Oracle Integrated Lights Out Manager (ILOM) 3.0

CMM Administration for Sun Blade 6000 and Sun Blade 6048 Modular Systems

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Contents

Using This Documentation

This administration guide provides Oracle ILOM 3.0 instructions for managing the chassis components in a Sun Blade 6000 or a Sun Blade 6048 Modular System Chassis. System management is provided through the Sun Blade Chassis Monitoring Modules (CMM), which is referred to in this guide as the Oracle ILOM CMM.

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

This preface contains the following topics:

Documentation and Feedback

You can download the Oracle ILOM 3.0 Documentation Collection at:
http://www.oracle.com/pls/topic/lookup?ctx=E19860-01&id=homepage

Application	Title	Format
Online Documentation Set	*Oracle Integrated Lights Out Manager (ILOM) 3.0 HTML Documentation Collection*	HTML
Quick Start	*Oracle Integrated Lights Out Manager (ILOM) 3.0 Quick Start Guide*	PDF
Remote KVMS	*Oracle Integrated Lights Out Manager (ILOM) 3.0 Remote Redirection Consoles — CLI and Web Guide*	PDF
Daily Management Features	*Oracle Integrated Lights Out Manager (ILOM) 3.0 Daily Management — Concepts Guide*	PDF
Daily Management Web Procedures	*Oracle Integrated Lights Out Manager (ILOM) 3.0 Daily Management — Web Procedures Guide*	PDF
Daily Management CLI Procedures	*Oracle Integrated Lights Out Manager (ILOM) 3.0 Daily Management — CLI Procedures Guide*	PDF
Protocol Management	*Oracle Integrated Lights Out Manager (ILOM) 3.0 Protocol Management — SNMP, IPMI, CIM, WS-MAN Guide*	PDF
CMM Administration	*Oracle Integrated Lights Out Manager (ILOM) 3.0 CMM Administration Guide for Sun Blade 6000 and 6048 Modular Systems*	PDF
Maintenance and Diagnostics	*Oracle Integrated Lights Out Manager (ILOM) 3.0 Maintenance and Diagnostics — CLI and Web Guide*	PDF
Late Breaking Information	*Oracle Integrated Lights Out Manager (ILOM) 3.0 Feature Updates and Release Notes*	PDF

You can provide feedback on this documentation at:
http://www.oraclesurveys.com/se.ashx?s=25113745587BE578

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 and Updates tab.**
4. **In the Patches Search box, select Product or Family (Advanced Search).**
5. **In the Product? Is field, type a full or partial product name, for example Sun Fire X4470, until a list of matches appears, and then select the product of interest.**
6. **In the Release? Is list box, click the Down arrow.**
7. **In the window that appears, click the triangle (>) by the product folder icon to display the choices, and then select the release of interest.**
8. **In the Patches Search box, click Search.**

   A list of product downloads (listed as patches) appears.
9. **Select the patch name of interest, for example Patch 10266805 for the ILOM and BIOS portion of the Sun Fire X4470 SW 1.1 release.**
10. **In the right pane that appears, click Download.**

Oracle ILOM 3.0 Version Numbers

Oracle ILOM 3.0 has implemented a new version numbering scheme to help you identify which version of Oracle ILOM you are running on your system. The 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 of Oracle ILOM

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

Tip – To identify the Oracle ILOM firmware version installed on your Sun server or CMM, click System Information --> Versions in the web interface, or type `version` in the command-line interface.

Documentation, Support, and Training

These web sites provide additional resources:

- Documentation (`http://www.oracle.com/technetwork/indexes/documentation/index.html`)
- Support (`https://support.oracle.com`)
- Training (`https://education.oracle.com`)

Oracle ILOM CMM Overview

Description	Links
Introduction	• "About the Modular System Chassis" on page 1
CMM functional overview	• "Oracle ILOM CMM Function Overview" on page 2
Oracle ILOM versions	• "Oracle ILOM Versions" on page 2
Oracle ILOM CMM documentation	• "Oracle ILOM CMM Documentation" on page 3
Topics covered in this guide.	• "About This Document" on page 3

Related Information

- *Oracle ILOM 3.0 Daily Management Concepts*, user account management
- *Oracle ILOM 3.0 Daily Management Web Procedures*, managing user accounts
- *Oracle ILOM 3.0 Daily Management CLI Procedures*, managing user accounts
- *Oracle ILOM 3.0 Protocol Management Reference*, managing user accounts

About the Modular System Chassis

The Sun Blade 6000 Modular System chassis holds up to 10 blades and the Sun Blade 6048 Modular System holds up to 48 blades. Supported blades include Sun Blade server modules and storage modules.

Each server module has its own Oracle ILOM service processor (SP) which is separate from the chassis monitoring module (CMM) Oracle ILOM . The Oracle ILOM CMM manages the Sun Blade 6000 and 6048 Modular System chassis. It provides management of chassis components, and a method of accessing the service processors in individual server modules.

Users interact with the Oracle ILOM CMM through a command-line interface (CLI) or web interface.

Oracle ILOM CMM Function Overview

Oracle ILOM on the CMM offers a tiered management architecture that enables system management of individual components or aggregated management of components at the chassis level.

A summary of the management functions include:

- Implementation of an IPMI satellite controller, making the chassis environmental sensors visible to the server module's BMC functions
- Direct environmental and inventory management using CLI, web, SNMP, and IPMI interfaces
- Firmware management of CMM, network express module (NEM), and server module SPs
- Pass-through management of server modules and HTTP links along with command-line interface (CLI) SSH contexts
- Chassis power control
- Access to the following components:
  - Chassis
  - Power supplies
  - Fans
  - Network express modules (NEMs)
  - Server module SPs
- Assignment of storage devices from SAS-2 capable storage modules to SAS-2 capable server blades in the chassis, using the Sun Blade Zone Manager. This is only available for the Sun Blade 6000 chassis.

Oracle ILOM Versions

The Oracle ILOM information in this document refers to 3.x.x versions of Oracle ILOM (Oracle ILOM 3.0.3 and later).

For information on Oracle ILOM 2.x, refer to the following documentation:

Oracle ILOM 2.0 Documentation Set:
http://docs.oracle.com/cd/E19720-01/index.html

Oracle ILOM CMM Documentation

The following documentation provides information on the functionality and use of the Oracle ILOM CMM :

- Oracle Integrated Lights Out Manager (ILOM) 3.0 Documentation Library: Comprehensive documentation on features and use of Oracle ILOM 3.0
- Oracle Integrated Lights Out Manager (ILOM) 3.0 CMM Administration for Sun Blade 6000 and Sun Blade 6048 Modular Systems (this document): Provides information on Oracle ILOM functionality that is specific to the Oracle ILOM CMM .
- *Oracle Integrated Lights Out Manager (ILOM) 3.0 Supplement for Sun Blade 6000 and Sun Blade 6048 Modular Systems*: Supplementary information specific to the Oracle ILOM 3.x version of the Oracle ILOM CMM .

Oracle Integrated Lights Out Manager (ILOM) 3.0 Documentation Collection is available at:

`http://www.oracle.com/pls/topic/lookup?ctx=E19860-01&id=homepage`

Sun Blade 6000 and 6048 modular system documentation is available at:

Sun Blade 6000:
`http://download.oracle.com/docs/cd/E19938-01/index.html`

Sun Blade 6048:
`http://download.oracle.com/docs/cd/E19926-01/index.html`

About This Document

This document covers administration tasks specific to the Sun Blade 6000 and 6048 Modular Systems. The topics covered are shown in the following table.

Description	Chapter
Perform initial set up of the Oracle ILOM CMM	• "Oracle ILOM CMM Initial Setup" on page 5
Update chassis and component firmware	• "Firmware Update Procedures" on page 25
Use Oracle ILOM power management features	• "CMM Power Management" on page 47
View or modify the storage zoning configuration	• "Zone Management Using Oracle ILOM Sun Blade Zone Manager" on page 62

Oracle ILOM CMM Initial Setup

Description	Links
Connect to the CMM and configure CMM IP address	• "Connecting to the Oracle ILOM CMM" on page 6
Log in to the Oracle ILOM CMM for the first time	• "Log In to the Oracle ILOM CMM Using a Network Connection" on page 17
Activating CMM Ethernet ports	• "Activating CMM Ethernet Ports" on page 19
Change the CLI blade prompt	• "Changing the Blade SP CLI Prompt" on page 22

Related Information

- *Oracle ILOM 3.0 Quick Start*, mandatory set up tasks
- *Oracle ILOM 3.0 Daily Management Concepts*, user account management
- *Oracle ILOM 3.0 Concepts Daily Management CLI Procedures*, managing user accounts
- *Oracle ILOM 3.0 Daily Management Web Procedures*, managing user accounts
- *Oracle ILOM 3.0 Protocol Management Reference*, managing user accounts

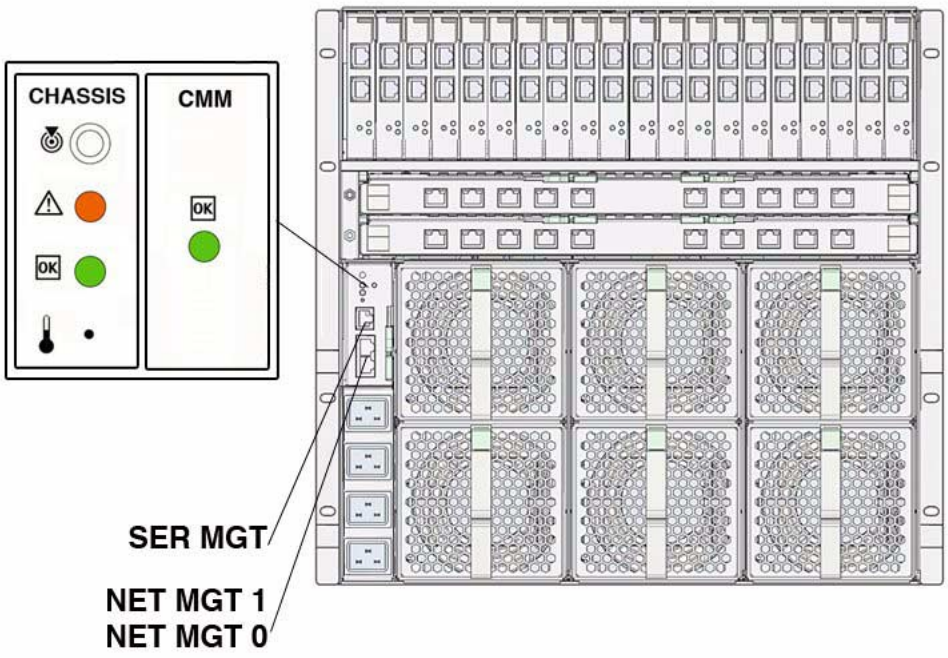
Connecting to the Oracle ILOM CMM

Description	Links	Platform Feature Support
Connecting to the Oracle ILOM CMM	• "Before You Begin" on page 6 • "Connect to the Oracle ILOM CMM Using a Serial Connection" on page 8 • "View and Set IPv4 Network Address" on page 9 • "View and Set Dual-Stack IPv4 and IPv6 Network Address" on page 11 • "Test IPv4 or IPv6 Network Configuration" on page 16	• CMM

Before You Begin

To set up the CMM with initial network configuration information, you must establish a connection through Oracle ILOM to the CMM. You can establish a local connection to Oracle ILOM through the serial management port (SER MGT) on the CMM or a remote connection to Oracle ILOM through the network management (NET MGT) port on the CMM (see the following figure).

FIGURE: Network and Serial Ports on CMM



When you establish a connection to Oracle ILOM through the network management port, Oracle ILOM will, by default, automatically learn the IP address of the CMM using DHCP for IPv4 and stateless for IPv6. If a network management connection has not been established to the NET MGT port on the CMM, Oracle ILOM is unable to learn the IP address of the CMM therefore, you will need to connect to Oracle ILOM through a serial connection. After you have established a connection to Oracle ILOM, you can view and, if necessary, modify the IP address assigned to the CMM.

Next Steps:

- If you do not know the IP address assigned to the CMM, see "Connect to the Oracle ILOM CMM Using a Serial Connection" on page 8.

  - or-

- If you do know the IP address assigned to the CMM and you have an established network management connection to the CMM, see one of the following sections to view or modify the CMM IP address.
  - "View and Set IPv4 Network Address" on page 9
  - "View and Set Dual-Stack IPv4 and IPv6 Network Address" on page 11

▼ Connect to the Oracle ILOM CMM Using a Serial Connection

You can access the Oracle ILOM CMM at any time by connecting a terminal or a PC running terminal emulation software to the serial connector on the chassis.

1. **Verify that your terminal, laptop, or terminal server is operational.**
2. **Configure that terminal device or the terminal emulation software to use the following settings:**
   - 8N1: eight data bits, no parity, one stop bit
   - 9600 baud
   - Disable software flow control (XON/XOFF)
3. **Connect a serial cable from the serial port (SER MGT) on the chassis panel to a terminal device.**

Note – The serial port requires that the serial cable connected to it use the pin assignments shown in the following table.

Pin	Signal Description
1	Request To Send (RTS)
2	Data Terminal Ready (DTR)
3	Transmit Data (TXD)
4	Ground
5	Ground
6	Receive Data (RXD)
7	Data Carrier Detect (DCD)
8	Clear To Send (CTS)

4. **Press Enter on the terminal device.**

   This establishes the connection between the terminal device and the Oracle ILOM CMM.

Note – If you connect a terminal or emulator to the serial port before the Oracle ILOM CMM has been powered on or during its power on sequence, you will see boot messages.

When the system has booted, the Oracle ILOM CMM displays its login prompt:

<*hostname*> `login:`

5. **Log in to the CLI:**

   a. **Type the default user name, `root`.**

   b. **Type the default password, `changeme`.**

   When you have successfully logged in, the Oracle ILOM CMM displays the default command prompt:

   `->`

   The Oracle ILOM CMM is running the CLI. You can now run CLI commands.

   Next Steps: View or set a Oracle ILOM CMM IP address using one of the following procedures:

   - "View and Set IPv4 Network Address" on page 9
   - "View and Set Dual-Stack IPv4 and IPv6 Network Address" on page 11

▼ View and Set IPv4 Network Address

1. **Log in to the Oracle ILOM CMM using either a remote SSH connection or a local serial connection.**

   For more information, see one of the following sections:

   - "Connect to the Oracle ILOM CMM Using a Serial Connection" on page 8.
   - "Log In to Oracle ILOM 3.0 Using the CLI" on page 18

2. **Type one of the following commands to set the working directory:**
   - For a chassis CMM: `cd /CMM/network`
   - For a chassis server blade server module: `cd /SP/network`

3. **Type the `show` command to view the IP address network properties.**

4. **To set IPv4 network settings for DHCP or static, perform one of the following:**
   - **To configure DHCP IPv4 network settings**, set values for the following properties:

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 values for the following properties:

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 property value for ipdiscovery 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 madeto the IPv4 network properties.

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.

5. **Test the IPv4 network configuration from Oracle ILOM use the Network Test Tools (Ping). For details, see** "Test IPv4 or IPv6 Network Configuration" on page 16

▼ View and Set Dual-Stack IPv4 and IPv6 Network Address

Note – This procedure provides instructions for configuring Oracle ILOM to operate in a dual-stack IPv4 and IPv6 network environment. Dual-stack IPv4 and IPv6 network settings are only in Oracle ILOM for the A90-D model chassis. For more information about dual-stack IPv4 and IPv6 support in Oracle ILOM, see the *Oracle Integrated Lights Out Manager (ILOM) 3.0 Concepts Guide*.

1. **Log in to the Oracle ILOM CMM using either a remote SSH connection or a local serial connection.**

   For more information, see one of the following sections:

   - "Connect to the Oracle ILOM CMM Using a Serial Connection" on page 8.
   - "Log In to Oracle ILOM 3.0 Using the CLI" on page 18

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 10 in this procedure.

3. **For IPv4 network configurations, use the** `cd` **command to navigate to the** `/`*x*`/network` **working directory for the device.**

   For example:

   - For a chassis CMM type: `cd /CMM/network`
   - For a chassis blade server SP type: `cd /CH/BL`*n*`/network`
   - For a chassis blade server with multiple SP nodes type: `cd /CH/BL`*n*`/Node`*n*`/network`

4. **Type the** `show` **command to view the configured IPv4 network settings configured on the device.**

5. **To set IPv4 network settings for DHCP or static, perform one of the following:**

- **To configure DHCP IPv4 network settings**, set values for the following properties:

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 values for the following properties:

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 property value for `ipdiscovery` 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 madeto 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 example:

   - For a chassis CMM type: `cd /CMM/network/ipv6`
   - For a chassis blade server SP type: `cd /CH/BL`*n*`/network/ipv6`
   - For a chassis blade server with multiple SP nodes type: `cd /CH/BL`*n*`/Node`*n*`/network/ipv6`

7. **Type the** `show` **command to view the configured IPv6 network settings configured on the device.**

   For example, see the following sample output values for the IPv6 properties on a server SP device.

```
-> 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 module, the default property value for `autoconfig` appears as `autoconfig=stateless_only`.

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8. **To configure an IPv6 auto-configuration option, use the `set` command to specify the following auto-configuration property values.**

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: • `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 – IPv6 auto-configuration addresses learned for the device will not affect any of the active Oracle ILOM sessions to the device. You can verify the newly learned auto-configured 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.

9. Perform the following steps to set a static IPv6 address:

a. To set a pending static IPv6 address, specify the following property values

Property	Set Property Value	Description
`state`	`set state=enabled`	The IPv6 network state is `enabled` by default. To enable a static IP address this state must be set to `enabled`.
`pendingipaddress`	`set pending_static_ipaddress=`*<ip6_address>/<subnet mask length in bits>*	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: `fec0:a:8:b7:214:4fff:feca:5f7e/64`

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

Step	Description
1	Use the `cd` command to change the directory to the device `network` target. For example: • For chassis CMM type: `cd /CMM/network` • For chassis blade server SP type: `cd /CH/BL`*n*`/network` • For chassis blade server SP with multiple nodes type: `cd /CH/BL`*n*`/Node`*n*`/network`
2	Type the following command to commit the changed property values for IPv6: `set commitpending=true`

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.

10. **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" on page 16**.**

▼ Test IPv4 or IPv6 Network Configuration

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. **Use the** `cd` **command to navigate to the** `/`*x*`/network/test` **working directory for the device, for example:**
   - For a chassis CMM type: `cd /CMM/network/test`
   - For a chassis blade server SP type: `cd /CH/BL`*n*`/network/test`
   - For a chassis blade server with multiple SP nodes type: `cd /CH/BL`*n*`/Node`*n*`/network/test`

3. **Type the** `show` **command to view the network** `test` **targets and properties.**

   For example, see the following output the shows the test target properties on a CMM device.

