CMM Grant Limit to Blade Server as of Oracle ILOM 3.0.10 (CLI)” on page 153	<ul style="list-style-type: none">• CMM

Special Considerations for Setting Power Limits (CLI)

Prior to modifying the power limit properties in Oracle ILOM, consider the following:

- The platform server or CMM must be running Oracle ILOM firmware version 3.0.6 or later. Where noted, some power limit procedures require the server or CMM to be running Oracle ILOM firmware version 3.0.10 or later.
- The following CMM and blade server power allocation properties were updated as of Oracle ILOM firmware version 3.0.10:
 - `allocated_power` was renamed to `granted_power`
 - `allocatable_power` was renamed to `grantable_power`
 - `permitted_power` was renamed to `grant_limit`

Updated CLI property	Description
granted_power	The sum of the maximum power consumed by either a single server component (such as, memory module), a category of server components (all memory modules), or all server power consuming components.
grantable_power	The total remaining power (watts) available to allocate from the CMM to the blade slots without exceeding the grant limit
grant_limit	The maximum power the CMM will grant to a blade slot.

- To modify power management configuration properties, you must have the Admin (a) role enabled in Oracle ILOM.
- For definitions of power monitoring terms used in the procedures, refer to the power monitoring terminology section in the *Oracle ILOM 3.0 Daily Management Concepts Guide*.
- For additional information describing the use of the server power limit (or the server power budget), refer to the power management section in the *Oracle ILOM 3.0 Daily Management Concepts Guide*.

▼ Set Permitted Power for Chassis Blade Slots (CLI)

Before You Begin

Review the [“Special Considerations for Setting Power Limits \(CLI\)”](#) on page 149

To configure the sum of permitted power allocated to a chassis blade slot, follow these steps:

1. Log in to the Oracle ILOM CMM CLI.
2. To set the permitted (maximum) power that the CMM will allocate to a blade slot, perform one of the following:
 - If the system is running Oracle ILOM firmware version 3.0.8 or earlier, type:


```
-> set /CMM/powermgmt/powerconf/bladeslots/bladeslotn
permitted_power=watts
```

 where *n* is the number of the blade slot that you want to configure.

For example:

```
-> set /CMM/powermgmt/powerconf/bladeslots/bladeslot1  
permitted_power=1200  
Set 'permitted_power' to '1200'
```

- If the system is running Oracle ILOM firmware version 3.0.10 or later, type:

```
-> set /CMM/powermgmt/powerconf/bladeslots/bladeslotn  
grant_limit=watts
```

where n is the number of the the blade slot that you want to configure.

Note – To prevent a blade server from powering-on, set the chassis blade slot permitted power value to 0.

▼ Set Server Power Budget Properties (CLI)

Before You Begin

Review the [“Special Considerations for Setting Power Limits \(CLI\)”](#) on page 149

To modify the server power budget property values, follow these steps:

1. **Log in to the Oracle ILOM server SP CLI.**

Alternatively, you can log in to the CMM and drill-down to the blade server SP to set the server power budget property values.

2. **To view the current power budget settings, type:**

```
-> show /SP/powermgmt/budget
```

For example:

```
-> show /SP/powermgmt/budget  
/SP/powermgmt/budget  
Targets:  
  
Properties:  
  activation_state = enabled  
  status = ok  
  powerlimit = 600 (watts)  
  timelimit = default (30 seconds)  
  violation_actions = none  
  min_powerlimit = 150  
  pendingpowerlimit = 600 (watts)  
  pendingtimelimit = default
```

```

pendingviolation_actions = none
commitpending = (Cannot show property)

```

```

Commands:
  cd
  show

```

3. To set the power budget properties, type:

-> **set /SP/powermgmt/budget** *property=value*

where *property=value* represents one of the following:

- activation_state=[enabled|disabled]
- pendingpowerlimit=[watts |percent]
- pendingtimelimit=[default|none|seconds]
- pendingviolation_actions=[none|hardpoweroff]
- commitpending=true

Power budget property	Description
Activation State	Enable this property to enable the power budget configuration.
Power Limit	Set a Power Limit in watts or as a percentage of the range between minimum and maximum system power. Note - The minimum system power is viewable in the CLI under the /SP/powermgmt/budget min_powerlimit target. The maximum system power is viewable from the Allocated Power property in the web interface or from the CLI under the /SP/powermgmt allocated_power target.
Time Limit	Specify one of the following grace periods for capping the power usage: <ul style="list-style-type: none"> • Default – Platform selected optimum grace period. • None – No grace period. Power capping is permanently applied. • Custom – User-specified grace period.
Violation Actions	Choose the action that the system will take if the power limit cannot be achieved within the grace period. This option can be set to none or hardpoweroff. This property, by default, is set to none.

Note – To set the `powerlimit`, `timelimit` and `violation_action` in the Oracle ILOM CLI, you must set the matching pending properties and then commit these three pending properties as a group. After these properties are committed by typing `set /SP/powermgmt/budget commitpending=true`, the new values will apply whenever the `budget activation_state` is set to `enabled`.

For example:

```
-> set /SP/powermgmt/budget activation_state=enabled
Set 'activation_state' to 'enabled'
```

▼ Set CMM Grant Limit to Blade Server as of Oracle ILOM 3.0.10 (CLI)

Before You Begin

Review the [“Special Considerations for Setting Power Limits \(CLI\)”](#) on page 149

To configure the permitted power allocated to a blade server, follow these steps:

1. Log in to the Oracle ILOM CMM CLI.
2. To configure the permitted (maximum) power that the CMM will allocate to a blade, type:

```
-> set /CMM/powermgmt/powerconf/bladeslots/BLn grant_limit=  
watts
```

where `n` is the number of the blade server you want to configure.

Note – To prevent a server module from powering-on, set the grant limit value for the blade to 0.

Note – The `grant_limit` value cannot be less than any amount already granted (`granted_power`).

Manage CMM Power Supply Redundancy Properties (CLI)

Description	Links	Platform Feature Support
CLI procedures for monitoring or configuring the CMM power supply redundancy properties	<ul style="list-style-type: none">• “View or Set CMM Power Supply Redundancy Properties (CLI)” on page 154	<ul style="list-style-type: none">• CMM

▼ View or Set CMM Power Supply Redundancy Properties (CLI)

Before You Begin

- For information about the usage of the power supply redundancy properties for CMM systems, see the power management section of the *Oracle ILOM 3.0 Daily Management Concepts Guide*.
- The CMM must be running Oracle ILOM firmware version 3.0.6 or later.
- To modify power supply redundancy properties, you must have admin (a) role privileges enabled in Oracle ILOM.
- For definitions of the power monitoring terms used in this procedure, refer to the power monitoring terminology section in the *Oracle ILOM 3.0 Daily Management Concepts Guide*.

To display or modify the CMM power supply redundancy properties in Oracle ILOM, follow these steps:

1. **Log in to the Oracle ILOM CMM CLI.**
2. **To view the current power management property values set on the CMM, type:**
-> **show /CMM/powermgmt**

3. To set the CMM power redundancy property, type:

```
-> set /CMM/powermgmt redundancy=[none|n+n]
```

For example:

```
-> set /CMM/powermgmt redundancy=none  
Set 'redundancy' to 'none'
```

Note – When you change the redundancy policy, this change affects the amount of power the CMM is permitted to allocate to server modules (blades). The chassis `Permitted Power` is set to the power that the available power supplies can provide minus the redundant power that is available. In addition, when there is no redundant power available to the system, a loss of a power supply will cause the system to reduce the `-Permitted -Power`. If the system reduces the `-Permitted -Power` below the power that had already been allocated, you should immediately take steps to turn off the server modules to reduce the allocated power.

Managing Remote Host Power States, BIOS Boot Device, and Host Server Console

Description	Links
Control the power state of a remote server module	<ul style="list-style-type: none">• “Issuing Remote Power State Commands From Server SP CLI or CMM CLI” on page 157
Remote Host Control - Boot Device on x86 system SP	<ul style="list-style-type: none">• “Configure BIOS Host Boot Device Override (CLI)” on page 159
Learn how to start the Host Console, change the display properties, as well as view the console history or bootlog	<ul style="list-style-type: none">• “Managing the SP Host Console” on page 161

Related Information

- *Oracle ILOM 3.0 Remote Redirection Consoles*, remote host management options
- *Oracle ILOM 3.0 Daily Management Web Procedures*, managing remote hosts power states

Issuing Remote Power State Commands From Server SP CLI or CMM CLI

From a command window or terminal, you can issue the commands that are described in [TABLE: Server SP Remote Power State Commands on page 158](#) and [TABLE: Chassis Monitoring Module \(CMM\) Remote Power State Commands on page 159](#) to remotely control the power state of a host server or CMM.

