Managing the Server

This chapter includes the following sections:

Viewing Overall Server Status

Procedure

Step 1 In the **Overall Server Status** area of the **Navigation** pane, click the blue health report link to refresh the **Server Summary** pane.

Step 2 (Optional) Review the following information in the **Server Status** area of the **Server Summary** pane:

Note The following list shows all possible status fields. The actual fields displayed depend on the type of C-Series server that you are using.

Name	Description
Power State field	The current power state.

Name	Description
Overall Server Status field	The overall status of the server. This can be one of the following: • **Memory Test In Progress**—The server is performing a self-test of the installed memory. This condition normally occurs during the boot process. • **Good** • **Moderate Fault** • **Severe Fault**
Temperature field	The temperature status. This can be one of the following: • **Good** • **Fault** • **Severe Fault** You can click the link in this field to view more temperature information.
Processors field	The overall status of the processors. This can be one of the following: • **Good** • **Fault** You can click the link in this field to view more information about the processors.
Memory field	The overall status of the memory modules. This can be one of the following: • **Good** • **Fault** • **Severe Fault** You can click the link in this field to view detailed status information.
Power Supplies field	The overall status of the power supplies. This can be one of the following: • **Good** • **Fault** • **Severe Fault** You can click the link in this field to view detailed status information.

Name	Description
Fans field	The overall status of the power supplies. This can be one of the following: • **Good** • **Fault** • **Severe Fault** You can click the link in this field to view detailed status information.
HDD field	The overall status of the hard drives. This can be one of the following: • **Good** • **Fault** You can click the link in this field to view detailed status information.
Locator LED field	Whether the locator LEDs are on or off.

Toggling the Locator LED

Before You Begin

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

Procedure

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

Step 2 On the **Server** tab, click **Summary**.

Step 3 In the **Actions** area, click **Turn On Locator LED**.
The LED indicator in the **Locator LED** field lights up and the physical locator LED on the server turns on and blinks.

Step 4 In the **Actions** area, click **Turn Off Locator LED**.
The locator LED turns off.

Toggling the Locator LED for a Hard Drive

Before You Begin

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

Procedure

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

Step 2 On the **Server** tab, click **Sensors**.

Step 3 In the **Sensors** pane, click the **Storage** tab.

Step 4 In the **Storage** table, find the hard disk drive (HDD) whose locator LED you want to change.

Step 5 In the **LED Status** column for that HDD, select the desired locator LED state from the drop-down list.
If you select **Turn On**, the LED status indicator in this column lights up and the physical locator LED on the associated HDD turns on and blinks.

Managing the Server Boot Order

Server Boot Order

Using CIMC, you can configure the order in which the server attempts to boot from available boot device types.

When you change the boot order configuration, CIMC sends the configured boot order to the BIOS the next time the server is rebooted. To implement the new boot order, reboot the server after making the configuration change. The new boot order will take effect on any subsequent reboot. The configured boot order is not sent again until the configuration is changed again.

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

- The BIOS encounters issues while trying to boot using the configured boot order.
- A user changes the boot order directly through the BIOS.

Configuring the Server Boot Order

Before You Begin

You must log in as a user with admin privileges to configure server boot order.

Procedure

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

Step 2 On the **Server** tab, click **BIOS**.
The BIOS page appears.

Step 3 In the **Actions** area, click **Configure Boot Order**.
A dialog box with boot order instructions appears.

Step 4 Review the instructions, and then click **OK**.
The **Configure Boot Order** dialog box displays.

Step 5 In the **Configure Boot Order** dialog box, update the following properties:

Name	Description
Device Types table	The server boot options. You can select one or more of the following: • **HDD**—Hard disk drive • **FDD**—Floppy disk drive • **CDROM**—Bootable CD-ROM or DVD • **PXE**—PXE boot • **EFI**—Extensible Firmware Interface
Add >	Moves the selected device type to the **Boot Order** table.
< Remove	Removes the selected device type from the **Boot Order** table.
Boot Order table	Displays the device types from which this server can boot, in the order in which the boot will be attempted.
Up	Moves the selected device type to a higher priority in the **Boot Order** table.
Down	Moves the selected device type to a lower priority in the **Boot Order** table.
Apply button	Saves the changes to the configured boot order or reapplies a previously configured boot order. CIMC sends the configured boot order to the BIOS the next time the server is rebooted.
Cancel button	Closes the dialog box without saving any changes or reapplying the existing configuration. If you select this option, the actual boot order will not be changed the next time the server is rebooted.

