



Managing the Server

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Overview to Common Properties Configuration

Hostname

The Dynamic Host Configuration Protocol (DHCP) enhancement is available with the addition of the hostname to the DHCP packet, which can either be interpreted or displayed at the DHCP server side. The hostname is now added in the options field of the DHCP packet, and sent in the DHCP DISCOVER packet which was initially sent to the DHCP server.

The default hostname of the server is changed from ucs-c2XX to CXXX-YYYYYY, where XXX is the model number and YYYYYY is the serial number of the server. This unique string acts as a client identifier, and helps you track and map the IP addresses leased out to the Cisco IMC from the DHCP server. The default

serial number is provided by the manufacturer as a sticker or label on the server which helps you physically identify the server.

Dynamic DNS

Dynamic DNS (DDNS) is used to add or update the resource records on DNS server from Cisco IMC. You can enable Dynamic DNS using either web UI or CLI. When you enable DDNS option, the DDNS service records the current hostname, domain name and the management IP and updates the resource records in DNS server from the Cisco IMC.



Note

The DDNS server deletes the prior resource records (if any) and adds the new resource records in DNS server if any one of the following DNS configuration is changed:

- Hostname
- Domain name in the LDAP settings
- When DDNS and DHCP are enabled, if the DHCP gets new IP or DNS IP or domain name due to change in network or a subnet.
- When DHCP is disabled and if you set the static IP using CLI or web UI.
- When `dns-use-dhcp` is enabled.

Dynamic DNS Update Domain— You can specify the domain. The domain could be either main domain or any sub-domain. This domain name will be appended to the hostname of the Cisco IMC for DDNS update.

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	<p>The overall status of the server. This can be one of the following:</p> <ul style="list-style-type: none"> • 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	<p>The temperature status. This can be one of the following:</p> <ul style="list-style-type: none"> • Good • Fault • Severe Fault <p>You can click the link in this field to view more temperature information.</p>
Processors field	<p>The overall status of the processors. This can be one of the following:</p> <ul style="list-style-type: none"> • Good • Fault <p>You can click the link in this field to view more information about the processors.</p>
Memory field	<p>The overall status of the memory modules. This can be one of the following:</p> <ul style="list-style-type: none"> • Good • Fault • Severe Fault <p>You can click the link in this field to view detailed status information.</p>
Power Supplies field	<p>The overall status of the power supplies. This can be one of the following:</p> <ul style="list-style-type: none"> • Good • Fault • Severe Fault <p>You can click the link in this field to view detailed status information.</p>

Name	Description
Fans field	<p>The overall status of the power supplies. This can be one of the following:</p> <ul style="list-style-type: none"> • Good • Fault • Severe Fault <p>You can click the link in this field to view detailed status information.</p>
HDD field	<p>The overall status of the hard drives. This can be one of the following:</p> <ul style="list-style-type: none"> • Good • Fault <p>You can click the link in this field to view detailed status information.</p>
Locator LED field	Whether the locator LEDs are on or off.
Overall Storage Status field	<p>The overall status of all controllers. This can be one of the following:</p> <ul style="list-style-type: none"> • Good • Moderate Fault • Severe Fault

Toggling the Locator LED

Before You Begin

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

Procedure

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- 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 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.
-



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 When you upgrade Cisco IMC to the latest version 2.0(x) for the first time, the legacy boot order is migrated to the precision boot order. During this process, 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) version 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.
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Configuring the Precision Boot Order

Before You Begin

You must log in as a user with admin privileges to configure server the 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 is displayed.
- Step 5** In the **Configure Boot Order** dialog box, update the following properties:

Name	Description
Add Boot Device table	The server boot options. You can add one or more of the following boot device and set parameters of the selected device: <ul style="list-style-type: none"> • Add Local HDD • Add PXE Boot • Add SAN Boot • Add iSCSI Boot • Add SD Card • Add USB • Add Virtual Media • Add PCHStorage • Add UEFISHELL
Enable/Disable button	The visibility of a device by BIOS. The state can be one of the following: <ul style="list-style-type: none"> • Enabled— The device is visible to BIOS in a boot order configuration. • Disabled— The device is not visible to BIOS in a boot order configuration.
Modify button	Modifies the attributes of the selected devices.
Delete button	Deletes the selected bootable device from the Boot Order table.

