Managing the Server

This chapter includes the following sections:

Toggling the Locator LED

Before you begin

You must log in with user or admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server # **scope chassis**	Enters chassis command mode.
Step 2	Server /chassis # **set locator-led** {**on** | **off**}	Enables or disables the chassis locator LED.

	Command or Action	Purpose
Step 3	Server /chassis # **commit**	Commits the transaction to the system configuration.

Example

This example disables the chassis locator LED and commits the transaction:

```
Server# scope chassis
Server /chassis # set locator-led off
Server /chassis *# commit

Server /chassis #
```

Toggling the Front Locator LED for the Chassis

This option is available only on some UCS C-Series servers.

Before you begin

You must log in with user or admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server # **scope chassis**	Enters chassis command mode.
Step 2	Server /chassis # **set front-locator-led** {**on** | **off**}	Enables or disables the chassis locator LED.
Step 3	Server /chassis # **commit**	Commits the transaction to the system configuration.

Example

This example disables the chassis locator LED and commits the transaction:

```
Server# scope chassis
Server /chassis # set front-locator-led off
Server /chassis *# commit

Server /chassis #
```

Toggling the Locator LED for a Hard Drive

This action is available only on some UCS C-Series servers.

Before you begin

You must log in with user or admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server # **scope chassis**	Enters chassis command mode.
Step 2	Server/chassis # **scope hdd**	Enters hard disk drive (HDD) command mode.
Step 3	Server /chassis/hdd # **locateHDD** *drivenum* {**1** | **2**}	Where *drivenum* is the number of the hard drive whose locator LED you want to set. A value of 1 turns the LED on while a value of 2 turns the LED off.

Example

This example turns on the locator LED on HDD 2:

```
Server# scope chassis
Server /chassis # scope hdd
Server /chassis/hdd # locateHDD 2 1
HDD Locate LED Status changed to 1
Server /chassis/hdd # show
Name                 Status               LocateLEDStatus
-------------------- -------------------- --------------------
HDD1_STATUS          present              TurnOFF
HDD2_STATUS          present              TurnON
HDD3_STATUS          absent               TurnOFF
HDD4_STATUS          absent               TurnOFF

Server /chassis/hdd #
```

Selecting a Time Zone

Selecting a Time Zone

Selecting a time zone helps you choose a local time zone so that you can view the local time rather than the default machine time. Cisco IMC Web UI and the CLI provide you options to choose and set a time zone of your choice.

Setting the time zone to your local time will apply the time zone variable to all the services that utilize the system timing. This impacts the logging information and is utilized in the following applications of the Cisco IMC:

- Fault summary and fault history logs
- Cisco IMC log
- rsyslog

When you set a local time, the timestamp on the applications that you can view are updated with the local time that you have chosen.

Selecting a Time Zone

Before you begin

You must log in with user or admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server # **scope CIMC**	Enters Cisco IMC command mode.
Step 2	Server /CIMC # **timezone-select**	Displays a list of continents and oceans.
Step 3	Enter the number corresponding to your continent or ocean.	A list of all the countries or regions of the chosen continent or ocean displays.
Step 4	Enter the number corresponding to the country or region that you want to set as your time zone.	If a country or a region has more than one time zones, a list of time zones in that country or region displays.
Step 5	Enter the number corresponding to time zone.	**Is the above information OK?** message appears.
Step 6	Enter **1**.	**Continue?[y|N]**: prompt appears.
Step 7	Enter **y** if you want to set the chosen time zone.	The chosen time zone is set as the time zone for your Cisco IMC server.

Example

This example sets the time zone:

```
Server# scope CIMC
Server /CIMC # timezone-select

Please identify a location so that time zone rules can be set correctly.
Please select a continent or ocean.
1) Africa
2) Americas
3) Antarctica
4) Arctic Ocean
5) Asia
6) Atlantic Ocean
7) Australia
8) Europe
9) Indian Ocean
10) Pacific Ocean
#? 2
Please select a country whose clocks agree with yours.
1) Anguilla
2) Antigua & Barbuda
3) Argentina
4) Aruba
```

```
5) Bahamas
6) Barbados
7) Belize
8) Bolivia
9) Brazil
10) Canada
11) Caribbean Netherlands
12) Cayman Islands
13) Chile
14) Colombia
15) Costa Rica
16) Cuba
17) Curacao
18) Dominica
19) Dominican Republic
20) Ecuador
21) El Salvador
22) French Guiana
23) Greenland
24) Grenada
25) Guadeloupe
26) Guatemala
27) Guyana
28) Haiti
29) Honduras
30) Jamaica
31) Martinique
32) Mexico
33) Montserrat
34) Nicaragua
35) Panama
36) Paraguay
37) Peru
38) Puerto Rico
39) St Barthelemy
40) St Kitts & Nevis
41) St Lucia
42) St Maarten (Dutch part)
43) St Martin (French part)
44) St Pierre & Miquelon
45) St Vincent
46) Suriname
47) Trinidad & Tobago
48) Turks & Caicos Is
49) United States
50) Uruguay
51) Venezuela
52) Virgin Islands (UK)
53) Virgin Islands (US)
#? 49
Please select one of the following time zone regions.
1) Eastern Time
2) Eastern Time - Michigan - most locations
3) Eastern Time - Kentucky - Louisville area
4) Eastern Time - Kentucky - Wayne County
5) Eastern Time - Indiana - most locations
6) Eastern Time - Indiana - Daviess, Dubois, Knox & Martin Counties
7) Eastern Time - Indiana - Pulaski County
8) Eastern Time - Indiana - Crawford County
9) Eastern Time - Indiana - Pike County
10) Eastern Time - Indiana - Switzerland County
11) Central Time
12) Central Time - Indiana - Perry County
13) Central Time - Indiana - Starke County
```

```
14) Central Time - Michigan - Dickinson, Gogebic, Iron & Menominee Counties
15) Central Time - North Dakota - Oliver County
16) Central Time - North Dakota - Morton County (except Mandan area)
17) Central Time - North Dakota - Mercer County
18) Mountain Time
19) Mountain Time - south Idaho & east Oregon
20) Mountain Standard Time - Arizona (except Navajo)
21) Pacific Time
22) Alaska Time
23) Alaska Time - Alaska panhandle
24) Alaska Time - southeast Alaska panhandle
25) Alaska Time - Alaska panhandle neck
26) Alaska Time - west Alaska
27) Aleutian Islands
28) Metlakatla Time - Annette Island
29) Hawaii
#? 8

The following information has been given:

        United States
        Eastern Time - Indiana - Crawford County

Is the above information OK?
1) Yes
2) No
#? 1

You have chosen to set timezone settings to:

        America/Indiana/Marengo

Continue?[y|N]: y
Timezone has been updated.
The local time now is: Sun Jun 1 02:21:15 2014 EST

Server /CIMC #
```

Managing the Server Boot Order

Server Boot Order

Using Cisco IMC, you can configure the order in which the server attempts to boot from available boot device types. In the legacy boot order configuration, Cisco IMC allows you to reorder the device types but not the devices within the device types. With the precision boot order configuration, you can have a linear ordering of the devices. In the web UI or CLI you can change the boot order and boot mode, add multiple devices under each device types, rearrange the boot order, set parameters for each device type.

When you change the boot order configuration, Cisco IMC sends the configured boot order to BIOS the next time that server is rebooted. To implement the new boot order, reboot the server after you make the configuration change. The new boot order takes effect on any subsequent reboot. The configured boot order remains until the configuration is changed again in Cisco IMC or in the BIOS setup.

Note The actual boot order differs from the configured boot order if either of the following conditions occur:

- BIOS encounters issues while trying to boot using the configured boot order.
- A user changes the boot order directly through BIOS.
- BIOS appends devices that are seen by the host but are not configured from the user.

Important While upgrading Cisco UCS C220 M5 or C480 M5 servers to release 4.1(1x) under the following conditions:

- if you are upgrading from any release earlier than 4.0(4x)
- if **Legacy Boot Mode** is enabled and no **Cisco IMC Boot Order** is configured
- and, if the server is booting from Cisco HWRAID adapter

then, you should perform one of the following before upgrading:

- Run XML-API scripts and UCSCFG based scripts provided here.

  OR

- Manually configure the intended boot order through Cisco IMC GUI or CLI interfaces.

Note When you create a new policy using the configure boot order feature, BIOS tries to map this new policy to the devices in the system. It displays the actual device name and the policy name to which it is mapped in the **Actual Boot Order** area. If BIOS cannot map any device to a particular policy in Cisco IMC, the actual device name is stated as **NonPolicyTarget** in the **Actual Boot Order** area.

Note During Cisco IMC 2.0(x) upgrade, the legacy boot order is migrated to the precision boot order. The previous boot order configuration is erased and all device types configured before updating to 2.0 version are converted to corresponding precision boot device types and some dummy devices are created for the same device types. you can view these devices in the **Configured Boot Order** area in the web UI. To view these devices in the CLI, enter **show boot-device** command. During this the server's actual boot order is retained and it can be viewed under actual boot order option in web UI and CLI.

When you downgrade Cisco IMC prior to 2.0(x) verison the server's last legacy boot order is retained, and the same can be viewed under **Actual Boot Order** area. For example:

- If you configured the server in a legacy boot order in 2.0(x) version, upon downgrade a legacy boot order configuration is retained.
- If you configured the server in a precision boot order in 2.0(x), upon downgrade the last configured legacy boot order is retained.

