



Upgrading from Unsupported Cisco HyperFlex Releases

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About Upgrading from Unsupported Cisco HyperFlex Releases

This document is designed to guide Cisco HyperFlex users who need to upgrade their environment from a Cisco HyperFlex HX Data Platform software release that is past the last date of support, to the latest suggested release on the Cisco Software Download site.



Important

This guide covers the Cisco HyperFlex Release 1.7(x), 1.8(x), 2.0(x), 2.1(x), 2.5(x), 2.6(x), 3.0(x) and 3.5(1x). If your release is not listed, do not use this document. Download the appropriate [Cisco HyperFlex Upgrade Guide](#) for your environment.

This section contains the following topics:

HyperFlex Upgrade Preparation

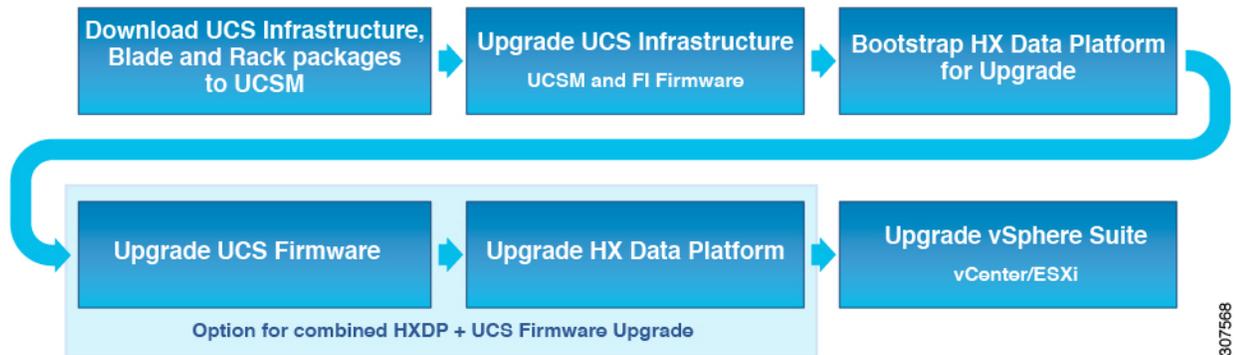
The intent of this guide is to successfully guide you through the process of upgrading an unsupported version of Cisco HyperFlex to a current feature rich supported version. Proper preparation for upgrade is as important as the actual upgrade. It is imperative that you follow the workflow and complete each task in the order presented. There are no shortcuts.

The following image describes the general upgrade workflow.



Note

Users who need to upgrade to an intermediate release before their destination release will complete the upgrade workflow two times.



The upgrade requires you to complete the following tasks in this order:

1. Complete all tasks in the [Prerequisites for Upgrading Obsolete Hyperflex Releases](#) section of this guide.
2. Run the Hypercheck Health & Pre-Upgrade tool to on your HyperFlex systems to ensure its stability and resiliency [Hypercheck : Hyperflex Health & Pre-Upgrade Check Tool](#)
3. Verify that your VMware vCenter and ESXi version is 6.0 U3 or later. For more information, see [Verify the ESXi and vCenter Build Number, on page 3](#).
4. Select the Cisco HyperFlex Data Center release currently running in your environment and follow the upgrade workflow for your specific upgrade.
 - [Upgrading Cisco HyperFlex 2.6\(x\), 3.0\(x\), and 3.5\(1x\)](#)
 - [Upgrading Cisco HyperFlex 2.1\(1a\), 2.1\(1b\), 2.1\(1c\) and 2.5\(x\)](#)
 - [Upgrading Cisco HyperFlex 1.8\(1f\) and 2.0\(x\)](#)
 - [Upgrading Cisco HyperFlex 1.8\(1a-1e\)](#)
 - [Upgrading Cisco HyperFlex 1.7](#)
5. Post Cisco HyperFlex Upgrade: [\(Optional\) ESXi Upgrade to 6.5 or 6.7](#)

What to do next:

Complete all tasks in the [Prerequisites for Upgrading Obsolete Hyperflex Releases](#) section of this guide.