```
-> show

/CMM/network/test
   Targets:

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

   Commands:
       cd
       set
       show
```

4. **Use the** `set ping` **or** `set ping6` **command to send a network test from the device to a specified network destination.**

Property	Set Property Value	Description

`ping`	`set ping=<IPv4_address>`	Type the `set ping=` command at the command prompt followed by the IPv4 test destination address.
		For example:
		`-> set ping=10.8.183.106`
		`Ping of 10.8.183.106 succeeded`

`ping6`	`set ping6=<IPv6_address>`	Type the `set ping6=` command followed by the IPv6 test destination address.
		For example:
		`-> set ping6=fe80::211:5dff:febe:5000`
		`Ping of fe80::211:5dff:febe:5000 succeeded`

Next Steps:

- If you have not already used the network management connection to log in to Oracle ILOM, see "Log In to the Oracle ILOM CMM Using a Network Connection" on page 17.
- Perform CMM administration tasks as described in this document or the Oracle Integrated Lights Out Manager (ILOM) 3.0 Documentation Collection

Log In to the Oracle ILOM CMM Using a Network Connection

Description	Links	Platform Feature Support
Log in to Oracle ILOM CMM using a network connection	• "Log In to Oracle ILOM 3.0 Using the Web Interface" on page 18 • "Log In to Oracle ILOM 3.0 Using the CLI" on page 18	• CMM

Note – For further information on setting up Oracle ILOM, refer to the *Oracle Integrated Lights Out Manager (ILOM) 3.0 Getting Started Guide*.

▼ Log In to Oracle ILOM 3.0 Using the Web Interface

Follow these steps to log in to the Oracle ILOM web interface for the first time using the `root` user account:

1. **Connect an Ethernet cable to the NET0 Ethernet port.**
2. **Type `http://`*system_ipaddress* into a web browser.**

   The web interface Login page appears.

3. **Type the user name and password for the `root` user account:**

   User Name: **`root`**

   Password: **`changeme`**
4. **Click Log In.**

   The Version page in the web interface appears.

▼ Log In to Oracle ILOM 3.0 Using the CLI

To log in to the Oracle ILOM CLI for the first time, use SSH and the `root` user account.

1. **Connect an Ethernet cable to the NET0 Ethernet port.**

2. **To log in to the Oracle ILOM CLI using the `root` user account, type:**

   $ **`ssh root@`***system_ipaddress*

   Password: **`changeme`**

   The Oracle ILOM CLI prompt appears (`->`).

Activating CMM Ethernet Ports

Description	Links	Platform Feature Support
Activating CMM Ethernet ports	• "Enable Ethernet Ports Using the Web Interface" on page 19 • "Enable Ethernet Ports Using the CLI" on page 20	• CMM

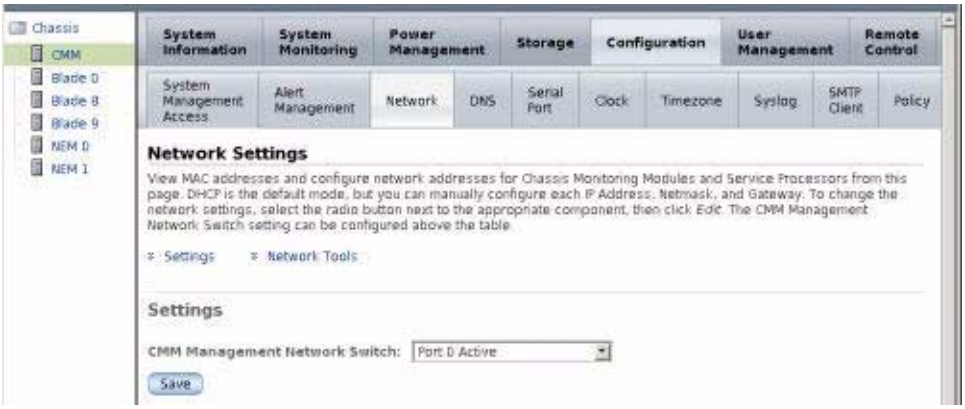
Note – By default, Ethernet port 0 is enabled on the CMM. You can enable port 1 or enable both ports through the CLI or the web interface.

Caution – You can cause Ethernet networking problems and bring down the external network if you activate both Ethernet ports on the CMM. Before you activate both ports, ensure that the external switch supports trunk mode. The upstream Ethernet switch needs to be configured correctly, so that no Ethernet traffic loop is created. This is done usually by the spanning tree algorithm.

▼ Enable Ethernet Ports Using the Web Interface

To enable an Ethernet port using the web interface:

1. **Log in to the Oracle ILOM web interface.**
2. **Click on CMM in the left panel.**
3. **Navigate to Configuration --> Network.**



4. **In the CMM Management Network Switch drop-down list, select one of the following:**
   - Port 0 Active: To activate port 0 only
   - Port 1 Active: To activate port 1 only
   - Trunking (Link Aggregation) to activate both ports
5. **Click Save.**
6. **Remove the CMM and reinstall it into the chassis.**

   See the chassis Service Manual for instructions on removing and replacing the CMM in the chassis.

   The active port is now updated.

▼ Enable Ethernet Ports Using the CLI

To enable port 1 using the CLI:

1. **Log in to the Oracle ILOM CLI.**
2. **Type:**

   -> **`cd /CMM/network`**

3. **Type** `show` **to view the** `-switchconf` **variable setting.**

   For example:

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

     Properties:
         commitpending = (Cannot show property)
         ipaddress = 10.6.153.71
         ipdiscovery = dhcp
         ipgateway = 10.6.152.1
         ipnetmask = 255.255.252.0
         macaddress = 00:14:4F:6B:6F:C1
         pendingipaddress = 10.6.153.71
         pendingipdiscovery = dhcp
         pendingipgateway = 10.6.152.1
         pendingipnetmask = 255.255.252.0
         switchconf = port0

     Commands:
         cd
         set
         show
```

   In this example, the `-switchconf` variable is set to port 0.

   - To activate port 1 and disable port 0, type: **`set switchconf=port1`**
   - To activate port 1 and keep port 0 active, type: **`set switchconf=trunk`**

4. **Remove the CMM and reinstall it into the chassis.**

   See the chassis Service Manual for instructions on removing and replacing the CMM in the chassis.

   The active port is now NET MGT port 1 or both NET MGT ports.

Changing the Blade SP CLI Prompt

Description	Links	Platform Feature Support
Changing the blade SP CLI prompt	• "About the Blade SP CLI Prompt" on page 22 • "Set the Blade SP CLI Prompt" on page 22 • "Reset the Blade SP CLI Prompt to the Default" on page 23	• CMM

About the Blade SP CLI Prompt

Starting with CMM software 3.2 (Oracle ILOM 3.0.10), you can change the default CLI prompt for a server blade SP through the CMM. This prompt is used when you execute the following command to navigate to a server blade SP from the CMM:

-> **start /CH/BL*n*/SP/cli**

Instead of seeing the -> prompt, you will see one of the following default prompts:

- [BL*n*/SP] -> for single node blades
- [BL*n*/NODE*n*/SP] -> for blades with multiple nodes

Note – A node is an independent computer that resides on the server blade. The Sun Blade X6275 server module is an example of a blade with two nodes per blade.

This feature requires that the server blade SP is running Oracle ILOM 3.0.9 or later.

▼ Set the Blade SP CLI Prompt

1. **Log in to the Oracle ILOM CLI.**
2. **Use one of the following commands to change the server blade default CLI prompt:**
   - For single-node blades: **set /CH/BL*n*/SP/cli prompt=**"*newprompt*"

- For two-node blades: **set /CH/BL*n*/NODE*n*/SP/cli prompt=**"*newprompt*"

Where *newprompt* is the value that you want to set for the new prompt.

For example, if you want to set the blade SP prompt to “blade SP”, on BL0, you would use the following command:

-> **set /CH/BL0/SP/cli prompt="blade SP"**

▼ Reset the Blade SP CLI Prompt to the Default

- **If you have changed the blade SP CLI prompt from the default, and want to return to the default, use the following command:**

  -> **set /CH/BL*n*/SP/cli prompt=""**

Firmware Update Procedures

Description	Links
Update the Oracle ILOM CMM firmware	• "Updating the Oracle ILOM CMM Firmware" on page 26
Update the NEM firmware	• "Updating the NEM Firmware" on page 34
Update chassis component firmware	• "Updating Chassis Component Firmware Using the CMM" on page 40
Reset the power on the Oracle ILOM CMM	• "Resetting the Oracle ILOM CMM" on page 44

Related Information

- *Oracle ILOM 3.0 Daily Management Concepts*, firmware management
- *Oracle ILOM 3.0 Daily Management CLI Procedures*, firmware updates
- *Oracle ILOM 3.0 Daily Management Web Procedures*, firmware updates
- *Oracle ILOM 3.0 Protocols Management Reference*, firmware updates

Updating the Oracle ILOM CMM Firmware

Description	Links	Platform Feature Support
Updating the Oracle ILOM CMM firmware	• "Additional Information About Updating the Oracle ILOM CMM Firmware" on page 26 • "Obtaining the CMM IP Address" on page 27 • "Determining Your Current Firmware Version" on page 27 • "Determine the Firmware Version Using the Web Interface" on page 28 • "Determine the Firmware Version Using the Management Ethernet Port CLI" on page 29 • "Download Firmware Files" on page 30 • "Update Oracle ILOM Firmware Using the Web Interface" on page 31 • "Update Oracle ILOM Firmware Using the CLI" on page 33	• CMM

Additional Information About Updating the Oracle ILOM CMM Firmware

This information is covered in more detail in the Oracle ILOM 3.0 Documentation Library at:

`http://www.oracle.com/pls/topic/lookup?ctx=E19860-01&id=homepage`

Use the following sections, in order:

1. Obtain the IP address of the CMM. See "Obtaining the CMM IP Address" on page 27.
2. Log on to the CMM to check the versions of firmware you have. See "Determining Your Current Firmware Version" on page 27.
3. Use Oracle ILOM to download the new versions of firmware. See "Downloading Firmware Files" on page 30.
4. Use Oracle ILOM to install the new firmware. See "Updating Oracle ILOM Firmware" on page 31.
5. Reset the CMM. See "Resetting the Oracle ILOM CMM" on page 44.

Note – For information on backing up and restoring the Oracle ILOM configuration, refer to the *Oracle ILOM 3.0 Daily Management Web Procedures* or the *Oracle ILOM 3.0 Daily Management CLI Procedures.*

Obtaining the CMM IP Address

You must use the CMM IP address to access the Oracle ILOM CMM. If you do not already know the CMM IP address, you must determine it.

Refer to"Before You Begin" on page 6 for instructions on how to determine the IP address of the CMM.

Determining Your Current Firmware Version

Three procedures are provided in this section for determining your current firmware version:

- "Determine the Firmware Version Using the Web Interface" on page 28
- "Determine the Firmware Version Using the Management Ethernet Port CLI" on page 29
- "Determine the Firmware Version Using the Serial Management Port CLI" on page 29

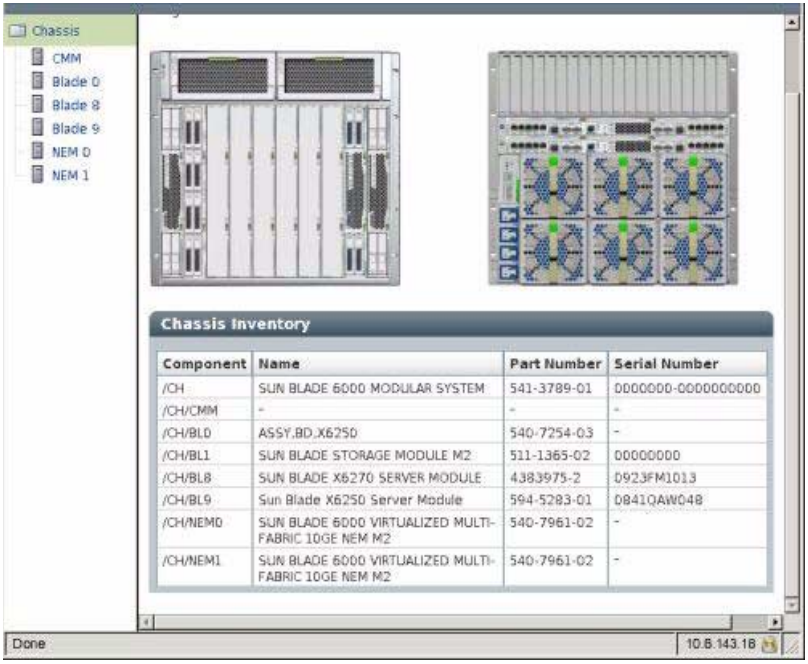
▼ Determine the Firmware Version Using the Web Interface

1. **Connect to the Oracle ILOM web interface by entering the IP address of the server's CMM in your browser's address field.**

   For example:

   `https://129.146.53.150`

2. **Log in to the Oracle ILOM web interface.**



3. **Click on the CMM in the left corner of the chassis navigation pane.**

4. **Navigate to System Information --> Versions.**

   The Versions page is displayed, which includes the firmware version and build number.

▼ Determine the Firmware Version Using the Management Ethernet Port CLI

See the *Oracle Integrated Lights Out Manager (ILOM) 3.0 Getting Started Guide* for more detailed information on this procedure.

1. **Log in to the Oracle ILOM CLI.**
2. **Type the** `version` **command, which returns output similar to the following:**

```
-> version
CMM firmware 3.0.10.15
CMM firmware build number: 55335
CMM firmware date: Thu Apr 22 19:41:07 EDT 2010
CMM filesystem version: 0.1.22
```

The Oracle ILOM (CMM) firmware version and build number are listed in the output.

▼ Determine the Firmware Version Using the Serial Management Port CLI

1. **Configure your terminal device or the terminal emulation software running on a laptop or PC to the following settings:**
   - 8N1: eight data bits, no parity, one stop bit
   - 9600 baud
   - Disable hardware flow control (CTS/RTS)
   - Disable software flow control (XON/XOFF)

2. **Connect a serial cable from the RJ-45 SER MGT port on the CMM to your terminal device or PC.**

3. **Press Enter on the terminal device to establish a connection between that terminal device and the CMM.**

   The CMM displays a login prompt.

   <*hostname*>`login:`

   Where *hostname* could be `SUNCMM` followed by the product serial number, or if you have enabled hostnames in DHCP, it will be the assigned host name.

4. **Log in to the Oracle ILOM CMM and type the default user name (`root`) with the default password (`changeme`).**

   After you have successfully logged in, the CMM displays its default command prompt:

   ```
   ->
   ```

5. **Type the `version` command, which returns output similar to the following:**

   ```
   -> version
   CMM firmware version: 3.0.3.32
   CMM firmware build number: 42331
   CMM firmware date: Wed Feb 18 11:46:55 PST 2009
   CMM filesystem version: 0.1.22
   ```

   The Oracle ILOM firmware version and build number are listed in the output.

Downloading Firmware Files

The following procedure explains how to download the Oracle ILOM firmware from the web.

▼ Download Firmware Files

Download the flash image `.ima` file using these steps:

1. **Go to `http://support.oracle.com`.**

2. **Sign in to My Oracle Support.**

3. **At the top of the page, click the Patches and Updates tab.**

4. **In the Patches Search box, select Product or Family (Advanced Search).**

5. **In the Product? Is text field, type a full or partial product name, for example Sun Fire X6275, until a list of matches appears, and then select the product of interest.**
6. **In the Release? Is list box, click the Down arrow.**
7. **In the window that appears, click the triangle (>) by the product folder icon to display the choices, and then select the release of interest.**
8. **In the Patches search box, click Search.**

   A list of product downloads (listed as patches) appears.
9. **Select the patch name of interest, for example:.**
   - Patch 10266805 for the Oracle ILOM and BIOS portion of the Sun Blade X6275 M@ SW 1.1 release.
   - Patch 10266804 for the Oracle ILOM portion of the Sun Blade 6000 CMM SW 1.1 release
   - Patch 10266803 for the Sun Blade 6000 NEM SW 1.1 release
10. **In the right pane that appears, click Download.**

Updating Oracle ILOM Firmware

Caution – Oracle ILOM enters a special mode to load new firmware. No other tasks can be performed in Oracle ILOM until the firmware upgrade is complete and the Oracle ILOM is reset.

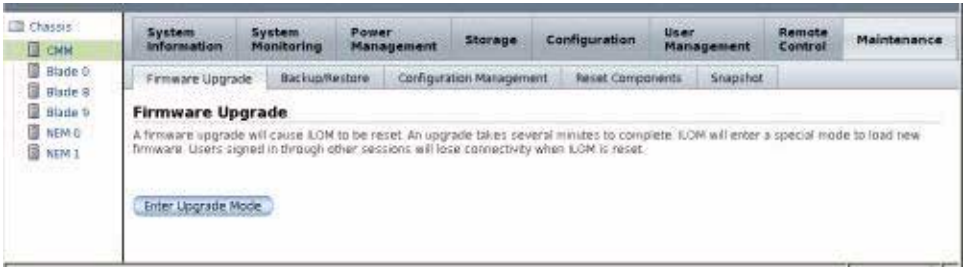
This is the procedure that actually updates the firmware, replacing the existing images with the new images from the `.ima` file you downloaded previously.

This section describes two methods of updating the Oracle ILOM /BIOS firmware:

- "Update Oracle ILOM Firmware Using the Web Interface" on page 31
- "Update Oracle ILOM Firmware Using the CLI" on page 33

▼ Update Oracle ILOM Firmware Using the Web Interface

1. **Log in to the Oracle ILOM web interface.**
2. **Navigate to Maintenance --> Firmware Upgrade.**

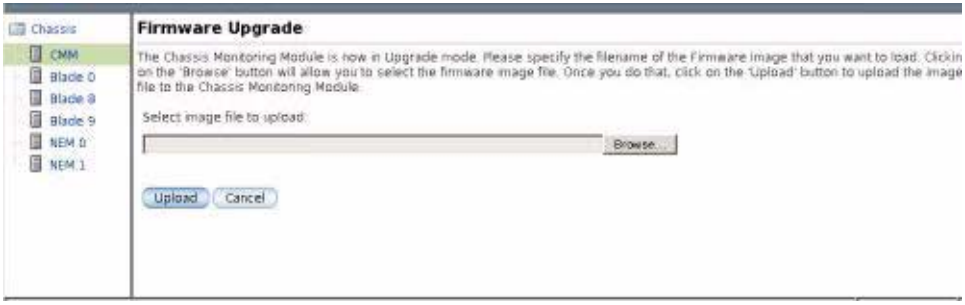


3. **Click the Enter Upgrade Mode button.**

   An Upgrade Verification dialog appears, indicating that other users who are logged in will lose their session when the update process completes.

4. **In the Upgrade verification dialog, click OK to continue.**

   The Firmware Upgrade page appears.



5. **Browse for the flash image file.**

6. **Click the Upload button.**

   Wait for the file to upload and validate.

   The Firmware Verification page appears.

Note – Recommended file transfer protocols to use for uploading the firmware image are: HTTP, FTP, or SFTP.

---

7. **(Optional) In the Firmware Verification page, enable the Preserve Configuration.**

   Enable this option if you want to save your existing configuration in Oracle ILOM and restore that existing configuration after the update process completes.

8. **Click Start Upgrade to start the upgrade process or click Exit to cancel the process.**

   When you click Start Upgrade the upload process will start and a prompt to continue the process appears.

9. **At the prompt, click OK to continue.**

   The Update Status page appears providing details about the update progress. When the update indicates 100%, the firmware update is complete.

   When the update completes, the system automatically reboots.

Note – The Oracle ILOM web interface might not refresh properly after the update completes. If the Oracle ILOM web is missing information or displays an error message, you might be viewing a cached version of the page from the version previous to the update. Clear your browser cache and refresh your browser before continuing.

---

10. **Reconnect to the Oracle ILOM CMM web interface.**
11. **Navigate to System Information --> Version to verify that the firmware version on the CMM corresponds to the firmware image you installed.**

Note – If you did not preserve the Oracle ILOM configuration before the firmware update, you will need to perform the initial Oracle ILOM setup procedures to reconnect to Oracle ILOM.

▼ Update Oracle ILOM Firmware Using the CLI

1. **Log in to the Oracle ILOM CLI through the Management Ethernet port or the Serial Management port.**

   For the Management Ethernet port: See "Determine the Firmware Version Using the Management Ethernet Port CLI" on page 29.