TABLE: Server SP Remote Power State Commands

Power State Command	Description	Command Syntax Example
start	Use the <code>start</code> command to turn on full power to the remote host server. To issue the <code>start</code> command: <ul style="list-style-type: none">• For a server SP, type:• For a blade server with a single dedicated SP, type:• For a blade server with two dedicated SPs, type:	start /SYS start /CH/BLn/SYS start /CH/BLn/NODEn/SYS
stop	Use the <code>stop</code> command to shut down the OS gracefully prior to powering off the host server. To issue the <code>stop</code> command: <ul style="list-style-type: none">• For a server SP, type:• For a blade server with a single dedicated SP:• For a blade server with two dedicated SPs:	stop /SYS stop /CH/BLn/SYS stop /CH/BLn/NODEn/SYS
stop -force	Use the <code>stop -force</code> command to immediately turn off the power to the remote host server. To issue the <code>stop -force</code> command: <ul style="list-style-type: none">• For a server SP, type:• For a blade server with single dedicated SP, type:• For a blade server with two dedicated SPs, type:	stop -force /SYS stop -force /CH/BLn/SYS stop -force /CH/BLn/NODEn/SYS
reset	Use the <code>reset</code> command to immediately reboot the remote host server. To issue the <code>reset</code> command: <ul style="list-style-type: none">• For a server SP, type:• For a blade server with single a dedicated SP, type:• For a blade server with two dedicated SPs, type:	reset /SYS reset /CH/BLn/SYS reset /CH/BLn/NODEn/SYS

TABLE: Chassis Monitoring Module (CMM) Remote Power State Commands

Power State Command	Description	Command Syntax Example
start	Use the <code>start</code> command to turn on full power to the remote chassis.	
	To issue the <code>start</code> command to the remote chassis from the CMM CLI, type:	start /CH
stop	Use the <code>stop</code> command to shut down the power on the chassis and its components gracefully.	
	To issue the <code>stop</code> command to the remote chassis from the CMM CLI, type:	stop /CH
stop -force	Use the <code>stop -force</code> command to immediately turn off the power to the chassis and its components.	
	To issue the <code>stop -force</code> command to the remote chassis from the CMM CLI, type:	stop -force /CH

For information about connecting to a host server or issuing commands from the Oracle ILOM CLI, see [“Configuring Network, Secure Shell, and Local Interconnect Settings”](#) on page 27.

▼ Configure BIOS Host Boot Device Override (CLI)

Before You Begin

- The Reset and Host Control (x) role is required to change the host boot device configuration variable.

Note – The host control BIOS boot device feature is supported on x86 server SPs. This feature is not supported on the CMM or on SPARC server SPs. For information about Oracle ILOM host control boot options on a SPARC server SP, consult the Administration guide or Oracle ILOM Supplement provided for the system.

To override the BIOS boot device from Oracle ILOM, follow these steps.

1. Log in to the Oracle ILOM SP CLI.

2. To navigate to and display the host boot properties, use the `cd` and `show` commands.

For example:

```
-> cd /HOST
/HOST

-> show

/HOST
  Targets:
    diag

  Properties:
    boot_device = default
    generate_host_nmi = (Cannot show property)

  Commands:
    cd
    set
    show
```

3. To set the host boot device for the next time the system is powered on, type:

```
-> set boot_device=value
```

Possible values are:

- `default` – Setting the value to `default` means that there is no override to the BIOS settings. Setting to `default` will also clear any previously chosen selection.
- `pxe` – Setting the value to `pxe` means that at the next host boot, the BIOS boot order settings will be temporarily bypassed and instead the host will boot from the network, following the PXE boot specification.

- `disk` – Setting the value to `disk` means that at the next host boot, the BIOS boot order settings will be temporarily bypassed and instead the host will boot from the first disk as determined by BIOS. The specific disk chosen depends on configuration. Typically, hosts use this option by default and the host's behavior might not change by selecting this option.
- `diagnostic` – Setting the value to `diagnostic` means that at the next host boot, the BIOS boot order settings will be temporarily bypassed and instead the host will boot into the diagnostic partition, if configured.
- `cdrom` – Setting the value to `cdrom` means that at the next host boot, the BIOS boot order settings will be temporarily bypassed and instead the host will boot from the attached CD-ROM or DVD device.
- `bios` – Setting the value to `bios` means that at the next host boot, the BIOS boot order settings will be temporarily bypassed and instead the host will boot into the BIOS Setup screen.

Managing the SP Host Console

Topic Descriptions	Links	Platform Feature Support
View and set Host Console properties	<ul style="list-style-type: none"> • “View and Configure Host Console Properties” on page 161 	<ul style="list-style-type: none"> • x86 system server SP • SPARC system server SP
Start Host Console and view Console History or Bootlog History	<ul style="list-style-type: none"> • “Start Host Console and Display Console History and Bootlog” on page 163 	

▼ View and Configure Host Console Properties

Before You Begin

- To modify the host console properties in Oracle ILOM, you must have `admin` (a) role privileges enabled in Oracle ILOM.
- As of Oracle ILOM 3.0.12, host console properties (`line_count`, `pause_count`, and `start_from`) are no longer persistent across all sessions. The values for these host console properties are valid for the length of the `spsh` session.

1. Log in to the Oracle ILOM SP CLI.

2. To navigate to and display the host console properties use the `cd` and `show` commands.

For example:

```
-> cd /HOST/console
/HOST/console

-> show

/HOST/console
  Targets:
    history

  Properties:
    line_count = 0
    pause_count = 0
    start_from = end

  Commands:
    cd
    show
    start
    stop
```

Note – Each time an spsh session is started, it initializes these properties to their default values: `line_count = 0`, `pause_count = 0`, `start_from = end`. The values for these properties are valid only for the length of that particular spsh session.

3. To view descriptions about the Host Control properties use the `help` command.

For example:

```
-> help escapechars
  Properties:
    escapechars : set escape chars using the console connection
    escapechars : User role required for set = a

-> help line_count
  Properties:
    line_count : total number of lines to display
    line_count : Possible values = 0-2048 where 0 means no limit
    line_count : User role required for set = c

-> help pause_count
  Properties:
    pause_count : number of lines to display before each pause
```

```
pause_count : Possible values = 0-2048 where 0 means no limit
pause_count : User role required for set = c

-> help start_from
Properties:
start_from : from which end of the available history to list
start_from : Possible values = beginning,end
start_from : User role required for set = c
```

4. To configure the Host Console properties use the set command.

For example:

- To set a value for the line_count property, type
-> **set line_count=value**
where *value* can range from 1 to 2048 lines.
- To set a value for the pause_count property, type:
-> **set pause_count=value**
where *value* can range from 1 to any valid integer or for infinite number of lines. The default is not to pause.
- To set a value for the start_from property, type:
-> **set start_from=[end|beginning]**
where *end* is the last line (most recent) in the buffer (the default), and *beginning* is the first line in the buffer.
- To set a value for escapechars, type:
-> **set escapechars=value**
where *value* is limited to two characters. The default value is #. (Hash-Period).

Note – The /SP/console escapechars property enables you to specify an escape character sequence to use when switching from a system console session back to Oracle ILOM. Changing the escape character does not take effect in a currently active console session.

▼ Start Host Console and Display Console History and Bootlog

Before You Begin

- To change the Host Console properties in Oracle ILOM, you must have the admin (a) role privileges enable.

- As of Oracle ILOM 3.0.12, host console properties (`line_count`, `pause_count`, and `start_from`) are no longer persistent across all sessions. The values for these host console properties are valid for the length of the `sps` session.

1. **Log in to the Oracle ILOM SP CLI.**

2. **Set the Host Console display properties, see “View and Configure Host Console Properties” on page 161.**

Note – As of Oracle ILOM 3.0.12, Host Console properties (`line_count`, `pause_count` and `start_from`) are no longer persistent across all sessions. The values for these properties are valid only for the length of that particular `sps` session.

3. **To start the host console, type:**

```
-> start /SP/console
```

4. **To display the Console History, type:**

```
-> show /SP/console/history
```

The Console History buffer is a circular buffer that can contain up to 1 Mbyte of information. The buffer captures all POST and boot information as well as any OS information that is controlled through the Host Console.