Important

- Boot order configuration prior to 2.0(x) is referred as legacy boot order. If your running version is 2.0(x), then you cannot configure legacy boot order through web UI, but you can configure through CLI and XML API. In the CLI, you can configure it by using **set boot-order HDD,PXE** command. Even though, you can configure legacy boot order through CLI or XML API, in the web UI this configured boot order is not displayed.
- Legacy and precision boot order features are mutually exclusive. You can configure either legacy or precision boot order. If you configure legacy boot order, it disables all the precision boot devices configured. If you configure precision boot order, then it erases legacy boot order configuration.

Viewing the Boot Device Detail

Note Do not change the boot order while the host is performing BIOS power-on self test (POST).

Before you begin

You must log in with user or admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope bios**	Enters the BIOS command mode.
Step 2	Server /bios # **show boot-device** [**detail**].	Displays the detailed information of the boot device.

Example

This example displays the details of the created bootable device:

```
Server# scope bios
Server /bios # show boot-device
Boot Device          Device Type  Device State       Device Order
-------------------- ------------ ------------------ ----------------
TestUSB              USB          Enabled            1
TestPXE              PXE          Enabled            2
Server /bios # show boot-device detail
Boot Device TestUSB:
    Device Type: USB
    Device State: Enabled
    Device Order: 1
    Sub Type: HDD
Boot Device TestPXE:
    Device Type: PXE
    Device State: Enabled
    Device Order: 2
    Slot Id: L
```

```
Port Number: 1
```

Configuring the Precision Boot Order

Note Do not change the boot order while the host is performing BIOS power-on self test (POST).

Before you begin

Beginning with release 4.1(3b), Cisco IMC supports HTTP Boot Capability. HTTP Boot is supported in UEFI Boot Mode only.

You must log in with user or admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope bios**	Enters the BIOS command mode.
Step 2	Server /bios # **create-boot-device**[*device name*] [*device type*].	Creates a bootable device that BIOS chooses to boot. This can be one of the following: • **HDD**—Hard disk drive • **PXE**—PXE boot • **SAN** boot • **iSCSI** boot • **SD** Card **Note** SD card option is available only on some UCS C-Series servers. • **USB** • **Virtual Media** • **PCHStorage** • **UEFISHELL** • **HTTP**
Step 3	Server /bios # **scope boot-device** *created boot device name*.	Enters the management of the created bootable devices.
Step 4	Server /bios /boot-device # **set** *values*	Specifies the property values for particular bootable device. You can set one or more of the following:

	Command or Action	Purpose
		• cli— CLI options • state— Whether the device will be visible by BIOS. By default the device is disabled. **Note** If enabled, the device will overwrite the legacy boot order configuration. • slot— Slot id where the device is plugged in. • port— Port of the slot in which the device is present. • LUN— Logical unit in a slot where the device is present. • sub-type—Sub device type under a certain device type. • order—The order of the device in the available list of devices. • macaddress—MAC address of the network ethernet interface • iptype— IP type. Enter any one of the required values: IPv4 or IPv6 • ipconfig-type— Type of IP Configuration. Enter any one of the required values: DHCP or Static • uri— URI path where all the OS iso and EFI files are located.
Step 5	Server /bios /boot-device # **commit**	Commits the transaction to the system configuration.

Example

This example configures the boot order, creates a boot device, set the attributes of the new device and commit the transaction:

```
Server# scope bios
Server /bios #  create boot-device TestPXE PXE
Server /bios #  scope boot-device TestPXE
Server /bios /boot-device #  set state Enabled
Server /bios /boot-device #  set slot L
Server /bios /boot-device #  set port 1
Server /bios /boot-device #  set order 1
```

```
Server /bios /boot-device #  commit
Enabling boot device will overwrite Legacy Boot Order configuration
Continue?[y|N]y
Server /bios /boot-device #  y
Commiting device configuration
Server /bios/boot-device # show detail
BIOS:
    BIOS Version: "C240M3.2.0.0.15 (Build Date: 03/16/2014)"
    Boot Order: (none)
    Boot Override Priority:
    FW Update/Recovery Status: None, OK
    UEFI Secure Boot: disabled
    Configured Boot Mode: None
    Actual Boot Mode: Legacy
    Last Configured Boot Order Source: CIMC

Server /bios/boot-device # show boot-device detail
Boot Device TestPXE:
    Device Type: PXE
    Device State: Enabled
    Device Order: 1
    Slot Id: L
    Port Number: 1
```

This example configures the boot order, creates a HTTP boot device for the IP type - **DHCP**, sets the attributes of the new device and commits the transaction:

```
Server# scope server 1
Server /server # scope bios
Server /server/bios #  create boot-device HTTP-Test HTTP
Server /server/bios #  scope boot-device HTTP-Test
Server /server/bios/boot-device # set status enabled
Server /server/bios/boot-device # set port 10
Server /server/server/bios /boot-device #  set order 1
Server /server/bios /boot-device #  set slot MLOM
Server /server/bios/boot-device # set iptype IPv4
Server /server/bios/boot-device # set macaddress 00:25:B5:00:01:2b
Server /server/bios/boot-device # set ipconfig-type DHCP
Server /server/bios/boot-device # set uri http://www.cloudboot.com:80/EFI/rhel_82_dvd.iso
Server /bios /boot-device #  commit
Commiting device configuration
Server /server/bios/boot-device # show detail
BBIOS:
    BIOS Version: server-name.2.0.7c.0.071620151216
    Backup BIOS Version: server-name.2.0.7c.0.071620151216
    Boot Order: (none)
    Boot Override Priority:
    FW Update/Recovery Status: None, OK
    UEFI Secure Boot: Enabled
    Last Configured Boot Order Source: CIMC

Server /server/bios/boot-device # show boot-device detail
Boot Device HTTP-Test:
    Device Type: HTTP-Test
    Device State: Enabled
    Device Order: 1
    Slot Id: MLOM
    Port Number: 10
    MAC Address: 00:25:B5:00:01:2b
    IP Type: IPv4
    IP Config Type: DHCP
    URI: http://www.cloudboot.com:80/EFI/rhel_82_dvd.iso
```

This example configures the boot order, creates a HTTP boot device for the IP type - **Static**, sets the attributes of the new device and commits the transaction:

```
Server# scope server 1
Server /server # scope bios
Server /server/bios #  create boot-device HTTP-Test HTTP
Server /server/bios #  scope boot-device HTTP-Test
Server /server/bios/boot-device # set status enabled
Server /server/bios/boot-device # set port 10
Server /server/server/bios /boot-device #  set order 1
Server /server/bios /boot-device #  set slot MLOM
Server /server/bios/boot-device # set macaddress 00:25:B5:00:01:2b
Server /server/bios/boot-device # set ipconfig-type Static
Server /server/bios/boot-device # set iptype IPv6C240-WZP21360Z1B /bios/boot-device *# set
 ipaddress 2001:420:5446:2014::330:12
Server /server/bios/boot-device *# set netmask_or_ipv6prefix 64
Server /server/bios/boot-device *# set gateway 2001:420:5446:2014::330:1
Server /server/bios/boot-device *# set dnsserver 2001:420:c0e0:1008::118
Server /server/bios/boot-device *# commit
Server /server/bios/boot-device *# set uri http://cisco.com/a.iso
Server /server/bios/boot-device *# commit
Server /server/bios/boot-device # show detail
Boot Device http_test:
    Device Type: HTTP
    Device State: Disabled
    Device Order: 1
    Slot Id: MLOM
    Port Number: 10
    MAC Address: aa:aa:aa:aa:aa:aa
    IP Type: IPv6
    IP Config Type: Static
    URI: http://cisco.com/a.iso
    IP Address: 2001:420:5446:2014::330:12
    Netmask/IPV6 Prefix: 64
    Gateway: 2001:420:5446:2014::330:1
    DNS Server: 2001:420:c0e0:1008::118
Server /server/bios/boot-device #
```

What to do next

Reboot the server to boot with your new boot order.

Modifying the Attributes of a Boot Device

Note Do not change the boot order while the host is performing BIOS power-on self test (POST).

Before you begin

You must log in with user or admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope bios**	Enters the BIOS command mode.

	Command or Action	Purpose
Step 2	Server /bios # **scope boot-device** *created boot device name*.	Enters the management of the created bootable devices.
Step 3	Server /bios /boot-device # **set state** {*Enabled*|*Disabled*}.	Enables or disables the device. The default state is disabled. **Note** If enabled, the device will overwrite the legacy boot order configuration.
Step 4	Server /bios /boot-device* # **set order** {*Index* | *1-50*}.	Specifies the order of booting for particular device in the device list. Enter a number between 1 and 50 based on the total number of created device. **Note** When you set the boot device order individually, it is not assured that the order appears in the way it was set. So, it is recommended that to set the order for multiple devices in a single execution, use **re-arrange-boot-device** command.
Step 5	Server /bios /boot-device* # **set port** {*value* | *1-255* }.	Specifies the port of the slot in which the device is present. Enter a number between 1 and 255.
Step 6	Server /server/bios /boot-device* # **set iptype** {*value* | *IPv4* | *IPv6*}.	Specifies the IP type for the device.
Step 7	Server /server/bios /boot-device* # **set macaddress** {*value* }.	Sets the MAC address of the network ethernet interface.
Step 8	Server /server/bios /boot-device* # **set ipconfig-type** {*value* | *DHCP* | *Static* }.	Specifies the IP configuration type for the device.
Step 9	Server /server/bios /boot-device* # **set uri** {*value* }.	Specifies the URI path where all the OS iso and EFI files are located.
Step 10	Server /bios /boot-device* # **commit**	Commits the transaction to the system configuration.

