

Oracle ILOM Getting Started Guide Firmware Release 5.1.x



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Contents

1 Using This Documentation

Product Documentation Library	1-1
Feedback	1-1

2 Oracle ILOM – Quick Start

Factory Default Settings	2-1
Mandatory Setup Tasks	2-2
Connect to Oracle ILOM	2-3
Log In to Oracle ILOM	2-4
Add New Users to Oracle ILOM	2-5
Optional Setup Tasks	2-8
Set Identification Labels for a Managed Device	2-8
Modify Default Network Connectivity Settings	2-9
Install Software Using Remote KVMS	2-11
Daily Management Tasks	2-12
Check System Status and View Open Problems	2-13
Manually Clear Fault Messages	2-14
Manage Log Entries (system, event, audit, session)	2-16
View Power Consumption Metrics for a Managed Device	2-18
View Power Allocations for a Managed Device	2-19
Set SPARC Power Management Policy	2-20
View Power Consumption Statistics and History	2-21
Routine Maintenance Tasks	2-22
Collect System Information for a Managed Device	2-22
Locate a Managed Device Using the Locator LED	2-23
Modify the Power State on a Managed Device	2-24
Reset Oracle ILOM on a Managed Device	2-25
Update Firmware on a Managed Device	2-25
Log In to the Host OS From a Remote Serial Console	2-26
Initial Setup: Frequently Asked Questions	2-27

1

Using This Documentation

- **Overview** – This guide describes how to get started with the Oracle ILOM firmware so that you can remotely manage your Oracle servers.
- **Audience** – Technicians, system administrators, and authorized Oracle service providers.
- **Required knowledge** – Users should have experience managing server hardware.

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Product Documentation Library

Documentation and resources for this product and related products are available at [Systems Management and Diagnostics Documentation](#).

Feedback

Provide feedback about this documentation at [Oracle Feedback](#).

2

Oracle ILOM – Quick Start

Description	Links
Factory Defaults Mandatory Setup Optional Setup Daily Management Routine Maintenance FAQs	<ul style="list-style-type: none"> • Factory Default Settings • Connect to Oracle ILOM • Log In to Oracle ILOM • Add New Users to Oracle ILOM • Set Identification Labels for a Managed Device • Modify Default Network Connectivity Settings • Install Software Using Remote KVMS • Check System Status and View Open Problems • Manually Clear Fault Messages • Manage Log Entries (system, event, audit, session) • View Power Consumption Metrics for a Managed Device • View Power Allocations for a Managed Device • Set SPARC Power Management Policy • View Power Consumption Statistics and History • Collect System Information for a Managed Device • Locate a Managed Device Using the Locator LED • Modify the Power State on a Managed Device • Reset Oracle ILOM on a Managed Device • Update Firmware on a Managed Device • Log In to the Host OS From a Remote Serial Console • Initial Setup FAQs

Factory Default Settings

Property	Default Value(s)	For details, see
Alert notifications	SMTP client: enabled Alerts: 15 configurable alerts Power consumption notification: disabled	Configuring Alert Notifications
Connectivity: DNS	Auto DNS via DHCP enabled	Modifying Default Connectivity Configuration Properties
Connectivity: Network	IPv4: DHCP enabled; DHCP Client ID: none IPv6: stateless auto-configuration enabled	Modifying Default Connectivity Configuration Properties

Property	Default Value(s)	For details, see
Connectivity: Serial Port	Owner: SP Baud rate: 9600 baud Flow control: none	Modifying Default Connectivity Configuration Properties
Date and Time	Timezone: GMT NTP server: disabled Clock: uninitialized	Setting ILOM Clock Properties
Management Access	Secure shell server: enabled Web and CLI sessions: 15 minute timeout Web HTTP redirection port: 80 Web HTTPS server: enabled, port 443 Web Server: TLS v1.2 SSL certificate: default certificate provided IPMI service state: enabled; IPMI sessions: disabled. SNMP state: SNMPv3 enabled; port 161 Banner state: disabled	<ul style="list-style-type: none"> SNMP Overview Server Management Using IPMI
Storage Redirection CLI socket port on management station	Port: 2121	Using Remote KVMS Consoles for Host Server Redirection
User credentials: Local	Root account login: root Root account password: changeme Maximum number of local user accounts: 10* (*some SPARC systems support up to 60 local user accounts) SSH key state: enabled	<ul style="list-style-type: none"> Setting Up and Maintaining User Accounts Add New Users to Oracle ILOM
User credentials: Remote	LDAP state: disabled LDAP/SSL state: disabled RADIUS state: disabled Active Directory state: disabled	Setting Up and Maintaining User Accounts

Mandatory Setup Tasks

- [Connect to Oracle ILOM](#)
- [Log In to Oracle ILOM](#)
- [Add New Users to Oracle ILOM](#)

Note:

The procedures in this section provide a quick overview of the mandatory setup tasks required to access Oracle ILOM. If further assistance is needed to perform these tasks, refer to the guides listed in the Related Information section.

Connect to Oracle ILOM

Establish a physical management connection to Oracle ILOM by performing one of the following procedures:

- Local serial management connection – Procedure 1
- Network management connection – Procedure 2

 **Note:**

To maintain the most reliable and secure environment for Oracle ILOM, the local serial port, or the dedicated network management port, or the standard data network port on the server must always be connected to an internal trusted network or dedicated secure management and private network.

1. Local Serial Management Connection Procedure

- a. Attach a serial cable between a console (workstation or terminal) and the SER MGT port on the server.

This physical connection provides your initial communication with the service processor (SP). You must set the terminal device communication properties to these values: 9600 baud, 8 bit, no parity, 1 stop bit.

 **Note:**

If the transmit and receive signals are reversed (crossed over) for DTE to DTE communications, a null modem configuration is required. Use the adapter cable that is supplied with your system to achieve a null modem configuration.

 **Note:**

For further information about the physical location of the SER MGT port on the Oracle Server, see the Oracle documentation provided for your server.

- b. To create a connection between the terminal device and the Oracle ILOM SP, press Enter on the terminal device.

2. Network Management Connection Procedure

- a. Attach an Ethernet cable between the network switch and the NET MGT port on the server.

Oracle ILOM automatically learns the network address of the server SP from both the IPv4 DHCP server and the IPv6 router on your network. If you need to modify these network settings, see [Modify Default Network Connectivity Settings](#).

