



# Upgrading the Firmware from Release 1.0(1) to Release 1.3(1)

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## Required Order of Steps When Upgrading from Release 1.0(1)

When you upgrade from Cisco UCS, Release 1.0(1), upgrade the components in the following order. If you do not follow this order, the firmware upgrade may fail and the servers may experience communication issues with Cisco UCS Manager. In addition, the order of steps in this document and the recommended options minimize the disruption to data traffic.

- 1 Adapter (interface card)—If you plan to upgrade the adapters directly, perform this step first. However, if you prefer, you can omit this step and upgrade the adapters as part of the last step, in a host firmware package.
- 2 BMC—If you upgrade the adapters in the host firmware package, perform this step first.
- 3 I/O module.
- 4 Fabric interconnect.
- 5 Cisco UCS Manager.
- 6 Host firmware package—Must be the last step in the upgrade process. We recommend that you upgrade the board controller firmware during this step to avoid an additional reboot of the server. You must upgrade the BIOS and storage controller firmware in a host firmware package.

# Updating the Firmware on the Adapters, BMCs, and IOMs to Release 1.3(1)



## Caution

Do not remove the hardware that contains the endpoint or perform any maintenance on it until the update process has completed. If the hardware is removed or otherwise unavailable due to maintenance, the firmware update fails. This failure may corrupt the backup partition. You cannot update the firmware on an endpoint with a corrupted backup partition.

## Procedure

- Step 1** In the **Navigation** pane, click the **Equipment** tab.
- Step 2** On the **Equipment** tab, click the **Equipment** node.
- Step 3** In the **Work** pane, click the **Firmware Management** tab.
- Step 4** On the **Installed Firmware** subtab, click **Update Firmware**.  
Cisco UCS Manager GUI opens the **Update Firmware** dialog box and verifies the firmware versions for all endpoints in the Cisco UCS instance. This step may take a few minutes, depending upon the number of chassis and servers.
- Step 5** In the **Update Firmware** dialog box, do the following:
- From the **Filter** drop-down list on the menu bar, choose **ALL**.  
If you would prefer to update one type of endpoint at a time, choose that endpoint from the **Filter** drop-down list.
  - From the **Set Version** drop-down list on the menu bar, choose the firmware version included in the Release 1.3(1) firmware bundle from the drop-down list.
  - Click **OK**.  
If the service profile for the server includes a host firmware package, Cisco UCS Manager cannot update the adapter firmware for that server. After you acknowledge the notification message, Cisco UCS Manager updates the firmware for all other endpoints on servers that do not have associated host firmware packages. If you want to update the adapter firmware for a server directly, you must remove all host firmware packages from the associated service profiles. Removing the adapter firmware from the host firmware package is not sufficient to enable you to update the adapters directly.
- Cisco UCS Manager copies the selected firmware image to the backup memory partition and verifies that the image is not corrupt. The image remains as the backup version until you explicitly activate it. Cisco UCS Manager begins all updates at the same time. However, some updates may complete at different times.
- The update is complete when the **Update Firmware** dialog box displays **ready** in the **Update Status** column for all updated endpoints.
- Step 6** (Optional) To monitor the progress of the update to a specific endpoint, right-click on the endpoint and choose **Show Navigator**.  
Cisco UCS Manager displays the progress in the **Update Status** area on the **General** tab. If the navigator has an **FSM** tab, you can also monitor the progress there. An entry in the **Retry #** field may not indicate that the update has failed. The retry count also includes retries that occur when Cisco UCS Manager retrieves the update status.

## What to Do Next

Activate the firmware.

# Activating the Firmware on the Adapters, BMCs, and IOMs to Release 1.3(1)

This procedure ensures that the firmware activation for these endpoints causes minimal disruption to data traffic. If you do not activate the endpoints in the following order with the correct options configured, the endpoints may reboot and cause a temporary disruption in data traffic.



### Caution

Do not select **ALL** from the **Filter** drop-down list in the **Activate Firmware** dialog box to activate all endpoints simultaneously. Many firmware releases and patches have dependencies that require the endpoints to be activated in a specific order for the firmware update to succeed. This order can change depending upon the contents of the release or patch. Activating all endpoints does not guarantee that the updates occur in the required order and can disrupt communications between the endpoints, the fabric interconnects, and Cisco UCS Manager. For information about the dependencies in a specific release or patch, see the release notes provided with that release or patch.

