Managing Blade Servers

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Blade Server Management

You can manage and monitor all blade servers in a Cisco UCS instance through Cisco UCS Manager. Some blade server management tasks, such as changes to the power state, can be performed from the server and service profile.

The remaining management tasks can only be performed on the server.

If a blade server slot in a chassis is empty, Cisco UCS Manager provides information, errors, and faults for that slot. You can also reacknowledge the slot to resolve server mismatch errors and to have Cisco UCS Manager rediscover the blade server in the slot.
Guidelines for Removing and Decommissioning Blade Servers

Consider the following guidelines when deciding whether to remove or decommission a blade server using Cisco UCS Manager:

Decommissioning a Blade Server
Decommissioning is performed when a blade server is physically present and connected but you want to temporarily remove it from the configuration. Because it is expected that a decommissioned blade server will be eventually recommissioned, a portion of the server's information is retained by Cisco UCS Manager for future use.

Removing a Blade Server
Removing is performed when you physically remove a blade server from the server by disconnecting it from the chassis. You cannot remove a blade server from Cisco UCS Manager if it is physically present and connected to a chassis. Once the physical removal of the blade server is completed, the configuration for that blade server can be removed in Cisco UCS Manager.

During removal, active links to the blade server are disabled, all entries from databases are removed, and the server is automatically removed from any server pools that it was assigned to during discovery.

Note
Only those servers added to a server pool automatically during discovery will be removed automatically. Servers that have been manually added to a server pool have to be removed manually.

If you need to add a removed blade server back to the configuration, it must be reconnected and then rediscovered. When a server is reintroduced to Cisco UCS Manager it is treated like a new server and is subject to the deep discovery process. For this reason, it's possible that Cisco UCS Manager will assign the server a new ID that may be different from the ID that it held before.

Booting Blade Servers

Booting a Blade 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 the Equipment tab.
Step 2 On the Equipment tab, expand Equipment > Chassis > Chassis Number > Servers.
Step 3 Choose the server that you want to boot.
Step 4 In the Work pane, click the General tab.
Step 5 In the Actions area, click Boot Server.
Step 6 If Cisco UCS Manager GUI displays a confirmation dialog box, click Yes.
After the server has booted, the Overall Status field on the General tab displays an OK status.

**Booting a Server from the Service Profile**

**Procedure**

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>In the Navigation pane, click the Servers tab.</td>
</tr>
<tr>
<td>Step 2</td>
<td>On the Servers tab, expand Servers &gt; Service Profiles.</td>
</tr>
<tr>
<td>Step 3</td>
<td>Expand the node for the organization where you want to create the service profile. If the system does not include multi-tenancy, expand the root node.</td>
</tr>
<tr>
<td>Step 4</td>
<td>Choose the service profile that requires the associated server to be booted.</td>
</tr>
<tr>
<td>Step 5</td>
<td>In the Work pane, click the General tab.</td>
</tr>
<tr>
<td>Step 6</td>
<td>In the Actions area, click Boot Server.</td>
</tr>
<tr>
<td>Step 7</td>
<td>If Cisco UCS Manager GUI displays a confirmation dialog box, click Yes.</td>
</tr>
<tr>
<td>Step 8</td>
<td>Click OK in the Boot Server dialog box.</td>
</tr>
</tbody>
</table>

After the server has booted, the Overall Status field on the General tab displays an ok status or an up status.

**Determining the Boot Order of a Blade 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 the Equipment tab.                           |
| Step 2 | On the Equipment tab, expand Equipment > Chassis > Chassis 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. |
| Step 6 | To view the boot order assigned to the server, click the Configured Boot Order tab. |
| Step 7 | To view what will boot from the various devices in the physical server configuration, click the Actual Boot Order tab. |

**Note** The Actual Boot Order tab always shows "Internal EFI Shell" at the bottom of the boot order list.
Shutting Down Blade Servers