- b. Determine the IP address assigned to the server SP.

To determine the IP address assigned, establish a local serial management (SER MGT) connection to the ILOM SP, log in to ILOM, and then view the network

properties under the `/network` and `/networkipv6` targets using the `show` command.

It is also possible to determine the IP address from the DHCP server on your network.

Related Information

- [Initial Setup FAQs](#)
- [Log In to Oracle ILOM](#)
- [Modify Default Network Connectivity Settings](#)
- [Setting Up a Management Connection to Oracle ILOM and Logging In](#)
- [Topics on connecting cables and applying power in the Oracle Server platform installation guide.](#)
- [Topics on configuring x86 BIOS settings in the Oracle Server platform administration guide.](#)

Log In to Oracle ILOM

To log in to Oracle ILOM, perform one of the following procedures based on the physical management connection established to Oracle ILOM:

- [Local serial management connection – Procedure 1](#)
- [Web browser-based network management connection – Procedure 2](#)
- [Command-line SSH network management connection – Procedure 3](#)

Note:

To enable first-time login and access to Oracle ILOM, a default Administrator account and its password are provided with the system. To build a secure environment, you must change the default password (`changeme`) for the default Administrator account (`root`) after your initial login to Oracle ILOM. If this default Administrator account has since been changed, contact your system administrator for an Oracle ILOM user account with Administrator privileges.

1. [Local Serial Management Connection – Login Procedure](#)
 - At the Oracle ILOM login prompt (`->`), type `root` for the account and `changeme` for the password.
2. [Web Browser-Based Network Management Connection – Login Procedure](#)
 - a. Type `http://ILOM_SP_ipaddress` into the web browser and press Enter. The Oracle ILOM Login dialog appears.
 - b. Log in to the Oracle ILOM web interface using the `root` account and the password, `changeme`. The Oracle ILOM web interface appears.
3. [Command-Line SSH Network Management Connection – Login Procedure](#)
 - a. To establish an SSH session to the Oracle ILOM CLI, open a terminal window.

- b. To log in to Oracle ILOM using the default root account, type:

```
$ ssh root@ ILOM_SP_ipaddress
```

Oracle ILOM prompts you for the `root` password.
- c. At the Password prompt, type `changeme`.
The Oracle ILOM CLI prompt appears (`->`).

Related Information

- Security Action: Change Default root Account Password
- [Connect to Oracle ILOM](#)
- [Add New Users to Oracle ILOM](#)
- Logging In to Oracle ILOM Server SP

Add New Users to Oracle ILOM

Before You Begin

- On most server SPs, you can create up to 10 local user accounts. On some SPARC SPs, you can create up to 60 local user accounts.

 **Note:**

To determine the maximum number of user accounts supported on the SP, click the [More details...](#) link in the ILOM Administration → User Management → User Account page in the web interface.

 **Note:**

To locate Oracle ILOM instructions for configuring remote user authentication directory services (such as Active Directory, LDAP, or RADIUS), see the Related Information section following this procedure.

- You can use the CLI and web interface to manage the server SP local user accounts. The following procedure identifies how to perform this task using the web interface and the CLI.
- The following procedure assumes you are logged in to Oracle ILOM as a root user. For root user login instructions, see [Log In to Oracle ILOM](#).

To add new local user accounts to Oracle ILOM, perform one of the following procedures:

- Add new local user accounts – Web Procedure 1
 - Add new local user accounts – CLI Procedure 2
1. Add New Local User Accounts – Web Procedure
 - a. In the Oracle ILOM web interface, click ILOM Administration > User Management > User Accounts.
 - b. In the Users table, click Add.
The Add User dialog box appears.

- c.** Specify a name and new password for the user account, and then select a user role profile.

Oracle ILOM enables you to select one of three user role profiles from the web interface: Administrator, Operator, or Advanced. For a description of each user role profile, see [Oracle ILOM User Profile and Role Descriptions](#).
 - d.** To add the new user account properties, click Save.
- 2.** Add New Local User Accounts – CLI Procedure
- a.** At the Oracle ILOM CLI prompt, type either:

```
—> create /SP/users/  
username  
password=  
password
```

For example:

```
->  
create /SP/users/user5
```

```
Creating  
user...
```

```
Enter  
new password: *****
```

```
Enter  
new password again: *****
```

```
Created  
/SP/users/user5
```

- b.** To assign a role to the user account, type either:

```
—> set /SP/users/  
username  
role=aucr
```

For example:

To grant all read and write privileges to user5 on the server SP, type:

```
->  
set /SP/users/user5 role=aucro
```

```
Set  
'role' to 'aucro'
```

 **Note:**

`aucro` is equivalent to the setting the Administrator (administrator) profile.

For more information about the user roles and privileges supported in Oracle ILOM, see the following table.

Example 2-1 Oracle ILOM User Profile and Role Descriptions

Assignable Profiles and Roles	Privileges Granted
Administrator (administrator)	The Administrator profile grants privileges for the following predefined user roles: <ul style="list-style-type: none"> • Admin (a) • User Management (u) • Console (c) • Reset and Host Control (r) • Read-Only (o)
Operator (operator)	The Operator profile grants privileges for the following predefined user roles: <ul style="list-style-type: none"> • Console (c) • Reset and Host Control (r) • Read-Only (o)
Advanced Roles (a u c r o s)	The Advanced Roles profile is configurable from the web interface only. Use this profile to grant privileges for any of the following predefined user roles: <ul style="list-style-type: none"> • Admin (a) • User Management (u) • Console (c) • Reset and Host Control (r) • Services (s) • Read-Only (o)
admin (a)	The Admin (a) role, when enabled, grants read and write permissions to all Oracle ILOM system management functions with the exception of the functions that would require the Admin (a) role to have these additional user roles enabled: User Management (u), Reset and Host Control (r), Console (c), and Services (s).
user (u)	The User Management (u) role, when enabled, grants read and write permissions to all Oracle ILOM user management authentication features.
console (c)	The Console (c) role, when enabled, grants read and write permissions to perform these remote console management functions: remote console lock options, SP console history log options, launch and use the remote console feature, and launch and use the Oracle ILOM Storage Redirection CLI.