Example

This example modifies the attributes of an existing device:

```
Server# scope bios
Server /bios *# scope boot-device scu-device-hdd
Server /bios/boot-device # set status enabled
```

```
Server /bios/boot-device *# set order 2
Server /bios/boot-device *# set port 1
Server /bios/boot-device *# commit
Enabling boot device will overwrite boot order Level 1 configuration
Continue?[y|N]y
Server /bios/boot-device #
```

This example modifies the attributes of an existing HTTP boot device:

```
Server# scope server 1
Server /server # scope bios
Server /server/bios *# scope boot-device http-test
Server /server/bios/boot-device # show detail
Boot Device http-test:
    Device Type: HTTP
    Device State: Disabled
    Device Order: 3
    Slot Id: 1
    Port Number: 10
    MAC Address: 00:25:B5:00:01:2b
    IP Type: IPv4
    IP Config Type: DHCP
    URI: http://www.cloudboot.com:80/EFI/rhel_82_dvd.iso


Server /server/bios/boot-device # set iptype IPv6
Server /server/bios/boot-device *# set slot 34
Server /server/server/bios /boot-device #  set order 1
Server /server/bios/boot-device *# set macaddress 00:25:B5:00:01:2c
Server /server/bios/boot-device *# set uri http://www.cloudboot.com:80/dvd.iso
Server /server/bios/boot-device *# commit
Server /server/bios/boot-device # show detail
Boot Device http-test:
    Device Type: HTTP
    Device State: Disabled
    Device Order: 3
    Slot Id: 34
    Port Number: 10
    MAC Address: 00:25:B5:00:01:2c
    IP Type: IPv6
    IP Config Type: DHCP
    URI: http://www.cloudboot.com:80/dvd.iso

Server /server/bios/boot-device #
```

Rearranging Device Boot Order

Note Do not change the boot order while the host is performing BIOS power-on self test (POST).

Before you begin

You must log in with user or admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope bios**	Enters the BIOS command mode.
Step 2	Server /bios # **rearrange boot-device**[*device name*]:[*position*].	Rearranges the selected boot devices in a single execution.

Example

This example rearranges the selected boot devices:

```
Server# scope bios
Server /bios # rearrange-boot-device  TestPXE:1,TestUSB:2
 Server /bios # show boot-device
Boot Device          Device Type  Device State       Device Order
-------------------- ------------ ------------------ ----------------
TestPXE              PXE          Disabled           1
TestUSB              USB          Disabled           2

Server /bios #
```

Re-Applying the Boot Order Configuration

Note Do not change the boot order while the host is performing BIOS power-on self test (POST).

Before you begin

You must log in with user or admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope bios**	Enters the BIOS command mode.
Step 2	Server /bios # **re-apply**.	Re-applies the boot order to BIOS, if the last configured boot order source is BIOS..

Example

This example re-applies the boot order to BIOS:

```
Server# scope bios
Server /bios # re-apply
Server /bios #
```

What to do next

Reboot the host after reapplying the boot order to BIOS.

Deleting an Existing Boot Device

Note Do not change the boot order while the host is performing BIOS power-on self test (POST).

Before you begin

You must log in with user or admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope bios**	Enters the BIOS command mode.
Step 2	Server /bios # **remove-boot-device** *device name*	Deletes the particular device from the boot order.

Example

This example deletes the selected device from the device list:

```
Server# scope bios
Server /bios # remove-boot-device scu-device-hdd
Server /bios #
```

Overview to UEFI Secure Boot

You can use Unified Extensible Firmware Interface (UEFI) secure boot to ensure that all the EFI drivers, EFI applications, option ROM or operating systems prior to loading and execution are signed and verified for authenticity and integrity, before you load and execute the operating system. You can enable this option using either web UI or CLI. When you enable UEFI secure boot mode, the boot mode is set to UEFI mode and you cannot modify the configured boot mode until the UEFI boot mode is disabled.

Note If you enable UEFI secure boot on a nonsupported OS, on the next reboot, you cannot boot from that particular OS. If you try to boot from the previous OS, an error is reported and recorded the under system software event in the web UI. You must disable the UEFI secure boot option using Cisco IMC to boot from your previous OS.

Important Also, if you use an unsupported adapter, an error log event in Cisco IMC SEL is recorded. The error messages is displayed that says:

System Software event: Post sensor, System Firmware error. EFI Load Image Security Violation. [0x5302] was asserted .

UEFI secure boot is supported on the following components:

Components	Types
Supported OS	• Windows Server 2019 • Windows Server 2016 • ESX 6.7 • ESX 6.5 • ESXi 7.0 • Linux
Broadcom PCI adapters	• 5709 dual and quad port adapters • 57712 10GBASE-T adapter • 57810 CNA • 57712 SFP port
Intel PCI adapters	• i350 quad port adapter • X520 adapter • X540 adapter • LOM
QLogic PCI adapters	• 8362 dual port adapter • 2672 dual port adapter
Fusion-io	

Components	Types
LSI	• LSI MegaRAID SAS 9240-8i • LSI MegaRAID SAS 9220-8i • LSI MegaRAID SAS 9265CV-8i • LSI MegaRAID SAS 9285CV-8e • LSI MegaRAID SAS 9285CV-8e • LSI MegaRAID SAS 9266-8i • LSI SAS2008-8i mezz • LSI Nytro card

Enabling UEFI Secure Boot Mode

Procedure

	Command or Action	Purpose
Step 1	Server# **scope bios**	Enters the BIOS command mode.
Step 2	Server/ BIOS # **set secure-boot enable | disable**	Enables or disables UEFI secure boot. **Note** If enabled, the boot mode is set to UEFI secure boot mode. You cannot modify configure boot mode until UEFI secure boot mode is disabled.

Example

This example enables UEFI secure boot mode and commits the transaction

```
Server# scope bios
Server /bios # set secure-boot enable
Setting Value : enable
Commit Pending.
Server /bios *# commit
UEFI Secure boot state changed successfully. Execute 'show detail' command to check the
current status
Server /bios #
```

What to do next

Reboot the server to have your configuration boot mode settings take place.

Disabling UEFI Secure Boot

Procedure

	Command or Action	Purpose
Step 1	Server# **scope bios**	Enters the BIOS command mode.
Step 2	Server/ BIOS # **set secure-boot enable | disable**	Enables or disables UEFI secure boot.

Example

This example disables UEFI secure boot mode and commits the transaction

```
Server# scope bios
Server /bios # set secure-boot disable
Setting Value : enable
Commit Pending.
Server /bios *# commit
UEFI Secure boot state changed successfully. Execute 'show detail' command to check the
current status
Server /bios #
```

What to do next

Reboot the server to have your configuration boot mode settings take place.

Viewing the Actual Server Boot Order

The actual server boot order is the boot order actually used by the BIOS when the server last booted. The actual boot order can differ from the boot order configured in Cisco IMC.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope bios**	Enters bios command mode.
Step 2	Server /bios # **show actual-boot-order** [**detail**]	Displays the boot order actually used by the BIOS when the server last booted.

Example

This example displays the actual boot order of the legacy boot order from the last boot:

```
Server# scope bios
Server /bios #  show actual-boot-order

Boot Order   Type                      Boot Device
------------ ------------------------- -----------------------------------
1            CD/DVD                    CD-ROM
2            CD/DVD                    Cisco   Virtual CD/DVD  1.18
```

```
3            Network Device (PXE)      Cisco NIC 23:0.0
4            Network Device (PXE)      MBA v5.0.5  Slot 0100
5            Network Device (PXE)      MBA v5.0.5  Slot 0101
6            Network Device (PXE)      MBA v5.0.5  Slot 0200
7            Network Device (PXE)      MBA v5.0.5  Slot 0201
8            Network Device (PXE)      Cisco NIC 22:0.0
9            Internal EFI Shell        Internal EFI Shell
10           FDD                       Cisco   Virtual HDD     1.18
11           FDD                       Cisco   Virtual Floppy  1.18

Server /bios #
```

This example displays the actual boot order of precision boot order from the last boot:

```
Server /bios # show actual-boot-order
Boot Order   Boot Device                          Device Type     Boot Policy
------------ ---------------------------------- --------------- --------------------
1            IBA GE Slot 0201 v1398              PXE             TestPXE
2            IBA GE Slot 0200 v1398              PXE             NonPolicyTarget
3            IBA GE Slot 0202 v1398              PXE             NonPolicyTarget
4            IBA GE Slot 0203 v1398              PXE             NonPolicyTarget
5            "UEFI: Built-in EFI Shell "         EFI             NonPolicyTarget
Server  /bios #
```

Configuring a Server to Boot With a One-Time Boot Device

You can configure a server to boot from a particular device only for the next server boot, without disrupting the currently configured boot order. Once the server boots from the one time boot device, all its future reboots occur from the previously configured boot order.

Before you begin

You must log in with user or admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope bios**	Enters the BIOS command mode.
Step 2	Server# /bios **show boot-device**	Displays the list of available boot drives.
Step 3	Server# /bios **set one-time-boot-device** *device-order*	Sets the boot order. **Note** The host boots to the one time boot device even when configured with a disabled advanced boot device.
Step 4	Server# /bios * **commit**	Commits the transaction.
Step 5	(Optional) Server# /bios **show detail**	Displays the BIOS details.