   For the Serial Management Port: See"Determine the Firmware Version Using the Serial Management Port CLI" on page 29.

2. **From the Oracle ILOM CLI, use the following command:**

   -> **`load -source tftp://`***`tftpserver`***`/ILOM-`***`version`***`-Sun_Blade_60`***`x`***`0.ima`**

   Where *tftpserver* is the trivial file-transfer protocol (TFTP) server that contains the update and `ILOM-`*`version`*`-Sun_Blade_60`*`x`*`0.ima` is the firmware image file, for example:

   For Sun Blade 6000: `ILOM-3_0_10_15-Sun_Blade_6000.ima`

   or

   For Sun Blade 6048: `ILOM-3_0_10_15-Sun_Blade_6048.ima`

Note – Recommended file transfer protocols to use for uploading the firmware image are: HTTP, FTP, and SFTP.

Updating the NEM Firmware

Description	Links	Platform Feature Support
Updating the Oracle ILOM CMM firmware	• "About NEM Firmware Updates" on page 34 • "Before You Begin" on page 34 • "Update NEM Firmware Using the CLI" on page 35 • "Update NEM Firmware Using the Web Interface" on page 37	• CMM

About NEM Firmware Updates

As of Oracle ILOM 3.0.9, the update firmware capability in Oracle ILOM was enhanced on some Oracle modular chassis systems to support firmware updates for Network Express Modules (NEMs). Prior to Oracle ILOM 3.0.9, NEM firmware updates were not supported from Oracle ILOM.

You can perform a NEM firmware update directly from the Oracle ILOM CLI or web interface. Supported file transfer methods for uploading the firmware package to the NEM include: TFTP, HTTPS, FTP, SFTP, SCP, HTTP, and browser-based.

Note – The browser-based local file transfer option is only available from the Oracle ILOM web interface.

Before You Begin

- From the NEM's vendor product download web site, download the NEM firmware update package to a system on your network where you can later gain access to it from Oracle ILOM.

- To update the NEM firmware in Oracle ILOM, you need the Admin (a) role enabled.

▼ Update NEM Firmware Using the CLI

1. **Log in to the Oracle ILOM CMM CLI.**
2. **Use the `cd` command to navigate to the NEM requiring the firmware update.**

   For example:

   `cd /CH/NEM#`

   Where # is the slot location where the NEM is installed in the chassis.

   If your chassis system does not support multiple NEMs and one NEM is supported, the NEM location would equal 0. For this example, you would type:

   `cd /CH/NEM0`

3. **Type the `show` command to view the NEM properties and the firmware version presently installed on the NEM.**

   For example, see the NEM `show` property output below for the Sun Blade 6000 Virtualized Multi-Fabric 10GE NEM M2.

Note – The `fru_extra_1=` property field identifies the firmware version presently installed on the NEM.

```
-> show /CH/NEM0

 /CH/NEM0
    Targets:
        MB
        SAS
        SP
        PRSNT
        STATE
        ERR
        OK
        SERVICE
        OK2RM
        LOCATE

    Properties:
        type = Network Express Module
        ipmi_name = NEM0
        system_identifier = SUNSP-0000000000
```

```
        fru_name = SUN BLADE 6000 VIRTUALIZED MULTI-FABRIC 10GE NEM
M2
         fru_version = FW 3.0.10.16, SAS 5.3.4.0
         fru_part_number = 540-7961-02
         fru_extra_1 = FW 3.0.10.16, SAS 5.3.4.0
         fault_state = OK
         load_uri = (none)
         clear_fault_action = (none)
         prepare_to_remove_status = NotReady
         prepare_to_remove_action = (none)
         return_to_service_action = (none)

     Commands:
         cd
         load
         reset
         set
         show
```

4. **Use the `load` command to upload and install the firmware update package on the NEM.**

   For example, you would type:

   `load_uri=`*uri*

   Where *uri* equals the URI transfer method and location of the firmware package.

   See the following CLI `load` examples for each supported file transfer method

Note – Recommended file transfer protocols to use for uploading the firmware image are: HTTP, FTP, or SFTP.

Transfer Method	CLI `load` Command Examples
TFTP	**`load_uri=tftp://`***ip_address***`/`***rom_nem***`.pkg`**
FTP	**`load_uri=ftp://`***username***`:`***password***`@`***ip_address***`/`***rom_nem***`.pkg`**
SCP	**`load_uri=scp://`***username***`:`***password***`@`***ip_address***`/`***rom_nem***`.pkg`**
HTTP	**`load_uri=http://`***username***`:`***password***`@`***ip_address***`/`***rom_nem***`.pkg`**
HTTPS	**`load_uri=https://`***username***`:`***password***`@`***ip_address***`/`***rom_nem***`.pkg`**
SFTP	**`load_uri=sftp://`***username***`:`***password***`@`***ip_address***`/`***rom_nem***`.pkg`**

Where:

- *password* is the login password to the system where the file is stored.

- *username* is the login user name to the system where the file is stored.
- *rom_nem*.pkg is the name of the firmware update package.
- *ip_address* is the IP address of the system where the file is stored.

The user name and password for HTTP and HTTPS are optional.

Note – Alternatively, you can use the `set` and `load` commands in the Oracle ILOM CLI to specify the path of the NEM location, as well as the location of the firmware update package to upload. For example: **`set /CH/NEM#/load_uri=`***uri*

---

5. **Wait a few moments for Oracle ILOM to confirm the completion of the firmware update process.**

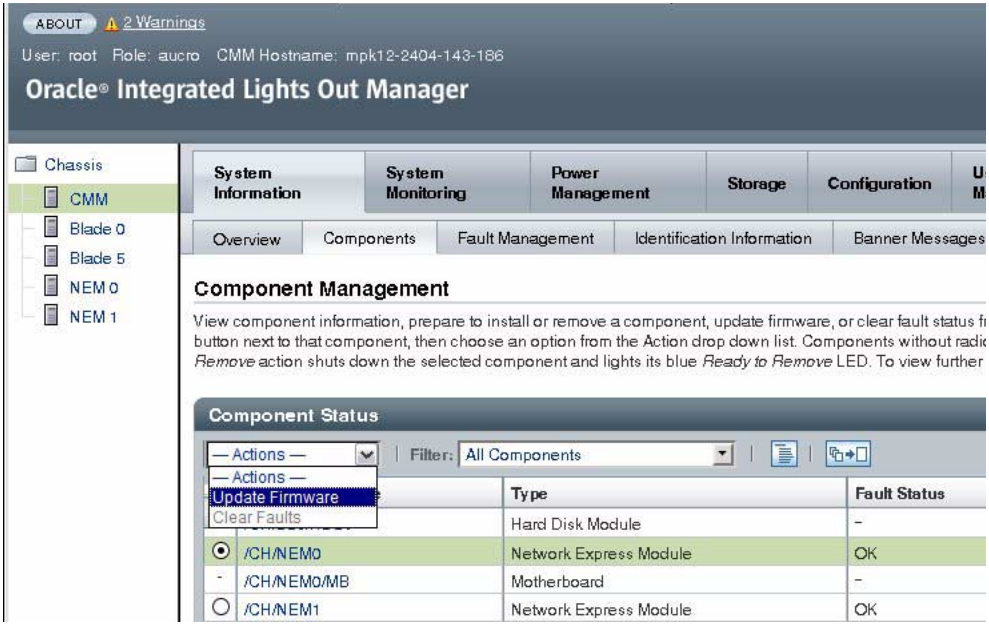
   A success or failure status appears.

6. **Use the `show` command to view and confirm the firmware version that is installed on the NEM.**

▼ Update NEM Firmware Using the Web Interface

1. **Log in to the Oracle ILOM CMM web interface.**
2. **In the Oracle ILOM web interface, click CMM from the left pane.**
3. **Click the System Information --> Components tab.**

   The Components page appears.



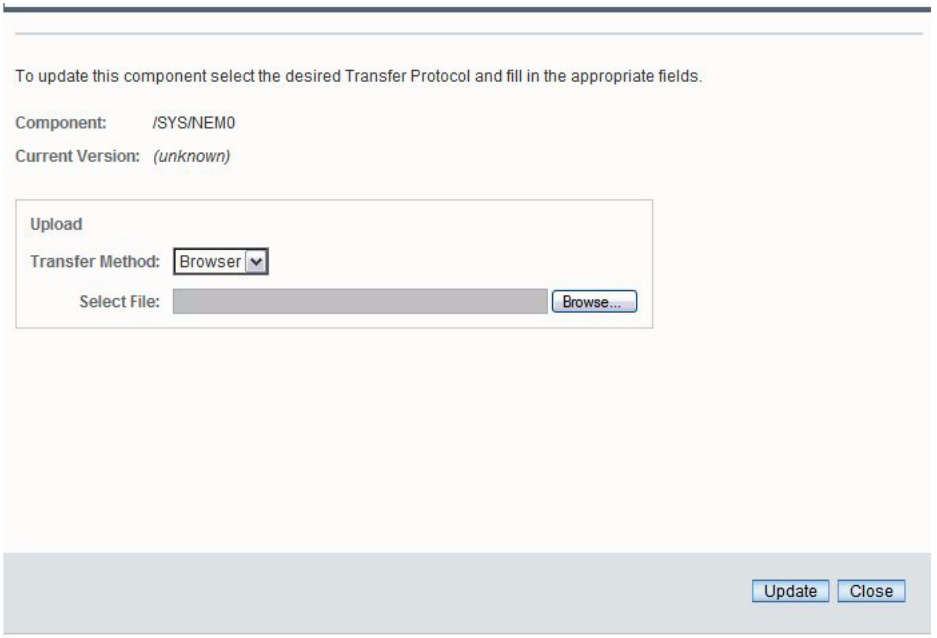
4. **In the Component Status table, do the following:**

   a. **Select the radio button for the NEM that you want to update.**

   b. **Click the NEM name appearing in the Component Name column to view the firmware version presently installed on the NEM, then click Close to dismiss the dialog.**

   c. **In the Actions drop-down list box, select Update Firmware to initiate the firmware update process for the NEM.**

      The Upload Firmware dialog appears.



5. **In the Upload Firmware dialog, do the following:**

   a. **Select the Upload Transfer Method from the drop-down list box.**

   b. **Specify the required fields for the selected transfer method as follows:**

Note – Recommended file transfer protocols to use for uploading the firmware image are: HTTP, FTP, or SFTP.

Transfer Method Option	Required Field	Instructions
Browser	Select File	Use the Browse button to specify the location of the NEM firmware update package.
FTP, SCP, HTTP, HTTPS, TFTP, SFTP	Host	Specify the IP address of the host system where the NEM firmware update package is stored.

Transfer Method Option	Required Field	Instructions
FTP, SCP, HTTP, HTTPS, TFTP, SFTP	Filepath	Specify the complete path to where the NEM firmware update package is stored.
FTP, SCP, HTTP, HTTPS, SFTP	Username	Specify the login user name to the system where the NEM firmware update package is stored.
FTP, SCP, HTTP, HTTPS, SFTP	Password	Specify the login password to the system where the NEM firmware update package is stored.

6. **Wait a few moments for Oracle ILOM to confirm the completion of the firmware update process.**

   A success or failure status appears in the Upload Firmware dialog.

Updating Chassis Component Firmware Using the CMM

Description	Links	Platform Feature Support
Updating the Chassis component firmware	• "About Chassis Component Firmware" on page 40 • "Update Firmware Using the Web Interface" on page 41 • "Update Firmware Using the CLI" on page 43	• CMM • NEM • Sun blade server

About Chassis Component Firmware

As of Oracle ILOM 3.0.10, the Oracle ILOM CMM offers a centralized user interface for viewing the firmware version installed and initiating firmware updates on the following chassis components:

- Storage blades
- CPU blades

- Network Express Modules (NEMs): Not all NEMs have firmware. Check your NEM documentation to determine NEM firmware availability. For a detailed procedure for updating NEM firmware, see "Updating the NEM Firmware" on page 34.

You must have Oracle ILOM CMM version 3.0.10 (available on the Oracle download site with Sun Blade 6000 Modular System Software release 3.2) installed on the CMM before using this firmware update tool. Server modules (blades) must be running Oracle ILOM 2.x or later.

▼ Update Firmware Using the Web Interface

1. **Download the firmware that you need from the Oracle software download site:** `http://www.oracle.com/us/products/servers-storage/servers/blades/index.html`

   a. **Search the page for the blade or NEM that you want to update.**

   b. **Download the latest firmware package and extract it to an accessible folder on the network.**

2. **Log in to the Oracle ILOM CMM as any user with Administrator privileges.**

3. **In the Chassis navigation pane, click on CMM.**

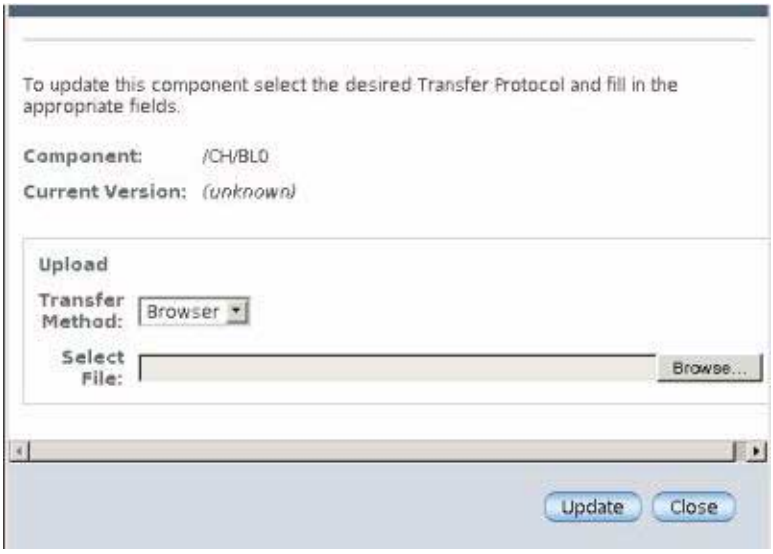
4. **Select System Information --> Components.**

5. **Select the component for which you want to upgrade the firmware.**

   For example: `-/CH/BL0`.

6. **Select Update Firmware from the Actions drop-down menu.**

   A dialog box appears.



7. Fill in the required fields for the selected transfer method.

Note – Recommended file transfer protocols to use for uploading the firmware image are: HTTP, FTP, and SFTP.

Transfer Method Option	Required Field	Instructions
Browser	Select File	Use the Browse button to specify the location of the NEM firmware update package.
FTP, SCP, HTTP, HTTPS, TFTP, SFTP	Host	Specify the IP address of the host system where the NEM firmware update package is stored.
FTP, SCP, HTTP, HTTPS, TFTP, SFTP	Filepath	Specify the complete path where the NEM firmware update package is stored.
FTP, SCP, HTTP, HTTPS, SFTP	Username	Specify the login user name to the system where the NEM firmware update package is stored.
FTP, SCP, HTTP, HTTPS, SFTP	Password	Specify the login password to the system where the NEM firmware update package is stored.

8. **Click Update.**

   The firmware update process can take several minutes. A success or failure status appears in the Upload Firmware dialog.

▼ Update Firmware Using the CLI

1. **Download the firmware that you need from the Oracle software download site:** http://www.oracle.com/us/products/servers-storage/servers/blades/index.html
2. **Search the page for the blade or NEM that you want to update.**
3. **Download the latest firmware package and extract it to an accessible folder on the network.**
4. **From a network connected terminal, log in to the Oracle ILOM CMM CLI using the `root` user account by entering the following command:**

   $ **`ssh root@`***cmm_ipaddress*

   Where *cmm_ipaddress* is the IP address of the Oracle ILOM CMM.
5. **Enter the password (the default is changeme).**

   The Oracle ILOM CLI prompt appears:

   ->
6. **Change directories to the blade slot containing the blade or NEM to be upgraded:**

   -> **`cd /CH/BL`***n*

   or

   -> **`cd /CH/NEM`***n*

   Where BL*n* is the chassis blade slot number of the blade to be upgraded and NEM*n* is the NEM to be upgraded.
7. **Enter the following command:**

   -> **`load -source`**
   *transfer_method***`://`***transfer_server_ipaddress*`/`*firmware-version***`.pkg`**

   Where

   - *transfer_method* is one of the following: FTP, SCP, HTTP, HTTPS, TFTP, SFTP
   - *transfer_server_ipaddress* is the domain name or IP address of your transfer server where you copied the image file
   - *firmware-version* is the name of the `.pkg` file.

Note – Recommended file transfer protocols to use for uploading the firmware image are: HTTP, FTP, and SFTP.

8. **When the process completes, ensure that the proper firmware version was installed. Enter the following command:**

   -> **version /CH/BL***n*

   or

   -> **version /CH/NEM***n*

   Where BL*n* is the chassis slot number of the blade that was upgraded and NEM*n* is the NEM that was upgraded.

Resetting the Oracle ILOM CMM

Description	Links	Platform Feature Support
Resetting power to the CMM	• "Reset Oracle ILOM Using the Web Interface" on page 44 • "Reset Oracle ILOM CMM Using the CLI" on page 45	• CMM

Note – If neither of the Oracle ILOM procedures in this section are available, you can remove the CMM from the chassis and reinstall it to reset the power on the CMM.

Note – Refer to the *Sun Blade 6000 Modular System Service Manual* or the *Sun Blade 6048 Modular System Service Manual* for information on how to remove and install the CMM.

▼ Reset Oracle ILOM Using the Web Interface

1. **Log in to the Oracle ILOM web interface.**
2. **Navigate to Maintenance --> Reset Components.**

3. **Select /CH/CMM, then click Reset.**

▼ Reset Oracle ILOM CMM Using the CLI

1. **Log in to the Oracle ILOM CLI.**
2. **From the Oracle ILOM CLI, type the following command:**

```
-> reset /CMM
```

CMM Power Management

Description	Links
Enable or disable Light Load Efficiency Mode (LLEM)	• "Light Load Efficiency Mode (LLEM)" on page 48
Force power supply fans to low speed	• "Force Power Supply Fan Speed" on page 52
Disable the power management	• "Disabling the Power Management Policy" on page 54
Learn about Oracle ILOM readings for Specific Sun Blade 6048 Modular System Cases	• "Oracle ILOM 3.0 for Specific Sun Blade 6048 Cases" on page 55

Related Information

- *Oracle ILOM 3.0 Daily Management Concepts*, power management
- *Oracle ILOM 3.0 Daily Management CLI Procedures*, power management
- *Oracle ILOM 3.0 Daily Management Web Procedures*, power management
- *Oracle ILOM 3.0 Protocol Management Reference*, manage system power

Light Load Efficiency Mode (LLEM)

Description	Links	Platform Feature Support
Light Load Efficiency Mode	• "About LLEM" on page 48 • "Enable or Disable LLEM Using the Web Interface" on page 49 • "Enable or Disable Redundant Mode Using the Web Interface" on page 50 • "Enable or Disable LLEM Using the CLI" on page 50 • "Enable Redundant Mode Using the CLI" on page 51 • "Enable Redundant Mode Using the CLI" on page 51	• CMM

About LLEM

The Light Load Efficiency Mode (LLEM) is a new feature of Oracle ILOM CMM 3.0.6.11.

Under the LLEM, the CMM monitors the power being used and automatically shuts down the power supply unit (PSU) sides to achieve higher efficiency. While enabled, LLEM runs in both redundant and non-redundant mode.

The CMM always disables PSU sides in descending order. When the power load level increases, the CMM renewably those disabled sides to cover the demand. If a new blade is inserted into the chassis, it can be powered on even if its power budget exceeds the power available from the sides currently turned on.

