



HyperFlex Offline Upgrade Workflow

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Online Upgrade of HyperFlex Data Platform Software Only Using CLI



Attention Cisco recommends upgrading the HyperFlex cluster using HyperFlex Connect UI. The procedure below lists the commands used for upgrading the HyperFlex cluster using CLI.

1. If UCSM (A-bundle) or UCS Server Firmware (C-bundle) upgrade is required, download Cisco UCS Infrastructure A, blade bundle B, and rack bundle C. See [Software Download](#).
2. Upgrade Cisco UCS Infrastructure bundle as required. See [Upgrade UCS Infrastructure Firmware](#).
3. Log into CIP-M of the cluster with admin access and create a tmp directory i.e. /home/admin/tmp.
4. Copy the target storfs-package- \diamond .tgz to the tmp directory.
5. Copy the target Hypervisor upgrade bundle to the tmp directory.
6. Use `stcli cluster upgrade --h` command to check the usage of the command.
7. Use `--dryrun` to check if all the inputs to the command and upgrade compatibility before the actual upgrade initiates.
8. Perform the actual upgrade and follow the details mentioned in the following examples:



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- Note**
- Step 1 and step 2 are required if UCS infra and UCS Server f/w upgrade need to be performed.
 - Step 5 is required if the Hypervisor upgrade needs to be performed.
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Combined Upgrade of Cisco HX Data Platform, ESXi and Cisco UCS Firmware**M6 Clusters:**

```
# stcli cluster upgrade --components ucs-fw,hxdp,hypervisor -location
/home/admin/tmp/<storfs package name> --hypervisor-bundle
/home/admin/tmp/<ESXi package name> --ucsm-host <IP/FQDN of UCSM>
--ucsm-user <UCSM User> --ucsm6-fw-version <UCSM Firmware Version>
--vcenter-user administrator@vsphere.local
```

M6 Example:

```
~# stcli cluster upgrade --components ucs-fw,hxdp,hypervisor -location
/home/admin/tmp/storfs-packages-5.0.1a-40733.tgz --hypervisor-bundle
/home/admin/tmp/HX-ESXi-6.7U3-17700523-Cisco-Custom-6.7.3.16-upgrade-bundle.zip
--ucsm-host eng-fil6.eng.storvisor.com --ucsm-user admin --ucsm6fw-version '4.2(1i)'
--vcenter-user administrator@vsphere.local
```

M5 Clusters:

```
# stcli cluster upgrade --components ucs-fw,hxdp,hypervisor
--location /home/admin/tmp/<storfs package name> --hypervisor-bundle
/home/admin/tmp/<ESXi package name> --ucsm-host <IP/FQDN of UCSM>
--ucsm-user <UCSM User> --ucsm5-fw-version <UCSM Firmware Version>
--vcenter-user administrator@vsphere.local
```

M5 Example:

```
~# stcli cluster upgrade --components ucs-fw,hxdp,hypervisor -location
/home/admin/tmp/storfs-packages-5.0.1a-40733.tgz --hypervisor-bundle
/home/admin/tmp/HX-ESXi-6.7U3-17700523-Cisco-Custom-6.7.3.16-upgrade-bundle.zip
--ucsm-host eng-fil6.eng.storvisor.com --ucsm-user admin --ucsm5fw-version '4.2(1i)'
--vcenter-user administrator@vsphere.local
```

M4 Clusters:

```
# stcli cluster upgrade --components ucs-fw,hxdp,hypervisor -location
/home/admin/tmp/<storfs package name> --hypervisor-bundle
/home/admin/tmp/<ESXi package name> --ucsm-host <IP/FQDN of UCSM>
--ucsm-user <UCSM User> --ucs-fw-version <UCSM Firmware Version>
--vcenter-user administrator@vsphere.local
```

M4 Example:

```
~# stcli cluster upgrade --components ucs-fw,hxdp,hypervisor -location
/home/admin/tmp/storfs-packages-5.0.1a-40733.tgz --hypervisor-bundle
/home/admin/tmp/HX-ESXi-6.7U3-17700523-Cisco-Custom-6.7.3.16-upgrade-bundle.zip
--ucsm-host eng-fil6.eng.storvisor.com --ucsm-user admin --ucs-fw-version '4.2(1i)'
--vcenter-user administrator@vsphere.local
```

Combined Upgrade of Cisco HX Data Platform and ESXi**M6/M5/M4 Clusters:**

```
# stcli cluster upgrade --components hxdp,hypervisor -location
/home/admin/tmp/<storfs package name> --hypervisor-bundle
/home/admin/tmp/<esxiupgrade_bundle.zip> --vcenter-user administrator@vsphere.local
```

Example:

```
~# stcli cluster upgrade --components hxdp,hypervisor -location
/home/admin/tmp/storfs-packages-5.0.1a-40733.tgz --hypervisor-bundle
/home/admin/tmp/HX-ESXi-6.7U3-17700523-Cisco-Custom-6.7.3.16-upgrade-bundle.zip
--vcenter-user administrator@vsphere.local
```