This procedure continues directly from [Updating the Firmware on the Adapters, BMCs, and IOMs to Release 1.3\(1\), page 2](#) and assumes you are on the **Firmware Management** tab.

## Procedure

- Step 1** In the **Installed Firmware** tab, choose **Activate Firmware**.  
If one or more of the selected endpoints are not configured with the desired version as the backup version, Cisco UCS Manager GUI does not display that version in the **Set Version** drop-down list. You must select the version from the **Startup Version** column for each individual endpoint.
- Step 2** If the adapter firmware is not updated through a host firmware package in a service profile, do the following in the **Activate Firmware** dialog box to activate the adapter firmware:
- From the **Filter** drop-down list, choose **Interface Cards**.
  - From the **Set Version** drop-down list, choose the firmware version included in the Release 1.3(1) firmware bundle.
  - Check the **Ignore Compatibility Check** check box.  
The firmware for this release is not compatible with previous releases. Therefore, you must check the **Ignore Compatibility Check** check box to ensure that the activation succeeds.
  - Check the **Set Startup Version Only** check box.  
**Note** During a direct upgrade, you should configure **Set Startup Version Only** for an adapter. With this setting, the activated firmware moves into the pending-next-boot state, and the server is not immediately rebooted. The activated firmware does not become the running version of firmware on the adapter until the server is rebooted. You cannot configure **Set Startup Version Only** for an adapter in the host firmware package.
  - Click **Apply**.

When the **Activate Status** column for all adapters displays **pending-next-boot** or **ready** continue with Step 3.

- Step 3** If the BMC firmware is not updated through a management firmware package in a service profile, do the following in the **Activate Firmware** dialog box to activate the BMC firmware:
- From the **Filter** drop-down list, choose **BMC**.
  - From the **Set Version** drop-down list, choose the firmware version included in the Release 1.3(1) firmware bundle.

If one or more of the selected endpoints are not configured with the desired version as the backup version, Cisco UCS Manager GUI does not display that version in the **Set Version** drop-down list. You must select the version from the **Startup Version** column for each individual endpoint.

- Check the **Ignore Compatibility Check** check box.
- Click **Apply**.

The activation of firmware for a BMC does not disrupt data traffic. However, it will interrupt all KVM sessions and disconnect any vMedia attached to the server.

When the **Activate Status** column for all BMC components displays **ready** continue with Step 4.

- Step 4** To activate the IOM firmware, do the following in the **Activate Firmware** dialog box:
- From the **Filter** drop-down list, choose **IO Modules**.
  - From the **Set Version** drop-down list, select the firmware version included in the Release 1.3(1) firmware bundle.
  - Check the **Ignore Compatibility Check** check box.
  - Check the **Set Startup Version Only** check box.

**Important** When you configure **Set Startup Version Only** for an I/O module, the I/O module is rebooted when the fabric interconnect in its data path is rebooted. If you do not configure **Set Startup Version Only** for an I/O module, the I/O module reboots and disrupts traffic. In addition, if Cisco UCS Manager detects a protocol and firmware version mismatch between it and the I/O module, Cisco UCS Manager automatically updates the I/O module with the firmware version that matches its own and then activates the firmware and reboots the I/O module again.

- Click **Apply**.
- When the **Activate Status** column for all IOMs displays **pending-next-boot** or **ready** continue with Step 5.

- Step 5** Click **OK**.
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# Activating the Fabric Interconnect Firmware for a Cluster Configuration

## Activating the Firmware on a Subordinate Fabric Interconnect to Release 1.3(1)

### Before You Begin

Determine which fabric interconnect in the cluster is the subordinate fabric interconnect. For more information, see [Verifying the High Availability Status and Roles of a Cluster Configuration](#).