Name	Description
Clone button	Copies an existing device setting to a new device.
Re-Apply button	Reapplies the boot order configuration to BIOS when the last configured boot order source displays as BIOS.
Move Up button	Moves the selected device type to a higher priority in the Boot Order table.
Move Down button	Moves the selected device type to a lower priority in the Boot Order table.
Boot Order table	Displays the device types from which this server can boot, in the order in which the boot is attempted.
Save button	Saves the changes to the configured boot order or reapplies a previously configured boot order. Cisco IMC sends the configured boot order to BIOS the next time that server is rebooted.
Cancel button	Closes the dialog box without saving any changes or reapplying the existing configuration. If you choose this option, the actual boot order does not change the next time that server is rebooted.

- Step 6** Click **Save**.
Additional device types might be appended to the actual boot order, depending on what devices you have connected to your server.
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What to Do Next

Reboot the server to boot with your new boot order.

Managing a Boot Device

Before You Begin

You must log in as a user with admin privileges to add device type to the server boot order.

Procedure

- Step 1** In the **Navigation** pane, click the **Server** tab.
- Step 2** On the **Server** tab, click **BIOS**.
- Step 3** In the **Action** 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 is displayed.
- Step 5** In the **Configure Boot Order** dialog box, from the **Add Boot Device** table, choose the device that you want add to the boot order.
To add the local HDD device, click **Add Local HDD**, and update the following parameters:

Name	Description
Name field	The name of the device. Note Once created, you cannot rename the device.
State drop-down list	The visibility of the device by BIOS. This can be one of the following: <ul style="list-style-type: none"> • Enabled—The device is visible to BIOS in a boot order configuration. • Disabled—The device is not visible to BIOS in a boot configuration.
Order field	The order of the device in the available list of devices. Enter between 1 and n, where n is the number of devices.
Slot field	The slot in which the device is installed. Enter a number between 0 and 255 or M for MEZZ.
Add Device button	Adds the device to the Boot Order table.
Cancel button	Closes the dialog box without saving any changes made while the dialog box was open.

To add the PXE device, click **Add PXE**, and update the following parameters:

Name	Description
Name field	The name of the device. This name cannot be changed after the device has been created.

Name	Description
Status drop-down list	The visibility of the device by BIOS. The state can be one of the following: <ul style="list-style-type: none"> • Enabled—The device is visible to BIOS in a boot order configuration. • Disabled—The device is not visible to BIOS in a boot order configuration.
Order field	The order of the device in the available list of devices. Enter between 1 and n, where n is the number of devices.
Slot field	The slot in which the device is installed. Enter a number between 0 and 255 or L for LOM.
Port field	The port of the slot in which the device is present. Enter a number between 0 and 255.
Add Device button	Adds the device to the Boot Order table.
Cancel button	Closes the dialog box without saving any changes made while the dialog box was open.

To add the SAN boot device, click **Add SAN**, and update the following parameters:

Name	Description
Name field	The name of the device. This name cannot be changed after the device has been created.
State drop-down list	The visibility of the device by BIOS. The state can be one of the following: <ul style="list-style-type: none"> • Enabled—The device is visible to BIOS in a boot order configuration. • Disabled—The device is not visible to BIOS in a boot order configuration.
Order field	The order of the device in the available list of devices. Enter between 1 and n, where n is the number of devices.
Slot field	The slot in which the device is installed. Enter a number between 0 and 255.

Name	Description
Add Device button	Adds the device to the Boot Order table.
Cancel button	Closes the dialog box without saving any changes made while the dialog box was open.

