



# HyperFlex Edge Upgrade

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## Overview

This section provides information related to upgrading a Cisco HyperFlex Edge system from the HX Connect. If your cluster was deployed using Cisco Intersight, please use Intersight to perform the cluster upgrade. For detailed upgrade prerequisites and instructions about upgrading Edge Clusters using Intersight.



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### Important

- Upgrading a HyperFlex Edge system involves upgrading the server firmware, HyperFlex Data Platform Software, and VMware ESXi.
  - You can perform a combined upgrade of HyperFlex Data Platform and VMware ESXi using HyperFlex Connect or you can choose to perform a split upgrade.
  - UCS Server firmware upgrade is not supported from HX Connect. Instead, perform the UCS server firmware upgrade separately using the Host Upgrade Utility (HUU) tool or the Integrated Management Controller (IMC) Supervisor.
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## Cisco HyperFlex Edge Firmware Recommended Versions

- Review the [Cisco HyperFlex Release Notes for Cisco HX Data Platform](#) that corresponds to the release for your planned upgrade.
- For upgrading supported releases, see the [Cisco HyperFlex Software Requirements and Recommendations](#) document.

- If you want to upgrade from a release that is no longer supported, see the [Cisco HyperFlex Systems Upgrade Guide for Unsupported Cisco HX Releases](#).
- For HyperFlex Edge clusters that are upgraded using HX Connect, the HyperFlex Data Platform upgrade includes upgrade of the embedded storage firmware in addition to the HyperFlex Data Platform software. This embedded firmware upgrade includes updates to the SAS passthrough storage controller and associated drives (housekeeping, cache, and capacity) that run the distributed storage platform. A manual upgrade of these embedded firmware storage components via the HUU should not be performed. It is recommended to complete the server firmware upgrade using HX Connect. If a manual upgrade or downgrade of these storage components is required, ensure that you do the following:
  - If you are using the Host Update Utility (HUU) to upgrade chassis firmware, be sure to uncheck the option to upgrade the SAS controller and do not upgrade drives (except for the boot drive, if desired).
  - Avoid using the Upgrade All button in the HUU as this will include the storage controller by default.
  - Firmware management for these devices is handled by HyperFlex Data Platform automatically and should not be manually changed using other utilities. Only use the HUU to upgrade these components when deemed necessary for troubleshooting or as instructed by Cisco TAC.
  - For clusters running Cisco IMC version prior to version 4.1(3b), secure boot must be temporarily disabled to perform server firmware upgrade. Once Cisco IMC version 4.1(3b) version or later is running on all nodes in the cluster, secure boot can be enabled for firmware upgrade.

## Server Firmware Upgrade Using the Cisco Host Upgrade Utility Tool

The following table summarizes the server firmware upgrade workflow on Cisco HX Servers:

Step	Description	Reference
1.	Place a node in HX maintenance mode.  <b>Note</b> Upgrade one node at a time, for the cluster to stay online during upgrade.	Entering Cisco HyperFlex Maintenance Mode
2.	Upgrade server firmware using the Host Upgrade Utility tool.	See Upgrading the Firmware on a Cisco UCS C-Series Server Using the HUU in the <a href="#">Cisco Host Upgrade Utility User Guide</a> .
3.	Reboot the node back into ESXi. Exit HX maintenance mode.	
4.	Wait until the cluster becomes fully healthy.	<a href="#">Viewing HyperFlex Cluster Health</a>

Step	Description	Reference
5.	<p>Repeat steps 1-4 on the remaining HX nodes in a rolling fashion.</p> <p><b>Note</b> Ensure that you check the health state before entering maintenance mode on the next host in the cluster.</p>	

You can find current and previous releases of the *Cisco Host Upgrade Utility User Guide* at this location:  
<https://www.cisco.com/c/en/us/support/servers-unified-computing/ucs-c-series-rack-servers/products-user-guide-list.html>.