Assignable Profiles and Roles	Privileges Granted
reset and host control (r)	The Reset and Host Control (r) role, when enabled, grants read and write permissions to perform these host management functions: host boot device control, run and configure diagnostics utilities, reset SP, sub-component service actions, fault management actions, SPARC TPM management actions, and SNMP MIB download operation.
read-only (o)	The Read-Only (o) user role grants read-only permissions to view the state of all Oracle ILOM configuration properties and to change the account password properties assigned to the individual user account.
service (s)	The Services (s) user role, when enabled, grants read and write permissions to assist Oracle service engineers if on-site service is required.
administrator (aucro)	A combination of all these user roles (aucro), when enabled, grant read and write permissions to perform backup and restore configuration functions in Oracle ILOM.

Related Information

- [Managing User Credentials](#)

Optional Setup Tasks

- [Set Identification Labels for a Managed Device](#)
- [Modify Default Network Connectivity Settings](#)
- [Install Software Using Remote KVMS](#)

Note:

The procedures in this section provide a quick overview of the optional setup tasks that you might need to perform when setting up an Oracle server. If further assistance is needed to perform these tasks, refer to the guides listed in the Related Information section.

Set Identification Labels for a Managed Device

Before You Begin

- You need Admin (a) role privileges in Oracle ILOM to set the system identification labels for a managed device.

You can assign identification labels for the host name, system identifier, system contact, and the system location by using the Oracle ILOM server SP CLI or web interface.

- Set identification label – Web Procedure 1
- Set identification label – CLI Procedure 2
- 1. Set Identification Labels – Web Procedure
 - a. In the SP \web interface, click ILOM Administration > Identification.
The Identification Information page appears providing fields to specify the:
 - **Hostname** – Type a host name for the managed device. The host name can contain up to 60 characters. It must begin with a letter and it must contain only alphanumeric, hyphen, and underscore characters.
 - **System Identifier** – Type system identifier for the managed device. The system identifier can contain up to 60 characters using any standard keyboard keys except quotation marks.
 - **System Contact** – Type a system contact for the managed device. The system contact can consist of a text string using any standard keyboard keys except quotation marks.
 - **System Location** – Type a system location for the managed device. The system location can consist of a text string using any standard keyboard keys except quotation marks.
 - **Physical Presence Check** – When this option is enabled, you must prove physical presence at the system to recover the ILOM password or to perform other security-related actions. Refer to your platform documentation for instructions on how to prove physical presence. If your platform documentation does not mention physical presence, contact your Oracle service representative.
 - b. Click Save for your settings to take affect.
- 2. CLI Procedure – Set Identification Labels
 - a. To view the identification labels assigned to a server SP, type:

```
-> show /SP
```
 - b. To set identification labels for a server SP, type:
 - ```
-> set /SP hostname= text_string
```
    - ```
-> set /SP system_identifier= text_string
```
 - ```
-> set /SP system_contact= text_string
```
    - ```
-> set /SP system_location= text_string
```
 - ```
-> set /SP check_physical_presence= true|false
```

*where:*

true|false appears, type either: true to enable, or false to disable

#### Related Information

- Assigning System Identification Information

## Modify Default Network Connectivity Settings

### Before You Begin

- This procedure assumes that you have an established local or network management connection to the Oracle ILOM server SP. For instructions on how to establish a physical local or network connection to Oracle ILOM, see [Connect to Oracle ILOM](#).
- Oracle ILOM is shipped with IPv4 DHCP and IPv6 Stateless default network settings.

When the network property for IPv4 is set to DHCP, the SP automatically configures the DHCP IP address using the DHCP advertisement messages received from the DHCP IPv4 server.

When the auto-configuration property for IPv6 is set to Stateless, the SP automatically configures its dynamic address using the IPv6 router advertisement messages. In addition, the SP always generates a non-routable Link-Local IPv6 address, which allows it to be reachable from its local subnet.

- You need Admin (a) role privileges to modify network settings in Oracle ILOM.
- You can modify the server SP network settings in Oracle ILOM using the CLI or web interface.

To modify default network settings on the server SP, perform one of the following:

- Modify server SP default network settings – Web Procedure 1
  - Modify server SP default network settings – CLI Procedure 2
1. Modify Default Server SP Network Settings – Web Procedure
    - a. Click ILOM Administration > Connectivity > Network.
    - b. To change the default IPv4 network options, perform one of the following:
      - **To change the default IPv4 DHCP Client ID property value** (`None`), select `sysid` in the DHCP Client ID list box.
      - When `sysid` is specified as the DHCP Client ID, the DHCP client (ILOM SP) uses the unique system identification label (if configured) to retrieve the DHCP address from the DHCP server. When `None` is specified as the DHCP Client ID, the DHCP client (ILOM SP) uses the system MAC address to retrieve the DHCP address.
      - **To assign a static IPv4 address**, click to enable the Static IP radio button, and specify the static IPv4 address, subnet mask, and gateway address.
    - c. To change the IPv6 network options, perform one or both of the following:
      - **Autoconfig options**: Select or clear the check box associated with the IPv6 autoconfig option.
      - **Static IP Address**: In the Static IP Address text box, type the following input parameters to specify the IPv6 address and subnet mask address:  
**Static IP Address**: In the Static IP Address text box, type the following input parameters to specify the IPv6 address and subnet mask address:  
For example: `fec0:a:8:b7:214:4fff:feca:5f7e/64`
    - d. Click Save to apply the changes.
  2. Modify Default Server SP Network Settings – CLI Procedure
    - a. To change the default IPv4 `dhcp_clientid=none` property and set the value to `sysid`, type:

```
->set /SP/network dhcp_clientid=sysid
```

When `sysid` is specified as the DHCP Client ID, the DHCP client (ILOM SP) uses the unique system identification label (if configured) to retrieve the DHCP address from the DHCP server. When `none` is specified as the DHCP Client ID, the DHCP client (ILOM SP) uses the system MAC address to retrieve the DHCP address.