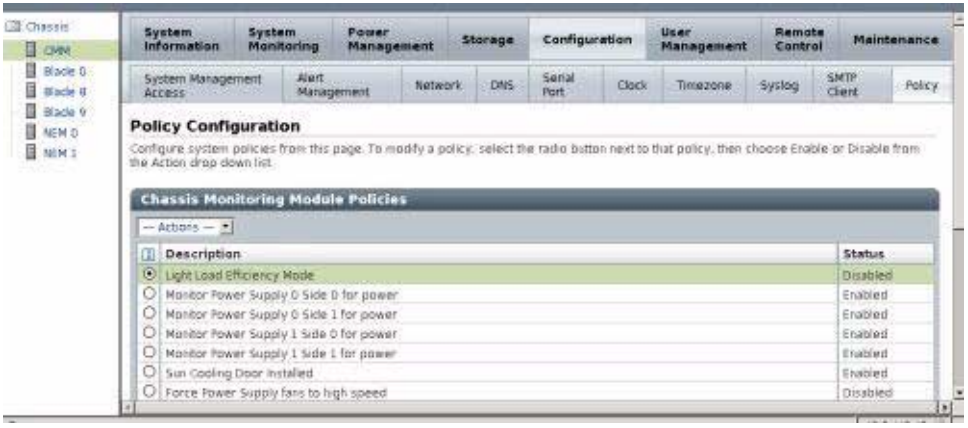
When an unexpected AC fault occurs, LLEM is suspended and all sides will become enabled, verified by the sensor value of `I_V12` and `V_OUT_OK`. If the fault is cleared, configured LLEM policy automatically goes back into effect.

When the LLEM is disabled, all PSU sides, including those previously disabled, become enabled. This can be verified by the sensor value of `I_V12` and `V_OUT_OK`.

For further information on Oracle ILOM power management features, see the *Oracle Integrated Lights Out Manager (ILOM) 3.0 Concepts Guide.*

▼ Enable or Disable LLEM Using the Web Interface

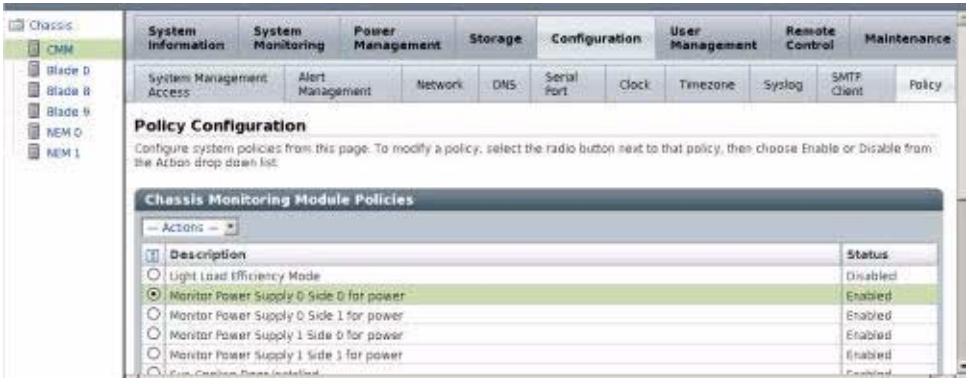
1. **Log in to the Oracle ILOM web interface.**
2. **Click on CMM in the Chassis navigation pane.**
3. **Navigate to the Configuration --> Policy page.**



4. **Select Light Load Efficiency Mode.**
5. **Select Enable or Disable from the Actions drop-down list.**
6. **To turn power supplies on or off in the Policy page:**

   a. **Select Monitor Power Supply *x* Side *y* for power.**

      In the following example, Monitor Power Supply 0 Side 0 is selected.



   b. **Select Enable or Disable from the Actions menu.**

▼ Enable or Disable Redundant Mode Using the Web Interface

1. **Log in to the Oracle ILOM web interface.**
2. **Click on CMM in the Chassis navigation pane.**
3. **Navigate to the Power Management --> Redundancy page.**

4. **Select one of the following from the drop-down menu:**
   - None: To set non-redundant mode.
   - N+N: To set redundant mode.
5. **Click Save.**

▼ Enable or Disable LLEM Using the CLI

1. **Log in to the Oracle ILOM CMM CLI.**
2. **To enable or disable LLEM, use the command:**

   -> **set /CMM/policy LIGHT_LOAD_EFFICIENCY_MODE=[enabled|disabled]**

3. **When LLEM is disabled, you can turn the PSU sides on or off with this command:**

   -> **set /CMM/policy MONITOR_PS*n*_SIDE*n*=[enabled|disabled]**

Note – It is advisable to disable any PSU side first before unplugging the power cord.

You can check the sensor value of `/CH/PSn/Sn/I_12V` or `/CH/PSn/Sn/V_OUT_OK`, where the value of `I_12V` being 0 or `V_OUT_OK` deasserted indicates the corresponding side is disabled.

You can disable any PSU sides monitoring. In both redundant and non-redundant modes, LLEM works on those sides that are under monitoring.

▼ Enable Redundant Mode Using the CLI

1. **Log in to the Oracle ILOM CMM CLI.**
2. **Set redundant mode using this command:**

   -> **set /CMM/powermgmt redundancy=n+n**

   All `MONITOR_PSn_SIDEn` are set to enabled, and any attempt to disable any PSU side's monitoring is not allowed.

▼ Enable Non-Redundant Mode Using the CLI

1. **Log in to the Oracle ILOM CMM CLI.**
2. **Set non-redundant mode using this command:**

   -> **set /CMM/powermgmt redundancy=none**

Force Power Supply Fan Speed

Description	Links	Platform Feature Support
Force power supply fan speed	• "About Power Supply Fan Speed" on page 52 • "Set the Power Supply Fan Speed Using the Web Interface" on page 52 • "Set the Power Supply Fan Speed Using the CLI" on page 53	• CMM

About Power Supply Fan Speed

A new feature, introduced in Oracle ILOM 3.0.6.11, allows the adjustment of power supply fan speed.

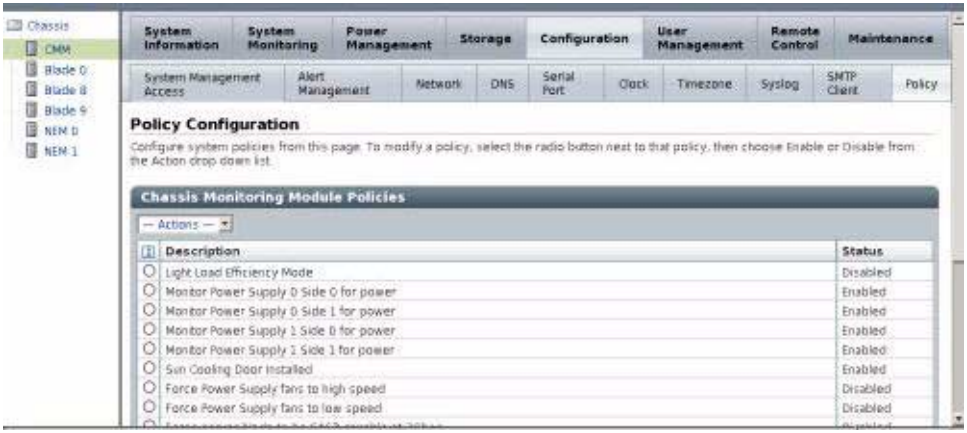
The high and low speed settings are defined as follows:

- High speed refers to the fans running at 100% capacity.
- Low speed refers to the fans running at 80% capacity.

Note – Only force power supply unit (PSU) fans to low speed if half the PEM slots or fewer are in use.

▼ Set the Power Supply Fan Speed Using the Web Interface

1. **Log in to the Oracle ILOM web interface.**
2. **Click on CMM in the Chassis navigation pane.**
3. **Navigate to the Configuration --> Policy.**



4. **Choose one of the following options:**
   - Force Power Supply fans to low speed
   - Force Power Supply fans to high speed
5. **Select Enable or Disable from the Actions drop-down menu.**

   As the power supply fans cool the power supplies, the power supply fans also cool the PEM slots.

Note – If you enable both fan speed policies, high speed policy dominates.

▼ Set the Power Supply Fan Speed Using the CLI

1. **Log in to the Oracle ILOM CLI interface.**
2. **Execute the following command:**

   -> **`set /CMM/policy PS_FANS_HIGH=[enabled|disabled]`**

   -> **`set /CMM/policy PS_FANS_LOW=[enabled|disabled]`**

   As the power supply fans cool the power supplies, the power supply fans also cool the PEM slots.

Note – If you enable both fan speed policies, high speed policy dominates.

Disabling the Power Management Policy

Description	Links	Platform Feature Support
Disabling the power management policy	• "About the Power Management Policy" on page 54 • "Disable Power Management Policy Using the Web Interface" on page 54 • "Disable Power Management Policy Using the CLI" on page 55	• CMM

About the Power Management Policy

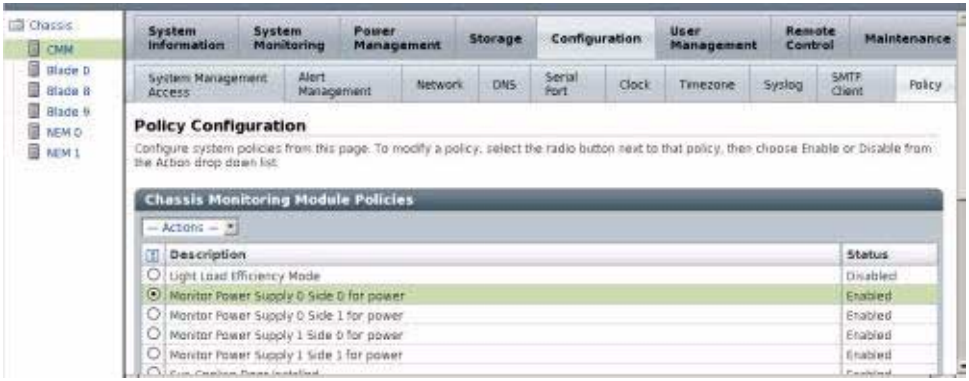
A new power management option has been added to Oracle ILOM CMM 3.0.6.11c (Software Version 3.1.13) that enables the user to disable power management so that blades in the chassis attempt to power on even if power allocation has been exceeded.

Caution – Chassis shutdown can occur. Do not disable power management unless you are advised to by Oracle Services personnel.

▼ Disable Power Management Policy Using the Web Interface

1. **Log in to the Oracle ILOM web interface.**
2. **Select CMM from the Chassis navigation pane.**
3. **Navigate to the Configuration --> Policy.**
4. **Select Manage Chassis Power.**
5. **Select Disable from the Actions drop-down list.**

   The following Oracle ILOM screen graphic shows the Manage Chassis Power option at the bottom of the Policy Configuration page.



▼ Disable Power Management Policy Using the CLI

1. **Log in to the Oracle ILOM CMM CLI.**
2. **Type the following command:**

```
-> set /CMM/policy POWER_MANAGEMENT=disabled
```

Oracle ILOM 3.0 for Specific Sun Blade 6048 Cases

Description	Links	Platform Feature Support
Oracle ILOM 3.0 for specific Sun Blade 6048 cases	• "Oracle ILOM Behavior With Two Power Cord Configuration" on page 56 • "Configure the CMM for Two Power Cords" on page 56 • "Oracle ILOM 3.0 Readings for Specific Power Supply States" on page 57	• CMM

Oracle ILOM Behavior With Two Power Cord Configuration

This section specifies how CMM and server module firmware behave when only two of the three power plugs are connected to an A231 power supply unit (PSU).

There are three plugs on the back of each A231 PSU. These plugs are named AC0, AC1, and AC2. Each plug allows connection of a 220V power cord. When only two of the available three plugs are connected to the A231 PSUs, this provides 5600 watts to the entire chassis.

If you connect only two of the total three plugs, connect them to AC0 and AC1. AC2 should not be connected.

For further information on Sun Blade 6048 Modular System sensors, refer to the *Oracle Integrated Lights Out Manager (ILOM) 3.0 Supplement for Sun Blade 6000 and Sun Blade 6048 Modular Systems* (820-7603).

▼ Configure the CMM for Two Power Cords

1. **To set up a two power cord configuration, disable the power supply side in the Oracle ILOM CMM with the following commands:**

   -> **set /CMM/policy MONITOR_PS0_SIDE2=disabled**

   -> **set /CMM/policy MONITOR_PS1_SIDE2=disabled**

2. **To view the disabled power cord side 2 configuration, type:**

```
-> show /CMM/policy/

/CMM/policy
    Targets:

    Properties:
        COOLING_DOOR_INSTALLED = disabled
        MONITOR_PS0_SIDE0 = enabled
        MONITOR_PS0_SIDE1 = enabled
        MONITOR_PS0_SIDE2 = disabled
        MONITOR_PS1_SIDE0 = enabled
        MONITOR_PS1_SIDE1 = enabled
        MONITOR_PS1_SIDE2 = disabled
        PS_FANS_HIGH = disabled

   Commands:
```

```
cd
set
show
```

Oracle ILOM 3.0 Readings for Specific Power Supply States

This section provides some of the sensor readings for the system event log (SEL) in cases that are specific to the Sun Blade 6048 Modular System.

To view the SEL using IPMItool, use the following command:

```
ipmitool -H SPIPaddress -U root -P changeme sel list
```

AC Cables Are Disconnected

When an AC cable gets disconnected, the SEL displays the readings as shown in the example for power supply module 0, side 0 in TABLE: AC Cable Disconnect SEL Readings on page 57.

Note – The order of the events might not match the real time event exactly, because that is based on how the sensors are being scanned.

TABLE: AC Cable Disconnect SEL Readings

Event ID	Device	State	Description
8	Voltage PS0/S0/V_OUT_OK	State Deasserted	PSU 0 side 0 DC output is out (because AC is unplugged).
9	Voltage PS0/S0/V_IN_ERR	Predictive Failure Asserted	PSU 0 side 1 AC is disconnected.

AC Cables Are Disconnected, Then Are Reconnected

When an AC cable gets disconnected, then plugged back in, the SEL displays the readings as shown for power supply module 0, side 0 in TABLE: AC Cables Reconnected SEL Readings on page 58.

TABLE: AC Cables Reconnected SEL Readings

Event ID	Device	State	Description
8	Voltage PS0/S0/V_OUT_OK	State Deasserted	PSU 0 side 0 DC output is out (because AC is unplugged).
9	Voltage PS0/S0/V_IN_ERR	Predictive Failure Asserted	PSU 0 side 0 AC is disconnected.
a	Voltage PS0/S0/V_OUT_OK	State Asserted	PSU 0 side 0 DC output is OK (because AC is plugged in).
b	Voltage PS0/S0/V_IN_ERR	Predictive Failure Deasserted	PSU 0 side 0 is connected.

`stop /CH` Command

When the `stop /CH` command is applied, the SEL displays the readings as shown in the example in TABLE: stop /CH SEL Readings on page 58. This example describes a two power cord configuration.

TABLE: `stop /CH` SEL Readings

Event ID	Device	State	Description
29	Module/Board NEM1/STATE	Transition to Power Off	Not enough power for the NEM 1, since the PSU shuts off.
2a	Voltage PS0/S0/V_OUT_OK	State Deasserted	PSU 0 side 0 is out.
2b	Voltage PS0/S1/V_OUT_OK	State Deasserted	PSU 0 side 1 is out.
2c	Module/Board NEM0/STATE	Transition to Power Off	Not enough power for the NEM 0, since the PSU shuts off.
2d	Voltage PS1/S0/V_OUT_OK	State Deasserted	PSU 1 side 0 is out.
2e	Voltage PS1/S1/V_OUT_OK	State Deasserted	PSU 1 side 0 is out.

`start /CH` Command

When the `start /CH` command is applied, the SEL displays the readings as shown in the example in TABLE: start /CH SEL Readings on page 59. This example describes a two power cord configuration.

TABLE: `start /CH` SEL Readings

Event ID	Device	State	Description
2f	Module/Board NEM1/STATE	Transition to Running	NEM 1 is powering on.
30	OEM BL7/ERR	Predictive Failure Deasserted	Blade module does not have an error.
31	Module/Board NEM0/STATE	Transition to Running	NEM 0 is powering on.
32	Voltage PS1/S0/V_OUT_OK	State Asserted	PSU 1 side 0 is on.
33	Voltage PS1/S1/V_OUT_OK	State Asserted	PSU 1 side 1 is on.
34	OEM BL1/ERR	Predictive Failure Deasserted	Blade module does not have an error.
35	Voltage PS0/S0/V_OUT_OK	State Asserted	PSU 0 side 0 is on.
36	Voltage PS0/S1/V_OUT_OK	State Asserted	PSU 0 side 1 is on.

One PSU Is Removed

When one PSU is removed, and there is too much power consumption in the chassis to support PSU redundancy, the SEL displays the readings shown in TABLE: PSU Removed SEL Readings on page 59.

TABLE: PSU Removed SEL Readings

Event ID	Device	State	Description
1	Entity Presence PS0/PRSNT	Device Absent	PS0 is absent from the system.
2	Voltage PS0/S0/V_OUT_OK	State Deasserted	PSU 0 side 0 DC power is out.
3	Voltage PS0/S1/V_OUT_OK	State Deasserted	PSU 0 side 1 DC power is out.
4	Voltage PS0/S2/V_OUT_OK	State Deasserted	PSU 0 side 2 DC power is out.

PSU Is Reinserted

TABLE: PSU Reinserted SEL Readings on page 60 shows the SEL readings as a PSU is reinserted into the system and the system recognizes that power has been reapplied.

TABLE: PSU Reinserted SEL Readings

Event ID	Device	State	Description
5	Entity Presence PS0/PRSNT	Device Present	PS0 is present in the system.
6	Voltage PS0/S0/V_OUT_OK	State Asserted	PSU 0 side 0 DC power is on.
7	Voltage PS0/S1/V_OUT_OK	State Asserted	PSU 0 side 1 DC power is on.
8	Voltage PS0/S2/V_OUT_OK	State Asserted	PSU 0 side 2 DC power is on.

SAS Zoning Chassis Blade Storage Resources

Description	Links
Refer to this section to learn about supported management options for zoning chassis-level storage devices.	• "Zone Management for Chassis-Level SAS-2 Capable Resources" on page 62
Refer to this section for information about Oracle ILOM Sun Blade Zone Manager properties.	• "Sun Blade Zone Manager Properties" on page 63
Refer to this section for important information about saving, backing up, and recovering SAS zoning configuration parameters.	• "Important SAS Zoning Allocations Considerations" on page 72
Refer to this section for procedures for enabling the Sun Blade Zone Manager and creating SAS zoning assignments.	• "Enabling Zoning and Creating SAS-2 Zoning Assignments" on page 73
Refer to this section for procedures for viewing or modifying existing storage allocations.	• "Managing Existing SAS-2 Storage Resource Allocations" on page 87
Refer to this section for resetting all saved storage allocations to factory defaults.	• "Resetting Sun Blade Zone Manager Allocations to Factory Defaults" on page 95
Refer to this section to optionally reset the in-band management password.	• "Resetting the Zoning Password to Factory Default for Third-Party In-Band Management" on page 96

Zone Management for Chassis-Level SAS-2 Capable Resources

Oracle ILOM provides zone management support for chassis-level SAS-2 storage devices installed in a Sun blade chassis system. You can choose to manage access to the Sun blade chassis-level storage resources by using the Oracle ILOM Sun Blade Zone Manager or a third-party in-band application. For more details, see:

- "Zone Management Using a Third-Party In-Band Management Application" on page 62
- "Zone Management Using Oracle ILOM Sun Blade Zone Manager" on page 62
- "Manageable SAS-2 Zoning-Capable Devices" on page 63

Zone Management Using a Third-Party In-Band Management Application

If your environment supports managing access to chassis-level storage devices using a third-party in-band management application, you should verify that the state for the Sun Blade Zone Manger in Oracle ILOM is disabled (default). If you need to reset the in-band management password to factory defaults, you can reset this password in Oracle ILOM. For instructions, see "Resetting the Zoning Password to Factory Default for Third-Party In-Band Management" on page 96.

