



## CHAPTER 2

# Using the CIMC Firmware Update Utility

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## Overview

The CIMC Firmware Update Utility is used to update the firmware versions for host(x86)-based systems for standalone servers. To update the firmware, you must restart the host system to either the Linux operating system or to the EFI prompt. You can use the procedures to update the firmware version using KVM as well. Although the procedure to update the firmware version using Linux, EFI, or KVM is the same, be aware that when you activate the new firmware version, the connection to the CIMC is reset, and the KVM window will close.

Before updating the firmware, ensure that the rack-mounted servers are compliant with Intelligent Platform Management Interface Specification (IPMI) v2.0. In addition, you must be logged in as the **root user** or the **super-user**.

To update the firmware version on your server, follow these steps:

- 
- Step 1** Determine the current version of the firmware that is installed on the system.
  - Step 2** Download the most recent firmware version image and copy it to a directory on the server.
  - Step 3** Update the firmware version.
  - Step 4** Activate the new firmware.

The subsequent sections explain each of these steps in detail.

In this document, commands that are used on a Linux server are shown. To use the same commands at the EFI prompt, you must add **.efi** to the command. For example, to view the currently installed firmware version on a Linux server, enter the following command:

**./fwup cimc show version**

To view the currently installed firmware version in the EFI prompt, enter the following command:

```
fwup.efi cimc show version
```

---

## Determining the Current Version of the Firmware

Before updating the version, you must first determine the current version of the firmware that is installed on the server. Enter the following command at the command prompt to determine the current version of the firmware:

```
./fwup cimc show version
```

Following is the output that is displayed for this command:

```
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CIMC Firmware
-----
Running Version: 1.2.0.14
Backup Version: 1.2.0.14
Boot-loader Version: 1.2.0.14.6
Primary Image Index: 1
Active Image Index: 2
```

In this output:

- Running Version refers to the version that is in the primary slot of the server
- Backup Version refers to the version that is stored in the secondary slot of the server
- Primary Image Index refers to the current index from where the firmware version is running.
- Active Image Index refers to the index that the firmware version will run from after the firmware version has been updated and activated.

## Downloading the Most Recent Firmware Version

After you determine the current version of the CIMC, you must download the most recent firmware version image files using the following steps:

- 
- Step 1** Download the image file from the following location:  
[www.cisco.com](http://www.cisco.com) > **Products and Services** > **Unified Computing** > **All Products** > **Cisco UCS C-Series Rack-Mount Servers** > **Download Software**.

On this page, select the appropriate server and select **Unified Computing System (UCS) Software Container for Rack Mount Servers**. A zipped file is downloaded to your local system.

- Step 2** Unzip the file on your system. A folder structure is created. Within this folder structure, you will find the CIMC folder.

Within this folder, you will find the image file. It is saved with the **.bin** extension. Typically, the image file is labeled in the following format:

```
upd-pkg-[board-name]-m1-cimc.full.[latest firmware version].bin
```

For example:

**upd-pkg-c200-m1-cimc.full.1.2.0.16.bin**

- Step 3** Note the complete path of the location where the image file is available.  
You will need to provide the complete path and filename when you update the firmware version.

## Updating the Firmware to the Most Recent Version

After determining the currently installed version on the server, you can update the version to the most recent version. To complete this step, you must have already downloaded the most recent firmware version from [www.cisco.com](http://www.cisco.com) and copied it to a directory on the server. For information on downloading the most recent firmware version, see [Downloading the Most Recent Firmware Version, page 2-2](#).

Prior to updating the firmware, ensure that the most recent firmware version that you downloaded is supported on your server. Enter the following command to view the details of the firmware version:

```
./fwup cimc show version upd-pkg-[board-name]-m1-cimc.full.[latest firmware version].bin
```

Following is the output that is displayed for this command:

```
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Binary Image Information
-----
Platform: c200
Version: 1.2.0.22
Images: u-boot.bin, uImage, flashfs, ramfs
Filename: ./root/upd-pkg-[board-name]-m1-cimc.full[latest firmware version].bin
Size: 184899104 bytes
```

Updating the firmware version includes the following two major steps:

**Step 1** Transferring the image

**Step 2** Flashing the image



**Note**

Updating the firmware version of the system takes a minimum of 15 minutes. Transferring the image takes up to 3 minutes, while flashing the image can take up to 12 minutes. In total, the firmware update process can take up to 15 minutes. After you initiate the update, we recommend that you not terminate the process as it affects the system adversely.