5. **To display the Bootlog type:**

```
-> show /SP/console/bootlog
```

The Bootlog tracks the systems’s start-up progress and logs any problems that might occur.

bootManaging TPM and LDom States on SPARC Servers (CLI)

Description	Links
Control the TPM state on a SPARC server	<ul style="list-style-type: none">• “Control TPM State on a SPARC Server (CLI)” on page 165
Manage Logical Domain (LDom) configurations on SPARC servers	<ul style="list-style-type: none">• “Managing LDom Configurations on SPARC Servers (CLI)” on page 168

Related Information

- *Oracle ILOM 3.0 Remote Redirection Consoles*, remote host management options
- *Oracle ILOM 3.0 Daily Management Web Procedures*, manage TPM and LDom states on SPARC servers

▼ Control TPM State on a SPARC Server (CLI)

Before You Begin

- The Trusted Platform Module (TPM) feature in Oracle ILOM is available for SPARC servers only.
- The SPARC server should be running a version of the Oracle Solaris Operating system that supports TPM.

For more information about configuring TPM support in Oracle Solaris, refer to the Oracle Solaris documentation or the platform documentation shipped with your server.

- You must be using Oracle ILOM 3.0.8 or a later version on the SPARC server SP.

- You need to have the Reset and Host Control (r) user account to modify the TPM settings in Oracle ILOM.

1. Log in to the Oracle ILOM SP CLI.

2. Use the `show` command to display the TPM target, properties, and commands.

For example:

```
-> show /HOST/tpm

/HOST/tpm
  Targets:

  Properties:
    activate = false
    enable = false
    forceclear = false

  Commands:
    cd
    set
    show
```

3. Use the `help` command to view details about the TPM target and properties.

For example:

```
-> help /HOST/tpm

/HOST/tpm : Host TPM (Trusted Platform Module) Knobs
  Targets:

  Properties:
    activate : TPM Activate Property. If set to TRUE, then TPM
will be activated if the 'enable' property is also set to TRUE.
    activate : Possible values = true, false
    activate : User role required for set = r
    enable : TPM Enable Property. If not enabled, then TPM
configuration changes can not be made.
    enable : Possible values = true, false
    enable : User role required for set = r

    forceclear : TPM Forceclear Property. If set to TRUE, then
TPM state will be purged on the next power on event if and only if
the 'enable' property is set to TRUE.
    forceclear : Possible values = true, false
    forceclear : User role required for set = r
```

4. Use the `set` command to specify the TPM property values.

For example:

- `set` command usage:

```
set [target] <property>=<value> [<property>=<value>]
```

- At the prompt, you would type the TPM target and one or more property values as follows:

```
-> set /host/tpm property=value
```

```
-> set /host/tpm property=value property=value
```

where *property* and *value* can be any of the following parameters specified in the following table:

Property	Values	Example
enable	Accepts true or false. Note - The default value for <code>enable</code> is <code>-false</code> .	To enable the TPM state, you would type: -> set /HOST/tpm enable=true Note - To apply the enabled TPM state on the SPARC server the next time the server powers on, you must activate it. For more details, see <code>activate</code> property.
activate	Accepts true or false. Note - The default value for <code>activate</code> is <code>-false</code> .	To enable the TPM state and activate this enabled state on the SPARC server the next time the server powers on, you would type: -> set /HOST/tpm enable=true activate=true
forceclear	Accepts true or false. Note - The default value for <code>forceclear</code> is <code>-false</code> .	To purge (disable) an enabled TPM state on the SPARC server the next time the server powers on, you would type: -> set /HOST/tpm forceclear=true Note - <code>forceclear</code> will set only to true, if property values for <code>enable</code> and <code>activate</code> are also set to true.

Managing LDom Configurations on SPARC Servers (CLI)

Description	Links	Platform Feature Support
Review the prerequisites	<ul style="list-style-type: none">• “Requirements — LDom Configuration (CLI)” on page 168	<ul style="list-style-type: none">• SPARC system server SP
View and manage Oracle ILOM settings for stored LDom configurations	<ul style="list-style-type: none">• “View Targets and Properties for Stored LDom Configurations on SPARC T3 Series Server (CLI)” on page 169• “Specify Host Power to a Stored LDom Configuration (CLI)” on page 170• “Enable or Disable the Control Domain Property Values (CLI)” on page 170	

Requirements — LDom Configuration (CLI)

In order for you to view and manage the Oracle ILOM settings for stored Logical Domain (LDom) configurations, the following requirements must be met:

- You must access Oracle ILOM on a SPARC server that has the appropriate Oracle ILOM point release firmware installed (see the following Note).

Note – Oracle ILOM 3.0.12 or later is required for you to view the LDom targets and properties from a SPARC T3 Series server. Oracle ILOM 2.0.0 or later is required for you to: (1) specify which LDom configuration is used on the host SPARC server, and (2) to manage the boot property values for the control domain from the host SPARC server.

-
- You must have the Oracle VM Server for SPARC (Logical Domains Manager) 2.0 or later software installed on your host SPARC server.
 - The host SPARC server must have saved LDom configurations. For instructions on how to create and save LDom configurations on a host SPARC server, refer to the *Logical Domains 1.3 Administration Guide*.

- The Remote Host Reset and Host Control (r) privileges must be enabled in Oracle ILOM for you to set the:
 - LDom bootmode target
 - Primary or guests domain property values for the bootmode target.

▼ View Targets and Properties for Stored LDom Configurations on SPARC T3 Series Server (CLI)

To view the CLI targets and properties for saved LDom configurations on SPARC T3 Series server, follow these steps:

1. Log in to the Oracle ILOM CLI on a SPARC T3 Series server.
2. To view the names of saved LDom host configurations, type:
3. To view the property values for the creation date of the saved LDom configuration and the number of domains configured in the saved LDom configuration, you would type:

-> **show /HOST/domain/configs**

-> **show /HOST/domain/configs/<name_of_stored_configuration>**

The following example shows a sample CLI output for viewing the property values associated with a fictitious stored LDom configuration named ONEDOMAIN.

```
-> show
/HOST/domain/configs
  Targets:
    trimmed
    ONEDOMAIN
  Properties:

  Commands:
    cd
    show
-> show ONEDOMAIN
/HOST/domain/configs/ONEDOMAIN
  Targets:
  Properties:
    date_created = 2010-08-17 17:09:34
    domains = 1

  Commands:
    cd
    show
```

Note – Oracle ILOM stores the read-only properties in non-volatile memory and updates them each time an LDom configuration in LDom Manager is updated

▼ Specify Host Power to a Stored LDom Configuration (CLI)

To specify which stored LDom configuration is used when the host server is powered-on, follow these steps:

1. **Log in to the Oracle ILOM CLI on a SPARC server.**
2. **To navigate the /Host/bootmode target use the cd command, then use the set config= command to specify the name of the stored LDom configuration.**

The following example shows a sample CLI output for setting a fictitious stored LDom configuration named ONEDOMAIN as the bootmode target.

```
-> cd /HOST/bootmode
/HOST/bootmode

-> set config=ONEDOMAIN
Set 'config' to 'ONEDOMAIN'
```

Note that changes made to the LDom configuration bootmode properties will take effect on the next host server reset or power-on.

▼ Enable or Disable the Control Domain Property Values (CLI)

To enable or disable the LDom control domain boot property values in Oracle Oracle ILOM, follow these steps:

1. **Log in to the Oracle ILOM CLI on a SPARC server.**

2. To navigate to the `/Host/domain/control` target use the `cd` command, then use the `ls` command to view the auto-boot properties for the host control domain and guest domains.

For example:

```

-> cd /HOST/domain/control
-> ls

/Host/domain/control
  Targets:

  Properties:
    auto-boot = enabled
    boot_guests = enabled

  Commands:
    cd
    reset
    set
    show

```

3. Use the `set` command to specify the following auto-boot and boot-guests property values:

Property	Set Property Value	Description
auto-boot	set auto-boot=<value>	Type the set auto-boot= command followed by one of the following property values: <ul style="list-style-type: none"> • enabled (default). Enabling the auto-boot property value will automatically reboot the control domain after the next power-on or reset. • disabled. Disabling the auto-boot property value on the control domain will prevent automatic reboots and stop the control domain at the OpenBoot ok prompt after the next power-on or reset.
boot_guests	set boot_guests=<value>	Type the set boot_guests= command followed by one of the following property values: <ul style="list-style-type: none"> • enabled (default). Enabling the boot_guests property enables the guest domain to boot after the next power-on or reset. • disabled. Disabling the boot_guests property value for the guest domains will prevent the guest domains from booting after the next power-on or reset.

4. Reset /HOST/domain/control then reset the power on the host.

For example:

-> **reset /HOST/domain/control**

-> **reset /SYS**

Changes to the `boot_guests` property will only take effect after both reset operations (`/host/domain/control` and `/SYS`) are performed.