Zone Management Using Oracle ILOM Sun Blade Zone Manager

When the Sun Blade Zone Manager is enabled in the Oracle ILOM CMM you can manage chassis-level SAS-2 storage permissions to Sun blade CPU servers installed in the chassis. For further details about using the Oracle ILOM Sun Blade Zone Manager, see these topics:

- "Manageable SAS-2 Zoning-Capable Devices" on page 63
- "Sun Blade Zone Manager Properties" on page 63
- "Important SAS Zoning Allocations Considerations" on page 72
- "Enabling Zoning and Creating SAS-2 Zoning Assignments" on page 73
- "Managing Existing SAS-2 Storage Resource Allocations" on page 87
- "Resetting Sun Blade Zone Manager Allocations to Factory Defaults" on page 95

Manageable SAS-2 Zoning-Capable Devices

The Oracle ILOM CMM recognizes the following devices in a Sun blade chassis system as manageable SAS-2 zoning-capable devices:

- Sun blade CPU server with SAS-2 RAID expansion modules (REMs)
- Sun blade chassis system Network express modules (NEMs)
- Sun blade storage server (such as the Sun Blade Storage Module M2)

Note – Oracle ILOM does not support zoning management for: (1) internal storage modules installed on a Sun blade CPU server; (2) Fabric Expansion Modules (FMODs) on a Sun storage blade; or, (3) external network SAS-2 storage resources that are connected to a Sun blade chassis system through the external SAS-2 ports of a NEM.

Note – The Sun Blade Zone Manager CLI will not recognize or list the presence of non-manageable, non-supporting SAS-2 storage devices. However, in some instances, the Sun Blade Zone Manager web interface might recognize and list the presence of non-manageable, non-supporting SAS-2 storage devices. In these cases, the non-SAS-2 storage devices in the Sun Blade Zone Manager web interface are labeled as non-SAS-2 resources.

Sun Blade Zone Manager Properties

Oracle ILOM provides a set of easy-to-use properties for setting up and managing access permissions to chassis-level SAS-2 storage devices. For more details, see:

- "Sun Blade Zone Manager Web: Properties" on page 64
- "Sun Blade Zone Manager CLI: Targets and Properties" on page 70

Sun Blade Zone Manager Web: Properties

The Sun Blade Zone Manager Settings page is accessible from the Oracle ILOM CMM web interface by clicking System Management > SAS Zoning. The Sun Blade Zone Manager Settings page provides the following options for enabling, setting up, and managing SAS zoning permissions:

- "Sun Blade Zone Manager: State" on page 64
- "Whole Chassis Setup: Quick Setup" on page 64
- "Full Resource Control: Detailed Setup" on page 68
- "Zoning Reset: Reset All" on page 69

Sun Blade Zone Manager: State

The state for the Sun Blade Zone Manager in the Oracle ILOM CMM web interface appears on the Sun Blade Zone Manager Settings page.

When this state is enabled, the Sun Blade Zone Manager provides template-based (Quick Setup) or custom zoning capabilities (Detailed Setup) for chassis-installed SAS-2 storage devices.

When this state is disabled (default), Oracle ILOM is unable to manage the access permissions to the chassis-installed SAS-2 storage devices, and the options for Quick Setup and Detailed Setup are hidden from view on the Sun Blade Zone Manager Settings page.

For instructions for enabling the Sun Blade Zone Manager state, see "Access and Enable Sun Blade Zone Manager" on page 74.

Whole Chassis Setup: Quick Setup

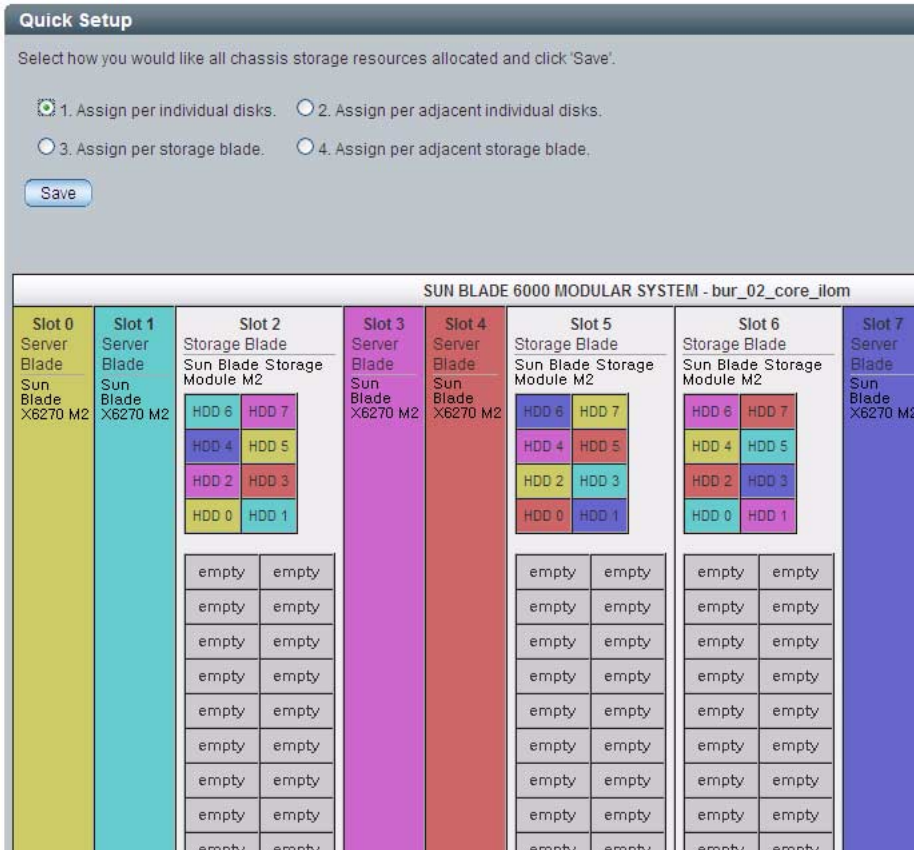
The Whole Chassis Setup feature, in the web interface, is typically used when setting up zoning access for the first time for all chassis-level SAS-2 storage devices. This feature offers the following Quick Setup zoning options:

- "Option 1: Assign to Individual Disks (Quick Setup)" on page 65
- "Option 2: Assign to Adjacent Individual Disks (Quick Setup)" on page 65
- "Option 3: Assign to Individual Storage Blade (Quick Setup)" on page 66
- "Option 4: Assign to Adjacent Storage Blade (Quick Setup)" on page 67

Option 1: Assign to Individual Disks (Quick Setup)

The first zoning option, shown in the Quick Setup dialog, uses a round-robin algorithm to evenly allocate storage ownership across all chassis CPU blade servers.

Option 1 is best suited for fault-tolerant chassis system operation where the failure or removal of a single storage blade server will not bring down all storage arrays.



Note – Empty slots shown in the Quick Setup dialog represent chassis blade slots that are empty (nothing installed).

Option 2: Assign to Adjacent Individual Disks (Quick Setup)

The second zoning allocation option, shown in the Quick Setup dialog, equally divides the number of blade storage disks among the adjacent CPU blade servers.

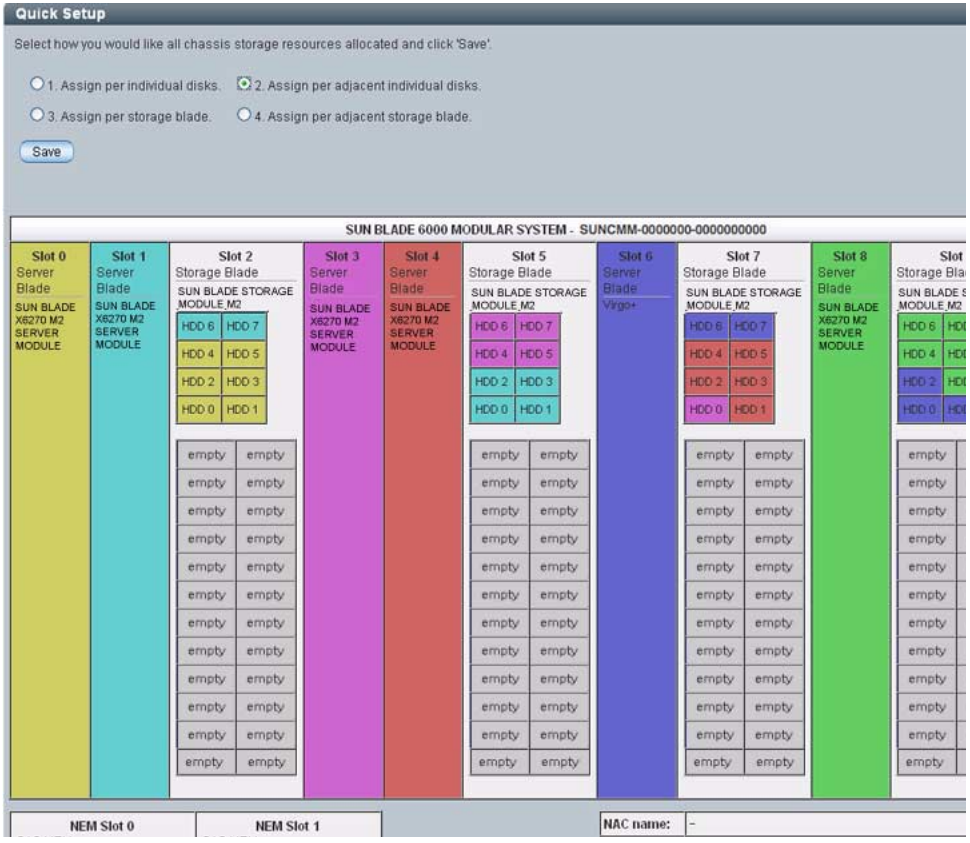
Option 2 attempts to allocate the same number of storage disks as possible to each adjacent CPU blade server. If there are no storage blades adjacent to a CPU blade, then Sun Blade Zone Manager will allocate storage disks from the nearest possible storage blade.

Assigning CPU blades to adjacent storage disks is best suited for when: 1) the Sun blade chassis system contains more CPU blade servers than storage blade servers, and 2) you want to equally deploy the storage resources among each CPU blade server.

Option 3: Assign to Individual Storage Blade (Quick Setup)

The third zoning allocation option, shown in the Quick Setup dialog, scans the Sun blade chassis system for CPU blade servers (starting at Slot 0) and then assigns the the storage disks from the closest available storage blade.

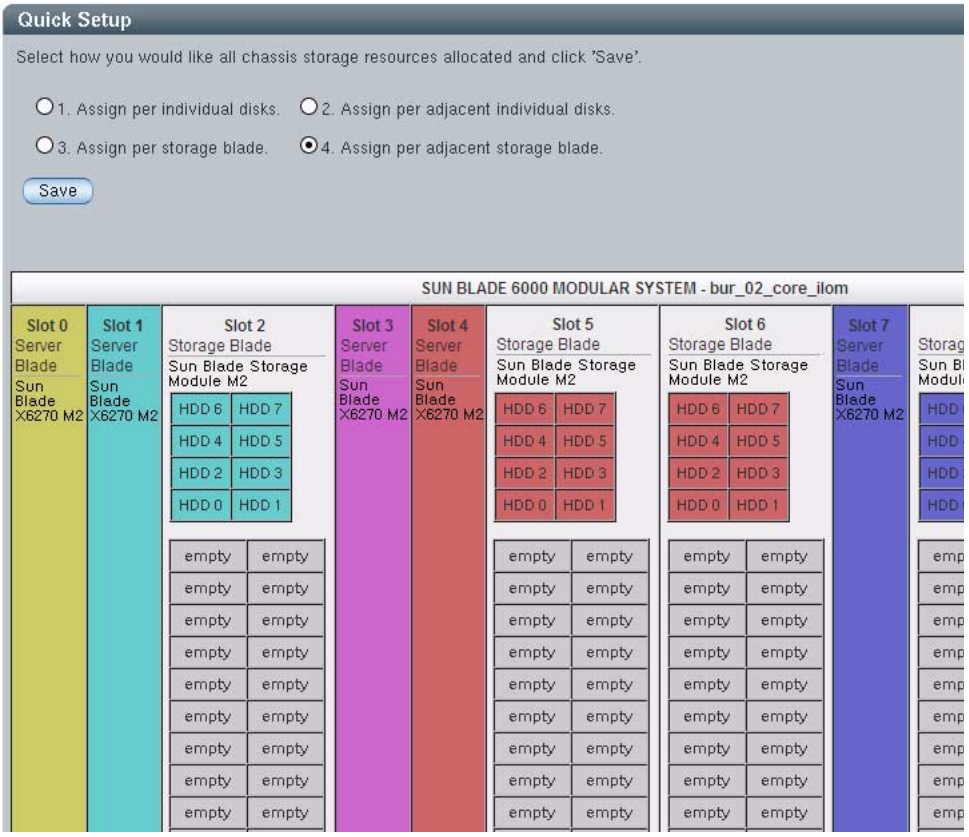
Option 3 is best suited for chassis systems that contain an equal number of storage blade servers and CPU blade servers, or there are more storage blade server than CPU blade servers. Otherwise, if there are fewer storage blade servers than CPU blade servers in the chassis, the Sun Blade Zone Manager will not be able to allocate storage to some CPU blade servers.



Option 4: Assign to Adjacent Storage Blade (Quick Setup)

The fourth zoning allocation option, shown in the Quick Setup dialog, scans the Sun blade chassis system for CPU blade servers with a storage blade in an adjacent slot. If the CPU blade server does not have a storage blade server in an adjacent chassis slot, the Sun Blade Zone Manager will not allocate storage to that CPU blade server.

Option 4 is best suited for chassis systems that contain: (1) an equal number of storage blade servers and CPU blade servers, and (2) each CPU blade server is installed in a chassis slot that is adjacent to a storage blade server.



Note – NEM0 and NEM1 targets appear in the Zone Manager when these NEMs are installed; however, external NEM connections to SAS-2 network storage devices are not supported or shown in the Sun Blade Zone Manager.

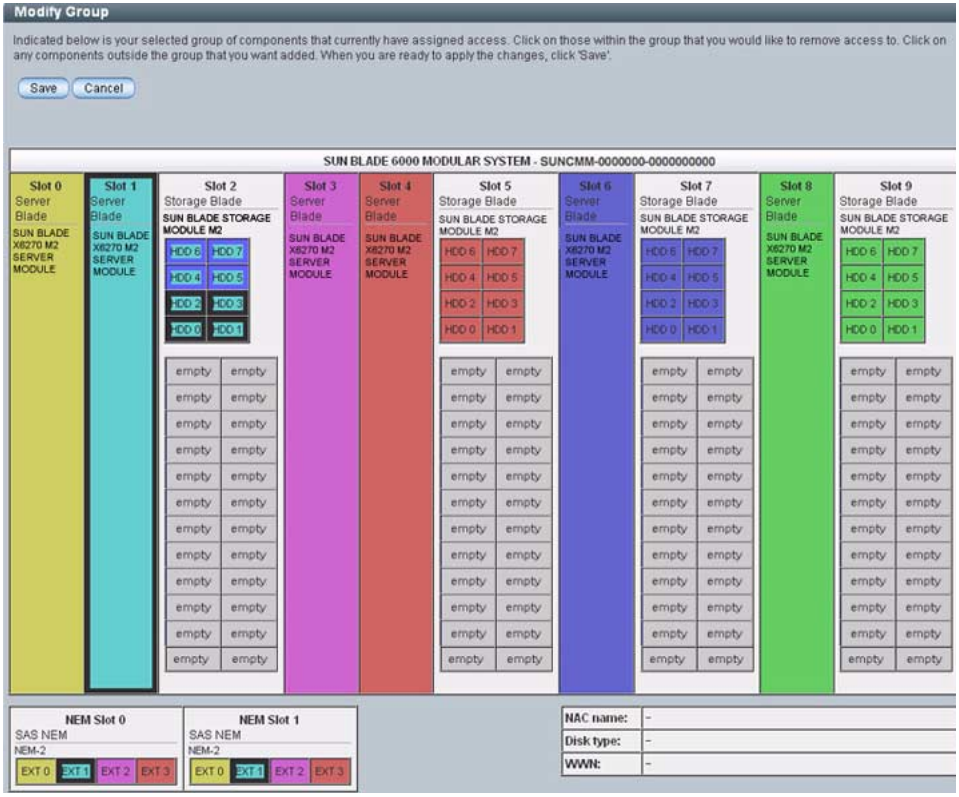
For further instructions on how to create SAS zoning allocations for the whole chassis, see "Allocating Storage to Entire Chassis: Quick Setup (Web)" on page 75.

Full Resource Control: Detailed Setup

The Full Resource Control: Detailed Setup option, in the web interface, enables you to create new allocations to storage resources or change existing storage resource allocations. For instance, when using the Full Resource Control: Detailed Setup option, you can choose to:

- Add storage allocations to a CPU blade server by clicking components outside the color-coded server group.

- Remove storage resource allocations assigned to a CPU blade server by clicking components within a color-coded server group
- Share a single resource allocation between one or more CPU blade servers.



For further instructions for using the Detailed Setup option for creating or changing resource allocations, see:

- "Allocate Storage Resources to Single Blade Server: Detailed Setup (Web)" on page 77
- "Allocate Single Storage Resource to Multiple Blade Servers: Detailed Setup (Web)" on page 81
- "Modify Existing Blade Group Allocations (Web)" on page 90

Zoning Reset: Reset All

When the state for the Sun Blade Zone Manager is enabled, the option for resetting the zoning configuration to factory defaults appears on the Sun Blade Zone Manager Settings page (System Management > SAS Zoning).

For instructions for resetting the Sun Blade Zone Manager parameters to factory defaults, see "Reset Zoning Allocations to Factory Defaults (Web)" on page 95.

Sun Blade Zone Manager CLI: Targets and Properties

The Oracle ILOM CMM CLI provides access to zoning targets and properties under the `/STORAGE/sas_zoning` namespace.

SAS Zoning Properties	Values	Default	Description
`zone_management_state=`	d*isabled* | *enabled*	Disabled	When set to disabled, the Sun Blade Zone Manager is unable to manage the SAS-2 chassis storage resources. When set to enabled, the Sun Blade Zone Manager provides template-based or custom zoning capabilities for chassis-installed SAS-2 resources.
`reset_password_action=`	*true*		When set to true, the in-band management zoning password on the CMM is set to factory defaults (all zeros).
`reset_access_action=`	*true*		When set to true, the storage resource allocation parameters currently saved on the CMM are set to factory defaults.

When zoning is enabled, blades and NEMs that are SAS-2 capable appear as CLI targets under `/STORAGE/sas_zoning`. For example:

```
-> show /STORAGE/sas_zoning

     Targets
       BL0
       BL6
       BL7
       BL8
       BL9
       NEM0
       NEM1

    Properties
      zone_management_state = enabled
      reset_password_action = (Cannot show property)
      reset_access_action = (Cannot show property)

    Commands:
```

```
cd
set
show
```

Note – NEM0 and NEM1 targets appear in the Zone Manager when these NEMs are installed; however, external SAS connections in the Sun Blade Zone Manager are not supported at this time.