### Procedure

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- Step 1** In the **Navigation** pane, click the **Equipment** tab.
- Step 2** On the **Equipment** tab, click the **Equipment** node.
- Step 3** In the **Work** pane, click the **Firmware Management** tab.
- Step 4** On the **Installed Firmware** subtab, click **Activate Firmware**.  
Cisco UCS Manager GUI opens the **Update Firmware** dialog box and verifies the firmware versions for all endpoints in the Cisco UCS instance. This step may take a few minutes, depending upon the number of chassis and servers.
- Step 5** From the **Filter** drop-down list on the menu bar, choose **Fabric Interconnects**.
- Step 6** On the menu bar, check the **Ignore Compatibility Check** check box.
- Step 7** On the row of the **Activate Firmware** dialog box for the subordinate fabric interconnect, do the following:
- In the **Kernel** row, choose the firmware version included in the Release 1.3(1) firmware bundle from the drop-down list in the **Startup Version** column.
  - In the **System** row, choose the firmware version included in the Release 1.3(1) firmware bundle from the drop-down list in the **Startup Version** column.
- Step 8** Click **Apply**.  
Cisco UCS Manager updates and activates the firmware, and then reboots the fabric interconnect and any I/O module in the data path to that fabric interconnect, disrupting data traffic to and from that fabric interconnect. However, assuming the Cisco UCS instance is configured to permit traffic and port failover, data traffic fails over to the primary fabric interconnect and is not disrupted.
- Step 9** Verify the high availability status of the subordinate fabric interconnect.
- Note** If the **High Availability Status** area for the fabric interconnect does not show the following values, contact Cisco Technical Support immediately. Do not continue to update the primary fabric interconnect.

Field Name	Required Value
Ready field	Yes
State field	Up

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**What to Do Next**

If the high availability status of the subordinate fabric interconnect contains the required values, update and activate the primary fabric interconnect.

**Activating the Firmware on a Primary Fabric Interconnect to Release 1.3(1)**

This procedure continues directly from [Activating the Firmware on a Subordinate Fabric Interconnect to Release 1.3\(1\)](#), page 5 and assumes you are on the **Firmware Management** tab.

**Before You Begin**

Activate the subordinate fabric interconnect.

**Procedure**

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- Step 1** On the **Installed Firmware** subtab, click **Activate Firmware**.  
Cisco UCS Manager GUI opens the **Update Firmware** dialog box and verifies the firmware versions for all endpoints in the Cisco UCS instance. This step may take a few minutes, depending upon the number of chassis and servers.
- Step 2** From the **Filter** drop-down list on the menu bar, choose **Fabric Interconnects**.
- Step 3** On the menu bar, check the **Ignore Compatibility Check** check box.
- Step 4** On the row of the **Activate Firmware** dialog box for the subordinate fabric interconnect, do the following:
- In the **Kernel** row, choose the firmware version included in the Release 1.3(1) firmware bundle from the drop-down list in the **Startup Version** column.
  - In the **System** row, choose the firmware version included in the Release 1.3(1) firmware bundle from the drop-down list in the **Startup Version** column.
- Step 5** Click **Apply**.  
Cisco UCS Manager updates and activates the firmware, and then reboots the fabric interconnect and any I/O module in the data path to that fabric interconnect, disrupting data traffic to and from that fabric interconnect. However, assuming the Cisco UCS instance is configured to permit traffic and port failover, data traffic fails over to the other fabric interconnect, which becomes the primary. When it comes back up, this fabric interconnect is the subordinate fabric interconnect.
- Step 6** Verify the high availability status of the fabric interconnect.
- Note** If the **High Availability Status** area for the fabric interconnect does not show the following values, contact Cisco Technical Support immediately.

Field Name	Required Value
Ready field	Yes
State field	Up

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# Activating the Firmware on a Standalone Fabric Interconnect to Release 1.3(1)

For a standalone configuration with a single fabric interconnect, you can minimize the disruption to data traffic when you perform a direct firmware upgrade of the endpoints. However, you must reboot the fabric interconnect to complete the upgrade and, therefore, cannot avoid disrupting traffic.

## Procedure

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- Step 1** In the **Navigation** pane, click the **Equipment** tab.
  - Step 2** On the **Equipment** tab, click the **Equipment** node.
  - Step 3** In the **Work** pane, click the **Firmware Management** tab.
  - Step 4** On the **Installed Firmware** subtab, click **Activate Firmware**.  
Cisco UCS Manager GUI opens the **Update Firmware** dialog box and verifies the firmware versions for all endpoints in the Cisco UCS instance. This step may take a few minutes, depending upon the number of chassis and servers.
  - Step 5** From the **Filter** drop-down list, choose **Fabric Interconnects**.
  - Step 6** On the menu bar, check the **Ignore Compatibility Check** check box.
  - Step 7** On the row of the **Activate Firmware** dialog box for the fabric interconnect, do the following:
    - a) In the **Kernel** row, choose the firmware version included in the Release 1.3(1) firmware bundle from the drop-down list in the **Startup Version** column.
    - b) In the **System** row, choose the firmware version included in the Release 1.3(1) firmware bundle from the drop-down list in the **Startup Version** column.
  - Step 8** Click **OK**.
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Cisco UCS Manager activates the firmware, and then reboots the fabric interconnect and any I/O module in the data path to that fabric interconnect. For a standalone fabric interconnect, this disrupts all data traffic in the Cisco UCS instance.

