



Firmware Profiles

This chapter contains the following topics:

- [Firmware Management Menu, on page 1](#)
- [Host Image Mapping, on page 6](#)
- [Firmware Upgrades From SD Cards, on page 15](#)

Firmware Management Menu

Firmware images may either be uploaded from a local or a network server. The profile name must be unique across both local and network image profiles

Cisco delivers firmware updates in a single bundle to upgrade all Cisco IMC Supervisor components. Firmware updates can be downloaded from cisco.com. You cannot upgrade if a server is not managed in Cisco IMC Supervisor. For downloading the E-Series firmware images you must associate a contract access to the cisco.com account.

Adding Images to a Local Server

Perform this procedure when you want to add a firmware image from your local machine. You cannot perform this task on E-series servers. To add firmware images on E-series servers, see [Uploading Images from a Local File System, on page 3](#).



Note Starting with Cisco IMC Supervisor version 2.2(0.3), to perform firmware upgrade through **Images – Local** or through uploading images from a local file system on Cisco IMC versions prior to 3.0(3e), you must enable HTTP using the Shell menu.

-
- Step 1** Choose **Systems > Firmware Management**.
- Step 2** Click **Images - Local** tab and click + to add an image.
- Step 3** On the **Add Firmware Image - Local** screen, complete the following:

Field	Description
Profile Name field	Enter a descriptive and unique profile name.

Field	Description
Proxy Configuration check box	<p>(Optional) This check box picks up the proxy configuration details you have set.</p> <p>Enabling proxy server configuration ensures faster download of firmware images.</p> <p>Note The Cisco.com user credentials and proxy configuration details that you have already configured are automatically picked up. For setting up Cisco.com credentials, see Configuring Cisco.com User and for setting up proxy configuration, see Configuring Proxy Settings.</p>
Platform drop-down list	<p>Choose a platform from the drop-down list.</p> <p>Only platforms that manage at least one server is listed here.</p>
Available Image drop-down list	Choose the .iso image from the drop-down list.
Download Now check box	Check this check box to download the .iso image immediately after adding a profile. If not, you can click on Download Image to download the image later.
Graceful Timeout check box	<p>Check this check box to specify a time period within which the host system must shutdown to initiate the firmware upgrade process.</p> <p>Note You can configure graceful timeout for systems running Cisco IMC 3.1(3a) or higher.</p> <p>If you do not provide a timeout period, then the system is forcibly shut down after 120 seconds.</p>
Timeout (in mins) field	<p>Specify a time period, in minutes, within which the host system must shutdown to initiate the firmware upgrade process.</p> <p>You can specify a value between 0 and 60.</p>
Force Shutdown Server check box	<p>Check this check box to forcibly shut down the host system if it did not shut down within the time specified in the Graceful Timeout (in mins) field.</p> <p>This option is enabled by default.</p>
Allow Downloads for Images having Software Advisory check box	Check this check box to download images that have a software advisory associated with it.
Accept License Agreement	<p>Check this check box to accept the license agreement. Click on the Terms and Conditions link to read the End User License Agreement.</p> <p>Note You cannot create a firmware profile without accepting the license agreement even if you want to download the image later.</p>

Step 4 Click **Submit**.

- Note**
- You can view profile configuration details, modify the firmware image details, and delete the image profile. You can also select multiple profiles concurrently and delete them.
 - Cisco IMC Supervisor appliance should be able to remotely map to these images.
 - You can select an image from the **Images-Local** window and download the image from cisco.com. For firmware profiles that require images to be downloaded, you can defer and initiate the download process later using the **Download Image** option. You can also delete an image downloaded from cisco.com using the **Delete Image** option.

Uploading Images from a Local File System

Perform this procedure to upload iso images from your local file system to the Cisco IMC Supervisor system.



- Note** Starting with Cisco IMC Supervisor version 2.2(0.3), to perform firmware upgrade through Images – Local or through uploading images from a local file system on Cisco IMC versions prior to 3.0(3e), you must enable HTTP using the Shell menu.

Step 1 Choose **Systems > Firmware Management**.

Step 2 Choose **Upload** to add an image.