Combined Upgrade of Cisco HX Data Platform and Cisco UCS Firmware

M6 Clusters:

```
# stcli cluster upgrade --components ucs-fw,hxdp -location
/home/admin/tmp/<storfs package name> --ucsm-host <IP/FQDN of UCSM>
--ucsm-user <UCSM User> --ucsm6-fw-version <UCSM Firmware Version>
--vcenter-user administrator@vsphere.local
```

M6 Example:

```
~# stcli cluster upgrade --components ucs-fw,hxdp -location
/home/admin/tmp/storfs-packages-5.0.1a-40733.tgz
--ucsm-host eng-fil6.eng.storvisor.com --ucsm-user admin
--ucsm6fw-version '4.2(1i)' --vcenter-user administrator@vsphere.local
```

M5 Clusters:

```
# stcli cluster upgrade --components ucs-fw,hxdp --location
/home/admin/tmp/<storfs package name> --ucsm-host <IP/FQDN of UCSM>
--ucsm-user <UCSM User> --ucsm5-fw-version <UCSM Firmware Version>
--vcenter-user administrator@vsphere.local
```

M5 Example:

```
~# stcli cluster upgrade --components ucs-fw,hxdp -location
/home/admin/tmp/storfs-packages-5.0.1a-40733.tgz --ucsm-host
eng-fil6.eng.storvisor.com --ucsm-user admin --ucsm5fw-version
'4.2(1i)' --vcenter-user administrator@vsphere.local
```

M4 Clusters:

```
# stcli cluster upgrade --components ucs-fw,hxdp --location
/home/admin/tmp/<storfs package name> --ucsm-host <IP/FQDN of UCSM>
--ucsm-user <UCSM User> --ucs-fw-version <UCSM Firmware Version>
--vcenter-user administrator@vsphere.local
```

M4 Example:

```
~# stcli cluster upgrade --components ucs-fw,hxdp --location
/home/admin/tmp/storfs-packages-5.0.1a-40733.tgz --ucsm-host eng-fil6.eng.storvisor.com
--ucsm-user admin --ucs-fw-version '4.2(1i)' --vcenter-user administrator@vsphere.local
```

Upgrade of Cisco HX Data Platform

M6/M5/M4 Clusters:

```
# stcli cluster upgrade --components hxdp --location /home/admin/tmp/<storfs
package name> --vcenter-user administrator@vsphere.local
```

Example:

```
~# stcli cluster upgrade --components hxdp --location
/home/admin/tmp/storfs-packages-5.0.1a-40733.tgz --vcenter-user administrator@vsphere.local
```

Upgrade Cisco HX Data Platform Only Using GUI

Start upgrade of HX Data Platform only. See [Upgrade Cisco UCS Firmware, HX Data Platform, and VMware vSphere Workflow](#).

Upgrade Cisco UCS Firmware Only Using GUI

Start upgrade of UCS firmware only. See [Upgrade UCS Infrastructure Firmware](#).

Offline Upgrade Guidelines



Warning

The offline upgrade workflow is not supported in Cisco HyperFlex Release 5.0(2a) through 5.0(2d). Attempting to perform an offline upgrade on any of these releases will fail.



Important

- Offline upgrade can be performed from HX Connect UI for either combined or split upgrade. Before you proceed, consider following guidelines:
- Cisco recommends performing online upgrade from HX Connect UI for hitless upgrade experience without any impact operations.
- Offline upgrade requires the cluster to be shutdown.
- Offline cluster upgrades require the node(s) to reboot. Applications running on the cluster during an offline upgrade are impacted because they do not have access to the HyperFlex storage during the cluster reboot.
- Nodes are upgraded with the new version of the Cisco HX Data Platform software and rebooted one at a time.
- Offline cluster upgrades with nested vCenter is not supported.

Offline Upgrade Process Workflow

Step	Description	Reference
1.	If UCSM (A-bundle) or UCS Server Firmware (C-bundle) upgrade is required, download Cisco UCS Infrastructure A, blade bundle B, and rack bundle C.	Software Download
2.	Upgrade Cisco UCS Infrastructure bundle as required.	Upgrade UCS Infrastructure Firmware

Step	Description	Reference
3.	<p>Launch the vSphere Web Client and power down all user VMs (HyperFlex Controller VMs should stay powered on) residing on HX servers and all user VMs running on HX datastores. This includes VMs running on Compute-only nodes. After the VMs are shut down, verify the health state of the cluster and perform a graceful shutdown.</p> <p>Important HyperFlex controller VMs (stCtlVMs) must remain powered on.</p>	For more details, see Shut Down and Power Off the Cisco HX Storage Cluster .
4.	(Optional) SSH to cluster management IP as admin user and disable the snapshot schedule.	Run the command <code>stcli snapshot-schedule --disable</code> .
5.	Log into HX Connect as admin user and perform either a combined upgrade or an individual component upgrade.	<p>For a combined upgrade see Upgrading HyperFlex Data Platform Software, VMware ESXi, and Cisco UCS Server Firmware using HX Connect.</p> <p>For an individual component upgrade see Upgrade UCS Firmware, HX Data Platform and VMware vSphere - Individual Component Upgrade.</p>
6.	Confirm the upgrade is complete and perform the post upgrade tasks .	Post Upgrade Tasks
7.	Start the cluster.	Preparing for HX Storage Cluster Maintenance
8.	(Optional) Enable snapshot schedule if it was disabled previously in step 4.	Run the command <code>stcli snapshot-schedule --enable</code> .