Shutting Down a Blade 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

<table>
<thead>
<tr>
<th>Step 1</th>
<th>In the Navigation pane, click the Equipment tab.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 2</td>
<td>On the Equipment tab, expand Equipment &gt; Chassis &gt; Chassis Number &gt; Servers.</td>
</tr>
<tr>
<td>Step 3</td>
<td>Choose the server that you want to shut down.</td>
</tr>
<tr>
<td>Step 4</td>
<td>In the Work pane, click the General tab.</td>
</tr>
<tr>
<td>Step 5</td>
<td>In the Actions area, click Shutdown Server.</td>
</tr>
<tr>
<td>Step 6</td>
<td>If Cisco UCS Manager GUI displays a confirmation dialog box, click Yes.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Step 1</th>
<th>In the Navigation pane, click the Servers tab.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 2</td>
<td>On the Servers tab, expand Servers &gt; Service Profiles.</td>
</tr>
<tr>
<td>Step 3</td>
<td>Expand the node for the organization where you want to create the service profile. If the system does not include multi-tenancy, expand the root node.</td>
</tr>
<tr>
<td>Step 4</td>
<td>Choose the service profile that requires the associated server to be shut down.</td>
</tr>
<tr>
<td>Step 5</td>
<td>In the Work pane, click the General tab.</td>
</tr>
<tr>
<td>Step 6</td>
<td>In the Actions area, click Shutdown Server.</td>
</tr>
<tr>
<td>Step 7</td>
<td>If Cisco UCS Manager GUI displays a confirmation dialog box, click Yes.</td>
</tr>
</tbody>
</table>

After the server has been successfully shut down, the Overall Status field on the General tab displays a down status or a power-off status.
Resetting a Blade 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 shut down, the server is power cycled. The option to have Cisco UCS Manager complete all management operations before it resets the server does not guarantee that these operations will be completed before the server is reset.

Procedure

Step 1 In the Navigation pane, click the Equipment tab.
Step 2 On the Equipment tab, expand Equipment > Chassis > Chassis Number > Servers.
Step 3 Choose the server that you want to reset.
Step 4 In the Work pane, click the General tab.
Step 5 In the Actions area, click Reset.
Step 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 Blade Server

Perform the following procedure if you need to have Cisco UCS Manager 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 the Equipment tab.
Step 2 On the Equipment tab, expand Equipment > Chassis > Chassis 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, do the following:
   a) Click Re-acknowledge.
   b) 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.

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## Removing a Server from a Chassis

### Before You Begin

Physically remove the server from its chassis before performing the following procedure.

### Procedure

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

**Step 2** On the Equipment tab, expand Equipment > Chassis > Chassis Number > Servers.

**Step 3** Choose the server that you want to remove from the chassis.

**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.

**Step 7** Go to the physical location of the chassis and remove the server hardware from the slot.

For instructions on how to remove the server hardware, see the Cisco UCS Hardware Installation Guide for your chassis.

### What to Do Next

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

For more information, see Reacknowledging a Server Slot in a Chassis, on page 7.
Decommissioning a Blade Server

Procedure

Step 1  In the Navigation pane, click the Equipment tab.
Step 2  On the Equipment tab, expand Equipment > Chassis > Chassis 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 blade server, you must re-acknowledge the slot to have Cisco UCS Manager rediscover the server.

For more information, see Reacknowledging a Server Slot in a Chassis, on page 7.

Reacknowledging a Server Slot in a Chassis

Perform the following procedure if you decommissioned a blade server without removing the physical hardware from the chassis and you want Cisco UCS Manager to rediscover and recommission the server.

Procedure

Step 1  In the Navigation pane, click the Equipment tab.
Step 2  On the Equipment tab, expand Equipment > Chassis > Chassis Number > Servers.
Step 3  Choose the server whose slot you want to reacknowledge.
Step 4  If Cisco UCS Manager displays a Resolve Slot Issue dialog box, do one of the following:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The here link in the Situation area</td>
<td>Click this link and then click Yes in the confirmation dialog box. Cisco UCS Manager reacknowledges the slot and discovers the server in the slot.</td>
</tr>
<tr>
<td>OK</td>
<td>Click this button if you want to proceed to the General tab. You can use the Reacknowledge Slot link in the Actions area to have Cisco UCS Manager reacknowledge the slot and discover the server in the slot.</td>
</tr>
</tbody>
</table>
Removing a Non-Existent Blade Server from the Configuration Database

Perform the following procedure if you physically removed the server hardware without first decommissioning the server. You cannot perform this procedure if the server is physically present.

If you want to physically remove a server, see Removing a Server from a Chassis, on page 6.