Step 3 On the **Upload Firmware Image - Local** screen, complete the following:

Field	Description
Profile Name field	Enter a descriptive and unique profile name.
Platform drop-down list	Select the C-Series or E-Series platform.
File field	Select a file and drop it in this field or click Select a File to upload on your local file system.
Graceful Timeout check box	<p>Check this check box to specify a time period within which the host system must shutdown to initiate the firmware upgrade process.</p> <p>Note You can configure graceful timeout for systems running Cisco IMC 3.1(3a) or higher.</p> <p>If you do not provide a timeout period, then the system is forcibly shut down after 120 seconds.</p>
Timeout (in mins) field	<p>Specify a time period, in minutes, within which the host system must shutdown to initiate the firmware upgrade process.</p> <p>You can specify a value between 0 and 60.</p>

Field	Description
Force Shutdown Server check box	Check this check box to forcibly shut down the host system if it did not shut down within the time specified in the Graceful Timeout (in mins) field. This option is enabled by default.

Step 4 Click **Submit**.

- Note**
- You can view profile configuration details, modify the firmware image details, and delete the image profile. You can also select multiple profiles concurrently and delete them.
 - The **Delete Profile** option removes the image associated with the profile. If you uploaded a wrong image or if a file is no longer associated with a profile, a purge system task which runs periodically (once a month) will delete the files from the Cisco IMC Supervisor appliance.

Adding Images from a Network Server

Perform this procedure to add firmware images from a network server by providing the profile name, remote IP, remote filename and so on.

Step 1 Choose **Systems > Firmware Management**.

Step 2 On the **Firmware Management** page, choose **Images - Network**.

Step 3 Click + to add an image.

Step 4 On the **Add Firmware Image - Network** screen, complete the following:

Field	Description
Profile Name field	A descriptive and unique name for the profile. The profile name must be unique.
Platform drop-down list	Choose a platform from the drop-down list. Only platforms that manage at least one server are listed here.
Mount Type drop-down list	Choose either Network File System (NFS), Common Internet File System (CIFS) or HTTP server types.
Remote IP field (only for NFS and CIFS server types)	Enter remote IP address.
Remote Share field (only for NFS and CIFS server types)	Enter remote share path.
Remote File Name field (only for NFS and CIFS server types)	Enter a remote filename. Note The remote filename is the Host Upgrade Utility ISO file.
Location Link field (only for HTTP server type)	Enter a valid http/https URL link for the image location.

Field	Description
User Name field	Enter a network path user name.
Password field	Enter a network path password.
Mount Options drop-down list (only for CIFS server type)	Select valid mount options from the Mount Options drop-down list. Note You can select a mount option for servers that are running Cisco IMC version 2.0(8) and later.
Graceful Timeout check box	Check this check box to specify a time period within which the host system must shutdown to initiate the firmware upgrade process. Note You can configure graceful timeout for systems running Cisco IMC 3.1(3a) or higher. If you do not provide a timeout period, then the system is forcibly shut down after 120 seconds.
Timeout (in mins) field	Specify a time period, in minutes, within which the host system must shutdown to initiate the firmware upgrade process. You can specify a value between 0 and 60.
Force Shutdown Server check box	Check this check box to forcibly shut down the host system if it did not shut down within the time specified in the Graceful Timeout (in mins) field. This option is enabled by default.

Step 5 Click **Submit**.

- Note**
- You can view profile configuration details, modify the firmware image details, and delete the image profile. You can also select multiple profiles concurrently and delete them.
 - Cisco IMC Supervisor appliance should be able to remotely map to these images.

Upgrading Firmware

Before you begin

- If you are upgrading to Cisco IMC version 2.0(x), you must change the default Cisco IMC password.
- If you are upgrading firmware using a local firmware image profile on servers running Cisco IMC versions prior to 3.0(3e), then you must enable HTTP in Cisco IMC Supervisor. For information on enabling and disabling HTTP using the Cisco IMC Supervisor Shell Admin console, see the [Cisco IMC Supervisor Shell Guide, Release 2.2](#).



Note Cisco does not recommend simultaneous upgrade of both servers that are part of a single Cisco UCS S3260 Dense Storage Rack Server chassis.

Before upgrading Cisco IMC Supervisor and if a firmware profile was already set up, ensure that the CCO credentials and proxy details are configured. See [Configuring Cisco.com User](#) and [Configuring Proxy Settings](#).