SAS-2 capable storage devices on a blade server appear as targets under `sas_zoning/BL`*n*. For example:

```
-> show /STORAGE/sas_zoning/BL9

  Targets:
    HDD0
    HDD2
    HDD3
    HDD5
```

The SAS zoning properties that are available under the blade target (BL*n*) or storage device (HDD*n*) target include:

Blade and Storage Properties	SAS Zoning Target	Description
`add_storage_access=`	/BL*n*	Use the `add_storage_access=`*property under the /sas_zoning/BLn target* to allocate storage to a CPU blade server.
`remove_storage_access=`	/BL*n*	Use the `remove_storage_access=` property under the `/sas_zoning/BL`*n* target to remove storage from a CPU blade server.
`add_host_access=`	/BL*n*/HDD*n*	Use the `add_host_access=` property under the `/sas_zoning/BL`*n*`/HDD`*n* target to allocate storage to a CPU blade server.
`remove_host_access=`	/BL*n*/HDD*n*	Use the `remove_host_access=` property under the `/sas_zoning/BL`*n*`/HDD`*n* target to remove storage from a CPU blade server.

For further instructions on how to manage storage resource allocations from the Oracle ILOM CLI, see:

- "Manually Create SAS-2 Zoning Allocations (CLI)" on page 85
- "View and Modify Existing Storage Allocations (CLI)" on page 93
- "Reset Zoning Allocations to Factory Defaults (CLI)" on page 95

Important SAS Zoning Allocations Considerations

Saving Storage Allocations

When you save storage allocations to a blade, consider the following:

- The storage allocations saved in Oracle ILOM are based on the hardware currently installed in the chassis (SAS-2 NEMs or storage blades). Changes in the chassis hardware configuration can result in a loss of a storage blade group. Therefore, you should back up all chassis storage allocations in Oracle ILOM. For more information, see "Backing Up and Recovering SAS-2 Zoning Assignments" on page 73.

Note – Hot-plugging of chassis components such as NEMs and storage blades can also affect the storage blade group allocations. For further information on the effects of hot-plugging NEMs and storage blades, refer to the Oracle Sun storage blade or NEM hardware documentation.

- The Sun Blade Zone Manager dialog (Modify Group or New Assignments) must remain open during the entire Save operation. If the Sun Blade Zone Manager dialog is closed while the Save operation is in progress, only a portion of the storage blade group will be preserved.
- Do not remove or power cycle any of the chassis hardware components that are part of a storage blade group while a Save operation is in progress. Doing so will cause the group allocation not to save properly.

Backing Up and Recovering SAS-2 Zoning Assignments

Oracle ILOM provides Backup and Restore operations that enable you to: (1) create a backup copy of all parameters saved in the Oracle ILOM Configuration file, and (2) restore a backup copy of the Oracle ILOM Configuration file. For details about how to create a backup copy or how to restore a backup copy of the Oracle ILOM Configuration file, see "SAS Zoning Chassis Blade Storage Resources" on page 61.

Enabling Zoning and Creating SAS-2 Zoning Assignments

Chassis Hardware Requirements

- A PCIe 2.0 compliant midplane must exist in the Sun Blade 6000 chassis. For more information on determining this, refer to the *Sun Blade 6000 Modular System Product Notes*.
- The minimum software release of 3.2.1 must be installed on the CMM. This release includes the minimum Oracle ILOM CMM firmware version (3.0.10.15a), which supports SAS-2 and includes the Sun Blade Zone Manager.
- All SAS-2 storage devices (blade server module with SAS-2 REM, SAS-2 NEMs, and SAS-2 storage modules) must be properly installed and powered-on in the Sun blade chassis system.

Note – If the state of a SAS-2 storage device is in a failed state, the Sun Blade Zone Manager might not be able to recognize the failed SAS-2 storage device.

- SAS-2 NEMs must be at a firmware version level that supports zoning. Check your NEM product notes for version information and available updates.
- Initial setup and configuration of your Oracle ILOM CMM must be completed. For information about establishing a management connection to the Oracle ILOM CMM, see "Connecting to the Oracle ILOM CMM" on page 6.

▼ Access and Enable Sun Blade Zone Manager

When enabled, the Sun Blade Zone Manager in Oracle ILOM provides a way of constraining which CPU blade servers within a SAS domain have access to storage resources (HDDs, FMODs, external SAS ports).

Before You Begin

- The Admin (a) role is required in Oracle ILOM to modify SAS Zoning properties.
- Review "Chassis Hardware Requirements" on page 73.
- Review "Important SAS Zoning Allocations Considerations" on page 72.

Note – The presence of chassis storage blades in the Oracle ILOM web interface are not shown in the CMM Manage menu. Storage disks installed on storage blade servers are viewable from the System Information > Storage page. Sun storage blade resource allocations are manageable from the System Management > SAS Zoning > Sun Blade Zone Manager Settings page.

---

1. **To access and enable the Sun Blade Zone Manager from the CMM web interface, perform these steps:**

   a. **Click System Management > SAS Zoning.**

      The Sun Blade Zone Manager Settings page appears.

   b. **Enable SAS Zoning by selecting the Enabled check box and clicking Save.**

      After enabling the Sun Blade Zone Manager, you can create, view, and manage settings for SAS-2 zoning using Oracle ILOM interfaces.

      The following message might appear if the Oracle ILOM CMM services are still initializing:

```
Sun Blade Zone Manager Not Ready
The Sun Blade Zone Manager is initializing and not ready for
operation. Please wait several minutes and then refresh to check
the status.
```

      If the above message appears, wait five minutes and then try again. You will need to close and reopen, or refresh the web interface page.

2. **To enable the SAS Zoning property from the CMM CLI, type:**

   `set /STORAGE/SAS_zoning zone_management_state=enabled`

   - The following message appears.

     ```
     Enabling the Sun Blade Zone Manager will result in the
     clearing of all zoning configuration in the installed
     chassis SAS hardware, and any SAS disk I/O in progress will
     be interrupted.

     Are you sure you want to enable the Sun Blade Zone Manager
     (y/n)?
     ```

   - To continue, type: **`y`**

     The following message appears.

     ```
     Set 'zone_management_state' to 'enabled'
     ```

   - If the Oracle ILOM CMM is unable to initialize the Sun Blade Zone Manager, the following message appears:

     ```
     set: The Sun Blade Zone Manager is initializing and not
     ready for operation. Please wait several minutes and try
     again.
     ```

     If the above message appears, wait five minutes and retry the command.

Related Information

- "Allocating Storage to Entire Chassis: Quick Setup (Web)" on page 75
- "Allocate Storage Resources to Single Blade Server: Detailed Setup (Web)" on page 77
- "Manually Create SAS-2 Zoning Allocations (CLI)" on page 85
- "Managing Existing SAS-2 Storage Resource Allocations" on page 87
- "Resetting Sun Blade Zone Manager Allocations to Factory Defaults" on page 95

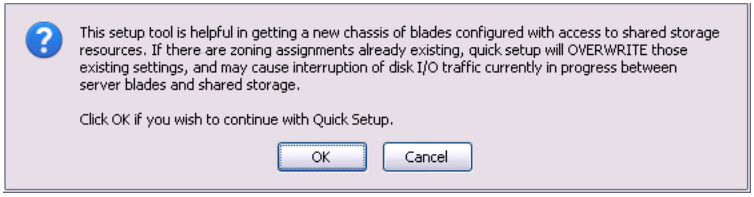
▼ Allocating Storage to Entire Chassis: Quick Setup (Web)

Before You Begin:

- The Admin (a) role is required in Oracle ILOM to modify SAS Zoning properties.
- Review "Chassis Hardware Requirements" on page 73.
- SAS Zoning must be enabled in Oracle ILOM prior to performing this Quick Setup procedure for assigning zoning. For instructions, see "Access and Enable Sun Blade Zone Manager" on page 74.

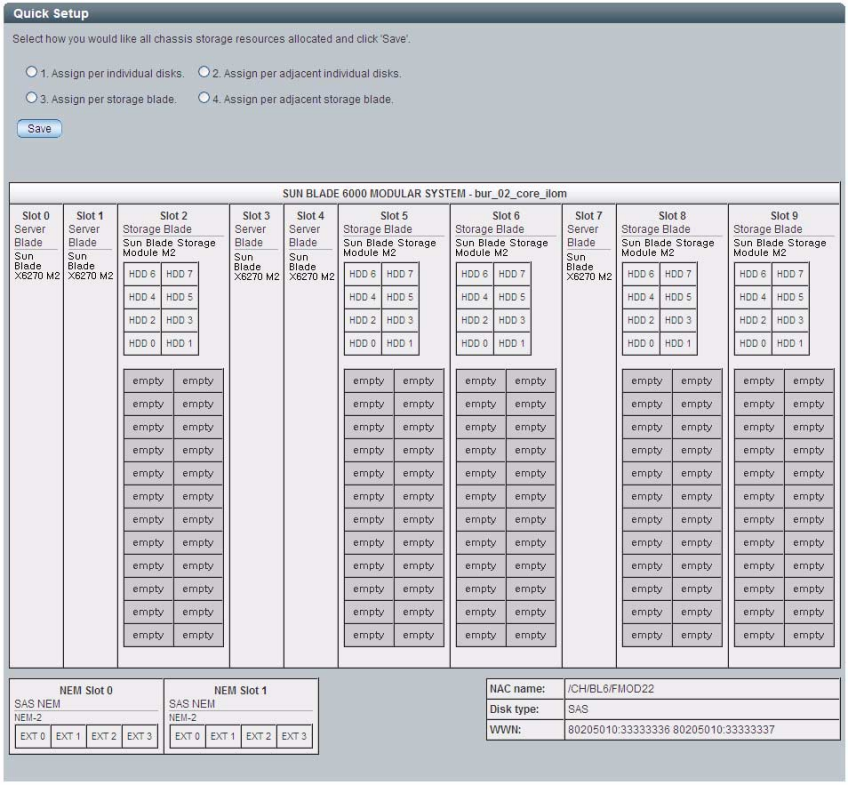
1. **To access the Sun Blade Zone Manager Settings page in the web interface, click System Management > SAS Zoning.**
2. **In the Sun Blade Zone Manager section, click the Quick Setup button.**

   A warning message appears.



3. **To overwrite existing zoning assignments, click OK.**

   The Quick Setup screen appears.



Note – Any HDD chassis slot that does not have a HDD presently installed in the chassis is labeled "empty." Empty HDD chassis slots are not included in the Quick Setup storage assignments.

4. **To indicate how you would like to allocate the chassis storage resources, select one of the Quick Setup options.**

   For a description of each Quick Setup option, see "Whole Chassis Setup: Quick Setup" on page 64.

   After choosing a Quick Setup option, the Sun Blade Zone Manager displays the color-coded zoning allocations between the CPU blade servers and storage devices (HDDs) installed on the storage blade servers. Although the Sun Blade Zone Manager shows the NEM0 and NEM1 External SAS connections, these connections are not supported.

Note – Until you click the Save button, the chassis storage allocations are not saved.

5. **To save the Quick Setup chassis storage allocations, click Save.**

6. **To back up the newly saved blade storage group allocations, see** "Backing Up and Recovering SAS-2 Zoning Assignments" on page 73**.**

Related Information

- "Important SAS Zoning Allocations Considerations" on page 72
- "Allocate Storage Resources to Single Blade Server: Detailed Setup (Web)" on page 77
- "Allocate Single Storage Resource to Multiple Blade Servers: Detailed Setup (Web)" on page 81
- "Modify Existing Blade Group Allocations (Web)" on page 90
- "Manually Create SAS-2 Zoning Allocations (CLI)" on page 85
- *Sun Blade 6000 Modular System Documentation*

▼ Allocate Storage Resources to Single Blade Server: Detailed Setup (Web)

Before You Begin:

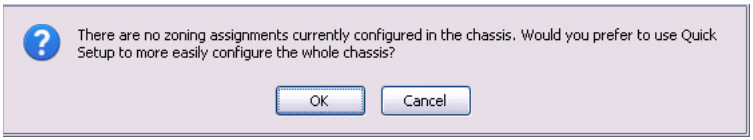
- The Admin (a) role is required in Oracle ILOM to modify SAS Zoning properties.
- Review "Chassis Hardware Requirements" on page 73.

- The Sun Blade Zone Manager must be enabled in Oracle ILOM prior to performing this procedure. For instructions, see "Access and Enable Sun Blade Zone Manager" on page 74.

1. **In the Sun Blade Zone Manager Settings page, click the Detailed Setup button.**

   One of the following appears:

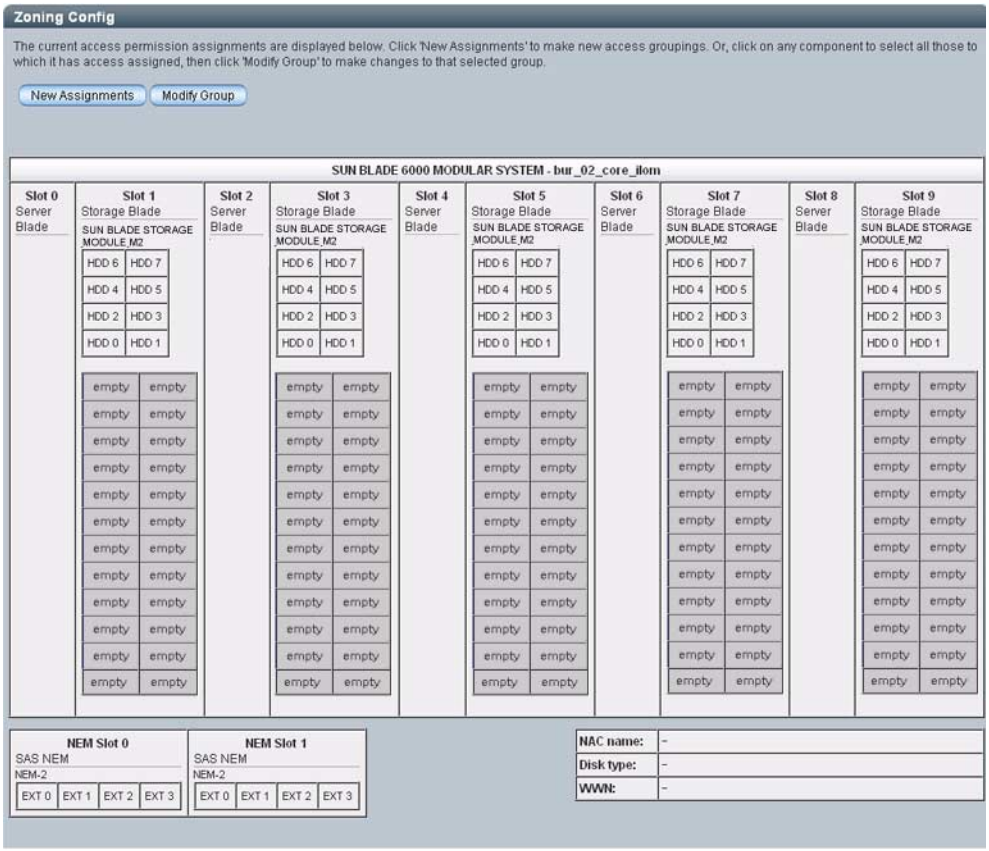
   - **The Zoning Config dialog appear**s. Proceed to Step 3.
   - The following **message appears indicating no zoning assignments exist**. Proceed to Step 2.



2. **In the message that states no zoning assignments exist, perform one of the following:**

   - If you want to manually create SAS zoning assignments using the Detailed Setup option, click Cancel and proceed to Step 4.

     Clicking Cancel will open the Detailed Setup Zoning Config page.



- If you want to set up the initial zoning assignments using Sun Blade Zone Manager Quick Setup option, click OK and proceed to "Allocating Storage to Entire Chassis: Quick Setup (Web)" on page 75.

3. **To assign storage resources to a single blade server, perform these steps in the Zoning Config dialog:**

   a. **Click New Assignments.**

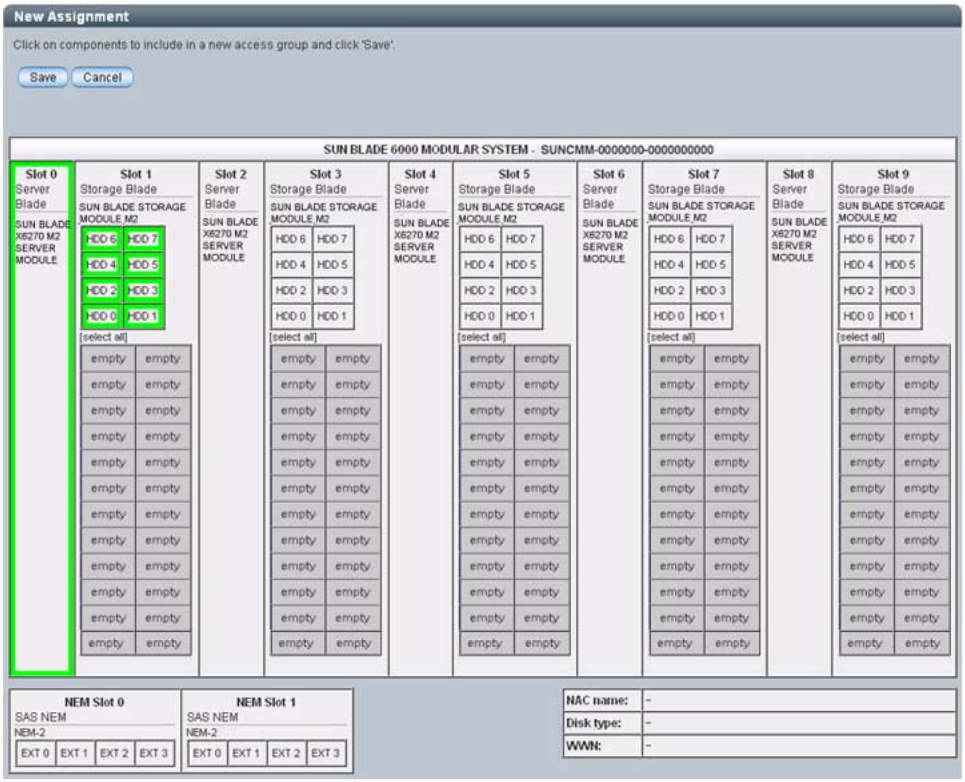
      New Assignments dialog appears.

   b. **Click a blade server then click the storage resources (HDDs) that you want to assign to the selected blade server.**

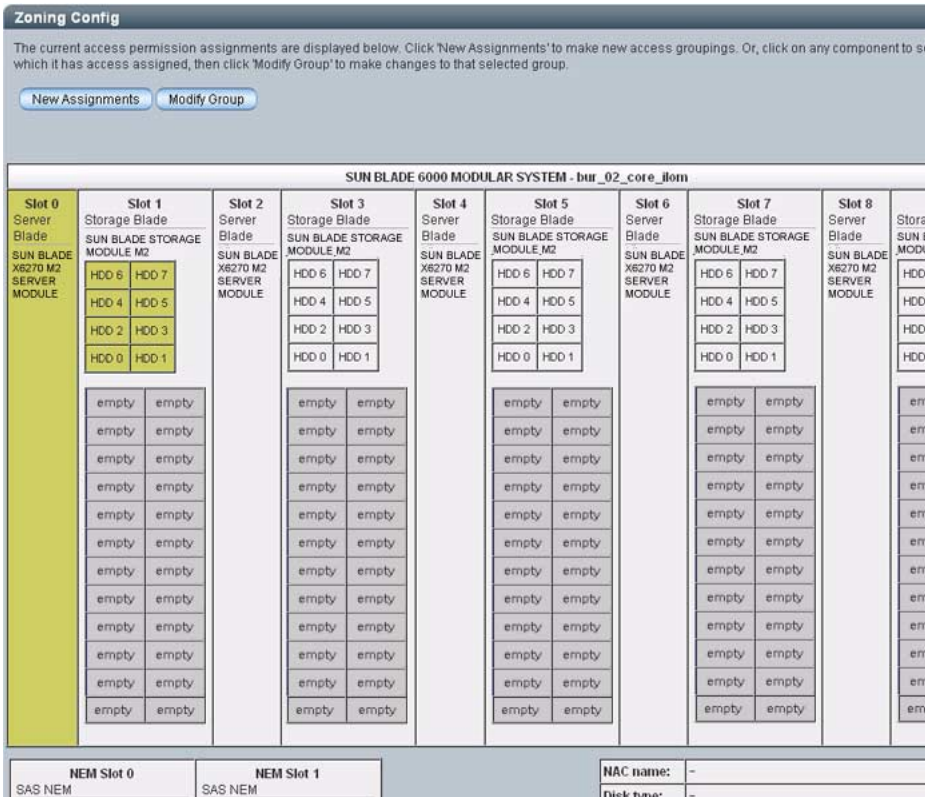
Note – All HDD chassis slots that do not have an HDD storage device installed are labeled "empty." Empty HDD chassis slots are not allocated to CPU blade servers.