CLI Command Reference

Syntax examples in this reference use a starting `/SP/` target, which applies to most Oracle Sun servers. If you are performing these commands from a CMM, you can interchange the starting `/SP/` target with `/CMM/` since the sub-targets are common across all platforms. If you are performing these commands from a blade server chassis, you can interchange the starting `/SP/` target with `/CH/BLn` or `CH/BLn/NodeN` depending on the blade server platform.

CLI commands described in this reference include:

- “`cd` Command” on page 173
- “`create` Command” on page 174
- “`delete` Command” on page 176
- “`dump` Command” on page 177
- “`exit` Command” on page 177
- “`help` Command” on page 178
- “`load` Command” on page 179
- “`reset` Command” on page 180
- “`set` Command” on page 181
- “`show` Command” on page 191
- “`start` Command” on page 203
- “`stop` Command” on page 204
- “`version` Command” on page 205

`cd` Command

Use the `cd` command to navigate the namespace. When you `cd` to a target location, that location then becomes the default target for all other commands. Using the `-default` option with no target returns you to the top of the namespace. Typing

`cd -default` is the equivalent of typing `cd /`. Typing just `cd` displays your current location in the namespace. Typing `help targets` displays a list of all targets in the entire namespace.

Syntax

`cd target`

Options

`[-default] [-h|help]`

Targets and Properties

Any location in the namespace.

Examples

To create a user named `emmett`, `cd` to `/SP/users`, and then execute the `create` command with `/SP/users` as the default target.

```
-> cd /SP/users
-> create emmett
```

To find your location, type `cd`.

```
-> cd
```

create Command

Use the `create` command to set up an object in the namespace. Unless you specify properties with the `create` command, they are empty.

Syntax

create [*options*] *target* [*propertyname=value*]

Options

[-h|help]

Targets, Properties, and Values

TABLE: Targets, Properties and Values for `create` Command

Valid Targets	Properties	Values	Default
<i>/SP/users/username</i>	password	<string>	(none)
	role	administrator operator alulclrlols	o
<i>/SP/services/snmp/communities/</i> <i>communityname</i>	permissions	ro rw	ro
<i>/SP/services/snmp/users/</i> <i>username</i>	authenticationprotocol	MD5	MD5
	authenticationpassword	<string>	(null string)
	permissions	ro rw	ro
	privacyprotocol	none DES AE	DES
	privacypassword	S <string>	(null string)

Example

-> **create /SP/users/susan role=administrator**

delete Command

Use the `delete` command to remove an object from the namespace. You will be prompted to confirm a `delete` command. Eliminate this prompt by using the `-script` option.

Syntax

```
delete [options] [-script] target
```

Options

```
[-h|help] [-script]
```

Targets

TABLE: Targets for `delete` Command

Valid Targets

/SP/users/username

/SP/services/snmp/communities/communityname

/SP/services/snmp/users/username

Examples

```
-> delete /SP/users/susan  
-> delete /SP/services/snmp/communities/public
```

dump Command

Use the `dump` command to transfer a file from a target to a remote location specified by the URI.

Syntax

```
dump -destination <URI> target
```

Options

```
[-destination]
```

exit Command

Use the `exit` command to end a CLI session.

Syntax

```
exit [options]
```

Options

```
[-h|help]
```

help Command

Use the `help` command to display Help information about commands and targets. Using the `-o|output terse` option displays usage information only. The `-o|output verbose` option displays usage, description, and additional information including examples of command usage. If you do not use the `-o|output` option, usage information and a brief description of the command are displayed.

Specifying *command targets* displays a complete list of valid targets for that command from the fixed targets in */SP* and */SYS*. Fixed targets are targets that cannot be created by a user.

Specifying the `legal` command target displays the copyright information and product use rights.

Syntax

```
help [options] command target
```

Options

```
[-h|help] [-o|output terse|verbose]
```

Commands

```
cd, create, delete, exit, help, load, reset, set, show, start,  
stop, version
```

Examples

```
-> help load
```

```
The load command transfers a file from a remote location specified by the URI and updates the given target.
```

```
Usage: load [-script] -source <URI> [target]
```

```
-source: Specify the location to get a file.
```

```
-> help -output verbose reset
```

```
The reset command is used to reset a target.
```

```
Usage: reset [-script] [target]
```

```
Available options for this command:
```

```
-script: Do not prompt for yes/no confirmation and act as if yes were specified.
```

load Command

Use the `load` command to transfer an image file from a source, indicated by a Uniform Resource Indicator (URI), to update the Oracle ILOM firmware. The URI can specify a protocol and credentials used for the transfer. The `load` command supports the following transfer protocols: FTP, TFTP, SFTP, SCP, HTTP, and HTTPS. If credentials are required and not specified, the command prompts you for a password. Using the `-script` option eliminates the prompt for a yes or no confirmation, and the command acts as if yes were specified.

Note – Use this command to update your Oracle ILOM firmware and BIOS.

Syntax

```
load -source URI
```

Options

```
[-h|help] [-script]
```

Example

```
-> load -source tftp://ip_address/newmainimage
```

Note – A firmware upgrade will cause the server and Oracle ILOM to be reset. You should perform a graceful shutdown of the server prior to the upgrade procedure. An upgrade takes about five minutes to complete. Oracle ILOM will enter a special mode to load new firmware. No other tasks can be performed in Oracle ILOM until the firmware upgrade is complete and Oracle ILOM is reset.

```
-> load -source tftp://ip_address/newmainimage
Are you sure you want to load the specified file (y/n)? y
File upload is complete.
Firmware image verification is complete.
Do you want to preserve the configuration (y/n)? n
Updating firmware in flash RAM:
.
Firmware update is complete.
ILOM will now be restarted with the new firmware.
```

reset Command

Use the `reset` command to reset the state of the target. You will be prompted to confirm a reset operation. Eliminate this prompt by using the `-script` option.

Note – The `reset` command does not affect the power state of hardware devices.

Syntax

```
reset [options] target
```

Options

```
[-h|help] [-script]
```

(The `-f` | *force* option is supported on SPARC-based systems.)

Targets

TABLE: Targets for `reset` Command

Valid Targets

`/SP`

`/SYS`

Examples

-> `reset /SP`

-> `reset /SYS`

set Command

Use the `set` command to specify the properties of the target.

Syntax

`set` [*options*] *target* [*propertyname=value*]

Options

`[-h|help]`

Targets, Properties, and Values

TABLE: Targets, Properties, and Values for set Command

Valid Targets	Properties	Values	Default
/HOST/tpm	enable	true false	false
	activate	true false	false
	forceclear	true false	false
/SP/alertmgmt/rules/n where <i>n</i> is 1-15	community_or_username	<string>	public
	destination	IP address hostname for SNMP traps IP address for IPMI PETS email_address for email	(none)
	destination_port	<integer>	0
	event_class_filter	" " Developer Email Internal Captive Shell Backup Restore Reset Chassis Power HMD COD Storage CPLD Restricted Shell ZMGTD Ethernet Switch Audit IPMI Fault System ActDir LdapSsl HOST SP Hardware	(none)
	event_type_filter	" " Log Connection Send Test Product Chassis Voting Command Entered Command Executed SAS2 fabric status CMM Ethernet Switch State Action Fault Repair Warning	(none)
	level	disable down critical major minor	(none)
	snmp_version	1 2c 3	3
	testrule	true	(none)
	type	email ipmipet snmptrap	(none)
	/SP/cli	timeout	<integer> where <i>integer</i> is 0 to 1440, and 0 means timeout is disabled
/SP/clock	datetime	<MMDDhhmmYYYY> where <i>MMDDhhmmYYYY</i> is the current date and time	<string>

TABLE: Targets, Properties, and Values for set Command (Continued)

Valid Targets	Properties	Values	Default
	timezone	EST PST8PDT etc	GMT
	usentpserver	enabled disabled	disabled
/SP/console	line_count	<integer> where <i>integer</i> is 0 to 2048, and 0 means no limit	0
	logging	enabled disabled	enabled
	pause_count	<integer> where <i>integer</i> is 0 to 2048, and 0 means no limit	0
	start_from	end beginning	end
/SP/services/http	port	<port> where <i>port</i> is the port number for the http service	80
	securerredirect	enabled disabled	enabled
	servicestate	enabled disabled	disabled
/SP/services/https	port	<port> where <i>port</i> is the port number for the https service	443
	servicestate	enabled disabled	disabled
	sslv2	enabled disabled	disabled
	sslv3	enabled disabled	enabled
	tlsv1	enabled disabled	enabled
	weak_ciphers	enabled disabled	disabled
/SP/services/ipmi	servicestate	enabled disabled	enabled

