



Modular Server Hardware Management

- [Modular Server Management, page 1](#)
- [Booting a Modular Server, page 2](#)
- [Shutting Down a Modular Server, page 2](#)
- [Power Cycling a Modular Server, page 3](#)
- [Performing a Hard Reset on a Modular Server, page 4](#)
- [Acknowledging a Modular Server, page 4](#)
- [Decommissioning a Modular Server, page 5](#)
- [Showing the Status of a Modular Server, page 5](#)
- [Turning On the Locator LED for a Modular Server, page 6](#)
- [Turning Off the Locator LED for a Modular Server, page 6](#)
- [Resetting the CMOS for a Modular Server, page 7](#)
- [Resetting the CIMC for a Modular Server, page 8](#)
- [Issuing an NMI from a Modular Server, page 8](#)
- [Health LED Alarms, page 9](#)
- [Viewing Health LED Status, page 9](#)

Modular Server Management



Important

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

Modular servers, which are introduced in Cisco UCS M-Series, are contained in compute cartridges.



Note

You cannot remove servers from their cartridges.

Booting a Modular Server

Before You Begin

Associate a service profile with a modular server or server pool.

Procedure

	Command or Action	Purpose
Step 1	UCS-A# scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type <i>/</i> as the <i>org-name</i> .
Step 2	UCS-A /org # scope service-profile <i>profile-name</i>	Enters organization service profile mode for the specified service profile.
Step 3	UCS-A /org/service-profile # power up	Boots the modular server associated with the service profile.
Step 4	UCS-A /org/service-profile # commit-buffer	Commits the transaction to the system configuration.

The following example boots the modular server associated with the service profile named ServProf34 and commits the transaction:

```
UCS-A# scope org /
UCS-A /org* # scope service-profile ServProf34
UCS-A /org/service-profile* # power up
UCS-A /org/service-profile* # commit-buffer
UCS-A /org/service-profile #
```

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.

Before You Begin

Associate a service profile with a modular server or server pool.

Procedure

	Command or Action	Purpose
Step 1	UCS-A# scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type <i>/</i> as the <i>org-name</i> .

	Command or Action	Purpose
Step 2	UCS-A /org # scope service-profile <i>profile-name</i>	Enters organization service profile mode for the specified service profile.
Step 3	UCS-A /org/service-profile # power down	Shuts down the modular server associated with the service profile.
Step 4	UCS-A /org/service-profile # commit-buffer	Commits the transaction to the system configuration.

The following example shuts down the modular server associated with the service profile named ServProf34 and commits the transaction:

```
UCS-A# scope org /
UCS-A /org # scope service-profile ServProf34
UCS-A /org/service-profile # power down
UCS-A /org/service-profile* # commit-buffer
UCS-A /org/service-profile #
```

Power Cycling a Modular Server

Procedure

	Command or Action	Purpose
Step 1	UCS-A# scope server <i>chassis-num / cartridge-id / server-num</i>	Enters cartridge server mode for the specified modular server in the specified chassis and cartridge.
Step 2	UCS-A /chassis/cartridge/server # cycle {cycle-immediate cycle-wait}	Power cycles the modular server. Use the cycle-immediate keyword to immediately begin power cycling the modular server; use the cycle-wait keyword to schedule the power cycle to begin after all pending management operations have completed.
Step 3	UCS-A /chassis/cartridge/server # commit-buffer	Commits the transaction to the system configuration.

The following example immediately power cycles modular server 2 in cartridge 2 of chassis 2 and commits the transaction:

```
UCS-A# scope server 2/2/2
UCS-A /chassis/cartridge/server # cycle cycle-immediate
UCS-A /chassis/cartridge/server # commit-buffer
UCS-A /chassis/cartridge/server #
```

Performing a Hard Reset on 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

	Command or Action	Purpose
Step 1	UCS-A# scope server <i>chassis-num</i> / <i>cartridge-id</i> / <i>server-num</i>	Enters cartridge server mode for the specified modular server in the specified chassis and cartridge.
Step 2	UCS-A /chassis/cartridge/server # reset { hard-reset-immediate hard-reset-wait }	Performs a hard reset of the modular server. Use the hard-reset-immediate keyword to immediately begin hard resetting the server; use the hard-reset-wait keyword to schedule the hard reset to begin after all pending management operations have completed.
Step 3	UCS-A /chassis/cartridge/server # commit-buffer	Commits the transaction to the system configuration.