To add the iSCSI boot device, click **Add iSCSI**, and update the following parameters:

Name	Description
Name field	The name of the device. This name cannot be changed after the device has been created.
State drop-down list	The visibility of the device by BIOS. The state can be one of the following: <ul style="list-style-type: none"> • Enabled—The device is visible to BIOS in a boot order configuration. • Disabled—The device is not visible to BIOS in a boot order configuration.
Order field	The order of the device in the available list of devices. Enter between 1 and n, where n is the number of devices.
Slot field	The slot in which the device is installed. Enter a number between 0 and 255.
Port field	The port of the slot in which the device is present. Enter number between 0 and 255.
Add Device button	Adds the device to the Boot Order table.
Cancel button	Closes the dialog box without saving any changes made while the dialog box was open.

To add the SD card, click **Add SD Card**, and update the following parameters:

Name	Description
Name field	The name of the device. This name cannot be changed after the device has been created.

Name	Description
State drop-down list	The visibility of the device by BIOS. This can be one of the following: <ul style="list-style-type: none"> • Enabled—The device is visible to BIOS in a boot order configuration. • Disabled—The device is not visible to BIOS in a boot configuration.
Order field	The order of the device in the available list of devices. Enter between 1 and n, where n is the number of devices.
Add Device button	Adds the device to the Boot Order table.
Cancel button	Closes the dialog box without saving any changes made while the dialog box was open.

To add the USB device, click **Add USB**, and update the following parameters:

Name	Description
Name field	The name of the device. This name cannot be changed after the device has been created.
Sub Type drop-down list	The subdevice type under a certain device type. This can be one of the following: <ul style="list-style-type: none"> • CD • FDD • HDD
State drop-down list	The visibility of the device by BIOS. This can be one of the following: <ul style="list-style-type: none"> • Enabled—The device is visible to BIOS in a boot order configuration. • Disabled—The device is not visible to BIOS in a boot order configuration.
Order field	The order of the device in the available list of devices. Enter between 1 and n, where n is the number of devices.
Add Device button	Adds the device to the Boot Order table.
Cancel button	Closes the dialog box without saving any changes made while the dialog box was open.

To add the virtual media, click **Virtual Media**, and update the following parameters:

Name	Description
Name field	The name of the device. This name cannot be changed after the device has been created.
Sub Type drop-down list	The subdevice type under a certain device type. This could be any one of the following: <ul style="list-style-type: none"> • KVM Mapped DVD • Cisco IMC Mapped DVD • KVM Mapped HDD • Cisco IMC Mapped HDD • KVM Mapped FDD
State drop-down list	The visibility of the device by BIOS. The state can be one of the following: <ul style="list-style-type: none"> • Enabled—The device is visible to BIOS in a boot order configuration. • Disabled—The device is not visible to BIOS in a boot order configuration.
Order field	The order of the device in the available list of devices. Enter between 1 and n, where n is the number of devices.
Cancel button	Closes the dialog box without saving any changes made while the dialog box was open.

To add the PCH storage device, click **PCH Storage**, and update the following parameters:

Name	Description
Name field	The name of the device. This name cannot be changed after the device has been created.
State drop-down list	The visibility of the device by BIOS. This can be one of the following: <ul style="list-style-type: none"> • Enabled—The device is visible to BIOS in a boot order configuration. • Disabled—The device is not visible to BIOS in a boot order configuration.

Name	Description
Order field	The order of the device in the available list of devices. Enter between 1 and n, where n is the number of devices.
LUN field	Logical unit in a slot where the device is present. Enter a number between 0 and 255.
Add Device button	Adds the device to the Boot Order table.
Cancel button	Closes the dialog box without saving any changes made while the dialog box was open.

To add the UEFI shell device, click **Add UEFI Shell**, and update the following parameters:

Name	Description
Name field	The name of the device. This name cannot be changed after the device has been created.
State drop-down list	The visibility of the device by BIOS. The state can be one of the following: <ul style="list-style-type: none"> • Enabled—The device is visible to BIOS in a boot order configuration. • Disabled—The device is not visible to BIOS in a boot order configuration.
Order field	The order of the device in the available list of devices. Enter between 1 and n, where n is the number of devices.
Add Device button	Adds the device to the Boot Order table.
Cancel button	Closes the dialog box without saving any changes made while the dialog box was open.