- b. To change the default IPv4 `dhcp` property and set property values for a static IPv4 address, type:

```
-> set /SP/network pendingipdiscovery=static
```

```
-> set /SP/network pendingipaddress=<IPv4_address>
```

```
-> set /SP/network pendingipgateway= <gateway_address>
```

```
-> set /SP/network pendingipnetmask= <netmask_address>
```

- c. To change the default IPv6 `autoconfig=stateless` property, navigate to the `/network/ipv6` target and perform one or both of the following:

- To change the default `autoconfig=stateless` property value, type: `-> set autoconfig=<property value>`

where `<property value>` can equal one of the following: `stateless`, `stateless_only`, `dhcpv6_stateless`, `dhcpv6_stateful`, or `disable`.

where `<property value>` can equal one of the following: `stateless`, `stateless_only`, `dhcpv6_stateless`, `dhcpv6_stateful`, or `disable`.

- d. To save all pending static IPv4 or IPv6 property changes, navigate to the `/network` target and type:

```
-> set commitpending=true
```

#### Related Information

- [Initial Setup FAQs](#)
- [Set Identification Labels for a Managed Device](#)
- [Modifying Default Connectivity Configuration Properties](#)
- [Configuring SNMP Settings in Oracle ILOM](#)

## Install Software Using Remote KVMS

### Note:

SPARC M8 series servers do not support Oracle ILOM Remote System Plus Console or KVMS configuration properties. SPARC M8 series servers support the Oracle ILOM System Remote VNC Console. For further details, see *Connecting to the Oracle ILOM Remote System VNC Console* in *Oracle ILOM 5.1 Administrator's Guide*

#### Before You Begin

- The Oracle ILOM Remote System Console (Plus), available from the SP web interface, provides remote redirection for the following devices: keyboard, video, mouse, and storage.



As an alternative method for redirecting storage devices in Oracle ILOM, you can use the Oracle ILOM Storage Redirection CLI. To locate instructions on how to use this feature, refer the Related Information section following this procedure.

- You need the Console (c) role privileges to operate the Oracle ILOM Remote System Console (Plus).
- Java 7 update 131 or later must be installed. TLS 1.1 and 1.2 must be enabled in the Advanced Settings of the Java Control Panel.

To launch the Oracle ILOM graphical remote console from the SP web interface:

1. Verify that the default KVMS settings provided in Oracle ILOM match your desktop environment:
  - a. In the web interface navigation pane, click Remote Control > KVMS.
  - b. In the KVMS Settings page, ensure that the video redirection state is enabled, and then verify that the appropriate mouse mode option (absolute or relative) is enabled.

For best performance, absolute mode is typically selected for Oracle Solaris-based operating systems, and relative mode is selected for Linux-based operating systems.

**Tip** – To toggle the keyboard or mouse input between the managed server and the local desktop, press: **Alt+m** (for mouse) or **Alt+k** (for keyboard).

2. For Windows Edge web browser users, register the 32-bit JDK file on your local system before launching the Oracle ILOM Remote System Console (Plus) feature.
  - a. In the Windows Explorer window, click Tools > Folder Options, and then click the Files Types tab.
  - b. Select the JNLP file, browse to its location, and then click OK.
3. To launch the Oracle ILOM Remote System Console (Plus), click Remote Control > Redirection > Launch Remote Console.

Related Information

- Using Remote KVMS Consoles for Host Server Redirection
- [Log In to the Host OS From a Remote Serial Console](#)
- Connecting to the Oracle ILOM Remote System VNC Console
- Oracle ILOM Remote KVMS Consoles Supported

## Daily Management Tasks

- [Check System Status and View Open Problems](#)
- [Manually Clear Fault Messages](#)
- [Manage Log Entries \(system, event, audit, session\)](#)
- [View Power Consumption Metrics for a Managed Device](#)
- [View Power Allocations for a Managed Device](#)
- [Set SPARC Power Management Policy](#)
- [View Power Consumption Statistics and History](#)

 **Note:**

The procedures in this section provide a quick overview of some of the daily management tasks that you might want perform from Oracle ILOM after your system is set up. If further assistance is needed to perform these tasks, refer to the guides listed in the Related Information section.

## Check System Status and View Open Problems

To monitor the state of the system and view open problems, you can use the Oracle ILOM CLI or web interface.

- Check system status and view open problems – Web Procedure 1
- Check system status and view open problems – CLI Procedure 2
- 1. Check System Status and View Open Problems – Web Procedure
  - a. To check the system status from the SP web interface, click System Information > Summary.  
Review the sub-system status messages appearing in the Status table.
  - b. To view all open problems, click System Information > Open Problems.  
If open problems exist on the system, details describing the problems appear in the Open Problems table.  
When applicable, click the URL link in the message to view further details about the problem, as well as suggested corrective actions for the system administrator.

 **Note:**

Oracle ILOM automatically clears the messages in the Open Problems table upon detecting the replacement or repair of a server component or field-replaceable unit (FRU).

2. Check System Status and View Open Problems – CLI Procedure
  - a. To check the system status from the /SP CLI target, type:  

```
-> show /System
```

  
Under the Properties, verify the health details.
  - b. To view a tabular output of reported sub-system problems, type:  

```
-> show /System/Open_Problems
```

  
If open problems exist on the system, details describing the problems appear in the Open Problems tabular output.  
When applicable, refer to the URL appearing in the open problem message to view further details about the problem, as well as suggested corrective actions for the system administrator.

Related Information

- [Manually Clear Fault Messages](#)

- Troubleshooting Oracle ILOM Managed Devices

## Manually Clear Fault Messages

### Before You Begin

- A *faulted state* indicates that the component is present but is unusable or degraded because one or more problems have been diagnosed by the Oracle ILOM Fault Manager. The component has been disabled to prevent further damage to the system.
- The Oracle ILOM Fault Manager auto clears fault messages in the Open Problems table for replaced or repaired SPARC server components, x86 server components.
- You must have Admin (a) role privileges to perform this procedure.

To launch the Oracle ILOM Fault Management shell and manually clear fault messages appearing in the Open Problems table:

 **Note:**

Alternatively, on some Oracle servers, you can use the legacy Oracle ILOM 3.0 CLI `/SYS` target to clear fault messages. For instructions, refer to the Related Information section following this procedure.

1. Contact Oracle Service to gain permission to use the Fault Management shell.

The Oracle ILOM Fault Management shell helps Oracle Services personnel to diagnose system problems. Customers should not run commands in the Fault Management shell unless requested to do so by Oracle Services.

2. To launch the Fault Management shell from the SP CLI, type the following:

```
start /SP/faultmgmt/shell
```

The Fault Management shell command prompt (`faultmgmtsp>`) appears.