Step 6 Click **Apply**.
Additional device types may be appended to the actual boot order, depending on what devices you have connected to your server.

What to Do Next

Reboot the server to boot with your new boot order.

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 CIMC.

Procedure

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

Step 2 On the **Server** tab, click **BIOS**.
The **BIOS** page appears.

Step 3 In the **Actual Boot Order** area of the **BIOS** page, review the list of boot devices in the order actually used by the BIOS when the server last booted.
If multiple instances of a device type were present during the last boot, you can expand the device type to see those devices.

Resetting the Server

Before You Begin

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

Procedure

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

Step 2 On the **Server** tab, click **Summary**.

Step 3 In the **Actions** area, click **Hard Reset Server**.
A dialog box with the message **Hard Reset the Server?** appears.

Step 4 Click **OK**.

Shutting Down the Server

Before You Begin

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

Procedure

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

Step 2 On the **Server** tab, click **Summary**.

Step 3 In the **Actions** area, click **Shut Down Server**.
A dialog box with the message **Shut Down the Server?** appears.

Step 4 Click **OK**.

Managing Server Power

Powering On the Server

Note If the server was powered off by any means other than through CIMC, it will not become active immediately when powered on. The server will remain in standby mode until CIMC completes initialization.

Before You Begin

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

Procedure

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

Step 2 On the **Server** tab, click **Summary**.

Step 3 In the **Actions** area, click **Power On Server**.
A dialog box with the message **Power on the server?** appears.

Step 4 Click **OK**.

Powering Off the Server

Before You Begin

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

Procedure

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

Step 2 On the **Server** tab, click **Summary**.

Step 3 In the **Actions** area, click **Power Off Server**.
A dialog box with the message **Power Off the Server?** appears.

Step 4 Click **OK**.

Power Cycling the Server

Before You Begin

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

Procedure

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

Step 2 On the **Server** tab, click **Summary**.

Step 3 In the **Actions** area, click **Power Cycle Server**.
A dialog box with the message **Power Cycle the Server?** appears.

Step 4 Click **OK**.

Configuring Power Policies

Viewing the Power Statistics

Procedure

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

Step 2 On the **Server** tab, click **Power Policies**.

Step 3 In the **Power Statistics** area, review the information in the following fields:

Name	Description
Current Consumption field	The power currently being used by the server, in watts.
Maximum Consumption field	The maximum number of watts consumed by the server since the last time it was rebooted.
Minimum Consumption field	The minimum number of watts consumed by the server since the last time it was rebooted.
Minimum Configurable Limit field	The minimum amount of power that can be specified as the peak power cap for this server, in watts.
Maximum Configurable Limit field	The maximum amount of power that can be specified as the peak power cap for this server, in watts.

Power Capping Policy

The power capping policy determines how server power consumption is actively managed. When power capping is enabled, the system monitors how much power is allocated to the server and attempts to keep the power consumption below the allocated power. If the server exceeds its maximum allotment, the power capping policy triggers the specified non-compliance action.

Configuring the Power Capping Policy

Note This feature is not available on some servers.

Before You Begin

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

Procedure

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

Step 2 On the **Server** tab, click **Power Policies**.

Step 3 In the **Power Configuration** area, update the following properties:

Name	Description
Enable Power Capping check box	fieldIf this box is checked, the system monitors how much power is allocated to the server and takes the specified action if the server goes over its maximum allotment.
Peak Power field	The maximum number of watts that can be allocated to this server. If the server requests more power than specified in this field, the system takes the action defined in the **Non-Compliance Action** field. Enter a number of watts within the range defined by the **Minimum Configurable Limit** field and the **Maximum Configurable Limit** field.
Non-Compliance Action drop-down list	The action the system should take if power capping is enabled and the server requests more than its peak power allotment. This can be one of the following: • **Force Power Reduction**—The server is forced to reduce its power consumption by any means necessary. This option is available only on some C-Series servers. • **None**—No action is taken and the server is allowed to use more power than specified in the **Peak Power** field. • **Power Off Host**—The server is shut down. • **Throttle**—Processes running on the server are throttled to bring the total power consumption down.