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	<ul style="list-style-type: none"> • Windows Server 2012 • Windows Server 2012 R2
Broadcom PCI adapters	<ul style="list-style-type: none"> • 5709 dual and quad port adapters • 57712 10GBASE-T adapter • 57810 CNA • 57712 SFP port
Intel PCI adapters	<ul style="list-style-type: none"> • i350 quad port adapter • X520 adapter • X540 adapter • LOM
QLogic PCI adapters	<ul style="list-style-type: none"> • 8362 dual port adapter • 2672 dual port adapter
Fusion-io	

Components	Types
LSI	<ul style="list-style-type: none"> • 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

Procedure

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

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

Step 3 In the **BIOS Properties** area, check **UEFI Secure Boot** checkbox.

Note If checked, the boot mode is set to UEFI secure boot. You cannot modify the **Configure Boot Mode** until UEFI secure boot option is disabled.

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 under the system software event in the web UI. You must disable the UEFI secure boot option by using Cisco IMC to boot from your previous OS.

Step 4 Click **Save Changes**.

What to Do Next

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

Disabling UEFI Secure Boot

Procedure

- Step 1** In the **Navigation** pane, click the **Server** tab.
 - Step 2** On the **Server** tab, click **BIOS**.
 - Step 3** In the **BIOS Properties** area, uncheck the **UEFI Secure Boot** check box.
 - Step 4** Click **Save Changes**.
-

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

- 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.
All devices present during the last boot are listed in a linear order. You can expand the device string name, to view the attributes of that particular device.
- Note** BIOS discovers devices that do not match any configurations in a configured boot order, and lists them as NonPolicyTarget devices in a device list.
-

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 Cisco IMC, it will not become active immediately when powered on. The server will remain in standby mode until Cisco IMC 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 **There is an update available for Chassis Firmware, would you like to continue?** appears. Clicking **OK** powers off the server and updates the system firmware.
 - 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**.
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Configuring Power Policies

Viewing the Power Statistics

Procedure

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- 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.

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

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- 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	<p>The action to be taken when chassis power is restored after an unexpected power loss. This can be one of the following:</p> <ul style="list-style-type: none"> • 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	<p>If the selected policy is Power On, the restart can be delayed with this option. This can be one of the following:</p> <ul style="list-style-type: none"> • fixed—The server restarts after a fixed delay. • random—The server restarts after a random delay.
Power Delay Value field	<p>If a fixed delay is selected, once chassis power is restored and the Cisco IMC has finished rebooting, the system waits for the specified number of seconds before restarting the server.</p> <p>Enter an integer between 0 and 240.</p>

Step 4 Click **Save Changes**.

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 is the default policy. This setting can cool almost any server configuration, but may not be suitable for servers with PCIe cards, since these cards overheat easily.

- **Performance**

This setting can be used for server configurations where maximum fan speed is required for high performance. With this setting, the fan speeds will run at the same speed or higher speed than that of the Balanced fan policy.

- **Low Power**

This setting is ideal for minimal configuration servers that do not contain any PCIe cards.

- **High Power**

This setting can be used for server configurations that require fan speeds ranging from 60 to 85%. This policy is ideal for servers that contain PCIe cards that easily overheat and have high temperatures. The minimum fan speed set with this policy varies for each server platform, but is approximately in the range of 60 to 85%.

- **Maximum Power**

This setting can be used for server configurations that require extremely high fan speeds ranging between 70% to 100%. This policy is ideal for servers that contain PCIe cards that easily overheat and have extremely high temperatures. The minimum fan speed set with this policy varies for each server platform, but is approximately in the range of 70 to 100%.

**Note**

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. For example, if you set the fan policy to **Balanced**, but the server includes PCIe cards that overheat easily, then the speed of the fans on the server is adjusted automatically. But the policy defined is retained as **Balanced**.

Configuring the Fan Policy

You can determine the right fan policy based on the server configuration and server components.

