Modular Server Hardware Management

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Modular Server Management

Modular servers are contained in compute cartridges. You cannot remove servers from their cartridges.

Booting a Modular Server

If the Boot Server link is dimmed in the Actions area, you must shut down the server first.

Procedure

Step 1 In the Navigation pane, click Equipment.
Booting a Rack-Mount Server from the Service Profile

Procedure

Step 1  In the Navigation pane, click Servers.
Step 2  Expand Servers > Service Profiles.
Step 3  Expand the node for the organization where you want to create the service profile.
        If the system does not include multitenancy, expand the root node.
Step 4  Choose the service profile that requires the associated server to boot.
Step 5  In the Work pane, click the General tab.
Step 6  In the Actions area, click Boot Server.
Step 7  If a confirmation dialog box displays, click Yes.
Step 8  Click OK in the Boot Server dialog box.

After the server boots, the Overall Status field on the General tab displays an OK status.

Determining the Boot Order of a Modular Server

Tip
You can also view the boot order tabs from the General tab of the service profile associated with a server.

Procedure

Step 1  In the Navigation pane, click Equipment.
Step 2  Expand Equipment > Chassis > Chassis Number > Cartridges > Cartridge Number > Servers
Step 3  Click the server for which you want to determine the boot order.
Step 4  In the Work pane, click the General tab.
Step 5  If the Boot Order Details area is not expanded, click the Expand icon to the right of the heading.
Shutting Down a Modular Server

When you use this procedure to shut down a server with an installed operating system, Cisco UCS Manager triggers the OS into a graceful shutdown sequence.

If the Shutdown Server link is dimmed in the Actions area, the server is not running.

Procedure

Step 1 In the Navigation pane, click Equipment.
Step 2 Expand Equipment > Chassis > Chassis Number > Cartridges > Cartridge Number > Servers
Step 3 Choose the server that you want to shut down.
Step 4 In the Work pane, click the General tab.
Step 5 In the Actions area, click Shutdown Server.
Step 6 If a confirmation dialog box displays, click Yes.

After the server has been successfully shut down, the Overall Status field on the General tab displays a power-off status.

Shutting Down a Server from the Service Profile

When you use this procedure to shut down a server with an installed operating system, Cisco UCS Manager triggers the OS into a graceful shutdown sequence.

If the Shutdown Server link is dimmed in the Actions area, the server is not running.

Procedure

Step 1 In the Navigation pane, click Servers.
Step 2 Expand Servers > Service Profiles.
Step 3 Expand the node for the organization where you want to create the service profile.
   If the system does not include multitenancy, expand the root node.
Step 4 Choose the service profile that requires the associated server to shut down.
Step 5 In the Work pane, click the General tab.
Resetting a Modular Server

When you reset a server, Cisco UCS Manager sends a pulse on the reset line. You can choose to gracefully shut down the operating system. If the operating system does not support a graceful shutdown, the server is power cycled. The option to have Cisco UCS Manager complete all management operations before it resets the server does not guarantee the completion of these operations before the server is reset.

**Procedure**

1. In the Navigation pane, click **Equipment**.
2. Expand **Equipment** > **Chassis** > **Chassis Number** > **Cartridges** > **Cartridge Number** > **Servers**
3. Choose the server that you want to reset.
4. In the Work pane, click the **General** tab.
5. In the Actions area, click **Reset**.
6. In the Reset Server dialog box, do the following:
   a) Click the **Power Cycle** option.
   b) (Optional) Check the check box if you want Cisco UCS Manager to complete all management operations that are pending on this server.
   c) Click **OK**.

The reset may take several minutes to complete. After the server has been reset, the **Overall Status** field on the **General** tab displays an ok status.

Reacknowledging a Modular Server

Perform the following procedure to rediscover the server and all endpoints in the server. For example, you can use this procedure if a server is stuck in an unexpected state, such as the discovery state.
Procedure

Step 1  In the Navigation pane, click Equipment.
Step 2  Expand Equipment > Chassis > Chassis Number > Cartridges > Cartridge Number > Servers
Step 3  Choose the server that you want to acknowledge.
Step 4  In the Work pane, click the General tab.
Step 5  In the Actions area, click Server Maintenance.
Step 6  In the Maintenance dialog box, click Re-acknowledge, then click OK.

Cisco UCS Manager disconnects the server and then builds the connections between the server and the fabric interconnect or fabric interconnects in the system. The acknowledgment may take several minutes to complete. After the server has been acknowledged, the Overall Status field on the General tab displays an OK status.

Deleting the Inband Configuration from a Modular Server

This procedure removes the inband management IP address configuration from a server. If this action is greyed out, no inband configuration was completed.

Procedure

Step 1  In the Navigation pane, click Equipment.
Step 2  Expand Equipment > Chassis > Chassis Number > Cartridges > Cartridge Number > Servers
Step 3  Choose the server for which you want to delete the inband management IP configuration.
Step 4  In the Work area, click the Inventory tab.
Step 5  Click the CIMC subtab.
Step 6  In the Actions area, click Delete Inband Configuration.
Step 7  Click Yes in the Delete confirmation dialog box.