Step 4 Click **Save Changes**.

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

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

Step 2 On the **Server** tab, click **Power Policies**.

Step 3 In the **Power Restore Policy** area, update the following fields:

Name	Description
Power Restore Policy drop-down list	The action to be taken when chassis power is restored after an unexpected power loss. This can be one of the following: • **Power Off**—The server remains off until it is manually restarted. • **Power On**—The server is allowed to boot up normally when power is restored. The server can restart immediately or, optionally, after a fixed or random delay. • **Restore Last State**—The server restarts and the system attempts to restore any processes that were running before power was lost.
Power Delay Type drop-down list	If the selected policy is **Power On**, the restart can be delayed with this option. This can be one of the following: • **fixed**—The server restarts after a fixed delay. • **random**—The server restarts after a random delay.
Power Delay Value field	If a fixed delay is selected, once chassis power is restored and the CIMC has finished rebooting, the system waits for the specified number of seconds before restarting the server. Enter an integer between 0 and 240.

Step 4 Click **Save Changes**.

Managing the Flexible Flash Controller

Cisco Flexible Flash

Some C-Series Rack-Mount Servers support an internal Secure Digital (SD) memory card for storage of server software tools and utilities. The SD card is hosted by the Cisco Flexible Flash storage adapter.

The SD storage is available to CIMC as four virtual USB drives. Three are preloaded with Cisco software and the fourth can hold a user-installed hypervisor or other content. The four virtual drives are as follows:

- Cisco UCS Server Configuration Utility (bootable)

- User-installed (may be bootable)
- Cisco drivers (not bootable)
- Cisco Host Upgrade Utility (bootable)

For information about the Cisco software utilities and packages, see the *Cisco UCS C-Series Servers Documentation Roadmap* at this URL:

http://www.cisco.com/go/unifiedcomputing/c-series-doc

Configuring the Flexible Flash Controller Properties

Before You Begin

- You must log in with admin privileges to perform this task.
- Cisco Flexible Flash must be supported by your platform.

Procedure

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

Step 2 On the **Server** tab, click **Inventory**.

Step 3 In the **Inventory** pane, click the **Storage** tab.

Step 4 In the **Storage Adapters** table, click the FlexFlash controller.
The properties of the selected FlexFlash controller appear in the tabbed menu below the **Storage Adapters** area.

Step 5 In the **Storage Card** tabbed menu, click the **Controller Info** tab.

Step 6 In the **Actions** area, click **Configure Operational Profile**.
The **Operational Profile** dialog box opens.

Step 7 In the **Operational Profile** dialog box, update the following fields:

Name	Description
Controller field	The system-defined name of the selected Cisco Flexible Flash controller. This name cannot be changed.
Virtual Drives Enabled field	The virtual drives that can be made available to the server as a USB-style drive. Check the box next to each virtual drive you want the server to access. The options are: • **SCU**—The server can access the Cisco UCS Server Configuration Utility. • **Drivers**—The server can access the Cisco drivers. • **HV**—The server can access a user-installed hypervisor. • **HUU**—The server can access the Cisco Host Upgrade Utility.

Name	Description
RAID Primary Member field	The slot in which the primary RAID member resides. **Important** Currently, Cisco Flexible Flash cards are only supported in slot 1. Therefore, this field must be set to slot1.
Error Count Threshold field	The number of read/write errors that are permitted while accessing the Cisco Flexible Flash card. If the number of errors exceeds this threshold, the Cisco FlexFlash card is disabled. To specify a read/write error threshold, enter an integer between 1 and 255. To specify that the card should never be disabled regardless of the number of errors encountered, enter 0 (zero).

Step 8 Click **Save Changes**.