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 **Fan Policy** area, select a fan policy from the drop-down list. It can be one of the following:

Name	Description
Balanced	This is the default policy. This setting can cool almost any server configuration, but may not be suitable for servers with PCIe cards as these cards overheat easily.
Performance	This setting can be used for server configurations where maximum fan speed is required for high performance. With this setting, the fan speeds run at the same speed or higher speed than that of the fan speed set with the Balanced fan policy.
Low Power	This setting is ideal for minimal configuration servers that do not contain any PCIe cards.
High Power	This setting can be used for server configurations that require fan speeds ranging from 60% to 85%. This policy is ideal for servers that contain PCIe cards that overheat easily and have high temperatures. The minimum fan speed set with this policy varies for each server, but it is approximately in the range of 50 to 85%.
Maximum Power	This setting can be used for server configurations that required extremely high fan speeds ranging from 70% to 100%. This policy is ideal for servers that contain PCIe cards that overheat easily and have very high temperatures. The minimum fan speed set with this policy varies for each server, but it is approximately in the range of 70 to 100%.

- 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 Cisco IMC as a single hypervisor (HV) partition configuration. Prior versions had four virtual USB drives. Three were preloaded with Cisco UCS Server Configuration Utility, Cisco drivers and Cisco Host Upgrade Utility, and the fourth as user-installed hypervisor. A single HV partition configuration is also created when you upgrade to the latest version of Cisco IMC or downgrade to the prior version, and reset the configuration.

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>

Card Management Feature in the Cisco Flexible Flash Controller

The Cisco Flexible Flash controller supports management of both single and two SD cards as a RAID-1 pair. With the introduction of card management, you can perform the following tasks:

Action	Description
Reset Cisco Flex Flash	Allows you to reset the controller.
Reset Partition Defaults	Allows you to reset the configuration in the selected slot to the default configuration.
Synchronize Card Configuration	Allows you to retain the configuration for an SD card that supports firmware version 253 and later.
Configure Operational Profile	Allows you to configure the SD cards on the selected Cisco Flexible Flash controller.

RAID Partition Enumeration

Non-RAID partitions are always enumerated from the primary card and the enumeration does not depend on the status of the primary card.

Following is the behavior of the RAID partition enumeration when there are two cards in the Cisco Flexible Flash controller:

Scenario	Behavior
Single card	RAID partitions are enumerated if the card is healthy, and if the mode is either Primary or Secondary-active .

Scenario	Behavior
Dual paired cards	<p>RAID partitions are enumerated if one of the cards is healthy.</p> <p>When only one card is healthy, all read/write operations occur on this healthy card. You must use UCS SCU to synchronize the two RAID partitions.</p>
Dual unpaired cards	<p>If this scenario is detected when the server is restarting, then neither one of the RAID partitions is enumerated.</p> <p>If this scenario is detected when the server is running, when a user connects a new SD card, then the cards are not managed by the Cisco Flexible Flash controller. This does not affect the host enumeration. You must pair the cards to manage them. You can pair the cards using the Reset Partition Defaults or Synchronize Card Configuration options.</p>

Upgrading from Single Card to Dual Card Mirroring with FlexFlash

You can upgrade from a single card mirroring to dual card mirroring with FlexFlash in one of the following methods:

- Add an empty FlexFlash to the server, and then upgrade the SD firmware version from prior versions to the latest version
For information on how to complete this task, see
- Upgrade the FlexFlash firmware to the latest version and then add an empty card to the server.

Prior to using either of these methods, you must keep in mind the following guidelines:

- To create RAID1 mirroring, the empty card that you want to add to the server must be of the exact size of the card that is already in the server. Identical card size is a must to set up RAID1 mirroring.
- Ensure that the card with valid data in the Hypervisor partition is marked as the primary healthy card. You can determine this state either in the Cisco IMC GUI or from the Cisco IMC CLI. To mark the state of the card as primary healthy, you can either use the **Reset Configuration** option in the Cisco IMC GUI or run the **reset-config** command in the Cisco IMC CLI. When you reset the configuration of a particular card, the secondary card is marked as secondary active unhealthy.
- In a Degraded RAID health state all read-write transactions are done on the healthy card. In this scenario, data mirroring does not occur. Data mirroring occurs only in the Healthy RAID state.
- Data mirroring is only applicable to RAID partitions. In the C-series servers, only Hypervisor partitions operate in the RAID mode.
- If you have not configured SD cards for use with prior versions, then upgrading to the latest version loads the latest 253 firmware and enumerates all four partitions to the host.