Step 1 Choose **Systems > Firmware Management**.

Step 2 On the **Firmware Management** screen, click **Firmware Upgrades**.

Step 3 Click **Run Upgrade**.

A warning message appears, advising you that running the upgrade on the selected servers will cause the host to reboot into the firmware update tool. On completion of the firmware update, the servers will reboot back to the host OS.

Step 4 Click **OK** to confirm.

Step 5 On the **Upgrade Firmware** screen complete the following:

Field	Description
Select Profile drop-down list	Choose a profile from the drop-down list.
Platform	You can view details such as server platform, firmware image version, and path for the selected firmware profile.
Image Version	
Image Path	
Server(s) button	Click Select and choose the servers from the list. The list displays only those servers whose platforms match the one configured in the selected profile.
Schedule later check box	Check this check box and select an existing schedule to run an upgrade. You can also click on the + icon to create a new schedule. For more information on creating schedules, see Creating Schedules . You can go to Policies > Manage Schedules , select a schedule, and click View Scheduled Tasks to verify the scheduled task and its progress. You can also select a scheduled task and click Remove Scheduled Tasks to remove the associated scheduled task.

Step 6 Click **Submit**.

Note You can also view firmware upgrade details and delete the status records for the specified upgrade operation.

Host Image Mapping

Host Image Mapping is a commonly used feature for the E-Series servers which allows you to download a firmware file to Cisco IMC, and upgrade the firmware. Using Cisco IMC Supervisor, you can create a host image mapping profile to download and upgrade either one of the following:

- ISO firmware image

- CIMC image or
- BIOS image

You can download the firmware image on Cisco IMC in one of the following methods:

- Provide a location on the network (an FTP, FTPS, HTTP or HTTPS server) where the firmware file is currently available.

For more information, see [Adding a Network Host Image Mapping Profile, on page 7](#)

- Choose the firmware file from a location on your system.

For more information, see [Creating an Upload Profile for Host Image Mapping, on page 9](#)



Important

To perform these tasks, Cisco IMC version 3.2.4 must be installed on the E-series servers. This feature does not work with prior versions of Cisco IMC.

For information on creating a profile to upgrade the firmware, see [Adding a Network Host Image Mapping Profile, on page 7](#).

Adding a Network Host Image Mapping Profile

Before you begin

You should have created rack accounts for UCS E-series servers in the system.

Step 1 Choose **Systems > Firmware Management**.

Step 2 On the **Firmware Management** page, click **Host Image Mapping**.

Step 3 Choose **Network Profile**.

Click this button if you have downloaded the firmware image from a location on the network.

Step 4 On the **Create Host Image Mapping Profile - Network** screen, complete the required fields, including the following:

Field	Description
Profile Name field	A descriptive name for the profile.
Platform drop-down list	<p>Choose a server platform.</p> <p>While applying this profile, the list of available servers is populated based on the platform you select in this drop-down list.</p> <p>Attention This drop-down list is populated by the rack accounts that you have created for UCS E-series servers.</p>

Download Image From drop-down list	Select the type of server where the firmware image is available. It can be one of the following: <ul style="list-style-type: none"> • FTP Server • FTPS Server • HTTP Server • HTTPS Server
Server IP Address field	IP address of the server.
File Path field	The path to the location where the firmware file is available.
File Type drop-down list	Choose the file type of the image. It can be one of the following: <ul style="list-style-type: none"> • ISO • CIMC • BIOS
File Name field	Enter the name of the file.
User name field	The user name. Note This field is only displayed when you select FTP Server or FTPS Server in the Download Image From drop-down list.
Password field	The user password. Note This field is only displayed when you select FTP Server or FTPS Server in the Download Image From drop-down list.
Map After Download check box	Maps the downloaded image. Important This check box is displayed only if you selected ISO in the File Type drop-down list. You can map the image while creating the profile, or you can map the image at a later point in time. Mapping an ISO image is mandatory for initiating an upgrade on the server. If you have not mapped the image on the server, and attempt to upgrade the firmware, an error message stating that the image is not mapped is displayed. For information on mapping an image in this scenario, see Mapping and Unmapping a Host Image, on page 13 .
Delete All Existing Images check box	Deletes all the currently downloaded images available in Cisco IMC of the server chosen for the firmware upgrade.

