Managing the Server

This chapter includes the following sections:

Configuring BIOS Settings

Entering BIOS Setup

When you enter the BIOS setup for the first time, ensure that you secure the BIOS by setting up an admin-level and a user-level password. You have to set up the admin password when you access the BIOS menu for the first time. The user password (which only gives access to a small subset of BIOS options) must be set inside the BIOS setup menu.

To set up the admin password, press F2 when the system boots up. You will be prompted to set the password.

To set up the user password, after you log in, go to the 'Security' tab and set the password.

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 **Compute** menu.

Step 2 In the work pane, click the **BIOS** tab.

Step 3 In the **Configure BIOS** tab, click the **Main** tab.

Step 4 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. 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. stores the changes and applies them the next time the server reboots.

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

Step 5   In the **Main** tab, update the BIOS settings fields.

Step 6   You can reset the parameters or restore the default values using the buttons at the bottom of the Main tab. The available options are:

Name	Description
Save button	Saves the settings for the BIOS parameters 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 button	Resets 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.

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 **Compute** menu.

Step 2   In the work pane, click the **BIOS** tab.

Step 3   In the **Configure BIOS** tab, click the **Advanced** tab.

Step 4   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. 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. stores the changes and applies them the next time the server reboots.

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

Step 5 In the **Advanced** tab, update the relevant fields:

Step 6 After you updated the fields, perform the following actions:

Name	Description
Save button	Saves the settings for the BIOS parameters on all three tabs and closes the dialog box.
Reset 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.

Configuring Server Management BIOS Settings

Procedure

Step 1 In the **Navigation** pane, click the **Compute** menu.

Step 2 In the work pane, click the **BIOS** tab.

Step 3 In the **Configure BIOS** tab, click **Server Management**.

Step 4 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. 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. stores the changes and applies them the next time the server reboots.

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

Step 5 In the **Server Management** tab, update the relevant fields:

Step 6 Complete your action with the following options:

Name	Description
Save button	Saves the settings for the BIOS parameters on all three tabs and closes the dialog box.
Reset 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.

Entering BIOS Setup

Before you begin

- The server must be powered on.

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

Procedure

Step 1   In the **Navigation** pane, click the **Compute** menu.

Step 2   In the work pane, click the **BIOS** tab.

Step 3   In the **Actions** area, click **Enter BIOS Setup**.

Step 4   Click **OK** at the prompt.
Enables enter BIOS setup. On restart, the server enters the BIOS setup.

Clearing the BIOS CMOS

Before you begin

- The server must be powered on.

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

Procedure

Step 1   In the **Navigation** pane, click the **Compute** menu.

Step 2   In the work pane, click the **BIOS** tab.

Step 3   In the **Actions** area, click **Clear BIOS CMOS**.

Step 4   Click **OK** to confirm.
Clears the BIOS CMOS.

Restoring BIOS Manufacturing Custom Settings

Before you begin

- The server must be powered on.

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

Procedure

Step 1   In the **Navigation** pane, click the **Compute** menu.

Step 2   In the **Compute** menu, select a server.

Step 3   In the work pane, click the **BIOS** tab.

Step 4   In the **Actions** area, click **Restore Manufacturing Custom Settings**.

Step 5   Click **OK** to confirm.

Managing the Server Boot Order

Server Boot Order

When you change the boot order configuration, 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 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.

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 **Compute** menu.

Step 2   In the **BIOS** tab, click the **Configure Boot Order** tab.

Step 3   In the **BIOS Properties** area, click **Configure Boot Order**.

A dialog box with boot order instructions appears.

Step 4   In the **Configure Boot Order** dialog box, clcik **Basic** tab and from the **Device Types** table, choose the device that you want add to the boot order.

To add the local HDD device, click **Advanced** tab, 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: • **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 the slot number from the available range.
Save Changes 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.
State drop-down list	The visibility of the device by BIOS. The state can be one of the following: • **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	
Port field	The port of the slot in which the device is present. Enter a number between 0 and 255.
Save Changes 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:
	
	    • **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 the slot number from the available range.
LUN field	Logical unit in a slot where the device is present. Enter a number between 0 and 255.
Save Changes 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:
	
	    • **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 the slot number from the available range.

Name	Description
Port field	The port of the slot in which the device is present.
	Enter a number between 0 and 255.
	Note In case of a VIC card, use a vNIC instance instead of the port number.
Save Changes 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.
State drop-down list	The visibility of the device by BIOS. This can be one of the following:
	• **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.
Lun field	Logical unit in a slot where the device is present.
	Enter a number between 0 and 255.
Save Changes 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:
	• **CD**
	• **FDD**
	• **HDD**

Name	Description
State drop-down list	The visibility of the device by BIOS. This can be one of the following: • **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.
Save Changes 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: • **KVM Mapped DVD** • • **KVM Mapped HDD** • • **KVM Mapped FDD**
State drop-down list	The visibility of the device by BIOS. The state can be one of the following: • **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.
Save Changes 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 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: • **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.
LUN field	Logical unit in a slot where the device is present. • Enter a number between 0 and 255 • SATA in AHCI mode—Enter a value between 1 and 10 • SATA in SWRAID mode—Enter 0 for SATA , and enter 1 for SATA **Note** SATA mode is available only on some UCS E-Series servers.
Save Changes 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: • **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.
Save Changes button	Adds the device to the **Boot Order** table.