Prerequisites for Upgrading Obsolete Hyperflex Releases

The following tasks should be performed prior to beginning the upgrade process:

- vCenter version check: Verify that the vCenter is version 6.0U3 or later.
- Ensure all VM network vlan vm port groups existing on all nodes in the cluster.
- Ensure that the management and storage data vlans are on the top-of-rack to ensure uninterrupted connectivity.
- If using jumbo frames in your environment, ensure jumbo frames is enabled on vmotion and data network on top of rack switch.
- Verify that the ESXi hosts are not in lockdown mode.

- Verify that **Springpath_security.properties** link exists on controller VMs (see security properties in [Verifying and Recreating the Springpath User Account](#)).
- MTU Setting: vm-network vlans set to MTU 9000 may revert to MTU 1500 during the upgrade process. After upgrading, verify the setting and reset if to MTU 9000 if needed.
- If using ACI with LLDP this setting may revert to CDP and need to be re-enabled post-upgrade.
- If using ACI with application-centric architecture, please contact TAC before beginning your upgrade.
- Confirm pycrypto package version (if cluster was previously upgraded from 1.7.x. (see [pycrypto](#))).

What to do next:

After completing the prerequisites, continue to the [Hypercheck : Hyperflex Health & Pre-Upgrade Check Tool](#) technote (HXDP 1.8.x and above).

Hypercheck: HyperFlex and Pre-Upgrade Check Tool

The [Hypercheck: HyperFlex and Pre-Upgrade Check Tool](#) are automated health and pre-upgrade checks that are designed to ensure your clusters are healthy before you upgrade. It is imperative that this healthcheck is not just performed, but that you take corrective action on any cluster that is found to be unhealthy. Correct all issues reported by the Hypercheck health check before continuing.

Hypercheck: Hyperflex Health & Pre-Upgrade Check Tool technote (HXDP 1.8.x and above)

<https://www.cisco.com/c/en/us/support/docs/hyperconverged-infrastructure/hyperflex-hx-data-platform/214101-hypercheck-hyperflex-health-pre-upgr.html>

What to do next:

Once all clusters are healthy, continue to [Verify the ESXi and vCenter Build Number, on page 3](#).

Verify the ESXi and vCenter Build Number

Cisco HyperFlex Data Platform requires that your ESXi and vCenter version number be 6.0 U3 or later. To determine the data platform server build number, perform the following steps in the vSphere Web Client.

1. Log in to the vSphere Web Client.
2. Click Home.
3. Click Hosts and Clusters.
4. Expand the datacenter.
5. Expand the cluster.
6. Click the ESXi host.
7. Click the Summary tab.
8. The ESX/ESXi Version field is located under **Configuration**.

What to do next:

- If your version number is a 6.0 U3 or later, you have met the minimum version required to upgrade your HyperFlex release. Continue to the next step in [HyperFlex Upgrade Preparation](#).
- If the VMware version number does not meet the minimum version required, upgrade the version, see [Upgrading vCenter and ESXi, on page 4](#).

Upgrading vCenter and ESXi

ESXi Upgrade Guidelines and Limitations

**Caution**

Using VMware Update Manager (VUM) to upgrade ESXi is discouraged.

If you are using VUM to upgrade ESXi do the following:

- Use VUM one host at a time.
 - Make sure that the cluster is in healthy state before moving on to the next node.
 - Do not use VUM to upgrade ESXi across a cluster, as there is no guarantee that the cluster will be healthy by the time VUM moves on to the next node.
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- The ESXi hypervisor version can be upgraded without disruption to the HyperFlex cluster workload. This is achieved by performing an online, rolling upgrade of each node in the HX cluster.
 - ESXi upgrade requires a manual online upgrade.
 - Verify that the current ESXi version is 6.0 U3 before beginning the upgrade path. For upgrade directions see, [ESXi Upgrade, on page 5](#).
 - Use the ESXi command line interface `esxcli` for upgrading or updating ESXi.
 - Replace the build numbers provided in the examples below with the latest version.

What to do next:

After reviewing the Guidelines and Limitations, download install the required software listed in [Software Download: ESXI 6.0 U3 \(EP 25\), on page 4](#).