<p>Run Upgrade After Download check box</p>	<p>Check this check box if you want to initiate the upgrade process immediately after the firmware file is downloaded.</p> <p>If you prefer to initiate the upgrade process manually at a later time, then do not check this check box. To run this process at a later time, see Running a Host Image Upgrade Manually, on page 12.</p> <p>Important If you chose ISO in the File Type drop-down list, and if you check this check box, then you must also check the Map After Download check box to proceed. By checking both these check boxes, the firmware file is downloaded and mapped to Cisco IMC.</p>
--	--

Step 5 Click **Submit**.

What to do next

After creating a profile, you must select a server on which this profile must run on. For more information, see [Applying a Host Image Profile, on page 11](#).

Following are some of the other actions you can perform after creating a profile:

- Edit or delete a profile
- View status information for a profile
- Initiate the upgrade process if not previously indicated while creating the profile.

Creating an Upload Profile for Host Image Mapping

Follow this procedure to upload a firmware file from your system to Cisco IMC.

Before you begin

You should have created rack accounts for UCS E-series servers in the system.

Step 1 Choose **Systems > Firmware Management**.

Step 2 On the **Firmware Management** page, click **Host Image Mapping**.

Step 3 Choose **Upload Profile**.

Step 4 In the **Create Host Image Mapping Profile – Upload** screen, complete the required fields including the following:

Field	Description
Profile Name field	A descriptive and unique name for the profile. The profile name must be unique.

Field	Description
Platform drop-down list	<p>Choose a platform from the drop-down list.</p> <p>While applying this profile, the list of available servers is populated based on the platform you select in this drop-down list</p> <p>Attention This drop-down list is populated by the rack accounts that you have created for UCS E-series servers.</p>
File Type drop-down list	<p>Choose the file type of the image.</p> <p>It can be one of the following:</p> <ul style="list-style-type: none"> • ISO • CIMC • BIOS
File Name field	<p>Click Select a File to browse for and select a file from your system.</p>
Map After Download check box	<p>Maps the downloaded image.</p> <p>Important This check box is displayed only if you selected ISO in the File Type drop-down list.</p> <p>You can map the image while creating the profile, or you can map the image at a later point in time. Mapping an ISO image is mandatory for initiating an upgrade on the server. If you have not mapped the image on the server, and attempt to upgrade the firmware, an error message stating that the image is not mapped is displayed. For information on mapping an image in this scenario, see Mapping and Unmapping a Host Image, on page 13.</p>
Delete All Existing Images check box	<p>Deletes all the currently downloaded images available in Cisco IMC of the server chosen for the firmware upgrade.</p>
Run Upgrade After Download check box	<p>Check this check box if you want to initiate the upgrade process immediately after the firmware file is downloaded.</p> <p>If you prefer to initiate the upgrade process manually at a later time, then do not check this check box. To run this process at a later time, see Running a Host Image Upgrade Manually, on page 12.</p> <p>Important If you chose ISO in the File Type drop-down list, and if you check this check box, then you must also check the Map After Download check box to proceed. By checking both these check boxes, the firmware file is downloaded and mapped to Cisco IMC.</p>

Step 5 Click **Submit**.

What to do next

After creating a profile, you must select a server on which this profile must run on. For more information, see [Applying a Host Image Profile, on page 11](#).

Following are some of the other actions you can perform after creating a profile:

- Edit or delete a profile
- View status information for a profile
- Initiate the upgrade process if not previously indicated while creating the profile.

Applying a Host Image Profile

After creating a host image mapping profile, you can select a server on which:

- A profile can be run to download the image to Cisco IMC or
- Firmware upgrade must be initiated immediately, provided you selected the **Run Upgrade After Download** check box while creating the profile.



Note If you do not apply a host image profile, then blank reports are generated when you choose the **View Status** option. Also, you cannot initiate a firmware upgrade without applying a profile, or when the Apply Host Image Profile action is in progress.

Before you begin

You should have created a host image mapping profile in the system.

Step 1 Choose **Systems > Firmware Management**.

