# Modular Server Management



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**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** *org-name* | Enters organization mode for the specified organization. To enter the root organization mode, type / as the *org-name* . |
| **Step 2** | UCS-A /org # **scope service-profile** *profile-name* | 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. |

### Example

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** *org-name* | Enters organization mode for the specified organization. To enter the root organization mode, type / as the *org-name*. |
| **Step 2** | UCS-A /org # **scope service-profile** *profile-name* | 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. |

| | Command or Action | Purpose |
|---|---|---|
| **Step 4** | UCS-A /org/service-profile # **commit-buffer** | Commits the transaction to the system configuration. |

### Example

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** *chassis-num* / *cartridge-id* / *server-num* | 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.<br>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. |

### Example

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** *chassis-num* / *cartridge-id* / *server-num* | 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.<br>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. |

### Example

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** *chassis-id* / *cartridge-id* / *server-id* | 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. |

### Example

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** *chassis-num* / *cartridge-id* / *server-num* | 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. |

### Example

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** *chassis-num* / *cartridge-id* / *server-num* | Enters cartridge server mode for the specified modular server in the specified chassis and cartridge. |
| **Step 2** | UCS-A /chassis/cartridge/server # **show status** | Shows the status for the specified modular server. |

### Example

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** *chassis-num* / *cartridge-id* / *server-num* | 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. |

### Example

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** *chassis-num* / *cartridge-id* / *server-num* | 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. |

### Example

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** *chassis-num* / *cartridge-id* / *server-num* | 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. |

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

### Example

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 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

| | Command or Action | Purpose |
|---|---|---|
| **Step 1** | UCS-A# **scope server** *chassis-num* / *cartridge-id* / *server-num* | 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. |

### Example

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** *chassis-id* / *cartridge-id* / *server-id* | Enters server mode for the specified server. |
| **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. |

### Example

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:<br>• Critical—The blade health LED is blinking amber.<br>• Minor—The blade health LED is amber. |
| **Description** column | A brief description of the alarm. |
| **Sensor ID** column | The ID of the sensor the triggered the alarm. |

| Name | Description |
|---|---|
| **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** *chassis-id* / *cartridge-id* / *server-num* | Enters cartridge server mode for the specified modular server in the specified chassis and cartridge. |
| **Step 2** | UCS-A /chassis/cartridge/server # **show health-led expand** | Displays the health LED and sensor alarms for the selected server. |

### Example

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 #
```