Example

This example shows how to configure a server to boot with a one-time boot device:

```
Server scope bios
Server /bios # show boot-device
Boot Device                    Device Type  Device State       Device Order
------------------------------ ------------ ------------------ ----------------
KVMDVD                         VMEDIA       Enabled            1
vkvm                           VMEDIA       Enabled            2

Server /bios # set one-time-boot-device KVMDVD
Server /bios *# commit
Changes to BIOS set-up parameters will require a reboot.
Do you want to reboot the system?[y|N]n
Changes will be applied on next reboot.
Server /bios # show detail
BIOS:
    BIOS Version: "C240M3.3.0.0.9 (Build Date: 10/02/16)"
    Boot Order: (none)
    FW Update/Recovery Status: None, OK
    UEFI Secure Boot: disabled
    Configured Boot Mode: Legacy
    Actual Boot Mode: Legacy
    Last Configured Boot Order Source: CIMC
    One time boot device: KVMDVD
Server /bios #
```

Assigning User-defined Server Description and Asset Tag

Procedure

	Command or Action	Purpose
Step 1	Server# **scope chassis**	Enters chassis command mode.
Step 2	Server /chassis # **set description** <*Server Description*>	Enters the server description.
Step 3	Server /chassis* # **set asset-tag** <*Asset Tag*>	Enters the asset tag.
Step 4	Server /chassis* # **commit**	Commits the transaction.
Step 5	(Optional) Server /chassis # **show detail**	Displays the server details.

Example

This example shows how to assign user-defined server description and asset tag:

```
Server# scope chassis
Server/chassis # set description DN1-server
Server/chassis* # set asset-tag powerpolicy
Server /chassis* # commit
Server /chassis # show detail
Chassis:
    Power: on
```

```
    Serial Number: FCH1834V23X
    Product Name: UCS C220 M4S
    PID : UCSC-C220-M4S
    UUID: 414949AC-22D6-4D0D-B0C0-F7950E9217C1
    Locator LED: off
    Description: DN1-server
    Asset Tag: powerpolicy
Server /chassis #
```

Resetting the Server

Important If any firmware or BIOS updates are in progress, do not reset the server until those tasks are complete.

Before you begin

You must log in with user or admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope chassis**	Enters chassis command mode.
Step 2	Server /chassis # **power hard-reset**	After a prompt to confirm, resets the server.

Example

This example resets the server:

```
Server# scope chassis
Server /chassis # power hard-reset
This operation will change the server's power state.
Continue?[y|N]
```

Shutting Down the Server

Important If any firmware or BIOS updates are in progress, do not shut down the server until those tasks are complete.

Before you begin

You must log in with user or admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope chassis**	Enters chassis mode.
Step 2	Server /chassis # **power shutdown**	Shuts down the server.

Example

The following example shuts down the server:

```
Server# scope chassis
Server /chassis # power shutdown
```

Managing Server Power

Powering On the Server

Note If the server was powered off other than through the Cisco IMC, the server will not become active immediately when powered on. In this case, the server will enter standby mode until the Cisco IMC completes initialization.

Important If any firmware or BIOS updates are in progress, do not change the server power until those tasks are complete.

Before you begin

You must log in with user or admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope chassis**	Enters the chassis command mode.
Step 2	Server /chassis # **power on**	Turns on the server.
Step 3	At the prompt, enter **y** to confirm.	Turns on the server.

Example

This example shows how to turn on the server:

```
Server# scope chassis
Server /chassis # power on
```

```
Warning: System is already powered ON, this action is ineffective.
Do you want to continue?[y|N]y
```

Powering Off the Server

Important If any firmware or BIOS updates are in progress, do not power off the server until those tasks are complete.

Before you begin

You must log in with user or admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope chassis**	Enters chassis command mode.
Step 2	Server /chassis # **power off**	Turns off the server.

Example

This example turns off the server:

```
Server# scope chassis
Server /chassis # power off
This operation will change the server's power state.
Continue?[y|N]y

Server /chassis # show
Power Serial Number Product Name  UUID
----- ------------- ------------- ------------------------------------
off   Not Specified Not Specified 208F0100020F000000BEA80000DEAD00
```

Power Cycling the Server

Important If any firmware or BIOS updates are in progress, do not power cycle the server until those tasks are complete.

Before you begin

You must log in with user or admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope** chassis	Enters chassis command mode.

	Command or Action	Purpose
Step 2	Server /chassis # **power cycle**	Power cycles the server.

Example

This example power cycles the server:

```
Server# scope chassis
Server /chassis # power cycle
```

Configuring Power Policies

Power Capping

Important This section is valid only for some UCS C-Series servers.

Power capping determines how server power consumption is actively managed. When you enable power capping option, the system monitors power consumption and maintains the power below the allocated power limit. If the server cannot maintain the power limit or cannot bring the platform power back to the specified power limit within the correction time, power capping performs actions that you specify in the **Action** field under the **Power Profile** area.

Once power capping is enabled, you can configure multiple power profiles to either have standard or advanced power profiles with defined attributes. If you choose a standard power profile, you can set the power limit, correction time, corrective-action, suspend period, hard capping, and policy state (if enabled). If you choose an advanced power profile, in addition to the attributes of the standard power profile, you can also set the domain specific power limits, safe throttle level, and ambient temperature based power capping attributes.

Note The following changes are applicable for Cisco UCS C-Series release 2.0(13) and later:

- After upgrading to the 2.0(13) release, power characterization automatically runs during the first host power on. Subsequent characterization runs only if initiated as described in section **Run Power Characterization** section.
- Also, when a server is power cycled and there is a change to the CPU or DIMM configurations, power characterization automatically runs on first host boot. For any other hardware change like PCIe adapters, GPU or HDDs, power characterization does not run. The characterized power range is modified depending on the components present after the host power cycle.

The **Run Power Characterization** option in the **Power Cap Configuration** Tab of the Web UI power cycles the host and starts power characterization.

Setting Power Redundancy Policy

Before you begin

You must log in as a user with admin privileges to perform this action.

Procedure

	Command or Action	Purpose
Step 1	Server # **scope sensor**	Enters sensor command.
Step 2	Server /sensor # **scope psu-redundancy-policy**	Enters psu redundancy policy command.
Step 3	Server /sensor/psu-redundancy-policy #**set psu-redundancy-policy***value*	Choose one of the following redundancy value that you want to set: • **non-redundant** - N, the available PSU output capacity, equals the number of PSUs installed, where PSU failure or grid failure is not supported. • **N+1** - N, the available PSU output capacity, equals the number of PSUs installed minus 1 (N-1), where the single PSU failure is supported, but grid failure is not supported. • **grid** - N, the available PSU output capacity, equals half the number of PSUs installed (N/2), where N PSU failure or grid failure is supported. This policy implies that the you have connected N number of PSUs to one feed and the other N number of PSUs to another feed.
Step 4	Server /sensor/psu-redundancy-policy* #**commit**	Commits the transaction to the server.
Step 5	(Optional) Server /sensor/psu-redundancy-policy #**show detail**	Displays the power redundancy status.

Example

This example shows how to set power redundancy for the server:

```
Server / #scope sensor
Server /sensor #scope psu-redundancy-policy
Server /sensor/psu-redundancy-policy # set psu-redundancy-policy grid
Server /sensor/psu-redundancy-policy* # commit
Server /sensor/psu-redundancy-policy # show detail
PSU Redundancy Policy: grid
Server /sensor/psu-redundancy-policy #
```

Enabling Power Characterization

This option is available only on some Cisco UCS C-Series servers.

Before you begin

You must log in with admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope chassis**	Enters chassis command mode.
Step 2	Server /chassis # **scope power-cap-config**	Enters power cap command mode.
Step 3	Server /chassis # **run-pow-char-at-boot**	Runs the power characterization at boot.
Step 4	Server /chassis # **commit**	Commits the transaction to the system.

Example

This example shows how to automatically invoke power characterization during a host reboot:

```
Server# scope chassis
Server /chassis# scope power-cap-config
Server /chassis /power-cap-config # run-pow-char-at-boot
Server /chassis /power-cap-config* # commit
Server /chassis/power-cap-config #
```

Configuring the Power Cap Policy

This option is available only on some Cisco UCS C-Series servers.

Before you begin

You must log in with admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope chassis**	Enters chassis command mode.
Step 2	Server /chassis # **scope power-cap-config**	Enters power cap command mode.
Step 3	Server /chassis /power-cap-config# **set pow-cap-enable** {**yes** | **no**}	Enables or disables the capping of power to the server.
Step 4	Server /chassis /power-cap-config# **commit**	Commits the transaction to the system configuration.

Example

This example shows how to enable the power capping policy:

```
Server# scope chassis
Server /chassis# scope power-cap-config
Server /chassis /power-cap-config # set pow-cap-enable yes
Server /chassis /power-cap-config* # commit
Server /chassis/power-cap-config #
```

Checking the Power Cap Range

This option is available only on some Cisco UCS C-Series servers.