Booting from the Flexible Flash

You can specify a bootable virtual drive on the Cisco Flexible Flash card that will override the default boot priority the next time the server is restarted, regardless of the default boot order defined for the server. The specified boot device is used only once. After the server has rebooted, this setting is ignored.

Note Before you reboot the server, ensure that the virtual drive you select is enabled on the Cisco Flexible Flash card. To verify this, go to the **Storage** tab, select the card, then go to the **Virtual Drive Info** subtab.

Before You Begin

- You must log in with admin privileges to perform this task.
- Cisco Flexible Flash must be supported by your platform.

Procedure

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

Step 2 On the **Server** tab, click **BIOS**.

Step 3 In the **Actions** area, click **Configure Boot Override Priority**.
The **Boot Override Priority** dialog box opens.

Step 4 In the **Boot Override Priority** dialog box, select a virtual drive to boot from.

Step 5 Click **OK**.

Resetting the Flexible Flash Controller

In normal operation, it should not be necessary to reset the Cisco Flexible Flash. We recommend that you perform this procedure only when explicitly directed to do so by a technical support representative.

Note This operation will disrupt traffic to the virtual drives on the Cisco Flexible Flash controller.

Before You Begin

- You must log in with admin privileges to perform this task.
- Cisco Flexible Flash must be supported by your platform.

Procedure

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

Step 2 On the **Server** tab, click **Inventory**.

Step 3 In the **Inventory** pane, click the **Storage** tab.

Step 4 In the **Storage Adapters** table, click the FlexFlash controller.
The properties of the selected FlexFlash controller appear in the tabbed menu below the **Storage Adapters** area.

Step 5 In the **Storage Card** tabbed menu, click the **Controller Info** tab.

Step 6 In the **Actions** area, click **Reset Cisco Flex Flash**.

Step 7 Click **OK** to confirm.

Configuring BIOS Settings

Configuring Main BIOS Settings

Before You Begin

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

Procedure

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

Step 2 On the **Server** tab, click **BIOS**.

Step 3 In the **Actions** area, click **Configure BIOS**.

Step 4 In the **Configure BIOS Parameters** dialog box, click the **Main** tab.

Step 5 Specify whether the server should be rebooted after you save your changes.
If you want your changes applied automatically after you click **Save Changes**, check the **Reboot Host Immediately** check box. CIMC immediately reboots the server and applies your changes.

If you want to apply your changes at a later time, clear the **Reboot Host Immediately** check box. CIMC stores the changes and applies them the next time the server reboots.

Note If there are existing BIOS parameter changes pending, CIMC automatically overwrites the stored values with the current settings when you click **Save Changes**.

Step 6 In the **Main** tab, update the BIOS settings fields.
The BIOS parameters available depend on the model of the server that you are using. For descriptions and information about the options for each BIOS setting, see one the following topics:

- Main BIOS Parameters for C22 and C24 Servers
- Main BIOS Parameters for C200 and C210 Servers
- Main BIOS Parameters for C250 Servers
- Main BIOS Parameters for C260 Servers
- Main BIOS Parameters for C460 Servers

Step 7 (Optional) You can reset the parameters or restore the default values using the buttons at the bottom of the **Configure BIOS Parameters** dialog box.
The available options are:

Name	Description
Save Changes button	Saves the settings for the BIOS parameters on all three tabs and closes the dialog box. If the **Reboot Host Immediately** check box is checked, the server is rebooted immediately and the new BIOS settings go into effect. Otherwise the changes are saved until the server is manually rebooted.
Reset Values button	Restores the values for the BIOS parameters on all three tabs to the settings that were in effect when this dialog box was first opened.
Restore Defaults button	Sets the BIOS parameters on all three tabs to their default settings.
Cancel button	Closes the dialog box without making any changes.

Important The buttons in this dialog box affect all BIOS parameters on all available tabs, not just the parameters on the tab that you are viewing.

Step 8 Click **Save Changes**.

Configuring Advanced BIOS Settings

Note Depending on your installed hardware, some configuration options described in this topic may not appear.

Before You Begin

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

Procedure

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

Step 2 On the **Server** tab, click **BIOS**.