# Activating the Cisco UCS Manager Software to Release 1.3(1)

This procedure continues directly from the previous one and assumes you are on the **Firmware Management** tab.

## Procedure

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- Step 1** On the **Installed Firmware** subtab, click **Activate Firmware**.  
Cisco UCS Manager GUI opens the **Update Firmware** dialog box and verifies the firmware versions for all endpoints in the Cisco UCS instance. This step may take a few minutes, depending upon the number of chassis and servers.

- Step 2** From the **Filter** drop-down list, choose **UCS Manager**.
- Step 3** On the **UCS Manager** row of the **Activate Firmware** dialog box, do the following:
- From the drop-down list in the **Startup Version** column, select the firmware version included in the Release 1.3(1) firmware bundle from the drop-down list.
  - Check the **Ignore Compatibility Check** check box.
- Step 4** Click **OK**.  
Cisco UCS Manager disconnects all active sessions, logs out all users, and then activates the software. When the upgrade is complete, you are prompted to log back in.

## Updating a Host Firmware Package to Release 1.3(1)

You must upgrade the BIOS and storage controller firmware through the host firmware package when you upgrade to Release 1.3(1). If you do not upgrade those packages, the servers may experience communication issues with Cisco UCS Manager and the BMC.



### Caution

If the policy is included in one or more service profiles associated with a server, Cisco UCS Manager updates and activates the firmware in the server and adapter with the new versions and reboots the server as soon as you save the host firmware package policy.

This procedure assumes that the host firmware package already exists. For information on how to create a host firmware package, see *Cisco UCS Manager GUI Configuration Guide* or *Cisco UCS Manager CLI Configuration Guide*.

### Before You Begin

Before you update a host firmware package, do the following:

- Upgrade Cisco UCS Manager and the fabric interconnects
- Determine an appropriate maintenance window to reduce the impact of the disruption of data traffic when the server reboots
- Ensure you know the 1.3(1) firmware version and model number (PID) for the servers or servers

### Procedure

- Step 1** In the **Navigation** pane, click the **Servers** tab.
- Step 2** On the **Servers** tab, expand **Servers ► Policies**.
- Step 3** Expand the node for the organization that includes the policy you want to update.  
If the system does not include multi-tenancy, expand the **root** node.
- Step 4** Expand **Host Firmware Packages** and select the policy you want to update.
- Step 5** In the table on the right, do the following to delete the existing entry for the firmware you want to update:
- Select the line in the table for the firmware version that you want to change.
  - Right-click and select **Delete**.

c) Click **Yes** to confirm that you want to delete that entry.

**Step 6** On the **General** tab, click the down arrows to expand one or more of the following sections on the left:

- **Adapter Firmware Packages**
- **Storage Controller Firmware Packages**
- **Fibre Channel Adapters Firmware Packages**
- **BIOS Firmware Packages**
- **HBA Option ROM Packages**
- **Board Controller Packages**

**Step 7** In each section for the endpoint to which you want to include firmware in the package:

- a) Select the line in the table for the firmware version that you want to add to the pack.  
By default, the entries are sorted by vendor name. To sort the entries, click on a column heading.
- b) Drag the line to the table on the right.  
The firmware version must match the model numbers (PID) on the servers that are associated with this firmware pack. If you select a firmware version with the wrong model number, Cisco UCS Manager cannot install the firmware update.
- c) Click **Yes** to confirm that you selected the correct version.

**Step 8** If you need to include firmware updates for servers with different model numbers (PIDs) in this management firmware package, repeat Steps 6 and 7.

**Step 9** Click **Save Changes**.

Cisco UCS Manager verifies the model numbers and vendor against all servers associated with service profiles that include this policy. If the model numbers and vendor match a firmware version in the policy, Cisco UCS Manager updates the firmware.

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### What to Do Next

Verify that the firmware on the endpoints included in the host firmware package has been updated to release 1.3(1). If the firmware has not been updated, check the model numbers and vendors in the host firmware package against those on the endpoints that were not updated.