Before you begin

You must log in with admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Chassis power-cap-config # **show detail**	Dislpays details of the power cap range. **Platform Min (Allow-Throttle)** - This is the lower power limit for the chassis when CPU throttling is enabled. To use this as the platform minimum, set the **allow-throttle** field to **enabled** in the standard or advanced power-profile scope. **Platform Min (Efficient)** - This is the lower power limit for the chassis when the CPU throttling is disabled. **CPU Min (Allow-Throttle)** - This is the lower power limit for the CPU domain when throttling is enabled. To use this as the CPU minimum, set the **allow-throttle** field to **enabled**in the standard or advanced power-profile scope. **CPU Min (Efficient)** - This is the lower power limit for the CPU domain when throttling is disabled.

Example

```
Power Characterization Enabled: yes
    Power Capping: yes
    Power Characterization Status: Completed
    Platform Min (Allow-Throttle)(W): 164
    Platform Min (Efficient)(W): 286
```

```
Platform Max (W): 582
Memory Min (W): 2
Memory Max (W): 5
CPU Min (Allow-Throttle)(W): 64
CPU Min (Efficient)(W): 177
CPU Max (W): 330
```

Configuring Standard Power Profile

This option is available only on some Cisco UCS C-Series servers.

Before you begin

- Power capping must be enabled.
- You must log in with admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope chassis**	Enters chassis command mode.
Step 2	Server /chassis # **scope power-cap-config**	Enters power cap command mode.
Step 3	Server /chassis /power-cap-config# **set pow-cap-enable** {**yes** | **no**}	Enables or disables the power capping capability of the system.
Step 4	Server /chassis /power-cap-config# **scope power-profile standard**	Enters the standard command mode of a power profile
Step 5	Server /chassis /power-cap-config# **set allow-throttle yes** | **no**	Enables or disables the system to maintain the power limit by forcing the processor to use the throttling state (T-state) and memory throttle.
Step 6	Server /chassis /power-cap-config# **set corr-time** *value*	Sets the correction time in which the platform power should be brought back to the specified power limit before taking the action specified in the **Action** mode. The range is from 3 and 600 seconds. The default is 3 seconds.
Step 7	Server /chassis /power-cap-config# **set except-action alert** | **shutdown**	Specifies the action to be performed if the specified power limit is not maintained within the correction time. This can be one of the following: • **Alert**—Logs the event to the Cisco IMC SEL. • **Shutdown**—Gracefully shuts down the host. • **None**—No actions are taken.

	Command or Action	Purpose
Step 8	Server /chassis /power-cap-config# **set hard-cap yes** | **no**	Enables or disables the system to maintain the power consumption below the specified power limit.
Step 9	Server /chassis /power-cap-config# **set pow-limit** *value*	Specifies the power limit. Enter a value within the specified range.
Step 10	Server /chassis /power-cap-config# **set susp-pd** {*h:m-h:m* | |*All,Mo,Tu,We,Th,Fr,Sa,Su.*}	Specifies the time period that the power capping profile is not active.
Step 11	Server /chassis /power-cap-config# **commit**	Commits the transaction to the system.

Example

This example shows how to configure standard power profile:

```
Server# scope chassis
Server /chassis# scope power-cap-config
Server /chassis /power-cap-config # set pow-cap-enable yes
Server /chassis /power-cap-config* # commit
Server /chassis/power-cap-config # scope power-profile advance
Server /chassis/power-cap-config # set allow-throttle yes
Server /chassis/power-cap-config* # set corr-time 6
Server /chassis/power-cap-config* # set except-action alert
Server /chassis/power-cap-config* # set hard-cap yes
Server /chassis/power-cap-config* # set pow-limit 360
Server /chassis/power-cap-config* # set susp-pd 1:30-2:30|All
Server /chassis/power-cap-config* # commit
Server /chassis/power-cap-config # show detail
Power Cap Config:
    Power Characterization Enabled: yes
    Power Capping: no
    Power Characterization Status: Completed
    Platform Min (Allow-Throttle)(W): 164
    Platform Min (Efficient)(W): 290
    Platform Max (W): 581
    Memory Min (W): 2
    Memory Max (W): 5
    CPU Min (Allow-Throttle)(W): 64
    CPU Min (Efficient)(W): 177
    CPU Max (W): 330
```

Configuring Advanced Power Profile Settings

You can configure these settings only on some UCS C-Series servers.

Before you begin

- You must enable power capping.
- You must log in with admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server # **scope chassis**	Enters chassis command mode.
Step 2	Server /chassis # **scope power-cap-config**	Enters power cap command mode.
Step 3	Server /chassis /power-cap-config # **set pow-cap-enable** {**yes** | **no**}	Enables or disables the power capping capability of the server.
Step 4	Server /chassis /power-cap-config # **commit**	Commits the transaction to the system.
Step 5	Server /chassis /power-cap-config # **scope power-profile advanced**	Enters the advance command mode of a power profile.
Step 6	Server /chassis /power-cap-config/power-profile # **set allow-throttle** {**yes** | **no**}	Enables or disables the system to maintain the power limit by forcing the processor to use the throttling state (T-state) and memory throttle.
Step 7	Server /chassis /power-cap-config/power-profile # **set corr-time** *value*	Sets the maximum time to take corrective actions in order to bring the platform back to the specified power limit before taking the actions specified in the **Action** mode. The range is from 3 and 600 seconds. The default is 3 seconds.
Step 8	Server /chassis /power-cap-config/power-profile # **set cpu-power-limit** *value*	Specifies the power limit for the CPU. Enter power in watts within the range specified.
Step 9	Server /chassis /power-cap-config/power-profile # **set except-action** {**alert** | **shutdown**}	Specifies the action to be performed if the specified power limit is not maintained within the correction time. This can be one of the following: • **Alert**—Reports the event to the Cisco IMC SEL. • **Shutdown**—Gracefully shuts down the host. • **None**—No actions are taken.
Step 10	Server /chassis /power-cap-config/power-profile # **set hard-cap** {**yes** | **no**}	Enables or disables the system to maintain the power consumption below the specified power limit.
Step 11	Server /chassis /power-cap-config/power-profile # **set mem-pow-limit** *value*	Specifies the power limit for the memory. Enter power in watts within the range specified.

	Command or Action	Purpose
Step 12	Server /chassis /power-cap-config/power-profile # **set fail-safe-timeout** *value*	Specifies a safe throttle policy when the power capping functionality is impacted internal faults such as missing power readings for platforms or CPUs. The range is from 1 and 10 seconds.
Step 13	Server /chassis /power-cap-config/power-profile # **set plat-safe-Tlvl** *value*	Specifies the throttling level for the platform in percentage. The range is from 0 and 100.
Step 14	Server /chassis /power-cap-config/power-profile # **set plat-temp** *value*	Specifies the inlet temperature sensor. Enter value in Celsius.
Step 15	Server /chassis /power-cap-config/power-profile # **set pow-limit** *value*	Specifies the power limit. Enter power in watts within the range specified.
Step 16	Server /chassis /power-cap-config/power-profile # **set susp-pd** {*h:m-h:m* | |*All,Mo,Tu,We,Th,Fr,Sa,Su.*}	Specifies the time period that the power capping profile will not be active.
Step 17	Server /chassis/power-cap-config/power-profile # **set thermal-power-limit** *value*	Specifies the power limit to be maintained. Enter power in watts within the range specified.
Step 18	Server /power-cap-config/power-profile # **commit**	Commits the transaction to the system configuration.

Example

This example shows how to configure the advance power profile setting:

```
Server# scope chassis
Server /chassis# scope power-cap-config
Server /chassis /power-cap-config # set pow-cap-enable yes
Server /chassis /power-cap-config* # commit
Server /chassis/power-cap-config # scope power-profile advanced
Server /chassis/power-cap-config/power-profile # set allow-throttle yes
Server /chassis/power-cap-config/power-profile* # set corr-time 6
Server /chassis/power-cap-config/power-profile*# set cpu-power-limit 259
Server /chassis/power-cap-config/power-profile* # set except-action alert
Server /chassis/power-cap-config/power-profile* # set hard-cap yes
Server /chassis/power-cap-config/power-profile* # set mem-pow-limit 259
Server /chassis/power-cap-config/power-profile* # set fail-safe-timeout 10
Server /chassis/power-cap-config/power-profile* # set plat-safe-Tlvl 50
Server /chassis/power-cap-config/power-profile* # set plat-temp 35
Server /chassis/power-cap-config/power-profile* # set pow-limit 360
Server /chassis/power-cap-config/power-profile* # set susp-pd 1:30-2:30|All
Server /chassis/power-cap-config/power-profile* # set thermal-power-limit 354
```

```
Server /chassis/power-cap-config/power-profile* # commit
Server /chassis/power-cap-config/power-profile #
```

Resetting the Power Profiles to Defaults

This option is available only on some Cisco UCS C-Series servers.

Before you begin

You must log in with admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope chassis**	Enters chassis command mode.
Step 2	Server /chassis # **scope power-cap-config**	Enters power cap command mode.
Step 3	Server /chassis # **reset-power-profile-to-defaults**	Resets the power profile settings to factory-default values and disables power capping.
Step 4	Server /chassis # **commit**	Commits the transaction to the system.

Example

This example shows how to reset the power profile to the default settings:

```
Server# scope chassis
Server /chassis# scope power-cap-config
Server /chassis /power-cap-config # reset-power-profile-to-defaults
Server /chassis /power-cap-config* # commit
Server /chassis/power-cap-config #
```

Viewing the Power Capping Configuration

This option is available only on some Cisco UCS C-Series servers.

Before you begin

You must log in with admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server # **scope chassis**	Enters chassis command mode.
Step 2	Server /chassis # **scope power-cap-config**	Enters power cap configuration command mode.