Step 3 In the **Actions** area, click **Configure BIOS**.

Step 4 In the **Configure BIOS Parameters** dialog box, click the **Advanced** tab.

Step 5 Specify whether the server should be rebooted after you save your changes.
If you want your changes applied automatically after you click **Save Changes**, check the **Reboot Host Immediately** check box. CIMC immediately reboots the server and applies your changes.

If you want to apply your changes at a later time, clear the **Reboot Host Immediately** check box. CIMC stores the changes and applies them the next time the server reboots.

Note If there are existing BIOS parameter changes pending, CIMC automatically overwrites the stored values with the current settings when you click **Save Changes**.

Step 6 In the **Advanced** tab, update the BIOS settings fields.
The BIOS parameters available depend on the model of the server that you are using. For descriptions and information about the options for each BIOS setting, see one the following topics:

- Advanced BIOS Parameters for C22 and C24 Servers
- Advanced BIOS Parameters for C200 and C210 Servers
- Advanced BIOS Parameters for C250 Servers
- Advanced BIOS Parameters for C260 Servers
- Advanced BIOS Parameters for C460 Servers

Step 7 (Optional) You can reset the parameters or restore the default values using the buttons at the bottom of the **Configure BIOS Parameters** dialog box.
The available options are:

Name	Description
Save Changes button	Saves the settings for the BIOS parameters on all three tabs and closes the dialog box. If the **Reboot Host Immediately** check box is checked, the server is rebooted immediately and the new BIOS settings go into effect. Otherwise the changes are saved until the server is manually rebooted.
Reset Values button	Restores the values for the BIOS parameters on all three tabs to the settings that were in effect when this dialog box was first opened.
Restore Defaults button	Sets the BIOS parameters on all three tabs to their default settings.
Cancel button	Closes the dialog box without making any changes.

Important The buttons in this dialog box affect all BIOS parameters on all available tabs, not just the parameters on the tab that you are viewing.

Step 8 Click **Save Changes**.

Configuring Server Management BIOS Settings

Before You Begin

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

Procedure

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

Step 2 On the **Server** tab, click **BIOS**.

Step 3 In the **Actions** area, click **Configure BIOS**.

Step 4 In the **Configure BIOS Parameters** dialog box, click the **Server Management** tab.

Step 5 Specify whether the server should be rebooted after you save your changes.
If you want your changes applied automatically after you click **Save Changes**, check the **Reboot Host Immediately** check box. CIMC immediately reboots the server and applies your changes.

If you want to apply your changes at a later time, clear the **Reboot Host Immediately** check box. CIMC stores the changes and applies them the next time the server reboots.

Note If there are existing BIOS parameter changes pending, CIMC automatically overwrites the stored values with the current settings when you click **Save Changes**.

Step 6 In the **Server Management** tab, update the BIOS settings fields.
The BIOS parameters available depend on the model of the server that you are using. For descriptions and information about the options for each BIOS setting, see one the following topics:

- Server Management BIOS Parameters for C22 and C24 Servers

- Server Management BIOS Parameters for C200 and C210 Servers
- Server Management BIOS Parameters for C250 Servers
- Server Management BIOS Parameters for C260 Servers
- Server Management BIOS Parameters for C460 Servers

Step 7 (Optional) You can reset the parameters or restore the default values using the buttons at the bottom of the **Configure BIOS Parameters** dialog box.
The available options are:

Name	Description
Save Changes button	Saves the settings for the BIOS parameters on all three tabs and closes the dialog box. If the **Reboot Host Immediately** check box is checked, the server is rebooted immediately and the new BIOS settings go into effect. Otherwise the changes are saved until the server is manually rebooted.
Reset Values button	Restores the values for the BIOS parameters on all three tabs to the settings that were in effect when this dialog box was first opened.
Restore Defaults button	Sets the BIOS parameters on all three tabs to their default settings.
Cancel button	Closes the dialog box without making any changes.

Important The buttons in this dialog box affect all BIOS parameters on all available tabs, not just the parameters on the tab that you are viewing.

Step 8 Click **Save Changes**.