



CIMC Firmware Management

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Overview of Firmware

C-Series servers use Cisco-certified firmware specific to the C-Series server model that you are using. You can download new releases of the firmware for all supported server models from Cisco.com.



Caution

When you install new BIOS firmware, it must be from the same software release as the CIMC firmware running on the server. Do not install new BIOS firmware until after you have activated the matching CIMC firmware or the server will not boot.

To avoid potential problems, we strongly recommend that you use the Cisco Host Upgrade Utility (HUU), which upgrades the BIOS, CIMC, and other firmware to compatible levels. For detailed information about this utility, see the *Cisco Host Upgrade Utility Guide* for the version of the HUU that goes with the CIMC software release that you want to install. The HUU guides are available at the following URL: http://www.cisco.com/en/US/products/ps10493/products_user_guide_list.html.

If you elect to update the firmware manually, you must update the CIMC firmware first. The CIMC firmware update process is divided into the following stages to minimize the amount of time the server will be offline:

- **Installation.** During this stage, CIMC installs the selected CIMC firmware in the non-active, or backup, slot on the server.

- **Activation.** During this stage, CIMC sets the non-active firmware version as active and reboots the server, causing a disruption in service. When the server reboots, the firmware in the new active slot becomes the running version.

After you activate the CIMC firmware, you can update the BIOS firmware. The server must be powered off during the entire BIOS update process, so the process is not divided into stages. Instead, you only need to issue a single command and CIMC installs and updates the BIOS firmware as quickly as possible. Once the CIMC finishes rebooting, the server can be powered on and returned to service.

**Note**

You can either upgrade an older firmware version to a newer one, or downgrade a newer firmware version to an older one.

Obtaining Firmware from Cisco

Procedure

- Step 1** Navigate to <http://www.cisco.com/>.
- Step 2** If you are not already logged in, click **Log In** at the top right-hand edge of the page and log in using your Cisco.com credentials.
- Step 3** In the menu bar at the top, click **Support**.
- Step 4** Click **All Downloads** in the roll down menu.
- Step 5** If your server model is listed in the **Recently Used Products** list, click the server name. Otherwise, do the following:
 - a) In the left-hand box, click **Products**.
 - b) In the center box, click **Unified Computing and Servers**.
 - c) In the right-hand box, click **Cisco UCS C-Series Rack-Mount Standalone Server Software**.
 - d) In the right-hand box, click the server model whose software you want to download.
- Step 6** Click the **Unified Computing System (UCS) Server Firmware** link.
- Step 7** (Optional) Select a prior release from the menu bar on the left-hand side of the page.
- Step 8** Click the **Download** button associated with the Cisco Host Upgrade Utility ISO for the selected release.
- Step 9** Click **Accept License Agreement**.
- Step 10** Save the ISO file to a local drive.
We recommend you upgrade the CIMC and BIOS firmware on your server using this ISO file, which contains the Cisco Host Upgrade Utility. For detailed information about this utility, see the *Cisco Host Upgrade Utility Guide* for the version of the HUU that goes with the CIMC software release that you want to install. The HUU guides are available at the following URL: http://www.cisco.com/en/US/products/ps10493/products_user_guide_list.html.
- Step 11** (Optional) If you plan to upgrade the CIMC and BIOS firmware manually, do the following:
 - a) From the ISO file, open the ZIP file containing the firmware installation files.
The ZIP file is on the top-level of the ISO file, and its name follows the format `ServerModel_ReleaseNumber.ZIP`.

For example, C240M3_1.4.4A.ZIP.

You do not need to extract all of the files contained in this ZIP file. Instead, you only need to open it so that you can access the BIOS firmware installation CAP file and the ZIP file containing the CIMC firmware installation BIN file.

- b) From the *ServerModel_ReleaseNumber*.ZIP file, extract the BIOS firmware installation CAP file and save it to your local drive.

The CAP file is in the *ReleaseNumber/bios/cimc* folder, and its name follows the format *Server-BIOS-Release-Number.CAP*.

For example, 1.4.4a/bios/cimc/C240-BIOS-1-4-4c-0.CAP.

- c) From the *ServerModel_ReleaseNumber*.ZIP file, open the ZIP file containing the CIMC firmware installation files.