	Command or Action	Purpose
Step 3	Server /chassis/power-cap-config # **show detail**	Displays information about the power characterization.

Example

This example shows how to view information about the power cap configuration:

```
Server #scope chassis
Server/chassis # scope power-cap-config
Server /chassis/power-cap-config # show detail
Power Cap Config:
    Power Characterization Enabled: yes
    Power Capping: no
    Power Characterization Status: Completed
    Platform Min (Allow-Throttle)(W): 164
    Platform Min (Efficient)(W): 290
    Platform Max (W): 581
    Memory Min (W): 2
    Memory Max (W): 5
    CPU Min (Allow-Throttle)(W): 64
    CPU Min (Efficient)(W): 177
    CPU Max (W): 330
Server /chassis/power-cap-config #
```

Viewing the Power Statistics

This option is available only on some UCS C-Series servers.

Before you begin

You must log in with admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server # **scope chassis**	Enters chassis command mode.
Step 2	Server /chassis # **show power-monitoring**	Displays the power used by the server, CPU, and memory since the last time it was rebooted.

Example

This example shows how to view the power statistics of an individual domain:

```
Server #scope chassis
Server /chassis # show power-monitoring
Domain     Current (W)  Minimum (W)  Maximum (W)  Average (W)
---------- ------------ ------------ ------------ ------------
Platform   180          160          504          180
CPU        53           33           275          53
```

```
Memory     2            2            6            2
Server /chassis #
```

Configuring the Power Restore Policy

The power restore policy determines how power is restored to the server after a chassis power loss.

Before you begin

You must log in with admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server # **Scope CIMC**	Enters the Cisco IMC command mode.
Step 2	Server /CIMC # **Scope power-restore-policy**	Enters the power restore policy command mode.
Step 3	Server /CIMC/power-restore-policy # **set policy** {**power-off** | **power-on** | **restore-last-state**}	Specifies the action to be taken when chassis power is restored. Select one of the following: • **power-off**—Server power will remain off until manually turned on. This is the default action. • **power-on**—Server power will be turned on when chassis power is restored. • **restore-last-state**—Server power will return to the state before chassis power was lost. When the selected action is **power-on**, you can select a delay in the restoration of power to the server.
Step 4	(Optional) Server /CIMC/power-restore-policy # **set delay** {**fixed** | **random**}	Specifies whether server power will be restored after a fixed or random time. The default is **fixed**. This command is accepted only if the power restore action is **power-on**.
Step 5	(Optional) Server /CIMC/power-restore-policy # **set delay-value** *delay*	Specifies the delay time in seconds. The range is 0 to 240; the default is 0.
Step 6	Server /CIMC/power-restore-policy # **commit**	Commits the transaction to the system configuration.

Example

This example sets the power restore policy to power-on with a fixed delay of 180 seconds (3 minutes) and commits the transaction:

```
Server# scope CIMC
Server /CIMC # Scope  power-restore-policy
Server /CIMC/power-restore-policy # set policy power-on
Server /CIMC/power-restore-policy *# commit
Server /CIMC/power-restore-policy # set delay fixed
Server /CIMC/power-restore-policy *# set delay-value 180
Server /CIMC/power-restore-policy *# commit
Server /CIMC/power-restore-policy #  show detail
Power Restore Policy:
    Power Restore Policy: power-on
    Power Delay Type: fixed
    Power Delay Value(sec): 180

Server /CIMC/power-restore-policy #
```

Configuring Fan Policies

Fan Control Policies

Fan Control Policies enable you to control the fan speed to bring down server power consumption and noise levels. Prior to these fan policies, the fan speed increased automatically when the temperature of any server component exceeded the set threshold. To ensure that the fan speeds were low, the threshold temperatures of components are usually set to high values. While this behavior suited most server configurations, it did not address the following situations:

- Maximum CPU performance

  For high performance, certain CPUs must be cooled substantially below the set threshold temperature. This required very high fan speeds which resulted in higher power consumption and increased noise levels.

- Low power consumption

  To ensure the lowest power consumption, fans must run very slowly, and in some cases, stop completely on servers that support it. But slow fan speeds resulted in servers overheating. To avoid this situation, it is necessary to run fans at a speed that is moderately faster than the lowest possible speed.

With the introduction of fan policies, you can determine the right fan speed for the server, based on the components in the server. In addition, it allows you to configure the fan speed to address problems related to maximum CPU performance and low power consumption.

Following are the fan policies that you can choose from:

- **Balanced**—This setting can cool almost any server configuration, but may not be suitable for servers with PCIe cards as these cards overheat easily.
- **Low Power**—This setting is ideal for minimal configuration servers that do not contain any PCIe cards.
- **High Power**—This policy is ideal for servers that contain PCIe cards that overheat easily and have high temperatures.
- **Maximum Power**—This setting can be used for server configurations that required extremely high fan speeds. This policy is ideal for servers that contain PCIe cards that overheat easily and have very high temperatures.

- **Acoustic**—This setting can be used for configuring the fan noise level, thereby enabling noise reduction in the servers.

  Application of this policy might result in performance throttling impacting system performance. If excessive thermal or performance events are recorded in the event logs, select a standard fan control policy like **Low Power**, which is a non-disruptive change.

Note This option is available only on Cisco UCS C220 M5, C240 SD M5, C240 M5 servers. For these servers, **Acoustic** is the default fan policy.

For other servers, default fan policy depends on the server configuration and the number of PCIe cards present in the server.

Note For Cisco UCS M5 servers, although you set a fan policy in Cisco IMC, the actual speed that the fan runs at is determined by the configuration requirements of the server. PCIe cards are tagged with minimum fan speed depending on thermal requirements. If the server is equipped with these PCIe cards, you cannot configure the fan policy, which go below the tagged requirement.

The **Configuration Status** displays the status of the configured fan policy in Cisco UCS M5 servers. This can be one of the following:

- SUCCESS —The selected fan policy matches the actual fan speed that runs on the server.
- PENDING —The configured fan policy is not in effect yet. This can be due to one of the following:
  - The server is powered off
  - The BIOS POST is not complete
- FAN POLICY OVERRIDE—Overrides the specified fan speed with the actual speed determined by the configuration requirements of the server.

Configuring a Fan Policy

The fan policy determines the cooling requirements for your server. Prior to setting the fan policy, you must determine if your server includes PCIe cards that overheat easily.

Before you begin

You must log in with admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope chassis**	Enters the chassis command mode.
Step 2	Server /chassis # **scope fan-policy**	Enters the fan policy command mode.

	Command or Action	Purpose
Step 3	Server /chassis/fan-policy # **set fan-policy**	Sets the fan policy for the server. It can be one of the following: • **Balanced**—This setting can cool almost any server configuration, but may not be suitable for servers with PCIe cards as these cards overheat easily. • **Low Power**—This setting is ideal for minimal configuration servers that do not contain any PCIe cards. • **High Power**—This policy is ideal for servers that contain PCIe cards that overheat easily and have high temperatures. • **Maximum Power**—This setting can be used for server configurations that required extremely high fan speeds. This policy is ideal for servers that contain PCIe cards that overheat easily and have very high temperatures. • **Acoustic**—This setting can be used for configuring the fan noise level, thereby enabling noise reduction in the servers. Application of this policy might result in performance throttling impacting system performance. If excessive thermal or performance events are recorded in the event logs, select a standard fan control policy like **Low Power**, which is a non-disruptive change. **Note** This option is available only on Cisco UCS C220 M5, C240 SD M5, C240 M5 servers. For these servers, **Acoustic** is the default fan policy. For other servers, default fan policy depends on the server configuration and the number of PCIe cards present in the server.
Step 4	Server /chassis/fan-policy # **commit**	Commits the changes to the server.

Example

This example shows how to set the fan policy to maximum power for a server:

```
server # scope chassis
server /chassis # scope fan-policy
server /chassis/fan-policy # set fan-policy maximum-power

server /chassis/fan-policy* # commit
server /chassis/fan-policy # show detail
  Fan Policy: maximum-power
  Applied Fan Policy: Max Power
  Configuration Status: SUCCESS
server /chassis/fan-policy #
```

Configuring DIMM Black Listing

DIMM Black Listing

In Cisco IMC, the state of the Dual In-line Memory Module (DIMM) is based on SEL event records. A DIMM is marked bad if the BIOS encounters a non-correctable memory error or correctable memory error with 16000 error counts during memory test execution during BIOS post. If a DIMM is marked bad, it is considered a non-functional device.

If you enable DIMM blacklisting, Cisco IMC monitors the memory test execution messages and blacklists any DIMM that encounters memory errors at any given point of time in the DIMM SPD data. This allows the host to map out those DIMMs.

DIMMs are mapped out or blacklisted only when Uncorrectable errors occur. When a DIMM gets blacklisted, other DIMMs in the same channel are ignored or disabled, which means that the DIMM is no longer considered bad.

Note DIMMs do not get mapped out or blacklisted for 16000 Correctable errors.

Enabling DIMM Black Listing

Before you begin

You must be logged in as an administrator.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope dimm-blacklisting** /	Enters the DIMM blacklisting mode.
Step 2	Server /dimm-blacklisting # **set enabled** {**yes** | **no**}	Enables or disables DIMM blacklisting.

	Command or Action	Purpose
Step 3	Server /dimm-blacklisting* # **commit**	Commits the transaction to the system configuration.