The inband configuration for the server is deleted.

Note  If an inband service profile is configured in Cisco UCS Manager with a default VLAN and pool name, the server CIMC will automatically get an inband configuration from the inband profile approximate one minute after deleting the inband configuration here.

Decommissioning a Server

Decommissioning of a server is performed to temporarily remove the server from the UCSM configuration.
Procedure

Step 1: In the Navigation pane, click Equipment.
Step 2: Expand Equipment > Chassis > Chassis Number > Cartridges > Cartridge Number > Servers
Step 3: Choose the server that you want to decommission.
Step 4: In the Work pane, click the General tab.
Step 5: In the Actions area, click Server Maintenance.
Step 6: In the Maintenance dialog box, do the following:
   a) Click Decommission.
   b) Click OK.

The server is removed from the Cisco UCS configuration.

What to do next

If you physically re-install the server, you must re-acknowledge the slot to have Cisco UCS Manager rediscover the server.

Recommissioning a Modular Server

Procedure

Step 1: In the Navigation pane, click Equipment.
Step 2: Expand Equipment node.
Step 3: Click the Chassis node.
Step 4: In the Work pane, click the Decommissioned tab.
Step 5: On the row for each server that you want to recommission, check the check box in the Recommission column, then click Save Changes.
Step 6: If a confirmation dialog box displays, click Yes.
Step 7: (Optional) Monitor the progress of the server recommission and discovery on the FSM tab for the server.

Turning the Locator LED for a Server On and Off

Procedure

Step 1: In the Navigation pane, click Equipment.
Step 2: Expand Equipment > Chassis > Chassis Number > Cartridges > Cartridge Number > Servers
Step 3  Choose the server for which you want to turn the locator LED on or off.
Step 4  In the Work pane, click the General tab.
Step 5  In the Actions area, click one of the following:
  • Turn on Locator LED—Turns on the LED for the selected server.
  • Turn off Locator LED—Turns off the LED for the selected server.

### Turning the Local Disk Locator LED on a Modular Server On and Off

#### Before you begin
- Ensure the server, on which the disk is located, is powered on. If the server is off, you are unable to turn on or off the local disk locator LED.

#### Procedure

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>In the Navigation pane, click Equipment.</td>
</tr>
<tr>
<td>Step 2</td>
<td>Expand Equipment &gt; Chassis &gt; Chassis Number &gt; Cartridges &gt; Cartridge Number &gt; Servers</td>
</tr>
<tr>
<td>Step 3</td>
<td>Choose the server for which you want to turn the local disk locator LED on or off.</td>
</tr>
<tr>
<td>Step 4</td>
<td>In the Work pane, click the Inventory &gt; Storage &gt; Disks tabs. The Storage Controller inventory appears.</td>
</tr>
<tr>
<td>Step 5</td>
<td>Click a disk. The disk details appear.</td>
</tr>
<tr>
<td>Step 6</td>
<td>In the Details area, click Toggle Locator LED. If the Locator LED state is On, it will turn Off. If the Locator LED state is Off, it will turn On.</td>
</tr>
<tr>
<td>Step 7</td>
<td>Click Save Changes.</td>
</tr>
</tbody>
</table>

### Resetting the CMOS for a Modular Server

Sometimes, troubleshooting a server might require you to reset the CMOS. Resetting the CMOS is not part of the normal maintenance of a server.

#### Procedure

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>In the Navigation pane, click Equipment.</td>
</tr>
<tr>
<td>Step 2</td>
<td>Expand Equipment &gt; Chassis &gt; Chassis Number &gt; Cartridges &gt; Cartridge Number &gt; Servers</td>
</tr>
<tr>
<td>Step 3</td>
<td>Choose the server for which you want to reset the CMOS.</td>
</tr>
</tbody>
</table>
Resetting the CIMC for a Modular Server

Sometimes, with the firmware, troubleshooting a server might require you to reset the CIMC. Resetting the CIMC is not part of the normal maintenance of a server. After you reset the CIMC, the CIMC reboots with the running version of the firmware for that server.

If the CIMC is reset, the power monitoring functions of Cisco UCS become briefly unavailable until the CIMC reboots. Typically, the reset only takes 20 seconds; however, it is possible that the peak power cap can exceed during that time. To avoid exceeding the configured power cap in a low power-capped environment, consider staggering the rebooting or activation of CIMCs.

Procedure

Step 1 In the Navigation pane, click Equipment.
Step 2 Expand Equipment > Chassis > Chassis Number > Cartridges > Cartridge Number > Servers
Step 3 Choose the server for which you want to reset the CIMC.
Step 4 In the Work pane, click the General tab.
Step 5 In the Actions area, click Recover Server.
Step 6 In the Recover Server dialog box, click Reset CIMC (Server Controller), then click OK.