The ZIP file is in the *ReleaseNumber/cimc* folder and its name follows the format *server-model-cimc-release.zip*.

For example, 1.4.4a/cimc/c240-m3-cimc.1.4.4a.zip.

You do not need to extract all of the files contained in this zip file. Instead, you only need to open it so that you can access the CIMC firmware installation BIN file.

- d) From the *server-model-cimc-release.zip* file, extract the full CIMC firmware installation BIN file and save it to your local drive.

The BIN file is in the *server-model-cimc-release* folder and its name follows the format *upd-pkg-server-model-cimc.full.release.bin*.

For example, c240-m3-cimc.1.4.4a/upd-pkg-c240-m3-cimc.full.1.4.4a.bin.

Step 12 (Optional) If you plan to install the firmware from a TFTP server, copy the BIOS installation CAP file and the CIMC installation BIN file to the TFTP server you want to use.

The server must have read permission for the destination folder on the TFTP server.

What to Do Next

Use the Cisco Host Upgrade Utility to upgrade all firmware on the server or manually install the CIMC firmware on the server.

Installing CIMC Firmware from a TFTP Server

Before You Begin

- Log in to the CIMC GUI as a user with admin privileges.
- Obtain the Cisco Host Upgrade Utility ISO file from Cisco.com and extract the firmware installation files as described in [Obtaining Firmware from Cisco, on page 2](#).

Procedure

- Step 1** In the **Navigation** pane, click the **Admin** tab.
- Step 2** On the **Admin** tab, click **Firmware Management**.
- Step 3** In the **Actions** area, click **Install CIMC Firmware from TFTP Server**.
- Step 4** In the **Install Firmware** dialog box, complete the following fields:

Name	Description
TFTP Server IP Address field	The IP address of the TFTP server on which the firmware image resides.
Image Path and Filename field	The firmware image filename on the server. When you enter this name, include the relative path for the image file from the top of the TFTP tree to the file location.

- Step 5** Click **Install Firmware**.

What to Do Next

Activate the CIMC firmware.

Installing CIMC Firmware Through the Browser

Before You Begin

- Log in to the CIMC GUI as a user with admin privileges.
- Obtain the Cisco Host Upgrade Utility ISO file from Cisco.com and extract the firmware installation files as described in [Obtaining Firmware from Cisco](#), on page 2.

Procedure

- Step 1** In the **Navigation** pane, click the **Admin** tab.
- Step 2** On the **Admin** tab, click **Firmware Management**.
- Step 3** In the **Actions** area, click **Install CIMC Firmware through Browser Client**.
- Step 4** In the **Install Firmware** dialog box, click **Browse** and use the **Choose File** dialog box to select the .bin file you want to install.
- Step 5** Click **Install Firmware**.

What to Do Next

Activate the CIMC firmware.

Activating Installed CIMC Firmware

Before You Begin

Install the CIMC firmware on the server.



Important

While the activation is in progress, do not:

- Reset, power off, or shut down the server.
- Reboot or reset CIMC.
- Activate any other firmware.
- Export technical support or configuration data.

Procedure

- Step 1** In the **Navigation** pane, click the **Admin** tab.
- Step 2** On the **Admin** tab, click **Firmware Management**.
- Step 3** In the **Actions** area, click **Activate CIMC Firmware**.
The **Activate Firmware** dialog box appears.
- Step 4** In the **Activate Firmware** dialog box, choose the firmware image to activate.
- Step 5** Click **Activate Firmware**.

Installing BIOS Firmware from a TFTP Server



Note

This procedure is not available on some servers. For other BIOS installation methods, see the *Cisco UCS C-Series Rack-Mount Server BIOS Upgrade Guide* available at the following URL: http://www.cisco.com/en/US/docs/unified_computing/ucs/c/sw/bios/b_Upgrading_BIOS_Firmware.html.

Before You Begin

- Log in to the CIMC GUI as a user with admin privileges.
- Activate the CIMC firmware that goes with the BIOS version you want to install, as described in [Activating Installed CIMC Firmware, on page 5](#).
- Power off the server.