Caution – Alternatively, you can allocate storage resources to multiple blade servers; however, the servers must be enabled for multipathing. For further instructions, see "Allocate Single Storage Resource to Multiple Blade Servers: Detailed Setup (Web)" on page 81.

Although the Sun Blade Zone Manager displays them, NEM0 and NEM1 External SAS connections are not supported.



c. To save the newly created blade storage group assignment, click Save.



4. **To back up the newly saved blade storage group allocations, see** "Backing Up and Recovering SAS-2 Zoning Assignments" on page 73**.**

Related Information

- "Modify Existing Blade Group Allocations (Web)" on page 90
- "Important SAS Zoning Allocations Considerations" on page 72
- "Allocate Single Storage Resource to Multiple Blade Servers: Detailed Setup (Web)" on page 81
- *Sun Blade 6000 Modular System Documentation*

▼ Allocate Single Storage Resource to Multiple Blade Servers: Detailed Setup (Web)

Before You Begin

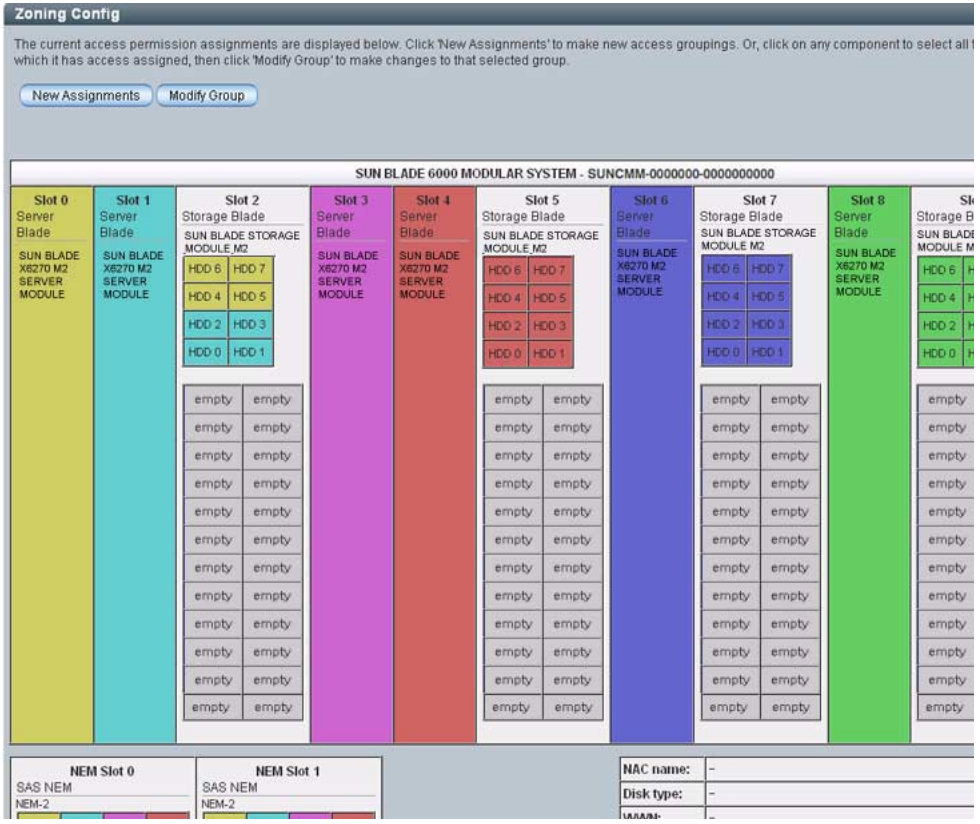
Caution – Refer to the Sun blade server documentation to determine whether the Sun blade server module is enabled for sharing storage resources with another Sun blade server module.

Caution – The option for sharing a single storage resource should only be used with an Oracle-supported clustering solution. For more information about clustering solutions, see the *Sun Blade Storage Module Administration Guide*.

- The Admin (a) role is required in Oracle ILOM to modify SAS Zoning properties.
- Review "Chassis Hardware Requirements" on page 73.
- The Sun Blade Zone Manager must be enabled in Oracle ILOM prior to performing this procedure. For instructions, see "Access and Enable Sun Blade Zone Manager" on page 74.

1. **In the Sun Blade Zone Manager Settings page, click the Detailed Setup button.**

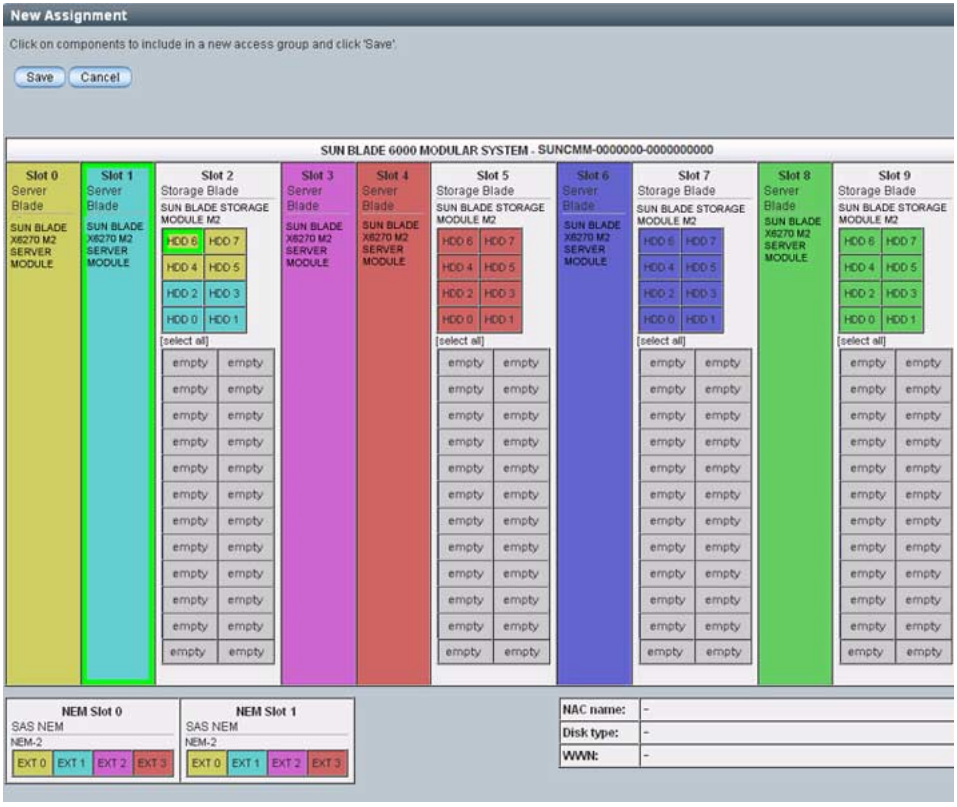
   The Zoning Config dialog appears. For example:



2. **To assign a single storage resource to multiple blade servers, perform the following steps:**

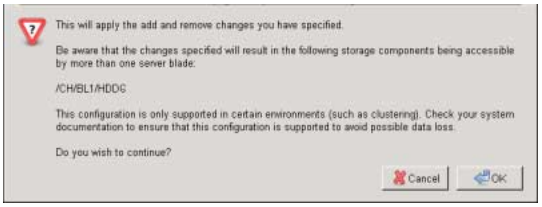
   a. **Click New Assignments.**

   b. **To share a single storage blade resource (for example, HDD6 in slot 2) currently assigned to a single blade server (for example, in slot 0) with another blade server (for example, in slot 1), click the additional blade server target (for example, in slot 1), then click the storage blade resource (for example, HDD6 in slot 2) that you want to share with this target (for example, in slot 1).**



   c. **To save the allocation modification to the blade storage group, click Save.**

   The following message appears.

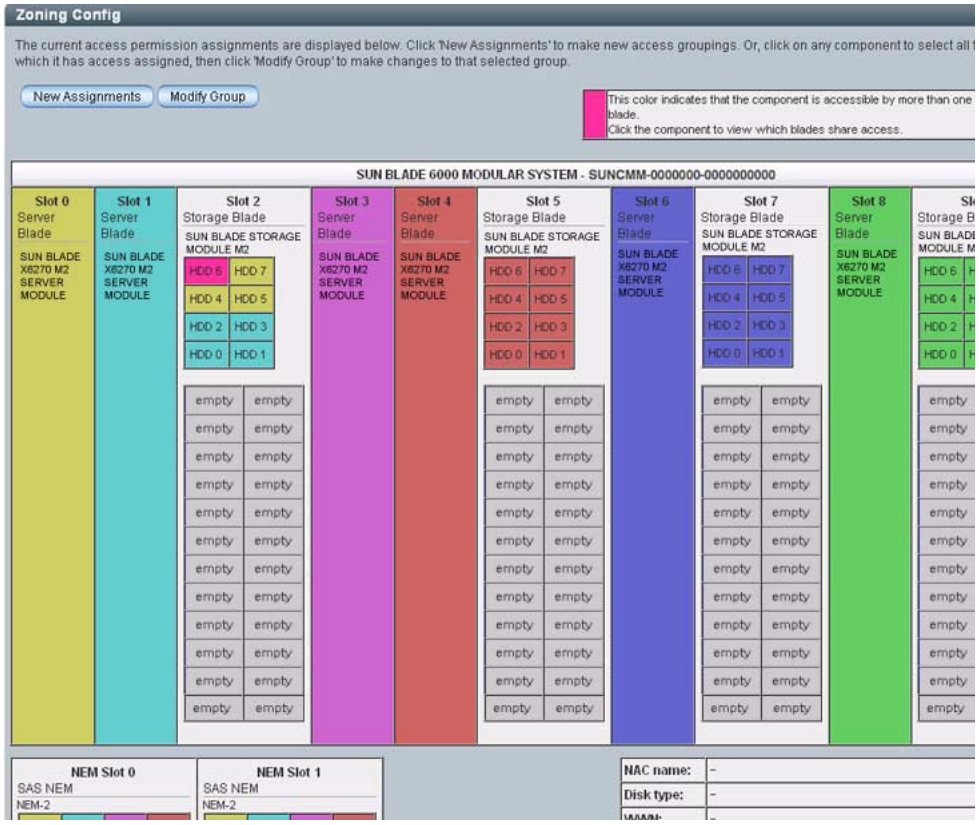


d. To continue to save the blade storage group assignment, click OK.

The Sun Blade Zone Manager highlights the shared storage resources in pink.

Example:

The HDD6 storage resource in slot 2 is highlighted with pink to indicate this resource is shared by more than one CPU blade server.



3. To back up the newly assigned blade storage group, see "Backing Up and Recovering SAS-2 Zoning Assignments" on page 73**.**

Related Information

- "Important SAS Zoning Allocations Considerations" on page 72

- "Managing Existing SAS-2 Storage Resource Allocations" on page 87
- *Sun Blade 6000 Modular System Documentation*

▼ Manually Create SAS-2 Zoning Allocations (CLI)

Before You Begin

- Ensure that your chassis configuration meets the requirements in "Chassis Hardware Requirements" on page 73.
- Admin (a) role privileges are required to manually create SAS zoning allocations in Oracle ILOM.
- The Sun Blade Zone Manager must be enabled in Oracle ILOM.

1. **Access the Sun Blade Zone Manager from the CLI.**

   For instructions, see "Access and Enable Sun Blade Zone Manager" on page 74.

2. **Use one of the following methods to allocate a storage resource to a CPU blade server:**

   - **Method 1**: To assign a storage disk to a CPU blade server, use the following commands:

     -> **cd /STORAGE/sas_zoning/BL***n*

     -> **set add_storage_access=***path_to_storage_disk*

     Where BL*n* is the chassis slot number for the CPU blade server and *path_to_storage_disk* is the path to the storage blade disk that you want to assign to the CPU blade server.

     For example, to assign the hard disk drive in the storage blade slot location 0 to the CPU blade server in chassis slot location 1, you would type:

     -> **set add_storage_access=/CH/BL1/HDD0**.

   - **Method 2**: To assign CPU blade server to a storage resource, type:

     -> **cd /STORAGE/sas_zoning/BL***n***/HDD***n*

     -> **set add_host_access=***path_to_blade_server*

     Where BL*n* is the chassis slot location for the CPU blade server, HDD*n* is storage blade slot location for the hard disk drive, and *path_to_blade_server* is the CPU blade server target where you want to assign to the storage disk.

     For example, if you wanted to assign a hard disk drive within a storage blade server to a CPU blade server in the chassis, you would type:

     -> **cd /STORAGE/sas_zoning/BL1/HDD0**

```
-> set add_host_access=/CH/BL0
```

The following examples show how to use these commands to set up zoning assignments between storage devices on a storage blade in slot 1 and a server blade in slot 0.

- **Method 1** - Command examples for allocating storage resources to a CPU blade server:

CLI Command Syntax Examples	Instructions
`-> cd /STORAGE/sas_zoning/BL0`	1. Use the first command syntax example to access the CPU blade server that will be assigned a storage resource. 2. Use the second command syntax example to allocate the storage module (HDD0) in the storage blade server (BL1) to the host CPU blade server (BL0) in chassis slot 0. 3. Optionally, you can use the third command syntax to assign multiple devices in a single command line. Ensure that you specify the full path to the storage resource and separate each resource with a comma (no space). 4. Use the `show` command to confirm that the storage allocations are saved to the CPU blade server (/CH/BL1/HD0 and CH/BL1/HDD1).
`-> set add_storage_access=/CH/BL1/HDD0`	
`-> set add_storage_access=/CH/BL1/HDD0,/CH/BL1/HDD1`	

`-> show`
`/STORAGE/sas_zoning/BL0`
`Targets:`
`0 (/CH/BL1/HDD0)`
`1 (/CH/BL1/HDD1)`	

- **Method 2** - Command examples for assigning a CPU server blade (BL0) to a storage blade resource (BL1/HDD0):

CLI Command Syntax Examples	Instructions
-> **cd /STORAGE/sas_zoning/BL1/HDD0** -> **set add_host_access=/CH/BL0** -> **show** /STORAGE/sas_zoning/BL1/HDD0 Targets: 0 (/CH/BL0)	1. Use the first command syntax example to access the storage resource (HDD0) installed in the storage blade server (BL1/HDD0). 2. Use the second command syntax example to assign the storage resource (HDD0) to the host CPU blade server (BL0). 3. Use the `show` command to confirm that the storage allocations are saved to the correct CPU blade server (/CH/BL0).

3. **Back up the newly saved server storage group.**

Related Information

- "Backing Up and Recovering SAS-2 Zoning Assignments" on page 73
- "Manually Create SAS-2 Zoning Allocations (CLI)" on page 85
- *Sun Blade 6000 Modular System Documentation*

Managing Existing SAS-2 Storage Resource Allocations

The Sun Blade Zone Manager in Oracle ILOM enables you to manage existing allocations to chassis storage resources in the following ways:

- "View Existing CPU Blade Server Storage Allocations (Web)" on page 87
- "Modify Existing Blade Group Allocations (Web)" on page 90
- "View and Modify Existing Storage Allocations (CLI)" on page 93

▼ View Existing CPU Blade Server Storage Allocations (Web)

Before You Begin

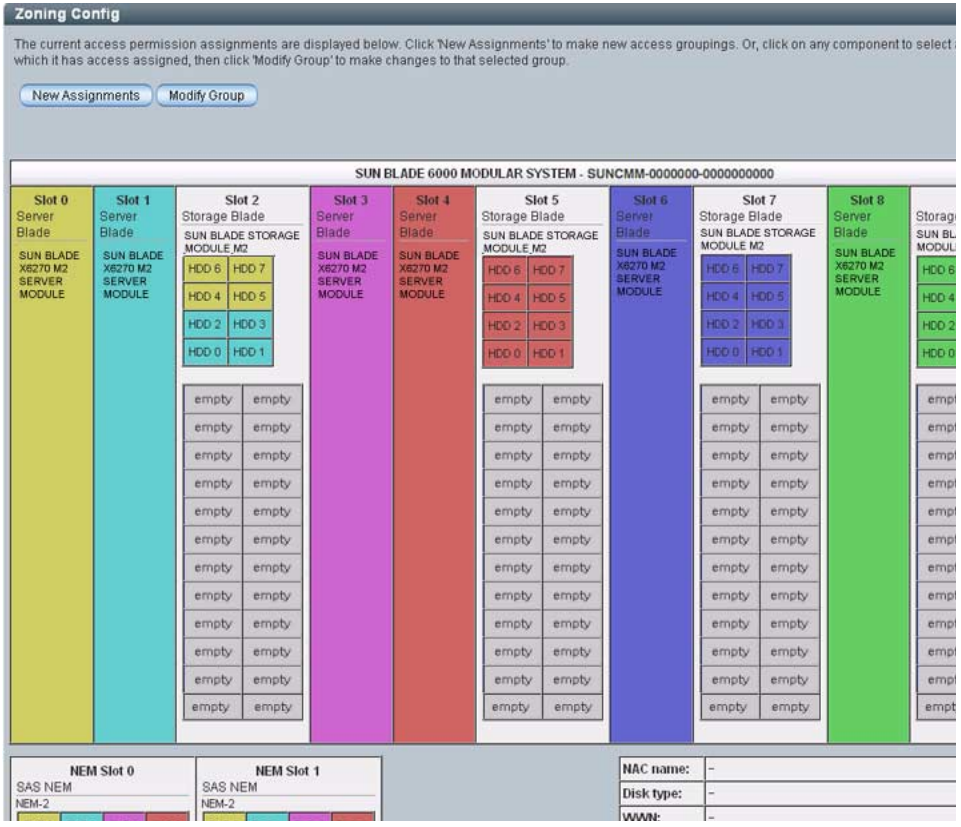
- Admin (a) role privileges are required to view Sun Blade Zone Manager allocations in Oracle ILOM.

- The Sun Blade Zone Manager in Oracle ILOM must be enabled.

1. **Access the Sun Blade Zone Manager and click Detailed Setup.**

   For instructions for accessing the Sun Blade Zone Manager, see "Access and Enable Sun Blade Zone Manager" on page 74.