Enter the following command to update the firmware version:

```
./fwup cimc update <complete path to the location where the file is available, and the file name>
```

For example:

```
./fwup cimc update /root/sw/fw_pkgs/update-pkg-c200-m1-cimc.full.1.2.0.16.bin
```

This command initiates the update of the firmware version. Following is the output that is displayed when the firmware version is being updated.

```
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```

```
Locked the front panel.
Current Firmware Version
```

```

-----
Running Version: 1.2.0.14
Backup Version: 1.2.0.14
Transferring Image:
-----
Host to CIMC Filesystem .... 100%
Flashing the CIMC firmware:
-----
Complete: 100% / Stage: SUCCESS
Unlocked the front panel
Total time taken for the update: 10.07
You must reset the CIMC to use the latest firmware version.
Run the "cimc activate" command to reset the CIMC.

```

**Note**

- In earlier versions of the utility, a message indicates that the front panel could not be locked. If this message is displayed in your console, you must ensure that no other administrator performs any task on the server when you initiate the firmware update. In the current version of the utility, the front panel is locked and prevents other administrators from performing any maintenance tasks on the server. After the firmware version is updated, the front panel is unlocked.
- If the update is terminated using **Ctrl+C**, the firmware update is not aborted. It continues to run in the background. To view the status of the update later, you must re-enter the **`./fwup cimc show updatestatus`** command.

## Viewing the Status of the Firmware Update

When updating the CIMC firmware version on a Linux server, you may be working on multiple consoles. When you have multiple active consoles at a time, you can view the status of the firmware update from any one of the consoles. To view the status of the firmware update process, enter the following command:

**`./fwup cimc show updatestatus`**

The output of this command displays the percentage of activity that is complete in updating the firmware version. Following is a sample of the output that is displayed:

```

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Firmware Update Status
-----
Legacy Update: 10 (In progress)
Percent Complete: 88
Stage Data: INSTALL

```

**Note**

If the update is terminated using **Ctrl+C**, the firmware update is not aborted. It continues to run in the background. To view the status of the update later, you must re-enter the **`./fwup cimc show updatestatus`** command.

## Activating the Most Recent Firmware

After the firmware update is completed, you must activate the updated firmware to use it. To activate the firmware, enter the **activate** command at the command prompt. Powering off the server, either manually, or by using the **Power Cycle** option in the CIMC Web UI activates the updated firmware. You can activate the firmware at any time after updating it. To activate the firmware using the utility, enter the following command:

```
./fwup cimc activate
```

When you enter the command to activate the firmware, the CIMC is reset.

**Note**

To avoid interrupting any task that is in progress in the CIMC Web UI, you can activate the updated firmware after the task is completed. Until you activate the updated firmware, the server will use the previously installed firmware version.

Following is a sample of the output for the **activate** command.

```
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```

```
Issuing Activate Complete command..... SUCCESS  
CIMC will reset.
```

The **activate** command resets the CIMC. Any task that was in progress using the CIMC Web UI is aborted because the connection is lost.

**Note**

If you are using KVM to login to the Linux server or the EFI shell to update the firmware version of CIMC, when you run the **activate** command, the connection to CIMC is reset. As a result, the network connection is interrupted and the KVM window closes.

## Reverting to the Previous Firmware Version

There may be instances when you might have to revert to the previously installed firmware version. After installing and activating a later version, you can revert to the previous version using the following options in the CIMC Web UI:

**Admin > Firmware Management > Activate CIMC Firmware**

However, you cannot use the Firmware Update Utility to revert to a previously installed version. To revert to the previously installed firmware version using the utility, you must download the previous version from [www.cisco.com](http://www.cisco.com) and use the utility to update and activate that version.