While upgrading versions of the FlexFlash, you may see the following error message:

```
Unable to communicate with Flexible Flash controller: operation ffCardsGet, status
CY_AS_ERROR_INVALID_RESPONSE"
```

In addition, the card status may be shown as **missing**. This error occurs because you accidentally switched to an alternate release or a prior version, such as 1.4(x). In this scenario, you can either revert to the latest version, or you can switch back to the FlexFlash 1.4(x) configuration. If you choose to revert to the latest Cisco IMC version, then the Cisco FlexFlash configuration remains intact. If you choose to switch back to the prior version configuration, you must reset the Flexflash configuration. In this scenario, you must be aware of the following:

- If multiple cards are present, and you revert to a prior version, then the second card cannot be discovered or managed.
- If the card type is SD253, then you must run the **reset-config** command twice from the Cisco IMC CLI - once to reload the old firmware on the controller and to migrate SD253 to SD247 type, and the second time to start the enumeration.

Configuring the Flexible Flash Controller Properties

After you upgrade to the latest version of Cisco IMC or downgrade to a prior version, and reset the configuration, the server will access HV partition only.

Before You Begin

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



Note

This task results in the host re-scanning all the virtual drives, and a loss of virtual drive connectivity. We recommend that you configure the Cisco Flexible Flash controller properties before using any virtual drives, or power down the host prior to starting this task

Procedure

- Step 1** In the **Navigation** pane, click the **Storage** tab.
- Step 2** On the **Storage** tab, click **Cisco FlexFlash**.
- Step 3** In the **Controller Info** tab, click **Configure Operational Profile**.
- Step 4** 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.

Name	Description
Virtual Drives Enabled field	<p>The virtual drives that can be made available to the server as a USB-style drive.</p> <p>A check box against single HV partition is displayed.</p> <p>Note In the prior versions, four check boxes against each virtual drive are displayed. If you have created single partition and downgraded to prior version of Cisco IMC, other virtual drives are displayed even though only HV is valid.</p>
RAID Primary Member field	The slot in which the primary RAID member resides.
RAID Secondary Role field	The value must be secondary-active.
I/O Read Error Threshold field	<p>The number of read errors that are permitted while accessing the Cisco Flexible Flash card. If the number of read errors exceeds this threshold on a card, the card is marked unhealthy.</p> <p>To specify a read 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).</p>
I/O Write Error Threshold field	<p>The number of write errors that are permitted while accessing the Cisco Flexible Flash card. If the number of write errors exceeds this threshold on a card, the card is marked unhealthy.</p> <p>To specify a 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).</p>
Clear Errors check box	If checked, the read/write errors are cleared when you click Save Changes .

Step 5 Click **Save Changes**.

Booting from the Flexible Flash Card

You can specify a bootable virtual drive on the Cisco Flexible Flash card that overrides the default boot priority the next time that 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. You can choose a bootable virtual drive only if a Cisco Flexible Flash card is available. Otherwise, the server uses a default boot order.



Note

Before you reboot the server, ensure that the virtual drive that you select is enabled on the Cisco Flexible Flash card. Go to the **Storage** tab, choose the card, and 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 appears.
- Step 4** From the **Boot Override Priority** drop-down list, choose a virtual drive to boot from.
- Step 5** Click **Apply**.
-

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** On the **Storage Adapters** pane, click **Cisco FlexFlash**.
- Step 2** In the **Cisco FlexFlash** pane, click the **Controller Info** tab.
- Step 3** In the **Actions** area, click **Reset FlexFlash Controller**.
- Step 4** Click **OK** to confirm.
-

Resetting the Cisco Flexible Flash Card Configuration

When you reset the configuration of the slots in the Cisco Flexible Flash card, the following situations occur:

- The card in the selected slot is marked as primary healthy.