Example

The following example shows how to enable DIMM blacklisting:

```
Server# scope dimm-blacklisting
Server /dimm-blacklisting # set enabled yes
Server /dimm-blacklisting* # commit
Server /dimm-blacklisting #
Server /dimm-blacklisting # show detail

DIMM Blacklisting:
      Enabled: yes
```

Configuring BIOS Settings

Viewing BIOS Status

Procedure

	Command or Action	Purpose
Step 1	Server# **scope bios**	Enters the BIOS command mode.
Step 2	Server /bios # **show detail**	Displays details of the BIOS status.

The BIOS status information contains the following fields:

Name	Description
BIOS Version	The version string of the running BIOS.
Boot Order	The legacy boot order of bootable target types that the server will attempt to use.
Boot Override Priority	This can be None, or HV.
FW Update/Recovery Status	The status of any pending firmware update or recovery action.
UEFI Secure Boot	Enables or Disables UEFI secure boot.
Configured Boot Mode	The boot mode in which h BIOS will try to boot the devices.
Actual Boot Mode	The actual boot mode in which BIOS booted the devices.

Name	Description
Last Configured Boot Order Source	The last configured boot order source by BIOS.

Configuring BIOS Settings

Before you begin

You must log in with admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope bios**	Enters the BIOS command mode.
Step 2	Server /bios # **scope** **input-output | main-memory | power-performance | processor | server-management**	Enters the settings command mode. For descriptions and information about the options for each BIOS setting, see the following topic: BIOS Parameters by Server Model You must commit the changes between each setting type. Server /bios/ # **commit**

Example

This example configures the BIOS to enable the USB legacy support and commits the transaction:

```
Server# scope bios
Server /bios # scope input-output
Server /bios/input-output # set UsbLegacySupport enabled
Server /bios/input-output *# commit
Changes to BIOS set-up parameters will require a reboot.
Do you want to reboot the system?[y|N] n
Changes will be applied on next reboot.
Server /bios/input-output #
```

Restoring BIOS Defaults

Before you begin

You must log in as a user with admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope bios**	Enters the BIOS command mode.

	Command or Action	Purpose
Step 2	Server /bios # **bios-setup-default**	Restores BIOS default settings. This command initiates a reboot.

Example

This example restores BIOS default settings:

```
Server# scope bios
Server /bios # bios-setup-default
This operation will reset the BIOS set-up tokens to factory defaults.
All your configuration will be lost.
Changes to BIOS set-up parameters will initiate a reboot.
Continue?[y|N]y
```

Entering BIOS Setup

Before you begin

- The server must be powered on.
- You must log in as a user with admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope bios**	Enters the BIOS command mode.
Step 2	Server /bios # **enter-bios-setup**	Enters BIOS setup on reboot.

Example

This example enables you to enter BIOS setup:

```
Server# scope bios
Server /bios # enter-bios-setup
This operation will enable Enter BIOS Setup option.
Host must be rebooted for this option to be enabled.
Continue?[y|N]y
```

Restoring BIOS Manufacturing Custom Defaults

In instances where the components of the BIOS no longer function as desired, you can restore the BIOS set up tokens to the manufacturing default values.

Note This action is only available for some C-Series servers.

Before you begin

- You must log in with admin privileges to perform this task.
- The server must be powered off.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope bios**	Enters the BIOS command mode.
Step 2	Server /bios # **restore-mfg-defaults**	Restores the set up tokens to the manufacturing default values.

Example

This example shows how to restore the BIOS set up tokens to the manufacturing default values:

```
Server # scope bios
Server /bios # restore-mfg-defaults
This operation will reset the BIOS set-up tokens to manufacturing defaults.
The system will be powered on.
Continue? [y|n] N
Server /bios #
```

BIOS Profiles

On the Cisco UCS server, default token files are available for every S3260 server platform, and you can configure the value of these tokens using the Graphic User Interface (GUI), CLI interface, and the XML API interface. To optimize server performance, these token values must be configured in a specific combination.

Configuring a BIOS profile helps you to utilize pre-configured token files with the right combination of the token values. Some of the pre-configured profiles that are available are virtualization, high-performance, low power, and so on. You can download the various options of these pre-configured token files from the Cisco website and apply it on the servers through the BMC.

You can edit the downloaded profile to change the value of the tokens or add new tokens. This allows you to customize the profile to your requirements without having to wait for turnaround time.

Activating a BIOS Profile

Before you begin

You must log in with user or admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope bios**	Enters the BIOS command mode.

	Command or Action	Purpose
Step 2	Server# /bios **scope bios-profile**	Enters the BIOS profile command mode.
Step 3	Server# /bios/bios-profile **activate** *virtualization*	You are prompted to back up the BIOS configuration. Enter **y**.
Step 4	You are prompted to reboot the system to apply the changes to the BIOS set-up parameters. Enter **y**.	Initiates the system reboot.

Example

This example activates the specified BIOS profile:

```
Server # scope bios
Server /bios # scope bios-profile
Server /bios/bios-profile # activate virtualization
It is recommended to take a backup before activating a profile.
Do you want to take backup of BIOS configuration?[y/n] y
backup-bios-profile succeeded.
bios profile "virtualization" deleted
Changes to BIOS set-up parameters will require a reboot.
Do you want to reboot the system?[y|N]y
A system reboot has been initiated.
Server /bios/bios-profile #
```

Taking a Back-Up of a BIOS Profile

Before you begin

You must log in with user or admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope bios**	Enters the BIOS command mode.
Step 2	Server# /bios **scope bios-profile**	Enters the BIOS profile command mode.
Step 3	Server# /bios/bios-profile **backup**	Displays a message that the backup of the BIOS profile was successful.

Example

This example backs up a BIOS profile:

```
Server # scope bios
Server /bios # scope bios-profile
Server /bios/bios-profile # backup
backup-bios-profile succeeded.
Server /bios #
```

Deleting a BIOS Profile

Before you begin

You must log in with user or admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope bios**	Enters the BIOS command mode.
Step 2	Server# /bios **scope bios-profile**	Enters the BIOS profile command mode.
Step 3	Server# /bios/bios-profile **delete** *BIOS profile*	Deletes the specified BIOS profile.

Example

This example deletes the specified BIOS profile:

```
Server # scope bios
Server /bios # scope bios-profile
Server /bios/bios-profile # delete performance
Server /bios/bios-profile #
```

Displaying BIOS Profiles

Procedure

	Command or Action	Purpose
Step 1	Server# **scope bios**	Enters the BIOS command mode.
Step 2	Server# /bios **show bios-profile**	Displays all the BIOS profiles.

Example

This example displays all the BIOS profiles:

```
Server # scope bios
Server /bios # show bios-profile
ID     Name             Active
------ ---------------- -------- --------
1      performance      yes
2      virtualization   no
3      none             no
4      cisco_backup     no
Server /bios #scope bios-profile
Server /bios #
```

Displaying Information of a BIOS Profile

Procedure

	Command or Action	Purpose
Step 1	Server# **scope bios**	Enters the BIOS command mode.
Step 2	Server# /bios **scope bios-profile**	Displays all the BIOS profiles.
Step 3	Server# /bios/bios-profile **info** *performance*	Displays information of the BIOS profile such as token name, profile value, and active value.

Example

This example displays information of the specified BIOS profile:

```
Server # scope bios
Server /bios # scope bios-profile
Server /bios/bios-profile # info performance

TOKEN NAME                      PROFILE VALUE        ACTUAL VALUE
=====================================================================
 TPMAdminCtrl                    Enabled              Enabled
 ASPMSupport                     Disabled             Disabled
Server /bios/bios-profile #
```

Displaying details of the BIOS Profile

Procedure

	Command or Action	Purpose
Step 1	Server# **scope bios**	Enters the BIOS command mode.
Step 2	Server# /bios **scope bios-profile**	Enters the BIOS profile command mode.
Step 3	Server# /bios/bios-profile **show detail**	Displays the details of BIOS profile.

Example

This example displays the details of the BIOS profile:

```
Server # scope bios
Server /bios # scope bios-profile
Server /bios/bios-profile # show detail
Active Profile: Virtualization
Install Status: bios profile install done
Server /bios/bios-profile #
```

Updating Firmware on Server Components

Important If any firmware or BIOS updates are in progress, do not reset the server until those tasks are complete.

Before you begin

You must log in with user or admin privileges to perform this task.

Server must be powered off.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope chassis**	Enters chassis command mode.
Step 2	Server /chassis # **scope firmware**	Enters firmware command mode.
Step 3	Server /chassis/firmware # **show detail**	Displays the firmware update required on some components message.
Step 4	Server /chassis/firmware # **update-all**	Updates the firmware on the server components.

Example

This example resets the server:

```
Server# scope chassis
Server /chassis # scope firmware
Server /chassis / firmware # show detail

Firmware update required on some components,
please run update-all (under chassis/firmware scope).

Server /chassis / firmware # update-all
```

Viewing Product ID (PID) Catalog Details

Procedure

	Command or Action	Purpose
Step 1	Server # **scope chassis**	Enters chassis command mode.
Step 2	Server /chassis # **show cpu-pid**	Displays the CPU PID details.
Step 3	Server /chassis # **show dimm-pid**	Displays the memory PID details.

	Command or Action	Purpose
Step 4	Server /chassis # **show pciadapter-pid**	Displays the PCI adapters PID details.
Step 5	Server /chassis # **show hdd-pid**	Displays the HDD PID details.