## Server Firmware Upgrade Using Cisco Integrated Management Controller Supervisor

The following table summarizes the server firmware upgrade workflow on Cisco HX Servers:

Step	Description	Reference
1.	<p>Place a node in HX maintenance mode.</p> <p><b>Note</b> Upgrade one node at a time, for the cluster to stay online during upgrade.</p>	
2.	Create a rack group. Add servers to the IMC Supervisor inventory.	See <a href="#">Managing Server Discovery, Rack Groups, and Rack Accounts</a> in the <i>Cisco IMC Supervisor Rack-Mount Servers Management Guide</i> .
3.	Configure auto-discovery profile.	See <a href="#">Configuring Auto Discovery Profile</a> in the <i>Cisco IMC Supervisor Rack-Mount Servers Management Guide</i> .
4.	Run inventory on the rack group.	See <a href="#">Collecting Inventory for Rack Accounts or Rack Groups</a> in the <i>Cisco IMC Supervisor Rack-Mount Servers Management Guide</i> .
5.	Create firmware profile.	<p>Refer to the following tasks in the <i>Cisco IMC Supervisor Rack-Mount Servers Management Guide</i>:</p> <ul style="list-style-type: none"> <li>• <a href="#">Adding Images to a Local Server</a></li> <li>• <a href="#">Uploading Images from a Local File System</a></li> <li>• <a href="#">Adding Images from a Network Server</a></li> </ul>

Step	Description	Reference
6.	Upgrade firmware using IMC Supervisor, on the node put in maintenance mode.	See <a href="#">Upgrading Firmware</a> in the <i>Cisco IMC Supervisor Rack-Mount Servers Management Guide</i> .
7.	Reboot the node back into ESXi. Exit HX maintenance mode.	
8.	Wait until the cluster becomes fully healthy.	
9.	Repeat step 6 on the remaining HX nodes in a rolling fashion.  <b>Note</b> Ensure that you check the health state before entering maintenance mode on the next host in the cluster.	

You can find current and previous releases of the *Cisco IMC Supervisor Rack-Mount Servers Management Guide* here: <https://www.cisco.com/c/en/us/support/servers-unified-computing/integrated-management-controller-imc-supervisor/products-installation-and-configuration-guides-list.html>.

## Upgrading Server Firmware on a Cisco UCS C-Series Server Using the Cisco IMC Supervisor



**Note** Before upgrading Cisco IMC Supervisor and if a firmware profile was already set up, ensure that the Cisco.com credentials and proxy details are configured.

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

**Step 2** On the **Firmware Management** page, 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.

Field	Description
<b>Platform</b> field	Click <b>Select</b> and choose the servers from the list. The list displays only those servers whose platforms match the one configured in the selected profile.
<b>Image Version</b> field	
<b>Image Path</b> field	
<b>Schedule later</b> check box	Check this check box and select an existing schedule to run an upgrade. You can also click the + icon to create a new schedule.

**Step 6** Click **Submit**.

## Upgrading HyperFlex Edge Using HX Connect

Cisco HyperFlex Edge cluster upgrade process involves upgrading the below 2 components:

- Cisco HyperFlex Data Platform
- VMware vSphere ESXi

You can combine HyperFlex Data Platform and VMware ESXi upgrade in a single combined upgrade for HyperFlex Edge clusters. Cisco recommends upgrading these 2 components in a combined upgrade from HyperFlex Connect. You can choose to upgrade one or two of these components at a time.

If you prefer to upgrade individual components one at a time, see [VMware vSphere/ESXi Upgrade](#). The component upgrade process for standard cluster and HyperFlex Edge cluster are the same.

This section describes the steps to perform a combined upgrade of HyperFlex Data Platform and VMware vSphere ESXi. In this process, the HyperFlex nodes will go through an optimized rolling reboot without any workload disruptions by use of VMware vMotion.



**Note** HyperFlex Edge clusters deployed via Intersight do not have upgrade capability from HyperFlex Connect. The upgrade is only supported through Intersight.

**Step 1** Log into HX Connect.

- Enter the administrative username and password.
- Click **Login**.