Issuing an NMI from a Server

Perform the following procedure if the system remains unresponsive and you need Cisco UCS Manager to issue a Non-Maskable Interrupt (NMI) to the BIOS or operating system from the CIMC. This action creates a core dump or stack trace, depending on the operating system installed on the server.

Procedure

Step 1 In the Navigation pane, click Equipment.
Step 2 Expand Equipment > Chassis > Chassis Number > Cartridges > Cartridge Number > Servers
Step 3 Choose the server from which you want to issue the NMI.
Step 4 In the Work pane, click the General tab.
Step 5 In the Actions area, click Server Maintenance.
Step 6 In the Maintenance dialog box, do the following:
   a) Click Diagnostic Interrupt.
   b) Click OK.
Cisco UCS Manager sends an NMI to the BIOS or operating system.

## Viewing Health Events on a Server

### Procedure

**Step 1**  
In the **Navigation** pane, click **Equipment**.

**Step 2**  
Expand **Equipment > Chassis > Chassis Number > Cartridges > Cartridge Number > Servers**

**Step 3**  
Choose the server for which you want to view health events.

**Step 4**  
In the **Work** pane, click the **Health** tab

The health events triggered for this server appear. The fields in this tab are:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health Summary</strong></td>
<td>Comma-separated names of all the health events that are triggered for the component.</td>
</tr>
<tr>
<td><strong>Health Qualifier</strong></td>
<td>Highest severity of all the health events that are triggered for the component. This can be one of the following:</td>
</tr>
<tr>
<td></td>
<td>• critical</td>
</tr>
<tr>
<td></td>
<td>• major</td>
</tr>
<tr>
<td></td>
<td>• minor</td>
</tr>
<tr>
<td></td>
<td>• warning</td>
</tr>
<tr>
<td></td>
<td>• info</td>
</tr>
<tr>
<td></td>
<td>• cleared</td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>The severity levels listed here are from highest to lowest severity.</td>
</tr>
<tr>
<td><strong>Health Details</strong></td>
<td></td>
</tr>
</tbody>
</table>

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**Modular Server Hardware Management**

**Viewing Health Events on a Server**

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9
Health LED Alarms

The server health LED is located on the front of each Cisco UCS M-Series server. Cisco UCS Manager allows you to view the sensor faults that cause the server health LED to change color from green to amber or blinking amber.

The health LED alarms display the following information:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severity</td>
<td>The severity of the alarm. This can be one of the following:</td>
</tr>
<tr>
<td></td>
<td>• Critical—The blade health LED is blinking amber. This is indicated with a red dot.</td>
</tr>
<tr>
<td></td>
<td>• Minor—The blade health LED is amber. This is indicated with an orange dot.</td>
</tr>
<tr>
<td>Name</td>
<td>Name of the health event.</td>
</tr>
<tr>
<td>Description</td>
<td>Detailed description of the health event.</td>
</tr>
<tr>
<td>Value</td>
<td>Current value of the health event.</td>
</tr>
<tr>
<td>Details area</td>
<td>The Details area displays the Name, Description, Severity, and Value details of any health event that you select in the Health Details area.</td>
</tr>
</tbody>
</table>
Viewing Health LED Alarms

**Procedure**

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In the Navigation pane, click Equipment.</td>
</tr>
<tr>
<td>2</td>
<td>Expand Equipment &gt; Chassis &gt; Chassis Number &gt; Cartridges &gt; Cartridge Number &gt; Servers</td>
</tr>
<tr>
<td>3</td>
<td>Click the server for which you want to view health LED alarms.</td>
</tr>
<tr>
<td>4</td>
<td>In the Work pane, click the General tab.</td>
</tr>
<tr>
<td>5</td>
<td>In the Actions area, click View Health LED Alarms.</td>
</tr>
<tr>
<td>6</td>
<td>Click OK to close the View Health LED Alarms dialog box.</td>
</tr>
</tbody>
</table>

The View Health LED Alarms dialog box lists the health LED alarms for the selected server.

**Viewing the POST Results for a Modular Server**

You can view any errors collected during the Power On Self-Test process for a server.

**Procedure**

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In the Navigation pane, click Equipment.</td>
</tr>
<tr>
<td>2</td>
<td>Expand Equipment &gt; Chassis &gt; Chassis Number &gt; Cartridges &gt; Cartridge Number &gt; Servers</td>
</tr>
<tr>
<td>3</td>
<td>Choose the server for which you want to view the POST results.</td>
</tr>
<tr>
<td>4</td>
<td>In the Work pane, click the General tab.</td>
</tr>
<tr>
<td>5</td>
<td>In the Actions area, click View POST Results.</td>
</tr>
<tr>
<td>6</td>
<td>Click OK to close the POST Results dialog box.</td>
</tr>
</tbody>
</table>

The POST Results dialog box lists the POST results for the server.
Viewing the POST Results for a Modular Server