Example

This example shows how to create view PID details

```
Server # scope chassis
Viewing CPU PID details
Server /chassis # show cpu-pid
Socket Product ID           Model
------ -------------------- ----------------------------------------
CPU1   UCS-CPU-E52660B      Intel(R) Xeon(R) CPU E5-2660 v2 @ 2.2...
CPU2   UCS-CPU-E52660B      Intel(R) Xeon(R) CPU E5-2660 v2 @ 2.2...
Viewing memory PID details
Server /chassis # show dimm-pid
Name              Product ID           Vendor ID  Capacity  Speed
----------------- -------------------- ---------- --------- ------
DIMM_A1           UNKNOWN              NA         Failed    NA
DIMM_A2           UNKNOWN              NA         Ignore... NA
DIMM_B1           UCS-MR-1X162RZ-A     0xCE00     16384 MB  1866
DIMM_B2           UCS-MR-1X162RZ-A     0xCE00     16384 MB  1866
DIMM_C1           UCS-MR-1X162RZ-A     0xCE00     16384 MB  1866
DIMM_C2           UCS-MR-1X162RZ-A     0xCE00     16384 MB  1866
DIMM_D1           UCS-MR-1X162RZ-A     0xCE00     16384 MB  1866
DIMM_D2           UCS-MR-1X162RZ-A     0xCE00     16384 MB  1866
DIMM_E1           UCS-MR-1X162RZ-A     0xCE00     16384 MB  1866
DIMM_E2           UCS-MR-1X162RZ-A     0xCE00     16384 MB  1866
DIMM_F1           UCS-MR-1X162RZ-A     0xCE00     16384 MB  1866
DIMM_F2           UCS-MR-1X162RZ-A     0xCE00     16384 MB  1866
DIMM_G1           UCS-MR-1X162RZ-A     0xCE00     16384 MB  1866
DIMM_G2           UCS-MR-1X162RZ-A     0xCE00     16384 MB  1866
DIMM_H1           UCS-MR-1X162RZ-A     0xCE00     16384 MB  1866
DIMM_H2           UCS-MR-1X162RZ-A     0xCE00     16384 MB  1866
Viewing PCI adapters PID details
Server /chassis # show pciadapter-pid
Slot   Product ID           Vendor ID  Device ID   SubVendor ID  SubDevice ID
------ -------------------- ---------- ----------- ------------- -------------
1      UCSC-MLOM-CSC-02     0x1137     0x0042      0x1137        0x012e
Viewing HDD PID details
Server /chassis # show hdd-pid
Disk Controller  Product ID           Vendor     Model
---- ----------- -------------------- ---------- ------------
1    SLOT-MEZZ   UCSC-C3X60-HD4TB     TOSHIBA    MG03SCA400
2    SLOT-MEZZ   UCS-C3X60-HD4TB      SEAGATE    ST4000NM0023
3    SLOT-MEZZ   UCSC-C3X60-HD4TB     TOSHIBA    MG03SCA400
4    SLOT-MEZZ   UCSC-C3X60-HD4TB     TOSHIBA    MG03SCA400
5    SLOT-MEZZ   UCSC-C3X60-HD4TB     TOSHIBA    MG03SCA400
6    SLOT-MEZZ   UCSC-C3X60-HD4TB     TOSHIBA    MG03SCA400
7    SLOT-MEZZ   UCSC-C3X60-HD4TB     TOSHIBA    MG03SCA400
8    SLOT-MEZZ   UCSC-C3X60-HD4TB     TOSHIBA    MG03SCA400
9    SLOT-MEZZ   UCSC-C3X60-HD4TB     TOSHIBA    MG03SCA400
10   SLOT-MEZZ   UCSC-C3X60-HD4TB     TOSHIBA    MG03SCA400
11   SLOT-MEZZ   UCSC-C3X60-HD4TB     TOSHIBA    MG03SCA400
12   SLOT-MEZZ   UCSC-C3X60-HD4TB     TOSHIBA    MG03SCA400
13   SLOT-MEZZ   UCSC-C3X60-HD4TB     TOSHIBA    MG03SCA400
14   SLOT-MEZZ   UCSC-C3X60-HD4TB     TOSHIBA    MG03SCA400
15   SLOT-MEZZ   UCS-C3X60-HD4TB      SEAGATE    ST4000NM0023
```

```
16   SLOT-MEZZ   UCS-C3X60-HD4TB      SEAGATE    ST4000NM0023
19   SLOT-MEZZ   UCSC-C3X60-HD4TB     TOSHIBA    MG03SCA400
28   SLOT-MEZZ   UCSC-C3X60-HD4TB     TOSHIBA    MG03SCA400
54   SLOT-MEZZ   UCSC-C3X60-HD6TB     SEAGATE    ST6000NM0014
55   SLOT-MEZZ   UCSC-C3X60-HD6TB     SEAGATE    ST6000NM0014
56   SLOT-MEZZ   UCSC-C3X60-HD4TB     TOSHIBA    MG03SCA400
57   SLOT-MEZZ   UCS-HD4T7KS3-E       WD         WD4001FYY...
58   SLOT-MEZZ   UCS-HD4T7KS3-E       WD         WD4001FYY...
59   SLOT-MEZZ   UCS-HD4T7KS3-E       WD         WD4001FYY...
60   SLOT-MEZZ   UCS-HD4T7KS3-E       WD         WD4001FYY...

Server /chassis #
```

Uploading and Activating a PID Catalog

Caution BMC reboots automatically once a PID catalog is activated.

You must reboot the server after activating a PID catalog.

Before you begin

You must log in as a user with admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope chassis**	Enters the chassis command mode.
Step 2	Server# /chassis **scope pid-catalog**	Enters the PID catalog command mode.
Step 3	Server /chassis/pid-catalog # **upload-pid-catalog** *remote-protocol IP Address PID Catalog file*	Specifies the protocol to connect to the remote server. It can be one of the following types: • TFTP • FTP • SFTP • SCP • HTTP

	Command or Action	Purpose
		Note The Cisco UCS C-Series server now supports fingerprint confirmation of the server when you update firmware through a remote server. This option is available only if you choose SCP or SFTP as the remote server type. If you chose SCP or SFTP as the remote server type while performing this action, a prompt with the message Server (RSA) key fingerprint is <server_finger_print _ID> Do you wish to continue? Click y or n depending on the authenticity of the server fingerprint. The fingerprint is based on the host's public key and helps you to identify or verify the host you are connecting to.
Step 4	(Optional) Server# /chassis/pid-catalog **show detail**	Displays the status of the upload.
Step 5	Server# /chassis/pid-catalog **activate**	Activates the uploaded PID catalog.
Step 6	Server# /chassis/pid-catalog **show detail**	Displays the status of the activation.

Example

This example uploads and activates the PID catalog:

```
Server # scope chassis
Server /chassis # scope pid-catalog
Uploading PID Catalog
Server /chassis/pid-catalog # upload-pid-catalog tftp 10.10.10.10 pid-ctlg-2_0_12_78_01.tar.gz
upload-pid-catalog initialized.
Please check the status using "show detail".
Server /chassis/pid-catalog #
Server /chassis/pid-catalog # show detail
    Upload Status: Upload Successful
    Activation Status: Please Activate Catalog
    Current Activated Version: N/A
Activating the uploaded PID catalog
Server /chassis/pid-catalog # activate
Successfully activated PID catalog
Server /chassis/pid-catalog # show detail
    Upload Status:
    Activation Status: Activation Successful
    Current Activated Version: 2.0(12.78).01
Server /chassis/pid-catalog #
```

Deleting a PID Catalog

Caution BMC reboots automatically once a PID catalog is deleted.

You must reboot the server after deleting a PID catalog.

Before you begin

You must log in as a user with admin privileges to perform this task.

Procedure

	Command or Action	Purpose
Step 1	Server# **scope chassis**	Enters the chassis command mode.
Step 2	Server# /chassis **scopepid-catalog**	Enters the PID catalog command mode.
Step 3	Server /chassis/pid-catalog # **delete**	Enter **y** at the confirmation prompt to delete the PID catalog. **Note** You can delete a PID catalog only if it has been previously updated and activated.
Step 4	(Optional) Server# /chassis/pid-catalog **show detail**	Displays the status of the PID catalog.

Example

This example uploads and activates the PID catalog:

```
Server # scope chassis
Server /chassis # scope pid-catalog
Server /chassis/pid-catalog # delete
CIMC will be automatically rebooted after successful deletion of the uploaded catalog file.
Once this is complete, a host reboot will be required for the catalog changes to be reflected
 in
the BIOS and host Operating System Continue?[y|N]y
Server /chassis/pid-catalog # show detail
PID Catalog:
    Upload Status: N/A
    Activation Status: N/A
    Current Activated Version: 4.1(0.41)
Server /chassis/pid-catalog #
```

Persistent Memory Module

Persistent Memory Modules

Cisco UCS C-Series Release 4.0(4) introduces support for the Intel® Optane™ Data Center persistent memory modules on the UCS M5 servers that are based on the Second Generation Intel® Xeon® Scalable processors. These persistent memory modules can be used only with the Second Generation Intel® Xeon® Scalable processors.

Persistent memory modules are non-volatile memory modules that bring together the low latency of memory and the persistence of storage. Data stored in persistent memory modules can be accessed quickly compared to other storage devices, and is retained across power cycles.

For detailed information about configuring persistent memory modules, see the Cisco UCS: Configuring and Managing Intel® Optane™ Data Center Persistent Memory Modules Guide.