Name	Description
Cancel button	Closes the dialog box without saving any changes made while the dialog box was open.

Enabling UEFI Secure Boot

Procedure

Step 1   In the **Navigation** pane, click the **Compute** menu.

Step 2   In the work pane, click the **BIOS** tab.

Step 3   In the **BIOS Properties** area of the **Configure Boot Order** tab, 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 **Compute** menu.

Step 2   In the work pane, click the **BIOS** tab.

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.

Configure Boot Order

Before you begin

You must log in as a user with admin privileges:

Procedure

Step 1	Log in to **CIMC**.
Step 2	From the **CIMC Compute**, select the **BIOS** tab.
Step 3	From the **CIMC Compute**, select the **BIOS** tab.
Step 4	From the **CIMC Compute**, select the **BIOS** tab.
Step 5	From the **CIMC Compute**, select the **BIOS** tab.
Step 6	From the **CIMC Compute**, select the **BIOS** tab.
Step 7	From the **CIMC Compute**, select the **BIOS** tab.
Step 8	From the **CIMC Compute**, select the **BIOS** tab.
Step 9	Select **Configure Boot Order** and the **Configure Boot Order**, the dialog box appears.
Step 10	From the **CD/DVD** page, select **Cisco vKVM-Mapped vDVD**, and select **Add**.
Step 11	From **HDD**, select **RAID Adapter**, and then select **Add**.
Step 12	Set the boot order sequence using the **Up** and **Down** options. The **Cisco vKVM-Mapped vDVD** boot order must be the first choice. **Save Changes** to complete the boot order setup.

Note To configure Boot Order for UEFI through CIMC, the supported BIOS version is 3.2.10 or later. If any other BIOS version is used, you must configure UEFI Boot Order through the BIOS setup menu and set **BootOrderRules** to **Loose**.

Enable UEFI Boot Order

Procedure

Select **Configure Boot Order**, the **dialog box** appears.

What to do next

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

Viewing the Actual Server Boot Order

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

Procedure

Step 1   In the **Navigation** pane, click the **Compute** menu.

Step 2   In the **BIOS** tab, click the **Configure Boot Order** tab.

Step 3   In the **BIOS Properties** area, click **Configure Boot Order**.

This area displays the boot order devices configured through Cisco IMC as well as the actual boot order used by the server BIOS.

The **Configured Boot Devices** section displays the boot order (**Basic** or **Advanced**) configured through Cisco IMC. If this configuration changes, Cisco IMC sends this boot order to BIOS the next time that server boots. The Basic configuration allows you to specify only the device type. The Advanced configuration allows you to configure the device with specific parameters such as slot, port and LUN.

To change the configured boot order, or to restore the previously configured boot order, administrators can click the **Configure Boot Order** button. To have these changes take effect immediately, reboot the server. You can verify the new boot order by refreshing the **BIOS** tab.

Note   This information is only sent to BIOS the next time the server boots. Cisco IMC does not send the boot order information to BIOS again until the configuration changes.

The **Actual Boot Devices** section displays the boot order actually used by BIOS when the server last booted. 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. To override any manual changes, you can change the configured boot order through Cisco IMC and reboot the server.

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

Configuring the Power Restore Policy for Modules on ISRG2

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

Note   Even though you can see the changed settings in the GUI, you have to reboot the server for the settings to take effect.

Before you begin

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

Procedure

Step 1   In the **Navigation** pane, click the **Compute** menu.

Step 2   In the work pane, click the **BIOS** and then the **Server Management** tab.

Step 3   In the **Server Management** area, update the following field:

Name	Description
Power Restore Policy	The action to be taken when chassis power is restored after an unexpected power loss. This can be one of the following: **Power On** – The server is powered on post the power outage. **Power Off** – The server remains in the power off state. **Restore Last State** – The server is set to the state it was in prior to the power outage.

Step 4   Click **Save**.

Configuring the Power Restore Policy for Modules on ISR4K

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 **Compute** menu.

Step 2   In the work pane, click the **Power Policies** tab.

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

Name	Description
Power Restore Policy	The action to be taken when chassis power is restored after an unexpected power loss. This can be one of the following: **Power On** – The server is powered on post the power outage. **Power Off** – The server remains in the power off state. **Restore Last State** – The server is set to the state it was in prior to the power outage.

Step 4   Click **Save**.

Configure Boot Order

Configure Boot Order for UEFI Installation

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 **Compute** menu.

Step 2   In the **BIOS** tab, click the **Configure Boot Order** tab. Under **BIOS Properties**, you can see the Device Types table with **Configured Boot Devices** and **Actual Boot Devices**.

Step 3   In the **BIOS Properties** area, under the **Actual Boot Devices**, select **UEFI Image Map**, use the **>>** button to add the image map under the **Configured Boot Devices** table. Similarly, add **UEFI OS** to the device, click **Configure Boot Order**.

         Note   Using the **<<** button removes the options from the configuration list.

Step 4   Click **Save Changes** to reflect the configured boot devices.

Name	Description
Configure Boot Order button	This opens a pop-up window with the **Basic** tab. Select the devices you wish to add under the **Configured Boot Devices** table.
Save Changes button	Adds the device to the **Configured Boot Devices** table.

Name	Description
Cancel button	Closes the dialog box without saving any changes made while the dialog box was open.