   The Zoning Config dialog appears displaying the current chassis storage allocations.



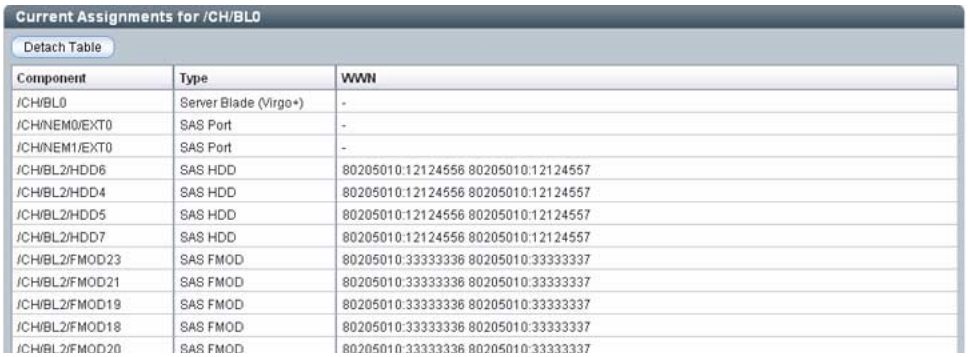
2. **To view all of the resource allocations for a selected CPU blade server, perform these steps:**

   a. **Select a CPU blade server slot.**

      For this example, slot 0 is selected.

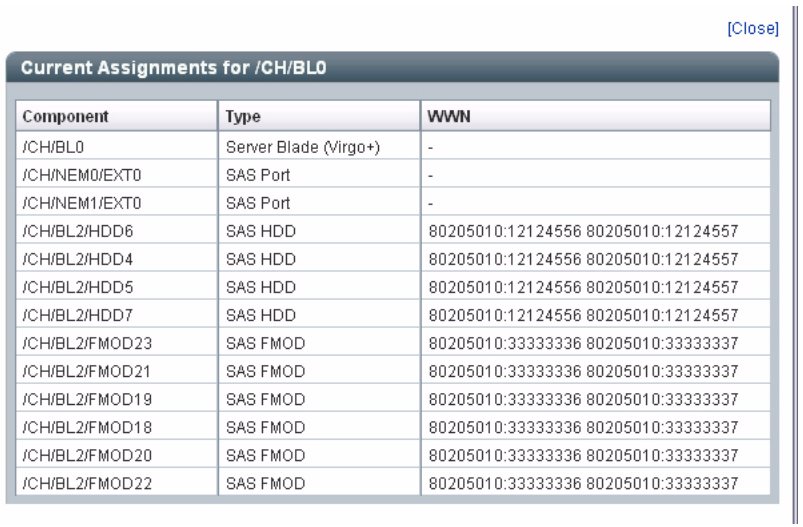
   b. **Scroll down to the Current Assignments table.**

      All of the storage resources that are currently assigned to the selected CPU blade server appear in the Current Assignments table.



3. **To view, at the same time, the Current Assignments table for the selected CPU blade server and the resource allocations for the other chassis CPU blade servers, click Detach Table.**

   The detached Current Assignments table appears in a separate dialog box.



Related Information

- "Modify Existing Blade Group Allocations (Web)" on page 90
- "Important SAS Zoning Allocations Considerations" on page 72
- "Manually Create SAS-2 Zoning Allocations (CLI)" on page 85
- *Sun Blade 6000 Modular System Documentation*

▼ Modify Existing Blade Group Allocations (Web)

Before You Begin

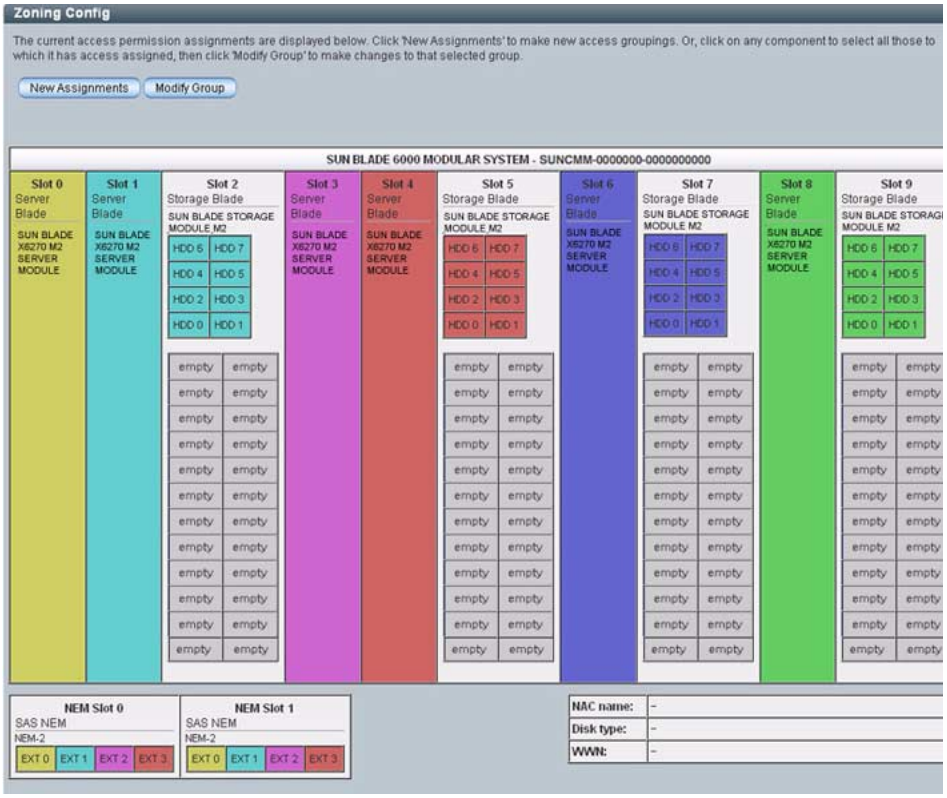
- Ensure that your chassis hardware configuration meets the requirements described in "Chassis Hardware Requirements" on page 73.
- Admin (a) role privileges are required in Oracle ILOM to modify any Sun Blade Zone Manager properties.
- The Sun Blade Zone Manager must be enabled in Oracle ILOM.

1. **To access the Sun Blade Zone Manager, click System Management > SAS Zoning.**

   The SAS Zoning page appears.

2. **In the Sun Blade Zone Manager section, click Detailed Setup.**

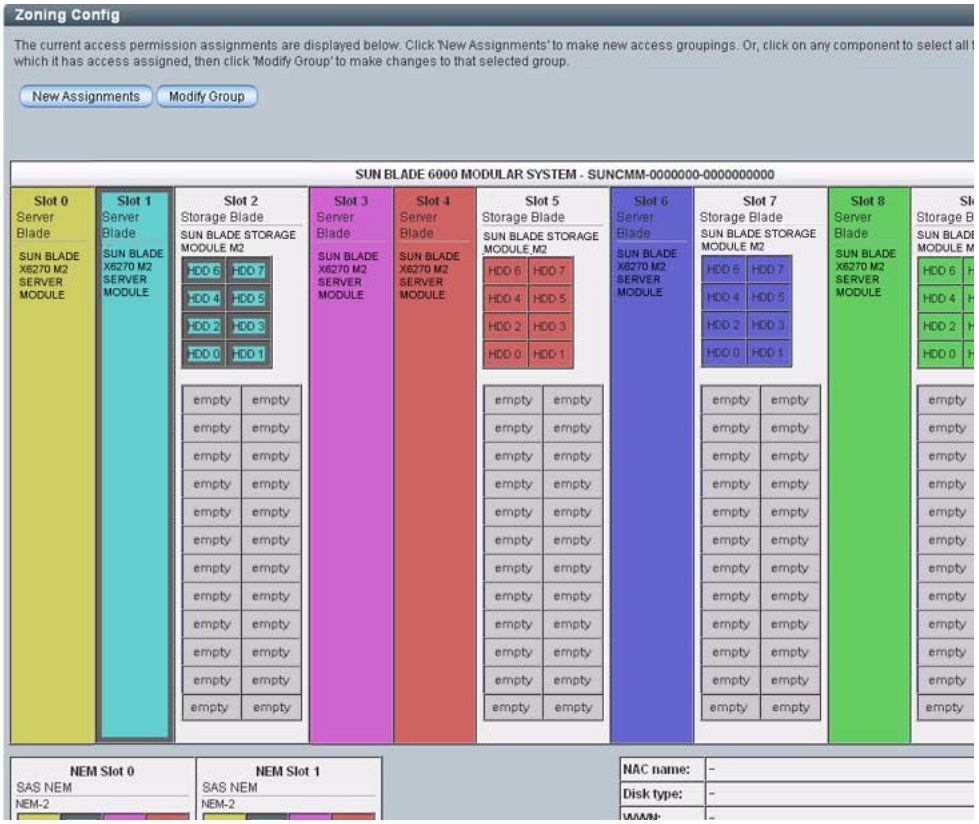
   The Zoning Config dialog appears, displaying the existing storage allocations in color-coded groups.



Note – Any HDD slots that do not have a storage device installed are labeled "empty." Empty HDD slots are not assigned to CPU blade servers.

3. **To modify the storage allocations for a blade storage group, select a blade that is part of the group.**

   The Sun Blade Zone Manager highlights the storage assigned to the blade storage group in the Zoning Config dialog.



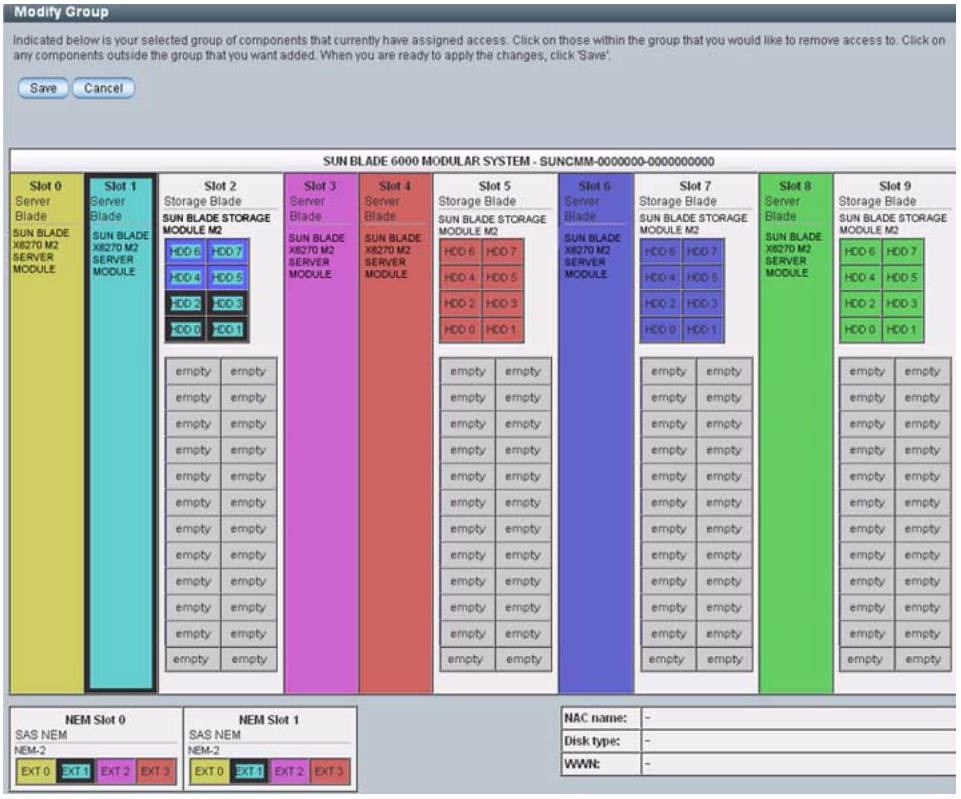
4. **To modify the storage resources assigned to a selected blade storage group, click Modify Group.**

   The Sun Blade Zone Manager highlights the selected blade storage group (which includes the storage resources currently assigned to the CPU blade server).

5. **Perform one or more of the following storage modifications to the selected group:**

   - To remove storage resources allocated to a selected blade storage group, click on the resources that you want to remove.

Example:
The following illustration depicts HDD 4-7 as selected resources to be removed from the CPU blade server in slot 1.



- To assign additional storage resources to a blade storage group, click on any storage resources outside the color-coded group that you want to add.

6. **To apply the allocation modifications made to the selected blade storage group, click Save.**

7. **Back up the saved the recently modified resource allocations.**

Related Information

- "Important SAS Zoning Allocations Considerations" on page 72
- "Backing Up and Recovering SAS-2 Zoning Assignments" on page 73
- "View and Modify Existing Storage Allocations (CLI)" on page 93
- *Sun Blade 6000 Modular System Documentation*

▼ View and Modify Existing Storage Allocations (CLI)

Before You Begin

- Ensure that your chassis hardware configuration meets the requirements in "Chassis Hardware Requirements" on page 73.
- Admin (a) role privileges in Oracle ILOM are required to view and modify the Sun Blade Zone Manager properties.
- The Sun Blade Zone Manager must be enabled in Oracle ILOM.

1. **Access the Sun Blade Zone Manager from the CLI.**

   See "Access and Enable Sun Blade Zone Manager" on page 74.

2. **To view storage resources allocated to a CPU blade server, perform one of the following.**

   - To view the storage allocations for a CPU blade server, use the `show` command followed by the `/STORAGE/sas_zoning/BL`*n* target. For example:

```
-> show /STORAGE/sas_zoning/BL0

   Targets:
      0      (/CH/BL2/HDD0)
      1      (/CH/BL2/HDD1)
```

     In this example, the HDD0 and HDD1, which are currently installed in the storage blade server in chassis slot 2, are allocated to the CPU blade server in chassis slot 0.

   - To view where a storage blade resource is allocated, use the `show` command followed by `/STORAGE/BL`*n*`/HDD`*n* target. For example:

```
-> show /STORAGE/BL2/HDD0

   Targets:
      0      (/CH/BL0)

-> show /STORAGE/BL2/HDD1

   Targets:
      0      (/CH/BL0)
```

     In this example, the resources HDD0 and HDD1, which are installed in the storage blade server in chassis slot 2, are assigned to the CPU blade server in chassis slot 0.

3. **To modify the storage allocations, perform one of the following methods:**

   Method 1: Add or unassign storage resources per CPU blade server.

   - To assign a storage resource to a CPU blade server, type:

     -> **cd /STORAGE/sas_zoning/BL***n*
     -> **set add_storage_access=***path_to_storage_device*

     Where BL*n* is the CPU blade server chassis slot location, and *path_to_storage_device* is the path to the storage blade resource.

   - To unassign a storage resource from a CPU blade server, type:

     -> **cd /STORAGE/sas_zoning/BL***n*
     -> **set remove_storage_access=***path_to_storage_device*

     Where BL*n* is the CPU blade server chassis slot location, and *path_to_storage_device* is the path to the resource on the storage blade server. For example, `/CH/BL1/HDD0`.

   Method 2: Add or unassign server blade access to storage device.

   - To assign a CPU blade server to a storage resource, type:

     -> **cd /STORAGE/sas_zoning/BL***n***/HDD***n*

     -> **set add_host_access=***path_to_blade_server*

   - To unassign a host server blade access to a storage device, type:

     -> **cd /STORAGE/sas_zoning/BL***n***/HDD***n*

     -> **set remove_host_access=***path_to_blade_server*

   Where BL*n* is the storage blade server chassis slot location, HDD*n* is the storage resource slot location, and *path_to_blade_server* is the chassis slot location for the CPU blade server that you want the resource assigned or unassigned. For example, `/CH/BL0`.

Note – You can also add or unassign multiple storage devices in a single command line. To do so, specify the full path to the resource and separate each resource with a comma (no space). For example:
-> **set add_storage_access=/CH/BL1/HDD0,/CH/BL1/HDD1**

---

4. **Back up the blade storage group assignment.**

Related Information

- "Important SAS Zoning Allocations Considerations" on page 72
- "Backing Up and Recovering SAS-2 Zoning Assignments" on page 73
- "Manually Create SAS-2 Zoning Allocations (CLI)" on page 85
- *Sun Blade 6000 Modular System Documentation*

Resetting Sun Blade Zone Manager Allocations to Factory Defaults

To erase all saved Sun Blade Zone Manager chassis storage allocations and to start the Sun Blade Zone Manager from factory defaults, perform one of the following procedures.

- "Reset Zoning Allocations to Factory Defaults (Web)" on page 95
- "Reset Zoning Allocations to Factory Defaults (CLI)" on page 95

▼ Reset Zoning Allocations to Factory Defaults (Web)

Before You Begin

- Admin (a) role privileges are required in Oracle ILOM to modify Sun Blade Zone Manager properties.

Caution – Use this procedure only if you want to erase all currently saved SAS zoning allocations in Oracle ILOM.

1. **To access the Sun Blade Zone Manager page in the CMM web interface, click System Management > SAS Zoning.**

   If the Sun Blade Manager state is enabled, a Reset All button appears in the Zoning Reset section of the Sun Blade Zone Manager page.

2. **To erase all saved resource allocations and reset the Sun Blade Zone Manager to factory defaults, click Reset All.**

▼ Reset Zoning Allocations to Factory Defaults (CLI)

Before You Begin

- Admin (a) role privileges are required in Oracle ILOM to modify Sun Blade Zone Manager properties.

Caution – Use this procedure only if you want to erase all currently saved SAS zoning allocations in Oracle ILOM.

1. **Navigate to** `/STORAGE/sas_zoning` **in the CMM CLI by using the following command:**

   ```
   -> cd /STORAGE/sas_zoning
   ```

2. **To erase all saved resource allocations and reset the Sun Blade Zone Manager to factory defaults, type:**

   ```
   -> set reset_access_action=true
   ```

   If the Zone Manager is disabled, you will get the following warning:

   ```
   set: The CMM is not the SAS Zone Manager
   ```

   If you receive this message, enable Zone Manager and re-issue the reset command. For details, see "Access and Enable Sun Blade Zone Manager" on page 74.

Resetting the Zoning Password to Factory Default for Third-Party In-Band Management

If you are managing storage allocations for chassis-level storage devices using a third-party in-band zone management application and you need to reset the zoning management password to the factory default, perform one of the following procedures.

- "Reset the Zoning Password (Web)" on page 96
- "Reset the Zoning Password (CLI)" on page 97

▼ Reset the Zoning Password (Web)

Before You Begin

- Admin (a) role privileges are required in Oracle ILOM to modify Sun Blade Zone Manager properties.

Caution – Use this procedure only if you are not using Oracle ILOM Zone Manager, and you are using a third-party in-band management application to manage the chassis storage allocations.

1. **To verify that the Sun Blade Zone Manager state is disabled in the CMM web interface, click System Management > SAS Zoning.**

   The Sun Blade Zone Manager page appears.

   If the Sun Blade Zone Manager is disabled, an option for resetting the password appears in the In-band Zoning Manager section.

2. **To reset the zoning password to the default value (all zeros), click Reset.**

▼ Reset the Zoning Password (CLI)

Before You Begin

- Admin (a) role privileges are required in Oracle ILOM to modify Sun Blade Zone Manager properties.

Caution – Use this procedure only if you are not using Oracle ILOM Zone Manager, and you are using a third-party in-band management application to manage the chassis storage allocations.

1. **Navigate to** `/STORAGE/sas_zoning` **using the following command:**

   -> **`cd /STORAGE/sas_zoning`**

2. **To reset the current zoning password, type:**

   -> **`set reset_password_action=true`**

   The password is set to the default (all zeros).

Index

S

T

V

W