 **Note:**

After you start the Fault Management shell and until you exit the Fault Management shell, you can issue only commands that are specific to the Fault Management shell. To view the supported Fault Management shell commands type: `help`.

3. To administer the fault states from the Fault Management shell prompt, type:

```
fmadm <sub-command>
```

`fmadm` is a fault management configuration tool that enables you to view and modify the fault states maintained by the Oracle ILOM Fault Manager.

 **Note:**

To view a list of faulted components from the fault management configuration tool, type `fmadm faulty`.

4. To manually clear a message for a faulted sub-system component, issue one of the following sub-commands:

 **Note:**

Replace `<FRU|CRU>` with the faulted component name. Replace `<UUID>` with the assigned Universal Unique Identifier. For syntax examples, see the examples following the sub-command table.

| Sub-commands                          | Description                                                                                                                                                                                                                                                                         |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>acquit &lt;FRU CRU&gt;</code>   | Notify the Oracle ILOM Fault Manager that the specified faulted component is not to be considered suspect in any fault events that have been detected. The <code>fmadm acquit</code> command should be used only at the direction of a documented Oracle hardware repair procedure. |
| <code>acquit &lt;UUID&gt;</code>      | Notify the Oracle ILOM Fault Manager that the faulted event identified by the <code>uuid</code> resource can be safely ignored. The <code>fmadm acquit</code> command should be used only at the direction of a documented Oracle hardware repair procedure.                        |
| <code>replaced &lt;FRU CRU&gt;</code> | Notify the Oracle ILOM Fault Manager that the specified faulted field-replaceable unit or customer-replaceable unit has been replaced. This command should be used in those cases where the Oracle ILOM Fault Manager is unable to detect the replacement.                          |
| <code>repaired &lt;FRU CRU&gt;</code> | Notify the Oracle ILOM Fault Manager that the specified field-replaceable unit or customer-replaceable unit has been repaired. The <code>fmadm repaired</code> command should be used in those cases where the Oracle ILOM Fault Manager is unable to detect the repaired FRU.      |

**Sub-command Syntax Examples:**

- `fmadm repaired /SYS/MB/FM0`
- `fmadm repaired /SYS/PS1`
- `fmadm replaced /SYS/MB/FM0`
- `fmadm replaced /SYS/PS1`

 **Note:**

If you clear the message for a faulty component prior to completing the corrective service action, the Oracle ILOM Fault Manager rediagnoses the fault and redisplay the fault message in the Oracle ILOM Open Problems table.

5. To exit the Fault Management shell, type:

```
exit
```

 **Note:**

To issue standard Oracle ILOM CLI commands, you must first exit the Fault Management shell.

#### Related Information

- Oracle ILOM CLI Namespace Targets
- [Check System Status and View Open Problems](#)
- Oracle server platform service manual, see component types and service classification topics.

## Manage Log Entries (system, event, audit, session)

### Before You Begin

- The top-level *System Log* presents a subset of relevant operational Event Log entries in a more simplified manner. Specifically this log reports subsystem level diagnostic events pertaining to system inventory actions and component health status. These events can include power on and off, FRU insert and removal, as well as status events, such as service required, warning, or OK.
- The *Event Log* tracks informational, warning, or error messages about a managed device such as the addition or removal of a component or the failure of a component. The properties of the events recorded in the log can include: the severity of the event, the event provider (class), and the date and time the event was logged.
- The *Audit Log* and *Session Log* tracks all interface-related user actions such as, user logins, logouts, configuration changes, and password changes. The user interfaces monitored for user actions include the Oracle ILOM web interface, CLI, Fault Management shell (captive shell), and Restricted shell, as well as the API, SNMP, and IPMI client interfaces.

 **Note:**

As of Oracle ILOM firmware version 5.1.0, user session login and logout events for all Oracle ILOM user interfaces (web, CLI, and API ) have been moved from the audit log to the session log.

 **Note:**

User login and logout events captured in the audit log prior to Oracle ILOM 5.1.0 will continue to remain in the audit log.

- You need Admin (a) role privileges to clear log entries in Oracle ILOM.

 **Note:**

Oracle ILOM uses UTC/GMT time zones, by default, when capturing timestamps for log entries.

To manage Oracle ILOM log entries, perform one of the following procedures.

- Manage Oracle ILOM log entries – Web Procedure 1
  - Manage Oracle ILOM log entries – CLI Procedure 2
1. Manage Oracle ILOM log entries – Web Procedure
    - a. Perform one of the following:
      - To view the system log entries in the SP web interface, click ILOM System Information > System Log.
      - To view the event or audit log entries in the SP web interface, click ILOM Administration > Logs, then click Event or Audit or Session.
    - b. To filter the event types shown or to control the display properties for rows and pages, use the controls at the top of the log table.

For further information about filtering log properties, click the More Info link appearing on the log page.
    - c. To clear all log entries shown in the table, click Clear Log.

A confirmation dialog appears. In the confirmation dialog, click OK to clear the entries.
  2. Manage Oracle ILOM log entries – CLI Procedure
    - a. To list log entries from the SP CLI, perform one of the following.
      - For the system log, type,:

```
show /System/Logs/list
```
      - For the event log, type:

```
show /SP/Logs/event/list
```
      - For the audit log, type:

```
show /SP/Logs/audit/list
```
      - For the session log, type:

```
show /SP/Logs/session/list
```

To scroll the list, press any key except the q key.
    - b. To filter the log output, use the show command, and specify a value for one or more of the filter properties: Class, Type, Severity

**Examples:**

- Use one filter property, for example, Class:  

```
show /System/Logs/list Class== value
```

or

```
show /SP/logs/ event|audit /list Class== value
```
- Use two filter properties, for example, Class and Type:  

```
show /System/Logs/list Class==value Type== value
```

or

```
show /SP/logs/ event|audit /list Class== value Type== value
```
- Use all filter properties (Class, Type, and Severity):  

```
show /System/Logs/list Class==value Type==value
Severity==value
```

or

```
show /SP/logs/event|audit/list Class==value
Type==value Severity==value
```

- c. To clear all log entries shown, use the `clear=true` command.

For example:

```
set /System/Logs/clear=true
```

or

```
set /SP/logs/ event|audit clear=true
```

where *event|audit* appears, type either `event` or `audit`.