Software Download: ESXI 6.0 U3 (EP 25)

ESXI 6.0 U3 (EP 25)

Upgrade Bundle: HX-ESXi-6.0U3-15517548-Cisco-Custom-6.0.3.14-upgrade-bundle.zip

Download Link: [https://software.cisco.com/download/home/286305544/type/286305994/release/3.5\(2h\)](https://software.cisco.com/download/home/286305544/type/286305994/release/3.5(2h))

What to do next:

After downloading and installing the necessary software, follow the installation steps in the [ESXi Upgrade, on page 5](#).

ESXi Upgrade

After downloading the software bundles, complete the steps to upgrade the ESXi version:



Note ESXi version 6.0 U3 is required to start the upgrade path.

1. Step 1 Download ESXi upgrade package. When upgrading ESXi from 6.0 Ux to any newer version, use the offline zip file from the Cisco [Download Software](#) site.

Example Filename:

```
HX-ESXi-6.0U3-15517548-Cisco-Custom-6.0.3.14-upgrade-bundle.zip
```



Note Do not use the HX ISO file or any other VMware ISO to attempt an ESXi upgrade.

2. Select one of your hosts and put it in HX maintenance mode using the vSphere Web Client. For additional information see [Entering Cisco HyperFlex Maintenance Mode](#).

After the host enters maintenance mode, complete the following steps.

3. Remote secure copy the ESXi upgrade bundle to an appropriate folder with enough space.
To copy files using SCP, start the SSH service in the destination ESXi hosts as well.



- Note**
- On HX240, you can use the local SpringpathDS datastore or a mounted HX datastore.
 - On HX220, you can use either a mounted HX datastore or create a temporary RAM disk.

Example:

```
scp local_filename user@server:/path/where/file/should/go
```

4. Log in to ESXi.
5. To query the list of available image profiles and for profile name verification, execute the `esxcli software sources profile list -d <location_of_the_esxi_zip_bundle_on_the_datastore>` command.



Note The full path must be used when running the `esxcli` software command.

Example:

```
[root@localhost:~] esxcli software sources profile list -d
/vmfs/volumes/5d3a21da-7f370812-ca58-0025
b5a5a102/HX-ESXi-6.0U3-15517548-Cisco-Custom-6.0.3.14-upgrade-bundle.zip
Name                               Vendor  Acceptance Level  Creation Time
Modification Time
-----
```

```
HX-ESXi-6.0U3-15517548-Cisco-Custom-6.0.3.14 Cisco PartnerSupported
2019-07-02T00:14:56 2019-07-02T13:38:34
```

- To start the upgrade, run the `esxcli software profile update -d <path_to_profile_ZIP_file> -p < profile name>`.

Example:

```
[root@localhost:~] esxcli software
profile update -d /vmfs/volumes/5d3a21da-7f370812-ca58-0025b5a5a10
2/HX-ESXi-6.0U3-15517548-Cisco-Custom-6.0.3.14-upgrade-bundle.zip -p
HX-ESXi-6.0U3-15517548-Cisco-Custom-6.0.3.14
```

- Once the upgrade completes, restart the ESXi host.

Example:

```
esxcli system shutdown reboot -r Update -d 10
```

- After the ESXi host comes up, verify that the host has booted up with the correct version.

Example:

```
vmware -vl
```

- Wait for the ESXi host to auto reconnect to vCenter.

In some upgrade scenarios it may be necessary to force ESXi to reconnect from vCenter. Right-click on the host and select `Connection > Connect`.

- Exit maintenance mode using the vSphere Web Client, For additional information see [Entering Cisco HyperFlex Maintenance Mode](#)

- Ensure that the cluster becomes healthy between each ESXi upgrade.

Example:

```
stcli cluster storage-summary --detail
```

- Sequentially repeat this process for all hosts in the cluster.



Note Make sure that the cluster becomes healthy between each ESXi upgrade.

What to do next:

After upgrading your VMware software, continue to step 4 in [HyperFlex Upgrade Preparation, on page 1](#).

vCenter Upgrade

For directions on upgrading vCenter, see [VMware vSphere Documentation](#)

What to do next:

Once your version number is 6.0 U3 or later, you have met the minimum version required to upgrade your Cisco HyperFlex release. Continue to the [ESXi Upgrade Guidelines and Limitations, on page 4](#).