**Caution**

When you install new BIOS firmware, it must be from the same software release as the CIMC firmware running on the server. Do not install new BIOS firmware until after you have activated the matching CIMC firmware or the server will not boot.

To avoid potential problems, we strongly recommend that you use the Cisco Host Upgrade Utility (HUU), which upgrades the BIOS, CIMC, and other firmware to compatible levels. For detailed information about this utility, see the *Cisco Host Upgrade Utility Guide* for the version of the HUU that goes with the CIMC software release that you want to install. The HUU guides are available at the following URL: http://www.cisco.com/en/US/products/ps10493/products_user_guide_list.html.

Procedure

- Step 1** In the **Navigation** pane, click the **Server** tab.
- Step 2** On the **Server** tab, click **Summary**.
- Step 3** In the **Server Status** area, verify that the **Power State** field says "Off". If it says "On", click **Power Off Server** in the **Actions** area and wait for the server to power off before continuing.
- Step 4** In the **Navigation** pane, click the **Admin** tab.
- Step 5** On the **Admin** tab, click **Firmware Management**.
- Step 6** In the **CIMC Firmware** area, make sure the firmware version shown in the **Running Version** field matches the BIOS firmware version you are installing.
- Important** If the CIMC firmware version does not match, activate the CIMC firmware before continuing with this procedure or the server will not boot. For details, see [Activating Installed CIMC Firmware, on page 5](#).
- Step 7** In the **Actions** area, click **Install BIOS Firmware from TFTP Server**.
- Step 8** In the **Install BIOS Firmware** dialog box, complete the following fields:

Name	Description
TFTP Server IP Address field	The IP address of the TFTP server on which the firmware image resides.
Image Path and Filename field	The firmware image filename on the server. When you enter this name, include the relative path for the image file from the top of the TFTP tree to the file location.

- Step 9** Click **Install Firmware**.
- Step 10** Watch the messages in the **Status** field in the **Last BIOS Firmware Install** area until the status changes to "Completed Successfully".
- Step 11** Power on the server to complete the BIOS upgrade.

Installing BIOS Firmware Through the Browser

**Note**

This procedure is not available on some servers. For other BIOS installation methods, see the *Cisco UCS C-Series Rack-Mount Server BIOS Upgrade Guide* available at the following URL: http://www.cisco.com/en/US/docs/unified_computing/ucs/c/sw/bios/b_Upgrading_BIOS_Firmware.html.

Before You Begin

- Log in to the CIMC GUI as a user with admin privileges.
- Activate the CIMC firmware that goes with the BIOS version you want to install, as described in [Activating Installed CIMC Firmware, on page 5](#).
- Power off the server.

**Caution**

When you install new BIOS firmware, it must be from the same software release as the CIMC firmware running on the server. Do not install new BIOS firmware until after you have activated the matching CIMC firmware or the server will not boot.

To avoid potential problems, we strongly recommend that you use the Cisco Host Upgrade Utility (HUU), which upgrades the BIOS, CIMC, and other firmware to compatible levels. For detailed information about this utility, see the *Cisco Host Upgrade Utility Guide* for the version of the HUU that goes with the CIMC software release that you want to install. The HUU guides are available at the following URL: http://www.cisco.com/en/US/products/ps10493/products_user_guide_list.html.

Procedure

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- Step 4** In the **Navigation** pane, click the **Admin** tab.
- Step 5** On the **Admin** tab, click **Firmware Management**.
- Step 6** In the **CIMC Firmware** area, make sure the firmware version shown in the **Running Version** field matches the BIOS firmware version you are installing.
Important If the CIMC firmware version does not match, activate the CIMC firmware before continuing with this procedure or the server will not boot. For details, see [Activating Installed CIMC Firmware, on page 5](#).

- Step 7** In the **Actions** area, click **Install BIOS Firmware through Browser Client**.
- Step 8** In the **Install BIOS Firmware** dialog box, click **Browse** and use the **Choose File** dialog box to select the CAP file you want to install.
- Step 9** Click **Install Firmware**.
- Step 10** Watch the messages in the **Status** field in the **Last BIOS Firmware Install** area until the status changes to "Completed Successfully".
- Step 11** Power on the server to complete the BIOS upgrade.
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