TABLE: Targets, Properties, and Values for set Command (Continued)

Valid Targets	Properties	Values	Default
/SP/services/kvms	custom_lock_key	esc end tab ins del home enter space break backspace pg_up pg_down scr1_lck sys_rq num_plus num_minus f1 f2 f3 f4 f5 f6 f7 f8 f9 f10 f11 f12 a-z 0-9 ! @ # \$ % ^ & * () - _ = + ~ ' [[{ }] } ; : ' " < . > /?	(none)
	custom_lock_modifiers	l_alt r_alt l_shift r_shift l_ctrl r_ctrl l_gui r_gui	(none)
	lockmode	disabled windows custom	disabled
	mousemode	absolute relative	absolute
	servicestate	enabled disabled	enabled
/SP/services/snmp	engineid	<hexadecimal> where <i>hexadecimal</i> is the snmp agent id	(none)
	port	<port> where <i>port</i> is the snmp agent port address	161
	sets	enabled disabled	disabled
	v1	enabled disabled	disabled
	v2c	enabled disabled	disabled
	v3	enabled disabled	enabled
	servicestate	enabled disabled	enabled
/SP/services/snmp/mibs	dump_uri	<URI> where <i>URI</i> can be specified using tftp, ftp, sftp, scp, http, or https	(none)
/SP/services/snmp/communities/private	permission	ro rw	rw
/SP/services/snmp/communities/public	permission	ro rw	ro

TABLE: Targets, Properties, and Values for set Command (Continued)

Valid Targets	Properties	Values	Default
/SP/services/snmp/users/username	authenticationprotocol	MD5	MD5
	authenticationpassword	<password>	(null string)
	permissions	ro rw	ro
	privacyprotocol	none DES AES	DES
	privacypassword	<password>	(null string)
/SP/services/ssh	generate_new_key_action	true	(none)
	generate_new_key_type	none rsa dsa	(none)
	restart_sshd_action	true	(none)
	state	enabled disabled	enabled
/SP/services/sso	state	enabled disabled	enabled
/SP/users/username	role	administrator operator a u c r o s	(none)
	password	<password>	(none)
/SP/clients/activedirectory	state	enabled disabled	disabled
	defaultrole	administrator operator a u c r o s	(none)
	dnslocator	enabled disabled	disabled
	expsearchmode	enabled disabled	disabled
	address	<IPaddress> or <DNSname>	(none)
	port	<port> where <i>port</i> is the TCP port of the Active Directory server, designated as an integer between 0 and 65535	0
	strictcertmode	enabled disabled	disabled
	timeout	<seconds> where seconds is 0 to 20	4
	logdetail	none high medium low trace	none
	/SP/clients/activedirectory/amingroups/n	name	<string>

where *n* is 1-5

TABLE: Targets, Properties, and Values for set Command (*Continued*)

Valid Targets	Properties	Values	Default
/SP/clients/ activedirectory/ opergroups/n where <i>n</i> is 1-5	name	<string>	(none)
/SP/clients/ activedirectory/ userdomains/n where <i>n</i> is 1-5	domain	<string>	(none)
/SP/clients/ activedirectory/ customgroups/n where <i>n</i> is 1-5	name	<string>	(none)
	roles	a u c r o s administrator operator	o
/SP/clients/ activedirectory/ alternateservers/n where <i>n</i> is 1-5	address	<IPaddress> or <DNSname>	(none)
	port	<integer>	0
/SP/clients/ activedirectory/ alternateservers/n/cert where <i>n</i> is 1-5	certstatus	<string>	certificate not present
	clear_action	true	(none)
	issuer	<string>	(none)
	load_uri	<URI> where <i>URI</i> can be specified using tftp, ftp, or scp	(none)
	serial_number	<string>	(none)
	subject	<string>	(none)
	valid_from	<string>	(none)
	valid_until	<string>	(none)
	version	<string>	(none)

TABLE: Targets, Properties, and Values for set Command (Continued)

Valid Targets	Properties	Values	Default
/SP/clients/ activedirectory/cert/	certstatus	<string>	certificate not present
	clear_action	true	(none)
	issuer	<string>	(none)
	load_uri	<URI> where <i>URI</i> can be specified using tftp, ftp, or scp	(none)
	serial_number	<string>	(none)
	subject	<string>	(none)
	valid_from	<string>	(none)
	valid_until	<string>	(none)
	version	<string>	(none)
/SP/clients/ activedirectory/ dnslocatorqueries/n where <i>n</i> is 1-5	service	<DOMAIN>	(none)
/SP/clients/dns	auto_dns	enabled disabled	disabled
	nameserver	<string>	(none)
	retries	<integer> where <i>integer</i> is 0 to 4	(none)
	searchpath	<string>	(none)
	timeout	<seconds> where <i>seconds</i> is 0 to 10	(none)
/SP/clients/ldap	binddn	<username>	(none)
	bindpw	<password>	(none)
	defaultrole	administrator operator a u c r o s	o
	address	<IPaddress>	(none)
	port	<integer>	389
	searchbase	<string>	(none)
	state	enable disabled	disabled

TABLE: Targets, Properties, and Values for set Command (Continued)

Valid Targets	Properties	Values	Default
/SP/clients/ldapssl	state	enabled disabled	disabled
	defaultrole	administrator operator a u c r o s	(none)
	address	<IPaddress> or <DNSname>	(none)
	port	<port> where <i>port</i> is the TCP port of the LDAP/SSL server, designated as an integer between 0 and 65535	0
	strictcertmode	enabled disabled	disabled
	timeout	<seconds> where <i>seconds</i> is 0 to 20	4
	logdetail	none high medium low trace	none
/SP/clients/ldapssl/optionalUserMapping	state	enabled disabled	disabled
/SP/clients/ldapssl/adingroups/n where <i>n</i> is 1-5	name	<string>	(none)
/SP/clients/ldapssl/opergroups/n where <i>n</i> is 1-5	name	<string>	(none)
/SP/clients/ldapssl/userdomains/n where <i>n</i> is 1-5	domain	<username>	(none)
/SP/clients/ldapssl/customgroups/n where <i>n</i> is 1-5	name	<string>	(none)
	roles	administrator operator a u c r o s	(none)
/SP/clients/ldapssl/alternateservers/n where <i>n</i> is 1-5	address	<IPaddress> or <DNSname>	(none)
	port	<port> where <i>port</i> is the alternate server configuration TCP port, specified as an integer between 0 and 65535	0

TABLE: Targets, Properties, and Values for set Command (Continued)

Valid Targets	Properties	Values	Default
/SP/clients/ldapssl/ alternateservers/n/cert where <i>n</i> is 1-5	certstatus	<string>	certificate not present
	clear_action	true	(none)
	issuer	<string>	(none)
	load_uri	<URI> where <i>URI</i> can be specified using tftp, ftp, or scp	(none)
	serial_number	<string>	(none)
	subject	<string>	(none)
	valid_from	<string>	(none)
	valid_until	<string>	(none)
	version	<string>	(none)
	/SP/clients/ldapssl/cert	certstatus	<string>
clear_action		true	(none)
issuer		<string>	(none)
load_uri		<URI> where <i>URI</i> can be specified using tftp, ftp, or scp	(none)
serial_number		<string>	(none)
subject		<string>	(none)
valid_from		<string>	(none)
valid_until		<string>	(none)
version		<string>	(none)
/SP/clients/ntp/server/ [1 2]		address	<IPaddress>
/SP/clients/radius	defaultrole	administrator operator a u c r o s none	operator
	address	<IPaddress> or <hostname>	(none)
	port	<port> where <i>port</i> is the RADIUS server port	1812
	secret	<sharedSecret>	(none)
	state	enable disabled	disabled

TABLE: Targets, Properties, and Values for set Command (Continued)

Valid Targets	Properties	Values	Default
/SP/clients/smtpt	address	<IPaddress> or <hostname>	(none)
	port	<port> where <i>port</i> is the SMTP server port	25
	state	enabled disabled	enabled
/SP/clients/syslog[1 2]	address	<IPaddress> or <hostname>	(none)
/SP/config	dump_uri	<URI> where <i>URI</i> can be specified using tftp, ftp, sftp, scp, http, or https	(none)
	load_uri	<URI> where <i>URI</i> can be specified using tftp, ftp, sftp, scp, http, or https	(none)
	passphrase	<passphrase>	(none)
/SP/diag/snapshot	dataset	normal normal-logonly fruid fruid-logonly full full-logonly	normal
	dump_uri	<URI> where <i>URI</i> can be specified using ftp or sftp	(none)
	encrypt_output	true false	false
/SP/network	commitpending	true	(none)
	pendingipaddress	<IPaddress>	(none)
	pendingdiscovery	dhcp static	dhcp
	pendingipgateway	<IPaddress>	(none)
	pendingipnetmask	<IPaddress>	255.255. 255.0
	state	enabled disabled	enabled
/SP/network/ipv6	state	enabled disabled	enabled
	autoconfig	stateless dhcpv6_stateless dhcpv6_stateful disabled	stateless
	pending_static_ ipaddress	<IPv6_address>	(none)
	commitpending	true	(none)
/SP/network/test	ping	<IPv4_address>	(none)
	ping6	<IPv6_address>	(none)