The following example performs an immediate hard reset of modular server 2 in cartridge 2 of chassis 2 and commits the transaction:

```
UCS-A# scope server 2/2/2
UCS-A /chassis/cartridge/server # reset hard-reset-immediate
UCS-A /chassis/cartridge/server* # commit-buffer
UCS-A /chassis/cartridge/server #
```

Acknowledging 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

	Command or Action	Purpose
Step 1	UCS-A# acknowledge server <i>chassis-id / cartridge-id / server-id</i>	Acknowledges the specified modular server in the specified chassis and cartridge.
Step 2	UCS-A /chassis/cartridge/server # commit-buffer	Commits the transaction to the system configuration.

The following example acknowledges modular server 2 in cartridge 2 of chassis 2 and commits the transaction:

```
UCS-A# acknowledge server 2/2/2
UCS-A /chassis/cartridge/server* # commit-buffer
UCS-A #
```

Decommissioning a Modular Server

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

Procedure

	Command or Action	Purpose
Step 1	UCS-A# decommission server <i>chassis-num / cartridge-id / server-num</i>	Decommissions the specified modular server in the specified chassis and cartridge.
Step 2	UCS-A /chassis/cartridge/server # commit-buffer	Commits the transaction to the system configuration.

The following example decommissions modular server 2 in cartridge 2 of chassis 2 and commits the transaction:

```
UCS-A# decommission server 2/2/2
UCS-A /chassis/cartridge/server* # commit-buffer
UCS-A #
```

Showing the Status of a Modular Server

Procedure

	Command or Action	Purpose
Step 1	UCS-A# scope server <i>chassis-num / cartridge-id / server-num</i>	Enters cartridge server mode for the specified modular server in the specified chassis and cartridge.

	Command or Action	Purpose
Step 2	UCS-A /chassis/cartridge/server # show status	Shows the status for the specified modular server.

The following example shows the status for modular server 1 in cartridge 3 of chassis 1:

```
UCS-A# scope server 1/3/1
```

```
UCS-A /chassis/cartridge/server # show status
```

Server	Slot	Status	Availability	Overall Status	Discovery
1/3/1	Equipped		Available	Unassociated	Complete

Turning On the Locator LED for a Modular Server

Procedure

	Command or Action	Purpose
Step 1	UCS-A# scope server <i>chassis-num / cartridge-id / server-num</i>	Enters chassis server mode for the specified modular server in the specified chassis and cartridge.
Step 2	UCS-A /chassis/cartridge/server # enable locator-led	Turns on the modular server locator LED.
Step 3	UCS-A /chassis/cartridge/server # commit-buffer	Commits the transaction to the system configuration.

The following example turns on the locator LED for modular server 2 in cartridge 2 of chassis 2 and commits the transaction:

```
UCS-A# scope server 2/2/2
```

```
UCS-A /chassis/cartridge/server # enable locator-led
```

```
UCS-A /chassis/cartridge/server* # commit-buffer
```

```
UCS-A /chassis/cartridge/server #
```

Turning Off the Locator LED for a Modular Server

The locator LED is shared by all modular servers in a cartridge. Hence, to turn off a locator LED of a cartridge, you must turn it off from all modular servers in the cartridge.

Procedure

	Command or Action	Purpose
Step 1	UCS-A# scope server <i>chassis-num / cartridge-id / server-num</i>	Enters chassis mode for the specified modular server in the specified chassis and cartridge.
Step 2	UCS-A /chassis/cartridge/server # disable locator-led	Turns off the modular server locator LED.
Step 3	UCS-A /chassis/cartridge/server # commit-buffer	Commits the transaction to the system configuration.