Offline Upgrade Using CLI



Important

If you need to perform a split upgrade, you must upgrade HX Data Platform first. After HX Data Platform is upgraded to Release 3.5(1x), you can perform a split upgrade of UCSM only and/or ESXi only.



Note

Please make sure to update the UCS firmware version in all examples to the recommended version in the [Release Notes](#).

Combined Upgrade of Cisco HX Data Platform, ESXi and Cisco UCS Firmware

M6 Servers

```
# stcli cluster upgrade --components ucs-fw,hxdp,hypervisor --location /tmp/
<storfs package name> --hypervisor-bundle /tmp/<ESXi package name> --ucsm-host <IP/FQDN of
UCSM>
--ucsm-user <UCSM User> --ucsm6-fw-version <UCSM Firmware Version>
```

Example for M6 Servers:

```
~# stcli cluster upgrade --components ucs-fw,hxdp,hypervisor --location
/tmp/storfs-packages-5.0.1a-19712.tgz --hypervisor-bundle /tmp/ESXi-6.7-U3-offline-bundle.zip
--ucsm-host eng-fil6.eng.storvisor.com --ucsm-user admin --ucs6fw-version '4.0(2g)'
```

M5 Servers

```
# stcli cluster upgrade --components ucs-fw,hxdp,hypervisor --location /tmp/
<storfs package name> --hypervisor-bundle /tmp/<ESXi package name> --ucsm-host <IP/FQDN of
UCSM>
--ucsm-user <UCSM User> --ucsm5-fw-version <UCSM Firmware Version>
```

Example for M5 Servers:

```
~# stcli cluster upgrade --components ucs-fw,hxdp,hypervisor --location
/tmp/storfs-packages-4.5.1a-19712.tgz --hypervisor-bundle /tmp/ESXi-6.7-U3-offline-bundle.zip
--ucsm-host eng-fil6.eng.storvisor.com --ucsm-user admin --ucs5fw-version '4.0(2g)'
```

M4 Servers

```
# stcli cluster upgrade --components ucs-fw, hxdp, hypervisor --location/tmp/
<storfs package name, ESXi package name> --ucsm-host <IP/FQDN of UCSM>
--ucsm-user <UCSM User> --ucsfw-version <UCSM Firmware Version>
```

Example for M4 Servers:

```
~# stcli cluster upgrade --components ucs-fw, hxdp, hypervisor --location
/tmp/storfs-packages-4.5.1a-19712.tgz
--ucsm-host eng-fil6.eng.storvisor.com --ucsm-user admin --ucsfw-version '4.0(2g)'
```

Combined Upgrade of Cisco HX Data Platform and ESXi

M5 Servers

```
# stcli cluster upgrade --components hxdp,hypervisor --location /tmp/
hxupgrade_bundle.tgz --hypervisor-bundle /tmp/esxiupgrade_bundle.zip
```

Example for M5 Servers:

```
~# stcli cluster upgrade --components hxdp,hypervisor --location /tmp/
hxupgrade_bundle.tgz --hypervisor-bundle /tmp/esxiupgrade_bundle.zip
```

M4 Servers

```
# stcli cluster upgrade --components hxdp,hypervisor --location /tmp/
hxupgrade_bundle.tgz --hypervisor-bundle /tmp/esxiupgrade_bundle.zip
```

Example for M4 Servers:

```
~# stcli cluster upgrade --components hxdp,hypervisor --location /tmp/
hxupgrade_bundle.tgz --hypervisor-bundle /tmp/esxiupgrade_bundle.zip
```

Combined Upgrade of Cisco HX Data Platform and Cisco UCS Firmware

M5 Servers

```
# stcli cluster upgrade --components hxdp,ucs-fw --location/tmp/  
<storfs package name> --vcenter-user <vcuser> --ucsm-host <IP/FQDN of UCSM>  
--ucsm-user <UCSM User> --ucsm5-fw-version <UCSM Firmware Version>
```

M4 Servers

```
# stcli cluster upgrade --components hxdp,ucs-fw --location/tmp/  
<storfs package name> --vcenter-user <vcuser> --ucsm-host <IP/FQDN of UCSM>  
--ucsm-user <UCSM User> --ucsfw-version <UCSM Firmware Version>
```

Example for M4 Servers:

```
~# stcli cluster upgrade --components hxdp,ucs-fw --location  
/tmp/storfs-packages-1.8.1c-19712.tgz --vcenter-user administrator@vsphere.local  
--ucsm-host eng-fil6.eng.storvisor.com --ucsm-user admin --ucsfw-version '3.1(2b)'
```