Procedure

Step 1 In the Navigation pane, click the Equipment tab.
Step 2 On the Equipment tab, expand Equipment > Chassis > Chassis Number > Servers.
Step 3 Choose the server that you want to remove from the configuration database.
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 Remove.
   b) Click OK.

Cisco UCS Manager removes all data about the server from its configuration database. The server slot is now available for you to insert new server hardware.

Turning the Locator LED for a Blade Server On and Off

Procedure

Step 1 In the Navigation pane, click the Equipment tab.
Step 2 On the Equipment tab, expand Equipment > Chassis > Chassis 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
   • Turn off Locator LED
Resetting the CMOS for a Blade Server

On rare occasions, troubleshooting a server may require you to reset the CMOS. This procedure is not part of the normal maintenance of a server.

**Procedure**

1. In the Navigation pane, click the Equipment tab.
2. On the Equipment tab, expand Equipment > Chassis > Chassis Number > Servers.
3. Choose the server for which you want to reset the CMOS.
4. In the Work pane, click the General tab.
5. In the Actions area, click Recover Server.
6. In the Recover Server dialog box, do the following:
   a) Click Reset CMOS.
   b) Click OK.

Resetting the CIMC for a Blade Server

On rare occasions, such as an issue with the current running firmware, troubleshooting a server may require you to reset the CIMC. This procedure is not part of the normal maintenance of a server. After you reset the CIMC, the server boots 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 for as long as it takes for the CIMC to reboot. While this usually only takes 20 seconds, there is a possibility that the peak power cap could be exceeded during that time. To avoid exceeding the configured power cap in a very low power-capped environment, consider staggering the rebooting or activation of CIMCs.

**Procedure**

1. In the Navigation pane, click the Equipment tab.
2. On the Equipment tab, expand Equipment > Chassis > Chassis Number > Servers.
3. Choose the server for which you want to reset the CIMC.
4. In the Work pane, click the General tab.
5. In the Actions area, click Recover Server.
6. In the Recover Server dialog box, do the following:
   a) Click Reset CIMC (Server Controller).
   b) Click OK.
Recovering the Corrupt BIOS on a Blade Server

On rare occasions, an issue with a server may require you to recover the corrupted BIOS. This procedure is not part of the normal maintenance of a server. After you recover the BIOS, the server boots with the running version of the firmware for that server. This radio button may be dimmed if the BIOS does not require recovery or the option is not available for a particular server.

Before You Begin

![Important] Remove all attached or mapped USB storage from a server before you attempt to recover the corrupt BIOS on that server. If an external USB drive is attached or mapped from vMedia to the server, BIOS recovery fails.

Procedure

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

**Step 2** On the Equipment tab, expand Equipment > Chassis > Chassis Number > Servers.

**Step 3** Choose the server for which you want to recover the BIOS.

**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, do the following:

a) Click Recover Corrupt BIOS.

b) Click OK.

**Step 7** If Cisco UCS Manager GUI displays a confirmation dialog box, click Yes.

**Step 8** In the Recover Corrupt BIOS dialog box, do the following:

a) Complete the following fields:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version To Be Activated drop-down list</td>
<td>Choose the firmware version that you want to activate from the drop-down list.</td>
</tr>
<tr>
<td>Ignore Compatibility Check check box</td>
<td>By default, Cisco UCS makes sure that the firmware version is compatible with everything running on the server before it activates that version. Check this check box if you want Cisco UCS to activate the firmware without making sure that it is compatible first.</td>
</tr>
<tr>
<td></td>
<td><strong>Note</strong> We recommend that you use this option only when explicitly directed to do so by a technical support representative.</td>
</tr>
</tbody>
</table>

b) Click OK.
Viewing the POST Results for a Blade Server

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

Procedure

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In the Navigation pane, click the Equipment tab.</td>
</tr>
<tr>
<td>2</td>
<td>On the Equipment tab, expand Equipment &gt; Chassis &gt; Chassis 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. The POST Results dialog box lists the POST results for the server and its adapters.</td>
</tr>
<tr>
<td>6</td>
<td>(Optional) Click the link in the Affected Object column to view the properties of that adapter.</td>
</tr>
<tr>
<td>7</td>
<td>Click OK to close the POST Results dialog box.</td>
</tr>
</tbody>
</table>