- The card in the other slot is marked as secondary-active unhealthy.
- One RAID partition is created.
- The card read/write error counts and read/write threshold are set to 0.
- Host connectivity could be disrupted.

If you upgrade to the latest version and select reset configuration option, a single hypervisor (HV) partition is created, and the existing four partition configurations are erased. This may also result in data loss. You can retrieve the lost data only if you have not done any data writes into HV partition, and downgrade to prior version.

Before You Begin

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

Procedure

- Step 1** On the **Storage Adapters** pane, click **Cisco FlexFlash**.
- Step 2** In the **Cisco FlexFlash** pane, click the **Controller Info** tab.
- Step 3** In the **Actions** area, click **Reset Partition Defaults**.
- Step 4** In the **Reset Partition Defaults** dialog box, update the following fields:

Name	Description
Slot radio button	Select the slot for which you want to mark the card as primary healthy. The card in the other slot, if any, is marked as secondary-active unhealthy.
Reset Partition Defaults button	Resets the configuration of the selected slot.
Cancel button	Closes the dialog box without making any changes.

- Step 5** Click **Yes**.

Retaining Configuration of the Cisco Flexible Flash Cards

You can retain the configuration for an FlexFlash that supports firmware version 253 and later card in the following situations:

- There are two unpaired FlexFlash
- The server is operating from a single FlexFlash, and an unpaired FlexFlash is in the other slot.
- One FlexFlash supports firmware version 253, and the other FlexFlash is unpartitioned.

When you retain the configuration, the following situations occur:

- The configuration for the FlexFlash in the selected slot is copied to the other card.
- The card in the selected slot is marked as primary healthy.
- The card in the secondary slot is marked as secondary-active unhealthy.

Before You Begin

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

Procedure

- Step 1** On the **Storage Adapters** pane, click **Cisco FlexFlash**.
- Step 2** In the **Cisco FlexFlash** pane, click the **Controller Info** tab.
- Step 3** In the **Actions** area, click **Synchronize Card Configuration**.
- Step 4** In the **Synchronize Card Configuration** dialog box, update the following fields:

Name	Description
Slot radio button	Select the slot for which you want the configuration retained. The configuration is copied from the selected slot to the card in the other slot, and the card in the selected slot is marked as primary healthy.
Synchronize Card Configuration button	Copies the configuration from the selected card only if the selected card is of type SD253 and has single HV configuration.
Cancel button	Closes the dialog box without making any changes.

- Step 5** Click **Yes**.

Adding an SD Card and Upgrading the Firmware to 1.5(4) Version

Procedure

- Step 1** Insert the empty SD card into SLOT-2 of the server.
- Step 2** Upgrade the Cisco IMC software version to release 1.5(4) and reboot Cisco IMC.
- Step 3** In the **Navigation** pane, click the **Storage** tab.
- Step 4** On the **Storage Adapters** pane, click **Cisco FlexFlash**.
- Step 5** In the **Controller Info** tab, determine the state displayed for the **Internal State** field. The state should be displayed as **WAIT_ON_USER**.
- Step 6** Click **Reset FlexFlash Controller**.
- Important** This option resets the partition enumeration to the host. Before you reset the FlexFlash controller, ensure that the SD card is not used from the host.

When you reset the FlexFlash controller, the card in SLOT-1 is automatically marked as primary healthy, and the empty card in SLOT-2 is marked as secondary active unhealthy card. RAID health is indicated as Degraded. In this situation, all data transactions are written on the healthy card and data mirroring does not occur

- Step 7** (Optional) To change the RAID health to healthy, launch Cisco UCS Server Configuration Utility (Cisco UCS SCU) on the host, and click **Hypervisor Sync**.
This option mirrors data from the healthy card to the unhealthy card.
-

Upgrading Cisco IMC and SD Card Firmware Versions

SD storage is available to Cisco IMC version 1.5(4) as a single HV partition configuration, and it support firmware version 257. Prior releases had four-partition configuration, and supported firmware versions 247, 248, and 253. Cisco IMC version 1.5(4) supports all the SD card firmware versions prior to 257. For SD card with firmware version 253 and later, if you select **Reset FlexFlash Controller** option, the firmware version of these cards are upgraded to 257 automatically.