The following example turns off the locator LED for modular server 2 in cartridge 2 of chassis 2 and commits the transaction:

```
UCS-A# scope chassis 2/2/2
UCS-A /chassis/cartridge/server # disable locator-led
UCS-A /chassis/cartridge/server* # commit-buffer
UCS-A /chassis/cartridge/server #
```

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

	Command or Action	Purpose
Step 1	UCS-A# scope server <i>chassis-num / cartridge-id / server-num</i>	Enters cartridge server mode for the specified modular server in the specified chassis and cartridge.
Step 2	UCS-A /chassis/cartridge/server # reset-cmos	Resets the CMOS for the modular server.
Step 3	UCS-A /chassis/cartridge/server # commit-buffer	Commits the transaction to the system configuration.

The following example resets the CMOS for modular server 2 in cartridge 2 of chassis 2 and commits the transaction:

```
UCS-A# scope server 2/2/2
UCS-A /chassis/cartridge/server # reset-cmos
UCS-A /chassis/cartridge/server* # commit-buffer
UCS-A /chassis/cartridge/server #
```

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

	Command or Action	Purpose
Step 1	UCS-A# scope server <i>chassis-num / cartridge-id / server-num</i>	Enters cartridge server mode for the specified modular server in the specified chassis and cartridge.
Step 2	UCS-A /chassis/cartridge/server # scope CIMC	Enters cartridge server CIMC mode
Step 3	UCS-A /chassis/cartridge/server/CIMC # reset	Resets the CIMC for the modular server.
Step 4	UCS-A /chassis/cartridge/server/CIMC # commit-buffer	Commits the transaction to the system configuration.

The following example resets the CIMC for modular server 2 in cartridge 2 of chassis 2 and commits the transaction:

```
UCS-A# scope server 2/2/2
UCS-A /chassis/cartridge/server # scope CIMC
UCS-A /chassis/cartridge/server/cimc # reset
UCS-A /chassis/cartridge/server/cimc* # commit-buffer
UCS-A /chassis/cartridge/server/cimc #
```

Issuing an NMI from a Modular 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

	Command or Action	Purpose
Step 1	UCS-A # scope server <i>chassis-id / cartridge-id / server-id</i>	Enters server mode for the specified server.

	Command or Action	Purpose
Step 2	UCS-A /chassis/cartridge/server # diagnostic-interrupt	
Step 3	UCS-A /chassis/cartridge/server # commit-buffer	Commits the transaction to the system configuration.

The following example sends an NMI from server 2 in cartridge 2 of chassis 2 and commits the transaction:

```
UCS-A# scope server 2/2/2
UCS-A /chassis/cartridge/server # diagnostic-interrupt
UCS-A /chassis/cartridge/server* # commit-buffer
UCS-A /chassis/cartridge/server #
```

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: <ul style="list-style-type: none"> • Critical—The blade health LED is blinking amber. • Minor—The blade health LED is amber.
Description column	A brief description of the alarm.
Sensor ID column	The ID of the sensor that triggered the alarm.
Sensor Name column	The name of the sensor that triggered the alarm.

Viewing Health LED Status

Procedure

	Command or Action	Purpose
Step 1	UCS-A# scope server <i>chassis-id / cartridge-id / server-num</i>	Enters cartridge server mode for the specified modular server in the specified chassis and cartridge.

	Command or Action	Purpose
Step 2	UCS-A /chassis/cartridge/server # show health-led expand	Displays the health LED and sensor alarms for the selected server.

The following example shows how to display the health LED status and sensor alarms for chassis 1 cartridge 2 server 1:

```
UCS-A# scope server 1/2/1
UCS-A /chassis/cartridge/server # show health-led
Health LED:
  Severity: Minor
  Reason:: P0V75_STBY:Voltage Threshold Crossed;TEMP_SENS_FRONT:Temperature Threshold
Crossed;
  Color: Amber
  Oper State:: On

  Sensor Alarm:
    Severity: Minor
    Sensor ID: 7
    Sensor Name: P0V75_STBY
    Alarm Desc: Voltage Threshold Crossed

    Severity: Minor
    Sensor ID: 76
    Sensor Name: TEMP_SENS_FRONT
    Alarm Desc: Temperature Threshold Crossed

    Severity: Minor
    Sensor ID: 91
    Sensor Name: DDR3_P1_D2_TMP
    Alarm Desc: Temperature Threshold Crossed

UCS-A /chassis/cartridge/server #
```