When prompted, type `y` to confirm the action or `n` to cancel the action.

**Related Information**

- [Managing Oracle ILOM Log Entries](#)
- [Configuring Syslog for Event Logging](#)
- [Setting ILOM Clock Properties](#)
- [Viewing the Oracle ILOM Event Log](#)

## View Power Consumption Metrics for a Managed Device

To monitor the power wattage metrics for a managed device from the CLI or web interface, follow one of these procedures:

- [Monitor power consumption – Web Procedure 1](#)
- [Monitor power consumption – CLI Procedure 2](#)

**Before You Begin**

- The *actual power* consumption metric identifies the input power wattage that the managed device is currently consuming. The *peak permitted power* consumption metric identifies the maximum power wattage the managed device can consume.

- The *target limit* power consumption metric, available for Oracle's SPARC servers only when enabled, identifies a user-defined power wattage or percentage limit that the device can consume.
- To generate a power consumption event notification for a managed device, or to enable power limiting on a SPARC server, see the Related Information section following these instructions.

#### 1. Monitor Power Consumption – Web Procedure

To view the power consumption metrics from the SP web interface, click Power Management > Consumption.

A power consumption wattage value, for the managed device, appears for the Actual Power and Peak Permitted Power properties.

A power consumption wattage or a percentage value for the Target Limit, if previously enabled, appears in addition to the other power consumption metrics when the managed device is a SPARC server from Oracle.

#### Note:

The ability to monitor power consumption varies depending on the implementation of this feature on the server. Refer to the server administration guide or Oracle ILOM supplement for information about server-specific Oracle ILOM behavior for power management.

#### 2. Monitor Power Consumption – CLI Procedure

To view the power consumption metrics from the SP CLI, perform the following:

For the SP CLI, type: `show /SP/powermgmt actual_power`

`show /SP/powermgmt permitted_power`

If the managed device is a SPARC server and power limiting is enabled, type:

`show /SP/powermgmt target_limit`

#### Related Information

- Setting Power Consumption Alert Notifications
- Setting SP Advanced Power Capping Policy to Enforce Power Limit
- Power Consumption Terminology and Properties

## View Power Allocations for a Managed Device

### Before You Begin

- The power allocation plan in Oracle ILOM depicts the power allocation requirements for a managed device. For instance:
  - **System Power Specification** – The System Power Specification table identifies the power wattage allocated for the power consumption properties set on the managed device.
  - **Per Component Power Map** – The Component Power Map table, available for Oracle rackmounted servers, identifies the power wattage allocated for each



component on the managed device. It also identifies the power cap limit set for a component, or whether a power cap limit can be set for a component.

- You can view the power allocations for a managed device from the web interface, CLI, or SNMP interface. To locate instructions on how to perform this task from an SNMP client, see the Related Information section that follows these instructions.

To view the power allocations for a managed device from the web interface or the CLI, perform one of these procedures.

- View power allocations – Web Procedure 1
  - View power allocations – CLI Procedure 2
1. View Power Allocations – Web Procedure
    - a. In the Oracle ILOM SP web interface, click Power Management > Allocations.
    - b. In the Power Allocation Plan page, view the power allocation requirements shown for the managed device.
  2. View Power Allocations – CLI Procedure
    - a. To view the total sum of power allocated to a managed device, perform the following:

From a server SP, type:

```
show /SP/powermgmt/budget
```

- b. To view the power wattage allocated to a component (fans, CPUs, and so forth) on a managed device, perform the following:

From a server SP, type:

```
show /SP/powermgmt/powerconf/ component_type / component_name
```

where the *component\_type* is the name of the component category, the *component\_name* is the name of the component.

#### Related Information

- View the Power Allocation Plan for a Managed Device
- Power Consumption Terminology and Properties

## Set SPARC Power Management Policy

### Before You Begin

- The *disabled* power policy enables the SPARC server to consume all available power permitted and to operate at full speed.
- The *performance* power policy enables unused and idle components in the system to operate at a slower speed or to go into a sleep state, resulting in power savings with little impact to performance.
- The *elastic* power policy enables the SPARC server to adapt to the current power requirements of the components.

For example, when the elastic power policy is enabled, Oracle ILOM keeps relative power usage at 70 percent at all times (even if the server workload fluctuates) by moving server components in or out of a slower speed or a sleep state.

- You need Administrator (a) role privileges in Oracle ILOM to modify the power policy settings for a SPARC server.
- You can manage the power policy for a SPARC server from the web interface, CLI, or SNMP interface. To locate instructions on how to perform these tasks from an SNMP client, see the Related Information section that follows these instructions.

To set the power policy on a SPARC server from the CLI or web interface, follow one of these procedures:

- Set the SPARC power policy – Web Procedure 1
  - Set the SPARC power policy – CLI Procedure 2
1. Modify the SPARC Power Policy – Web Procedure
    - a. To view the set power policy property from the SPARC server SP web interface, click Power Management > Settings.  
The Power Management Page appears.
    - b. To modify the property value set for power policy on the SPARC managed device, select one of the following options: Performance, Elastic, or Disabled.
    - c. Click Save to save the Power Policy setting.
  2. Modify the SPARC Power Policy – CLI Procedure
    - a. To view the set power policy property from the SPARC server SP CLI, type:  

```
-> show /SP/powermgmt policy
```
    - b. To modify the property value set for power policy on the SPARC server, type:  

```
-> set /SP/powermgmt policy=performance|elastic
```

  
*where the values for *performance|elastic* appear, type either *performance*, *elastic* or *disabled*.*  
When prompted, type: **y** to confirm the action or **n** to cancel the action.

#### Related Information

- Setting System Management Power Source Policies and Device Monitoring
- Power Consumption Terminology and Properties

## View Power Consumption Statistics and History

### Before You Begin

- The *power statistics* in Oracle ILOM enables you to view the power usage on a managed device over the last 15-, 30-, and 60-second intervals. It also identifies the date and time for the peak power wattage usage on the managed device.
- The *power history* in Oracle ILOM enables you to view the minimum, average, and maximum power usage on a managed device for the last hour or 14 days. It also identifies the date and time for the peak power wattage usage on the managed device.
- The power consumption statistics and history data in Oracle ILOM are viewable from the server SP web interface. They are not viewable from the server SP CLI.