TABLE: Targets, Properties, and Values for set Command (Continued)

Valid Targets	Properties	Values	Default
/SP/preferences/banner	connect_message	<string>	(none)
	login_message	<string>	(none)
	login_message_ acceptance	enabled disabled	disabled
/SP/serial/external	commitpending	true	(none)
	flowcontrol	software hardware none	none
	pendingspeed	<integer from list>	9600
	speed	<integer from list>	9600
/SP/serial/host	commitpending	true	(none)
	pendingspeed	<integer from list>	9600
	speed	<integer from list>	9600
/SP/	check_physical_ presence	true false	(none)
	hostname	<string>	(none)
	reset_to_defaults	all factory none	(none)
	system_contact	<string>	(none)
	system_description	<string>	(none)
	system_identifier	<string>	(none)
	system_location	<string>	(none)

Examples

```
-> set /SP/users/susan role=administrator
-> set /SP/clients/ldap state=enabled binddn=proxyuser bindpw=ez24get
```

show Command

Use the show command to display information about targets and properties.

Using the `-display` option determines the type of information shown. If you specify `-display targets`, then all targets in the namespace below the current target are shown. If you specify `-display properties`, all property names and values for the target are shown. With this option you can specify certain property names, and only those values are shown. If you specify `-display all`, all targets in the namespace below the current target are shown, and the properties of the specified target are shown. If you do not specify a `-display` option, the `show` command acts as if `-display all` were specified.

The `-level` option controls the depth of the `show` command, and it applies to all modes of the `-display` option. Specifying `-level 1` displays the level of the namespace where the object exists. Values greater than 1 return information for the current target level in the namespace and the *<specified value>* levels below. If the argument is `-level all`, it applies to the current level in the namespace and everything below.

The `-o|output` option specifies the output and form of command output. Oracle ILOM supports only `-o table`, which displays targets and properties in tabular form.

The alias, `show components`, is a shortcut for the following CLI command:

```
-> show -o table -level all /SYS component state
```

The `show components` alias produces the same output as the previous command. Thus, it enables you to restrict the table output to a single property below each target.

Syntax

```
show [options] [-display targets|properties|all] [-level value|all] target  
[propertyname]
```

Options

```
[-d|display] [-l|level] [-o|output]
```


Targets and Properties

TABLE: Targets and Properties for show Command

Valid Targets	Properties
/HOST/tpm	activate enable forceclear
/SYS	type ipmi_name product_name product_part_number product_serial_number product_manufacturer fault_state clear_fault_action power_state
/SYS/DBP/HDD<i>n</i> where <i>n</i> is a valid HDD slot	type ipmi_name fru_name fru_manufacturer fru_version fru_serial_number controller_id disk_id capacity device_name disk_type wwn raid_status raid_ids

TABLE: Targets and Properties for show Command (*Continued*)

Valid Targets	Properties
<p>/STORAGE/raid/controller@od:00.0 where 00.0 is the ID for the controller</p>	<p>fru_manufacturer fru_model pci_vendor_id pci_device_id pci_subvendor_id pci_subdevice_id raid_levels max_disks max_raids max_hot_spares max_global_hot_spares min_stripe_size max_stripe_size</p>
<p>/STORAGE/raid/controller@od:00.0/ raid_id0 where 00.0 is the ID for the controller, and raid_id0 is the target RAID disk</p>	<p>level status disk_capacity device_name mounted</p>
<p>/STORAGE/raid/controller@od:00.0/ raid_id0/disk_id0 where 00.0 is the ID for the controller, raid_id0 is the target RAID disk, and disk_id0 is the target disk</p>	<p>fru_manufacturer fru_serial_number fru_version status capacity device_name disk_type wwn raid_ids system_drive_slot</p>

TABLE: Targets and Properties for show Command *(Continued)*

Valid Targets	Properties
/SP	check_physical_presence customer_frudata hostname reset_to_defaults system_contact system_description system_identifier system_location
/SP/alertmgmt/rules/n where <i>n</i> 1-15	community username destination destination_port event_class_filter event_type_filter level snmp_version type
/SP/cli	timeout
/SP/clients/ activedirectory	state defaultrole address logdetail port strictcertmode timeout
/SP/clients/ activedirectory/ admingroups/n where <i>n</i> is 1-5	name
/SP/clients/ activedirectory/ alternateservers/n where <i>n</i> is 1-5	address port

TABLE: Targets and Properties for show Command *(Continued)*

Valid Targets	Properties
/SP/clients/ activedirectory/ alternateservers/<i>n</i>/cert where <i>n</i> is 1-5	clear_action certstatus issuer load_uri serial_number subject valid_from valid_until version
/SP/clients/ activedirectory/cert	certstatus clear_action issuer load_uri serial_number subject valid_from valid_until version
/SP/clients/ activedirectory/ customgroups/<i>n</i> where <i>n</i> is 1-5	name roles
/SP/clients/ activedirectory/ opergroups/<i>n</i> where <i>n</i> is 1-5	name
/SP/clients/ activedirectory/ userdomains/<i>n</i> where <i>n</i> is 1-5	domain

TABLE: Targets and Properties for show Command *(Continued)*

Valid Targets	Properties
/SP/clients/dns	auto_dns nameserver searchpath
/SP/clients/ldap	binddn bindpw defaultrole address port searchbase state
/SP/clients/ldapssl	defaultrole address logdetail port state strictcertmode timeout
/SP/clients/ldapssl/ optionalUserMapping	state
/SP/clients/ ldapssl/ admingroups/n where <i>n</i> is 1-5	name
/SP/clients/ ldapssl/ alternateservers/n where <i>n</i> is 1-5	address port

TABLE: Targets and Properties for show Command *(Continued)*

Valid Targets	Properties
/SP/clients/ ldapssl/ alternateservers/n/cert where <i>n</i> is 1-5	certstatus clear_action issuer load_uri serial_number subject valid_from valid_until version
/SP/clients/ldapssl/cert	certstatus clear_action issuer load_uri serial_number subject valid_from valid_until version
/SP/clients/ ldapssl/ customgroups/n where <i>n</i> is 1-5	name roles
/SP/clients/ ldapssl/ opergroups/n where <i>n</i> is 1-5	name
/SP/clients/ ldapssl/ userdomains/n where <i>n</i> is 1-5	domain
/SP/clients/ntp/server/[1 2]	address

TABLE: Targets and Properties for show Command *(Continued)*

Valid Targets	Properties
/SP/clients/radius	address port secret state
/SP/clients/smtp	port state
/SP/clock	datetime usentpserver uptime timezone
/SP/config	dump_uri load_uri passphrase
/SP/console	line_count logging pause_count start_from
/SP/diag/snapshot	dataset dump_uri result
/SP/firmware	load_uri
/SP/logs/event	clear

TABLE: Targets and Properties for show Command *(Continued)*

Valid Targets	Properties
/SP/network	commitpending dhcp_server_ip ipaddress ipdiscovery ipgateway ipnetmask macaddress pendingipaddress pendingdiscovery pendingipgateway pendingipnetmask state
/SP/network/ipv6	state autoconfig dhcpv6_server_ duid link_local_ipaddress static_ipaddress ipgateway pending_static_ipaddress dynamic_ipaddress_1
/SP/network/test	ping ping6
/SP/powermgmt	actual_power permitted_power available_power
/SP/preferences/banner	connect_message login_message login_message_acceptance
/SP/serial/external	flowcontrol speed

TABLE: Targets and Properties for show Command *(Continued)*

Valid Targets	Properties
/SP/serial/host	commitpending pendingspeed speed
/SP/services/http	port securedirect servicestate
/SP/services/https	port servicestate
/SP/services/https/ssl	cert_status
/SP/services/https/ssl/default_cert	issuer subject valid_from valid_until
/SP/services/https/ssl/custom_cert	clear_action issuer load_uri subject valid_from valid_until
/SP/services/https/ssl/custom_key	key_present load_uri clear_action
/SP/services/ipmi	servicestate
/SP/services/kvms	mousemode servicestate
/SP/services/servicetag	passphrase servicetag_urn state

TABLE: Targets and Properties for show Command *(Continued)*

Valid Targets	Properties
/SP/services/snmp	engineid port sets v1 v2c v3 servicestate
/SP/services/snmp/communities/private	permissions
/SP/services/snmp/communities/public	permissions
/SP/services/snmp/users/username	password role
/SP/services/ssh	state
/SP/services/ssh/keys/dsa	fingerprint length privatekey publickey
/SP/services/ssh/keys/rsa	fingerprint length privatekey publickey
/SP/services/sso	state
/SP/sessions/sessionid	username starttime type mode
/SP/users/username	role password

TABLE: Targets and Properties for show Command *(Continued)*

Valid Targets	Properties
/SP/users/username/ssh/keys/1	fingerprint algorithm load_uri clear_action embedded_comment bit_length
/SP/users/username/service	service_password service_password_expires
/SP/users/username/escalation	escalation_password escalation_password_expires

Examples

```
-> show /SP/users/user1
-> show /SP/clients -level2
-> show components
```

start Command

Use the start command to turn on the target or to initiate a connection to the host console. Using the `-script` option eliminates the prompt for a yes or no confirmation and the command acts as if yes were specified.

