Modular Server Hardware Management

Modular Server Management

Modular servers, which are introduced in Cisco UCS M-Series, are contained in compute cartridges. You cannot remove servers from their cartridges.

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Important Cisco UCS Manager Release 3.1(2) and later releases do not support Cisco UCS M-Series Servers.

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**.

Step 2 Expand **Equipment** > **Chassis** > **Chassis** *Number* > **Cartridges** > **Cartridge** *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 a confirmation dialog box displays, click **Yes**.

After the server has booted, the **Overall Status** field on the **General** tab displays an OK status.

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 or an up 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.

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 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.

Step 6 In the **Actions** area, click **Shutdown Server**.

Step 7 If a confirmation dialog box displays, click **Yes**.

After the server successfully shuts down, the **Overall Status** field on the **General** tab displays a down status or a power-off status.

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.

Note   If you are trying to boot a server from a power-down state, you should not use **Reset**.

If you continue the power-up with this process, the desired power state of the servers become out of sync with the actual power state and the servers might unexpectedly shut down at a later time. To safely reboot the selected servers from a power-down state, click **Cancel**, then select the **Boot Server** action.

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 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 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

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 local disk locator LED on or off.

Step 4 In the **Work** pane, click the **Inventory** > **Storage** > **Disks** tabs.
The Storage Controller inventory appears.

Step 5 Click a disk.
The disk details appear.

Step 6 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**.

Step 7 Click **Save Changes.**

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

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 CMOS.

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 CMOS**, then click **OK**.

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 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 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:

Name	Description
Health Summary area	
Health Qualifier field	Comma-separated names of all the heath events that are triggered for the component.
Health Severity field	Highest severity of all the health events that are triggered for the component. This can be one of the following: • **critical** • **major** • **minor** • **warning** • **info** • **cleared** **Note** The severity levels listed here are from highest to lowest severity.
Health Details area	
Severity column	Severity of the health event. This can be one of the following: • **critical** • **major** • **minor** • **warning** • **info** • **cleared** **Note** The severity levels listed here are from highest to lowest severity.
Name column	Name of the health event.
Description column	Detailed description of the health event.
Value column	Current value of the health event.
Details area	The **Details** area displays the **Name**, **Description**, **Severity**, and **Value** details of any health event that you select in the **Health Details** area.

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:

Name	Description
Severity column	The severity of the alarm. This can be one of the following: • Critical—The blade health LED is blinking amber. This is indicated with a red dot. • Minor—The blade health LED is amber. This is indicated with an orange dot.
Description column	A brief description of the alarm.
Sensor ID column	The ID of the sensor the triggered the alarm.
Sensor Name column	The name of the sensor that triggered the alarm.

Viewing Health LED Alarms

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 view health LED alarms.

Step 4 In the **Work** pane, click the **General** tab.

Step 5 In the **Actions** area, click **View Health LED Alarms**.
The **View Health LED Alarms** dialog box lists the health LED alarms for the selected server.

Step 6 Click **OK** to close the **View Health LED Alarms** dialog box.

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

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 the POST results.

Step 4 In the **Work** pane, click the **General** tab.

Step 5 In the **Actions** area, click **View POST Results**.
The **POST Results** dialog box lists the POST results for the server.

Step 6 Click **OK** to close the **POST Results** dialog box.