To view the power consumption statistics and history for a managed device from the web interface, perform the following:

- [View Power Statistics and History – Web Interface](#)

To view the power consumption statistic from the SP web interface, click Power Management > Statistics.

The power usage statistics appear in 15-, 30-, and 60-second intervals for the managed device.

 **Note:**

The power consumption and history data in Oracle ILOM are not viewable from the server SP CLI.

#### Related Information

- [Analyzing Power Usage Statistics](#)

## Routine Maintenance Tasks

- [Collect System Information for a Managed Device](#)
- [Locate a Managed Device Using the Locator LED](#)
- [Modify the Power State on a Managed Device](#)
- [Reset Oracle ILOM on a Managed Device](#)
- [Update Firmware on a Managed Device](#)
- [Log In to the Host OS From a Remote Serial Console](#)

## Collect System Information for a Managed Device

To gather system information for a managed device (such as the part number, serial number, system status, or firmware version), you can use the CLI or web interface.

- [Collect system information for managed device – Web Procedure 1](#)
  - [Collect system information for managed device – CLI Procedure 2](#)
1. [Collect System Information – Web Procedure](#)
    - a. In the SP web interface, click System > Summary.  
Summary page appears.
    - b. In the General Information table, locate and record the property values for Part Number, Serial Number, and Firmware Version.
    - c. At the top of the Status table, locate and record the status state shown for Overall Status and the value shown for Total Problem Count.
  2. [Collect System Information — CLI Procedure](#)
    - To view the health state, health details, part number, serial number, or firmware version for a managed device, type:

```
show /System
```

 **Note:**

Alternatively, on some Oracle servers, you can use the legacy Oracle ILOM 3.0 CLI `/SYS` target to view the health status, part number, serial number and firmware version.

**Related Information**

- [Check System Status and View Open Problems](#)
- [Manually Clear Fault Messages](#)
- [Manage Log Entries \(system, event, audit, session\)](#)

## Locate a Managed Device Using the Locator LED

**Before You Begin**

- You need User Management (u) role privileges to modify the Locator Indicator settings in Oracle ILOM.
- The Locator LED on a managed device is typically located on both the front and back panel of the device.

To locate an Oracle server among many servers in a data center, you can illuminate the Locator LED on a managed device from the Oracle ILOM CLI or web interface.

- [Modify locator indicator state – Web Procedure 1](#)
  - [Modify locator indicator state – CLI Procedure 2](#)
1. **Modify Locator Indicator State – Web Procedure**
    - a. In the SP web interface, click **System Information > Summary**.  
The Summary page appears.
    - b. To turn on or off the Locator LED on a managed device, click the **Locator Indicator** button in the **Actions** panel.  
A message appears prompting you to confirm the action.
    - c. To confirm the action, click **Yes to proceed**, or click **No to cancel**.  
Oracle ILOM updates the state of the Locator Indicator property in the **Actions** panel.
  2. **Modify Locator Indicator State – CLI Procedure**
    - To illuminate the Locator LED from a server SP, type:  

```
-> set /System/LOCATE value=fast_blink
```

Type `y` to confirm the action or `n` to cancel the action.
    - To disable the Locator LED from a server SP, type:  

```
-> set /System/LOCATE value=off
```

Type `y` to confirm the action or `n` to cancel the action.

**Related Information**

- [Troubleshooting Oracle ILOM Managed Devices](#)

## Modify the Power State on a Managed Device

### Before You Begin

- You need Admin (a) role privileges to modify the power state on a managed device.

To modify the power state on a server SP, you can use the Oracle ILOM CLI or web interface.

- Modify managed device power state – Web Procedure 1.
  - Modify managed device power state – CLI Procedure 2.
1. Modify Managed Device Power State – Web Procedure
    - a. In the SP web interface, click Host Management -> Power Control.  
Power Control page appears.
    - b. To set the power state on a managed device, select one of the following options:
      - **Reset** – This SP option power-cycles the managed server, while keeping power applied to system components (such as disk drives and so on).
      - **Graceful Reset** – This SPARC SP specific option gracefully shuts down the host OS prior to power-cycling the managed SPARC server.
      - **Immediate Power Off** – This option immediately powers off the managed device.
      - **Graceful Shutdown and Power Off** – This option gracefully powers down the OS prior to powering off the managed device.
      - **Power On** (default setting) – This option applies full power to the managed device.
      - **Power Cycle** – This option powers off the managed device, then applies full power to the managed device.

2. Modify Managed Device Power State – CLI Procedure

To set the power state on a managed device from the SP CLI, perform the appropriate action:

- **Reset** – To power-cycle the managed x86 server, while keeping power applied to system components (such as disk drives and so on) type:

```
reset /System
```

To power-cycle a managed SPARC server, type:

```
reset -force /System
```

- **Graceful Reset (SPARC SP only)** – To gracefully shut down the host operating system prior to power-cycling a SPARC server, type:

```
reset /System
```

- **Immediate Power Off** – To immediately power off a managed server, type:

```
stop -force /System
```

- **Graceful Shutdown and Power Off** – To shut down the OS gracefully prior to powering off a managed server, type:

```
stop /System
```

- **Power On** (default setting) – To apply full power to a managed server, type:

```
start /System
```

#### Related Information

- [Setting SP Power Limit Properties](#)

## Reset Oracle ILOM on a Managed Device

### Before You Begin

- You need Reset and Host Control (r) privileges to reset Oracle ILOM on the server SP.
- Resetting Oracle ILOM on a managed device does not have any affect on the operating system.
- Resetting Oracle ILOM on a server SP disconnects the current Oracle ILOM session(s) and renders the management connection unmanageable until the reset process completes.

You can reset the Oracle ILOM SP using the CLI or web interface.

- [Reset Oracle ILOM SP - Web Procedure 1](#)
- [Reset Oracle ILOM SP - CLI Procedure 2](#)
- 1. [Reset Oracle ILOM SP — Web Procedure](#)

To reset Oracle ILOM from the server SP web interface, click System Information > Maintenance > Reset SP, and then click the Reset button.