Syntax

```
start [options] target
```

Options

[-h|help] [-script]

Targets

TABLE: Targets for start Command

Valid Targets	Description
/SYS or /CH	Starts (powers on) the system or chassis.
/SP/console	Starts an interactive session to the console stream.

Examples

-> **start /SP/console**

-> **start /SYS**

stop Command

Use the `stop` command to shut down the target or to terminate another user's connection to the host console. You will be prompted to confirm a `stop` command. Eliminate this prompt by using the `-script` option. The `-f|force` option specifies that the action will be performed immediately.

Syntax

stop [*options*] **[-script]** *target*

Options

[-f|force] [-h|help]

Targets

TABLE: Targets for `stop` Command

Valid Targets	Description
<code>/SYS</code> or <code>/CH</code>	Perform an orderly shutdown, followed by a power-off of the specified system or chassis. Use the <code>-f -force</code> option to skip the orderly shutdown and force an immediate power-off.
<code>/SP/console</code>	Terminate another user's connection to the host console.

Examples

```
-> stop /SP/console
```

```
-> stop -force /SYS
```

version Command

Use the `version` command to display Oracle ILOM version information.

Syntax

```
version
```

Options

```
[-h|help]
```

Example

```
-> version  
version SP firmware version: 3.0.0  
SP firmware build number: 4415  
SP firmware date: Mon Mar 28 10:39:46 EST 2008  
SP filesystem version: 0.1.9
```

Diagnosing IPv4 or IPv6 Oracle ILOM Connection Issues

This section provides solutions to help resolve common problems when accessing Oracle ILOM using IPv6.

For details, see:

- [“Diagnosing Oracle ILOM Connection Issues” on page 207](#)

Diagnosing Oracle ILOM Connection Issues

If you are experiencing difficulties with connecting to Oracle ILOM when using IPv6, use the information provided in the following table to help resolve common problems when accessing Oracle ILOM using IPv6.

TABLE: Common IP Connection Problems and Suggested Resolutions

IPv6 Common Connection Problem	Suggested Resolution
Unable to access the Oracle ILOM web interface using an IPv6 address.	Ensure that the IPv6 address in the URL is enclosed by brackets, for example: <code>https://[fe80::221:28ff:fe77:1402]</code>
Unable to download a file using an IPv6 address.	Ensure that the IPv6 address in the URL is enabled by brackets, for example: <code>load -source tftp://[fec0:a:8:b7:214:rfff:fe01:851d]desktop.pkg</code>

TABLE: Common IP Connection Problems and Suggested Resolutions (*Continued*)

IPv6 Common Connection Problem	Suggested Resolution
Unable to access Oracle ILOM using IPv6 from a network client.	If on a separate subnet, try the following: <ul style="list-style-type: none">• Verify that Oracle ILOM has a dynamic or static address (not just a Link-Local address).• Verify that the network client has an IPv6 address configured (not just a Link-Local address). If on the same or separate subnet, try the following <ul style="list-style-type: none">• Ensure that the setting for <code>IPv6 State</code> is enabled on the Network Settings page in the Oracle ILOM web interface or under the <code>/SP/network/ipv6</code> target in the Oracle ILOM CLI.• Run <code>ping6</code> in a restricted shell.• Run <code>traceroute</code> in a restricted shell.
Unable to access Oracle ILOM from a client within a dual-stack IPv4 and IPv6 network environment.	Ensure that the following settings are enabled: <ul style="list-style-type: none">• State – You can enable the setting for <code>State</code> on the Network Settings page in the Oracle ILOM web interface or under the <code>/SP/network</code> target in the CLI.• IPv6 State – You can enable the setting for <code>IPv6 State</code> on the Network Settings page in the Oracle ILOM web interface or under the <code>/SP/network/ipv6</code> target.
Unable to access Oracle ILOM using IPv4 from a network client.	Ensure that the setting for <code>State</code> is enabled on the Network Settings page in the Oracle ILOM web interface or under the <code>/SP/network</code> target in the Oracle ILOM CLI.

Manual Host OS Configuration Guidelines for Local Interconnect Interface

The following topic provides guidelines for manually configuring a non-routable IPv4 address for the host OS connection point on the Local Interconnect Interface.

- [“Configuring Internal USB Ethernet Device on Host OS” on page 209](#)

Configuring Internal USB Ethernet Device on Host OS

If you chose to manually configure a non-routable IPv4 address for the Oracle ILOM SP connection point on the Local Interconnect Interface, you will also need to manually configure a non-routable IPv4 address for the host OS connection point on the Local Interconnect Interface. General guidelines, per operating system, for configuring a static non-routable IPv4 address for the host OS connection point are provided in the following table. For additional information about configuring IP addresses on the host operating system, consult the vendor operating system documentation.

Note – Oracle ILOM will present the internal USB Ethernet device installed on your server as an USB Ethernet interface to the host operating system.

TABLE: General Guidelines for Configuring Internal USB Ethernet Device on Host OS

Operating System	General Guidelines
Windows Server 2008	<p>After Windows discovers the internal USB Ethernet device, you will most likely be prompted to identify a device driver for this device. Since no driver is actually required, identifying the <code>.inf</code> file should satisfy the communication stack for the internal USB Ethernet device. The <code>.inf</code> file is available from the Oracle Hardware Management Pack 2.1.0 software distribution. You can download this management pack software from the Oracle software product download page www.oracle.com as well as extract the <code>.inf</code> file from the Management Pack software. For additional information about extracting the <code>.inf</code> file from the Management Pack software, refer to the <i>Oracle Hardware Management Pack User's Guide</i>.</p> <p>After applying the <code>.inf</code> file from the Oracle Hardware Management Pack 2.1.0 software distribution, you can then proceed to configure a static IP address for the host OS connection point of the Local Interconnect Interface by using the Microsoft Windows Network configuration option located in the Control Panel (Start --> Control Panel).</p> <p>For more information about configuring an IPv4 address in Windows 2008, see the Microsoft Windows Operating System documentation or the Microsoft Tech Net site (http://technet.microsoft.com).</p>
Linux	<p>Most supported Linux operating system installations on an Oracle Sun platform server include the installation of the device driver for an internal Ethernet device.</p> <p>Typically, the internal USB Ethernet device is automatically discovered by the Linux operating system. The internal Ethernet device typically appears as <code>usb0</code>. However, the name for the internal Ethernet device might be different based on the distribution of the Linux operating system.</p> <p>The following instructions demonstrate how to configure a static IP address corresponding to <code>usb0</code>, which typically represents an internal USB Ethernet device found on the server:</p> <pre data-bbox="351 1043 958 1229">\>lsusb usb0 \> ifconfig usb0 169.254.182.77 \> ifconfig usb0 netmask 255.255.255.0 \> ifconfig usb0 broadcast 169.254.182.255 \> ifconfig usb0 \> ip addr show usb0</pre> <p>Note - Rather than performing the typical <code>ifconfig</code> steps, it is possible to script the configuration of the interface. However, the exact network scripts vary among the Linux distributions. Typically, the operating version of Linux will have examples to model the network scripts.</p> <p>For more information about how to configure an IP address for device using a Linux operation system, refer to the Linux operating system documentation.</p>

TABLE: General Guidelines for Configuring Internal USB Ethernet Device on Host OS (*Continued*)