Step 2 On the **Firmware Management** page, click **Host Image Mapping**.

Step 3 Select a profile from the table and click **Apply**.

Alternatively, you can select and profile, and choose **Apply** from the **More Actions** drop-down list.

Step 4 In the **Apply Profile** screen, click **Select** to select the servers on which this firmware image must be applied on.

You can select multiple servers. The list of servers is populated based on the server platforms you selected while creating the profile.

Step 5 Click **Select** to return to the **Apply Profile** screen.

Step 6 Check the **Schedule Later** check box to select the date and time on when this process must be completed.

You can either select an existing schedule or click + to create a new schedule.

For information on creating a new schedule, see [Creating Schedules](#).

Step 7 Click **Submit**.

Downloading a Firmware Image

Complete this procedure to download a firmware image on the Cisco IMC of the server.

Before you begin

You should have created a Cisco.com profile for downloading the firmware image.

- You have created a Cisco.com profile for downloading the firmware image.
 - While creating the profile, you have not checked the Download Now check box.
-

Step 1 Choose **Systems > Firmware Management**.

Step 2 On the **Firmware Management** page, click **Host Image Mapping**.

Step 3 Choose a CCO profile from the list of profiles.

Step 4 From the **More Actions** drop-down list, choose **Download Image**.

Step 5 In the **Download Image** screen, review the information displayed and click **Download**.

The firmware image specified in the profile is downloaded from Cisco.com using the Cisco.com credentials that you configured.

What to do next

At a later point in time, you can delete the image that you have downloaded. For more information, see [Deleting a Downloaded Image, on page 13](#).

Running a Host Image Upgrade Manually

While creating a host image mapping profile, if you did not check the **Run Upgrade After Download** check box, then you manually initiate the upgrade process by completing the following procedure.

Before you begin

You should have created a host image mapping profile in the system.

Step 1 Choose **Systems > Firmware Management**.

Step 2 On the **Firmware Management** page, click **Host Image Mapping**.

Step 3 Choose **Run Upgrade**.

Step 4 In the **Upgrade Host Image** screen, complete the required fields, including the following:

Field	Description
Select Profile drop-down list	Choose a profile. After you choose a profile, the details of the profile are displayed on the screen.
Servers field	Click Select to choose the servers on which the upgrade must be run.
Schedule Later check box	Check this check box and select an existing schedule to upgrade the server at a later time, or click + to create a new schedule. For information on creating a new schedule, see Creating Schedules .

Step 5 Click **Submit**.

Deleting a Downloaded Image

While creating a Cisco.com profile, you can choose to download the firmware image immediately after creating the profile, or you can download it at a later point in time. After an image is downloaded, you can delete it from the Cisco IMC Supervisor. This option is only available for images downloaded with the Cisco.com profile.

- Step 1** Choose **Systems > Firmware Management**.
 - Step 2** On the **Firmware Management** page, click **Host Image Mapping**.
 - Step 3** Choose the CCO profile from the list of created profiles.
 - Step 4** From the **More Actions** drop-down list, choose **Delete Image**.
 - Step 5** In the **Delete Image(s)** screen, click **Delete**.
-

Mapping and Unmapping a Host Image

Complete this procedure to map or unmap a host image on a specific Cisco IMC server. You can map and unmap only an ISO host image. For other host images such as BIOS and CIMC, you can only delete them from this screen.

Before you begin

You should have created a host image mapping profile in the system.

- Step 1** Choose **Systems > Inventory and Fault Status**.
- Step 2** Expand **Rack Groups** and select the rack group that includes the server.
- Step 3** On the selected rack group page, click **Rack Servers**.

Step 4 Double-click the server in the list to view the details, or select the server in the list and click the down arrow on the far right, then choose **View Details**.

Note You cannot see the down arrow on the far right until you select a server from the list.

Step 5 Choose the **Host Images** tab.

The screen lists all the images that are available on the Cisco IMC server.

Step 6 Choose an ISO host image and select **Map Image** or **Unmap Image** or **Delete Image**.

From this screen, you can only select **Delete Image** for BIOS and CIMC images.

Viewing Status Details of a Host Image Profile

Before you begin

You should have created a host image mapping profile in the system.

Step 1 Choose **Systems > Firmware Management**.