- 2. [Reset Oracle ILOM SP — CLI Procedure](#)

To reset the Oracle ILOM from the server SP CLI, type the following:

```
reset /SP
```

#### Related Information

- [Reset Power to Service Processor](#)

## Update Firmware on a Managed Device

### Before You Begin

- If required by your platform, shut down the host operating system prior to updating the firmware image on the server SP.
- You need Admin (a) role privileges to update the firmware on an Oracle server SP.
- You can initiate the firmware update process from the web interface, CLI, or Web Service REST API.

The procedures in this section describe how to initiate the firmware update process from the web interface and CLI. To locate instructions on how to perform this task using the Oracle ILOM Web Service REST API, see the [Updating Oracle ILOM Firmware](#).

- The firmware update process takes several minutes to complete. During this time, do not perform other Oracle ILOM tasks. When the firmware update is complete, the system reboots.

To initiate the firmware update process from the SP CLI or web interface:

1. Determine the current firmware version installed on the server SP.
  - For the web interface, click System Information > Summary, and view the property value for the System Firmware Version in the General Information table.
  - For the CLI, at the command prompt, type: `version`

For information about the numbering scheme used to identify a firmware version, refer to Oracle ILOM Firmware Version Numbering Scheme.

2. Open a new web browser tab or window and navigate to the following site to download the Oracle ILOM firmware image.

#### [My Oracle Support](#)

For detailed instructions on downloading software updates from the My Oracle Support web site, refer to the System Firmware Downloads Using MOS.

#### Note:

Updating the system firmware image on a managed device to a prior firmware release is not recommended. However, if an earlier firmware release is required, Oracle ILOM will support the firmware update process to any prior firmware release that is available from the download site.

3. Place the firmware image on a server supporting one of the following protocols: TFTP, FTP, HTTP, HTTPS.
  - For a web interface firmware update, copy the image to the system on which the Oracle ILOM web browser is running.
  - For a CLI firmware update, copy the image to a server that is accessible from your network.
4. To update the Oracle ILOM firmware image from the SP web interface, click ILOM Administration > Maintenance > Firmware Upgrade, and then click Enter Upgrade Mode.

For detailed instructions about using the firmware update dialogs, refer to Updating Oracle ILOM Firmware.

5. To update the Oracle ILOM firmware image from the Oracle ILOM server SP CLI, type:

```
-> load -source supported_protocol://server_ip/path_to_firmware_image/
filename.xxx
```

For detailed instructions about using the CLI firmware update prompts, refer to Updating Oracle ILOM Firmware.

6. Verify that the appropriate firmware version was installed after the system reboots.

#### Related Information

- Update the Server SP Firmware Image

## Log In to the Host OS From a Remote Serial Console

### Before You Begin

- You need console (c) privileges to launch a remote serial console from the Oracle ILOM CLI. In addition, you also need user credentials to access the operating system on the host server.
- The power state on the host server must be powered on.

To log in to the host server operating system (OS) from the Oracle ILOM SP CLI:

1. Type:

```
start /host/console
```

A message appears prompting you to specify user credentials.

2. Type the required user credentials to access the host server OS.

You are now logged into the host server OS through your remote serial console.

 **Note:**

To issue standard Oracle ILOM CLI commands, you must first exit the remote serial console.

3. To exit the remote serial console, press these keys ESC and (.

Related Information

- [Install Software Using Remote KVMS](#)
- [Modify the Power State on a Managed Device](#)
- [Using Remote KVMS Consoles for Host Server Redirection](#)

## Initial Setup: Frequently Asked Questions

- **Does the Oracle ILOM service processor (SP) boot up automatically?**  
The Oracle ILOM service processor boots automatically when a power cable is connected to your Oracle server. For information about how to connect a power cable to your server, refer to the hardware installation documentation shipped with your Oracle server.
- **Where can I locate documentation for connecting a serial console or terminal to a managed device?**  
Refer to the Oracle server hardware installation guide.
- **Is a root account provided with Oracle ILOM?**  
Oracle ILOM is shipped from the factory with a preconfigured root account. You should use the preconfigured root account for initial login and initial setup of user account(s).  
To prevent unauthorized access to the managed device, change the preconfigured root account (login: `root` password: `changeme`) on each service processor (SP).
- **What format does Oracle ILOM accept for IPv4 and IPv6 network addresses?**  
For example:
  - IPv4 format: 10.8.183.106
  - IPv6 format: fec0:a:8:b7:214:4fff:5eca:5f7e/64
- **Are factory default settings provided with Oracle ILOM?**  
Factory default settings are provided for most Oracle ILOM system management features. You can use these default settings, or you can customize them to meet your



needs. For a list of factory default settings shipped with Oracle ILOM, see [Factory Default Settings](#)

- **Which Oracle ILOM user interface should I use?**

Most all Oracle ILOM features and functions are accessible from both the web interface and command-line interface (CLI). A sub-set of Oracle ILOM features and functions are also available from the SNMP and IPMI interfaces, as well as the Oracle ILOM Web Service REST API. For more information about features supported by Oracle ILOM SNMP and IPMI interfaces, refer to the For information about Oracle ILOM REST API, see .

- **I am not able to establish a network management connection to Oracle ILOM.**

If you are experiencing difficulties with connecting to Oracle ILOM, see the following suggested solutions for resolving connection issues:

- Verify that a physical Ethernet connection between your network and the NET MGT port on your Oracle server is established.
- For a local (non-network) connection to Oracle ILOM, ensure that the IPv4 state is enabled, or both the IPv4 and IPv6 states are enabled for dual-stack network environments.
- Use a command-line network tool, like Ping, to verify connectivity to the network.
- For IPv6 management connections, ensure that the IPv6 address in the URL is enclosed by brackets.  
For example:

- \* Web interface URL format:

- `https://[fe80::221:28ff:fe77:1402]`

- \* CLI download file URL format:

- `-> load -source tftp://[fec0:a:8:b7:214:rfff:fe01:851d]desktop.pkg`

- **If I prematurely deleted the root account, how can I recreate it?**

You can recover the Oracle ILOM root account on the server SP by resetting the SP to factory defaults. In the web interface, click ILOM Administration > Configuration Management > Reset Defaults.

**Important:** Resetting the defaults to factory, removes all log files and reverts all configuration properties to default values.

For an alternative method to recover the Oracle ILOM root account, contact Oracle Service.

- **What are the latest features available with Oracle ILOM?**

See Updates to Oracle ILOM 5.1.0 Firmware.