**Step 2** In the Navigation pane, select **Upgrade**.

**Step 3** On the **Select Upgrade Type** page, select **HX Data Platform** and **ESXi** and complete the following fields:

**Step 4** Upload the HyperFlex Data Platform upgrade package (storfs-package).

Table 1: Upgrade HX Data Platform

UI Element	Essential Information
<b>Drag the HX file here or click to browse</b>	<p>Upload the latest Cisco HyperFlex Data Platform Upgrade Bundle for upgrading existing clusters with previous release.tgz package file from <a href="#">Download Software - HyperFlex HX Data Platform</a>.</p> <p>Sample file name formats:</p> <ul style="list-style-type: none"> <li>• HXDP 5.5(x):storfs-packages-5.5.1a-31601.tgz</li> <li>• HXDP 5.0(x): storfs-packages-5.0.1a-31601.tgz</li> <li>• HXDP 4.5(x): storfs-packages-4.5.1a-31601.tgz</li> </ul>
<b>Current version</b>	Displays the current HyperFlex Data Platform version.
<b>Current cluster details</b>	Lists the HyperFlex cluster details like the <b>HyperFlex release</b> and <b>cluster upgrade state</b> .
<b>Bundle version</b>	Displays the HyperFlex Data Platform version of the uploaded bundle.
(Optional) <b>Checksum</b> field	<p>The MD5 Checksum number is available by hovering over the filename in the Cisco.com Software Download section.</p> <p>This is an optional step that helps you verify the integrity of the uploaded upgrade package bundle</p>

**Step 5** Upload the VMware ESXi custom image offline upgrade bundle.

**Step 6** Provide vCenter login credentials:

Essential Information	Essential Information
<b>User Name</b> field	Enter the vCenter <admin> username.
<b>Admin Password</b> field	Enter the vCenter <admin> password.

**Step 7** Click **Upgrade** to begin the combined upgrade process.

**Step 8** The Validation screen on the **Upgrade Progress** page displays the progress of the checks performed. Fix validation errors, if any.

**Note** At this point, all pre-upgrade checks and validations are running, along with the initial upgrade stage. Within a few minutes, HX Connect returns and prompts you to confirm and start the second stage of the upgrade. The upgrade is not complete until both steps are performed in the UI. The system should never be left in a state where only the first step of the upgrade is complete.

**Step 9** The HyperFlex Connect UI refreshes after the first step of the upgrade, and a banner pops up prompting you to provide the UCS and vCenter credentials and start the second stage of the upgrade process. Monitor the upgrade page and confirm that the upgrade is complete.

When upgrade is in progress, you may see an error message **Websocket connection failed. Automatic refresh disabled**. You can either refresh the page or log out and log back in to clear the error message. You can safely ignore this error message.

**Note** Proceed to [Confirm That Upgrade Is Complete](#) for post upgrade tasks once the upgrade is complete. If the upgrade fails, you can re-try the upgrade or contact Cisco TAC for further assistance.

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## Post Upgrade Tasks for HyperFlex Edge

After the upgrade is complete and the HyperFlex Edge cluster has been upgraded, log out and log back in to HX Connect to see the upgrade changes.

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- Step 1** Confirm that the HX nodes match the expected firmware version.
- Check the firmware version in the IMC supervisor GUI or Cisco IMC UI to verify for the correct firmware version.
- To view the firmware version, in the IMC Supervisor GUI, navigate to the **Systems > Firmware Management** tab. See [Upgrading Firmware using IMC Supervisor](#) for more details.
- Step 2** Log into any controller VM through SSH.
- ```
# ssh admin@controller_vm_ip
```
- Step 3** Confirm the HyperFlex Data Platform version.
- ```
# hxcli cluster version
```
- ```
Cluster version: 5.5(1a)
Node hx220-m5-node-1 version: 5.5(1a)
Node hx220-m5-node-3 version: 5.5(1a)
Node hx220-m5-node-2 version: 5.5(1a)
Node hx220-m5-node-4 version: 5.5(1a)
```
- Step 4** Verify that the HX storage cluster is online and healthy.
- ```
# hxcli cluster info|grep -i health
```
- Sample output:
- ```
healthstate : healthy
state: healthy
storage cluster is healthy
```
- Step 5** For each browser interface you use, empty the cache and reload the browser page to refresh the HX Connect content.
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