Step 2 On the **Firmware Management** page, click **Host Image Mapping**.

Step 3 Select a profile from the table and choose **View Status Details** from the **More Actions** drop-down list.

You can also select a profile from the table and right-click to choose **View Status Details**.

The **View Host Image Mapping Profile Status** screen displays the following information:

- Profile name
- Server IP address
- Download status
- Upgrade status

The status information is displayed for an upload profile and for a Cisco.com profile.

Note If you chose a BIOS file to upgrade the firmware, then you must wait for about 3-4 minutes for the changes to reflect in the Cisco IMC of that server.

Deleting a Host Image Mapping Profile

Step 1 Choose **Systems > Firmware Management**.

Step 2 On the **Firmware Management** page, click **Host Image Mapping**.

Step 3 Select a profile from the table and click **Delete Profile**.

Step 4 In the **Delete Profile** screen, click **Delete**.

The profile is deleted from the system.

Firmware Upgrades From SD Cards

As an administrator, you can now perform firmware upgrades on rack servers by downloading ISO images to Micro SD cards or FlexFlash cards. The user interface provides you with the following options to perform these firmware upgrades:

- **Download Image**—Use this option to download a firmware image for specific servers. You can also choose to initiate the firmware upgrade immediately after the image is downloaded. See [Downloading Firmware Image to an SD Card, on page 15](#).
- **Run Upgrade**—Use this option to initiate a firmware upgrade at a later point in time after the image is downloaded. See [Running Firmware Upgrade from an SD Card, on page 16](#).
- **Delete Status Messages**—Use this option to delete all firmware upgrade-related status messages from the user interface. See [Deleting Image Download Messages, on page 16](#).

To use these options, you must first create rack accounts in the system, and then create either local image profiles or network image profiles in the system. For more information on creating these profiles, see [Adding Images to a Local Server, on page 1](#) and [Adding Images from a Network Server, on page 4](#).

Downloading Firmware Image to an SD Card

Before you begin

- Racks accounts are added in the system.
- Local and network image profiles are created in the system.
- On Cisco UCS M4 servers, ensure that the FlexFlash controller is configured in the Util mode and not the mirror mode. If the controller is configured in the mirror mode, you cannot download the ISO file to the SD card. Use the FlexFlash policy to configure the controller in the Util mode.

Step 1 Choose **Systems > Firmware Management**.

Step 2 Choose **Firmware Upgrades - SD**.

Step 3 Choose **Download Image**.

Step 4 In the **Download Image** screen, complete the required fields, including the following:

Field Name	Description
Download Image From drop-down list	Choose if you want to use a local profile or a network profile to download the image.
Select Profile drop-down list	Choose a profile from the list. This drop-down list displays profiles for only M4 and M5 servers.

Field Name	Description
Run Upgrade After Download check box	Check this check box if the firmware upgrade process must be initiated immediately after the image is downloaded. By default, this check box is not checked.
Servers field	Click Select to check the check boxes of the servers on which you want the firmware upgrade process to run on. Click Select to return to the Download Image screen.

Step 5 Click **Submit**.

The firmware image is downloaded to the servers that you selected.

What to do next

Initiate the firmware upgrade on the servers. See [Running Firmware Upgrade from an SD Card, on page 16](#).

Running Firmware Upgrade from an SD Card

Before you begin

You have downloaded the firmware image using the **Download Image** option. See [Downloading Firmware Image to an SD Card](#).

Step 1 Choose **Systems > Firmware Management**.

Step 2 Choose **Firmware Upgrades - SD**.

Step 3 Click **Run Upgrade**.

Step 4 Click **Select** to check the check boxes of the servers on which you want the firmware upgrade process to run on.

Step 5 Click **Select**.

Step 6 Click **Submit**.

The firmware upgrade process is initiated on the selected servers. You can review the progress of the upgrade from the **Images -SD** screen. The status is displayed in the **Upgrade Status** column.

Deleting Image Download Messages

Step 1 Choose **Systems > Firmware Management**.

Step 2 Choose **Firmware Upgrades - SD**.

Step 3 Choose a profile from the list and click **Delete Status**.

Step 4 In the **Delete Image Download Messages** screen, click **Delete**.