Upgrading from Cisco IMC Version 1.4(x) to 1.5(4)

The partition layout for the release 1.4(x) is significantly different from the release 1.5(4) so, automatic upgrades from Cisco IMC version 1.4(x) to 1.5(4) is not possible. If you upgrade Cisco IMC version 1.4(x) to 1.5(4) directly, then you are prompted to select **Reset Partition Default** option. If you select this option, a single HV partition configuration is created. This may result in data loss stored in the SD card. To retain the four partition configuration and the data stored on the SD card, Cisco recommends that you first upgrade the Cisco IMC version to 1.5(2) or 1.5(3) and then upgrade to 1.5(4) version. Select **Reset FlexFlash Controller** option.

Upgrading Cisco IMC, SD Card Firmware, and Adding a New SD Card

Before You Begin

- The size of the empty card that you are adding should match the size of the existing card to successfully create a RAID1 mirror.
- Ensure that the SD card with the valid data in the HyperVisor partition is marked as a primary healthy card. To mark a specific SD card as healthy, you can click **Reset Partition Defaults**. This results in the other card being marked as secondary active unhealthy card.

Procedure

- Step 1** Upgrade the Cisco IMC software version to release 1.5(4) and reboot Cisco IMC.
- Step 2** In the **Navigation** pane, click the **Storage** tab.
- Step 3** On the **Storage Adapters** pane, click **Cisco FlexFlash**.
- Step 4** In the **Controller Info** tab, determine the state displayed for the **Internal State** field. The state should be displayed as **WAIT_ON_USER**.
- Step 5** Click **Reset FlexFlash Controller**.

Important This option resets the partition enumeration to the host. Before you reset the FlexFlash controller, ensure that the SD card is not used from the host.

When you reset the FlexFlash controller, the card in SLOT-1 is automatically marked as **primary healthy**, and the empty card in SLOT-2 is marked as **secondary active unhealthy** card. RAID health is indicated as **Degraded**. In this situation, all data transactions are written on the healthy card and data mirroring does not occur

Step 6 On the **Storage Adapters** pane, click **Cisco FlexFlash**.

Step 7 In the **Controller Info** tab, click **Reset Partition Defaults**, and select **SLOT-1** are the primary slot. The card in SLOT-1 is automatically marked as primary healthy, and the empty card in SLOT-2 is marked as secondary active unhealthy card. RAID health is indicated as Degraded

Step 8 (Optional) To change the RAID health to healthy, launch Cisco UCS Server Configuration Utility (Cisco UCS SCU) on the host, and click **Hypervisor Sync**. This option mirrors data from the healthy card to the unhealthy card.

Configuring DIMM Blacklisting

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.

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.

Enabling DIMM Black Listing

Before You Begin

- You must be logged in as an administrator.

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 **Memory** tab.

Step 4 In the **DIMM Black Listing** area, click the **Enable DIMM Black List** check box.

Name	Description
Overall DIMM Status	The overall status of a DIMM. <ul style="list-style-type: none"> • Good—The DIMM status is available. • N/A— The DIMM status is unavailable.
Enable DIMM Black List checkbox	Check this option to enable DIMM black listing.

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. Cisco IMC 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. Cisco IMC stores the changes and applies them the next time the server reboots.
- Note** If there are existing BIOS parameter changes pending, Cisco IMC 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. Cisco IMC 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. Cisco IMC stores the changes and applies them the next time the server reboots.

Note If there are existing BIOS parameter changes pending, Cisco IMC 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. Cisco IMC 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. Cisco IMC stores the changes and applies them the next time the server reboots.
- Note** If there are existing BIOS parameter changes pending, Cisco IMC 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**.

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 and parameters to the customized manufacturing default values.



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

Before You Begin

- The server must be powered off.
- 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 **Restore Manufacturing Custom Defaults**.
- Step 4** Click **OK**.
-