Operating System	General Guidelines
Oracle Solaris	<p data-bbox="421 227 1313 401">Most Oracle Solaris Operating System installations on an Oracle Sun platform server include the installation of the device driver for an internal USB Ethernet device. If this driver was not supported, you can extract this driver from the Oracle Hardware Management Pack 2.1.0 or later software. For information about how to extract the Solaris-specific OS driver for the Ethernet interface, refer to the <i>Oracle Server Hardware Management Pack User's Guide</i>.</p> <p data-bbox="421 406 1313 522">Typically, the internal USB Ethernet device is automatically discovered by the Solaris Operating System. The internal Ethernet device typically appears as <code>usbecm0</code>. However, the name for the internal Ethernet device might be different based on the distribution of the Oracle Solaris Operating System.</p> <p data-bbox="421 527 1313 583">After the Oracle Solaris Operating System recognizes the local USB Ethernet device, the IP interface for the USB Ethernet device needs to be configured.</p> <p data-bbox="421 588 1313 670">The following instructions demonstrate how to configure a static IP address corresponding to <code>usbecm0</code>, which typically represents an internal USB Ethernet device found on the server.</p> <ul data-bbox="421 677 1313 1197" style="list-style-type: none"><li data-bbox="421 677 1313 772">• Type the following command to <code>plumb</code> the IP interface or <code>unplumb</code> the IP interface: <pre data-bbox="445 713 778 772">ifconfig usbecm0 plumb ifconfig usbecm0 unplumb</pre><li data-bbox="421 777 1313 873">• Type the following commands to set the address information: <pre data-bbox="445 814 1106 873">ifconfig usbecm0 netmask 255.255.255.0 broadcast 169.254.182.255 169.254.182.77</pre><li data-bbox="421 878 1313 939">• To set up the interface, type: <pre data-bbox="445 914 725 939">ifconfig usbecm0 up</pre><li data-bbox="421 944 1313 1005">• To bring the interface down, type: <pre data-bbox="445 980 753 1005">ifconfig usbecm0 down</pre><li data-bbox="421 1010 1313 1071">• To show the active interfaces, type: <pre data-bbox="445 1046 601 1071">ifconfig -a</pre><li data-bbox="421 1076 1313 1197">• To test connectivity, ping the Oracle Solaris host or the SP internal USB Ethernet device. <pre data-bbox="445 1138 868 1197">ping <IPv4 address of Solaris Host> ping <IPv4 address of SP-Ethernet USB></pre> <p data-bbox="421 1203 1313 1315">Note - Rather than performing the typical <code>ifconfig</code> steps, it is possible to script the configuration of the interface. However, the exact network scripts can vary among the Oracle Solaris distributions. Typically, the operating version will have examples to model the network scripts.</p> <p data-bbox="421 1321 1313 1407">For more information about how to configure a static IP address for a device using the Oracle Solaris Operating System, refer to the Oracle Solaris Operating System documentation.</p>

Note – If the internal USB Ethernet device driver was not included in your operating system installation, you can obtain the device driver for the Ethernet device from the Oracle Hardware Management Pack 2.1.0 or later software. For more information about extracting this file from the Management Pack, refer to the *Oracle Server Hardware Management Pack User's Guide*.

Index

A

- Active Directory
 - certstatus, 65
 - removing certificate, 66
 - strictcertmode, 64
 - troubleshooting, 74
 - viewing and configuring settings, 67
- Admin (a) role, 59
- alert rules
 - CLI commands, 122
 - configuring, 118
 - disabling, 120
- alert tests
 - generating, 121
- alerts
 - CLI commands for managing alerts, 122
 - email notification
 - configuring the SMTP client, 123
 - generating email notification, 123

B

- backup and restore, permissions (aucro), 59

C

- certificate authentication, 64
- certificate state, 66
- CLI command syntax, 11
 - cd command, 173
 - create command, 174
 - delete command, 176
 - dump command, 177
 - exit command, 177
 - help command, 178
 - load command, 179
 - reset command, 180
 - set command, 181
 - show command, 191

- start command, 203
- stop command, 204
- version command, 205

CLI command types

- alert management commands, 14
- clock settings commands, 15
- general commands, 12
- host system commands, 16
- network and serial port commands, 14
- SNMP commands, 15
- system management access commands, 15
- user commands, 13

CLI commands

- alert rules, 122
- executing combined, 12
- executing individually, 12
- reference for, 173

CLI target types

- /CH, 5
- /CMM, 5
- /HOST, 5
- /SP, 5
- /SYS, 5

clock settings, 99

- command properties
 - for ILOM 2.x, 17
 - for ILOM 3.0, 17

command strings, 12

command-line interface (CLI)

- command syntax, 11
- filtering output options for commands, 17
- options for, 7
- overview, 2
- target tree, 7, 10

communication settings

- configuring, 27

component information, 89

- components
 - enabling and disabling, 92
 - managing, 89
 - monitoring, 95, 107
 - removing, 91
 - returning to service, 91
- Console (c) role, 59

D

- defaultuser account
 - using for password recovery, 23
- Distributed Management Task Force Command-Line Protocol (DMTF CLP), 2
- DMTF Command Line Protocol Commands, 6
- Domain Name Service (DNS)
 - locator service, 73
 - targets, properties, and values for, 40
- DSA key
 - viewing, 47
- Dual stack network settings, 32

E

- event logs
 - contents of, 101
 - filtering output, 100
 - viewing and clearing, 100

H

- HTTP or HTTPS settings
 - enabling, 42
 - targets, properties, and values for, 43

I

- ILOM 2.x
 - properties compared to ILOM 3.0, 17
 - updating 2.x scripts, 17
- IP address assignment
 - editing using the CLI, ?? to 32
 - for remote syslog receiver, 102

L

- LDAP server
 - configuring, 76
- LDAP/SSL, 78
 - certstatus, 79
 - removing a certificate, 80
 - strictcertmode, 78

- troubleshooting, 85
- viewing and configuring settings, 80

- Lightweight Directory Access Protocol (LDAP), 76
 - configuring, 77
 - overview, 76
- log in
 - first time, 21
 - prerequisites for, 20
- log out, 22

N

- network settings, 28
 - DNS, 40
 - editing IP address, 31
 - host name, 39
 - pending and active properties, 29
 - serial port, 41
 - system identifier, 39
 - targets, properties, and values for, 30
 - viewing and configuring, 30

P

- password
 - changing, 57
 - lost password recovery, 23
- permissions, user, 58
- physical presence
 - proving, 23
- power consumption
 - monitoring, 132
 - monitoring actual power, 134
 - monitoring available power, 136
 - monitoring individual power supply, 135
 - monitoring permitted power, 137
 - monitoring total system power, 133
- power consumption management
 - monitoring power
 - show command, 137
- power policy
 - configuring, 140
- properties
 - ILOM 3.0 versus ILOM 2.x, 17

R

- RADIUS
 - configuration prerequisites, 87
 - configuring, 87

- Read Only (o) role, 59
- recover lost password, 23
- remote host
 - managing, 127
 - managing power states, 157
- remote power control
 - CLI commands, 157
- remote syslog receiver, 102
- Reset and Host Control (r) role, 59
- roles, user, 58
- RSA key
 - viewing, 47
- S**
- Secure Shell (SSH)
 - enabling or disabling, 45
 - establishing remote connection, 45
 - generating new key, 48
 - settings for, 45
 - viewing current key, 46
- sensor readings, 96
- sensors
 - viewing readings, 96
- serial port output
 - switch using ILOM CLI, 44
- serial port settings
 - pending and active properties, 41
 - targets, properties, and values for, 42
 - viewing and configuring, 41
- Serverices (s) role, 59
- Single Sign On, 56
- SMTP client
 - configuring, 123
- SNMP Trap alert, 118
- SPARC servers
 - managing TPM and LDom states, 165
- ssh command (Solaris)
 - connecting to a SP, 45
- SSH connection, 45
 - enabling and disabling, 45
 - key encryption using the CLI, 46
 - new key, 48
 - restarting, 48
- SSH key, 62
 - adding, 62
 - deleting, 63

- Storage Redirection CLI
 - initial setup, 127
- strictcertmode, 64
- system alerts
 - commands for managing, 122
 - configuration prerequisites, 118
 - configuring, 118
 - configuring SMTP client, 123
 - deleting, 120
 - generating, 121
- system components
 - viewing and managing, 89
- system indicators
 - configuring, 98
 - viewing, 98
- T**
- target tree, 10
- target types, 5
- U**
- user accounts
 - adding, 57
 - configuring, 56
 - deleting, 59
 - password, 57
 - roles, 58
 - viewing individual session, 61
 - viewing individual user account, 60
 - viewing list of user sessions, 61
- User Management (u) role, 59

