

# ESXi upgrade to 7.0 U2 via HX Connect or Intersight fails with "CPU\_SUPPORT WARNING"

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## Introduction

This document describes the process to upgrade ESXi to 7.0 U2 which can fail on servers running older generation Central Processing Units (CPU).

## Background Information

The upgrade initiated through HX Connect or through Intersight displays the failure message: "Failed to apply profile HX-ESXi-7.0U2-17867351-Cisco-Custom-7.2.0.5" or "CPU\_SUPPORT WARNING: The CPU in this host may not be supported in future ESXi releases. Please plan accordingly" .

The Hyperflex Data Platform (HXDP) versions required to hit this issue are:

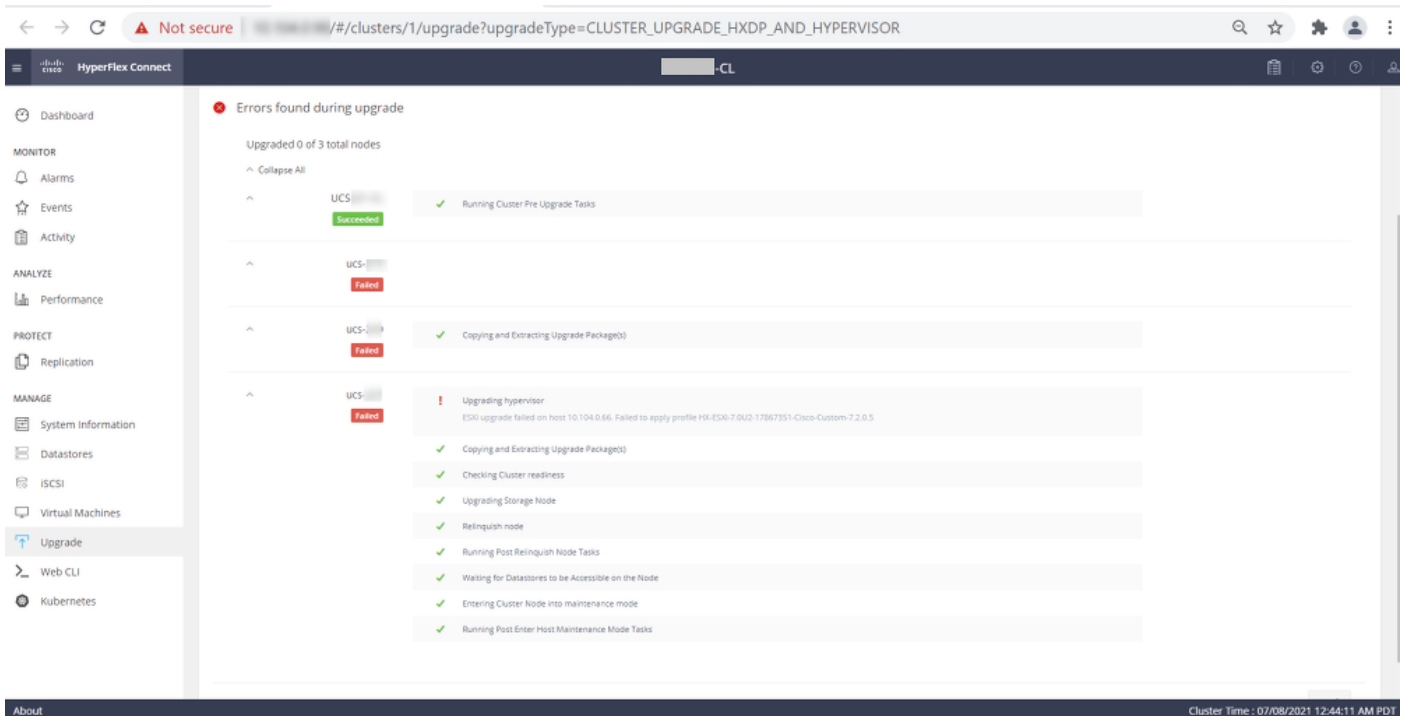
HXDP 4.5(2a)

HXDP 4.5(1a)

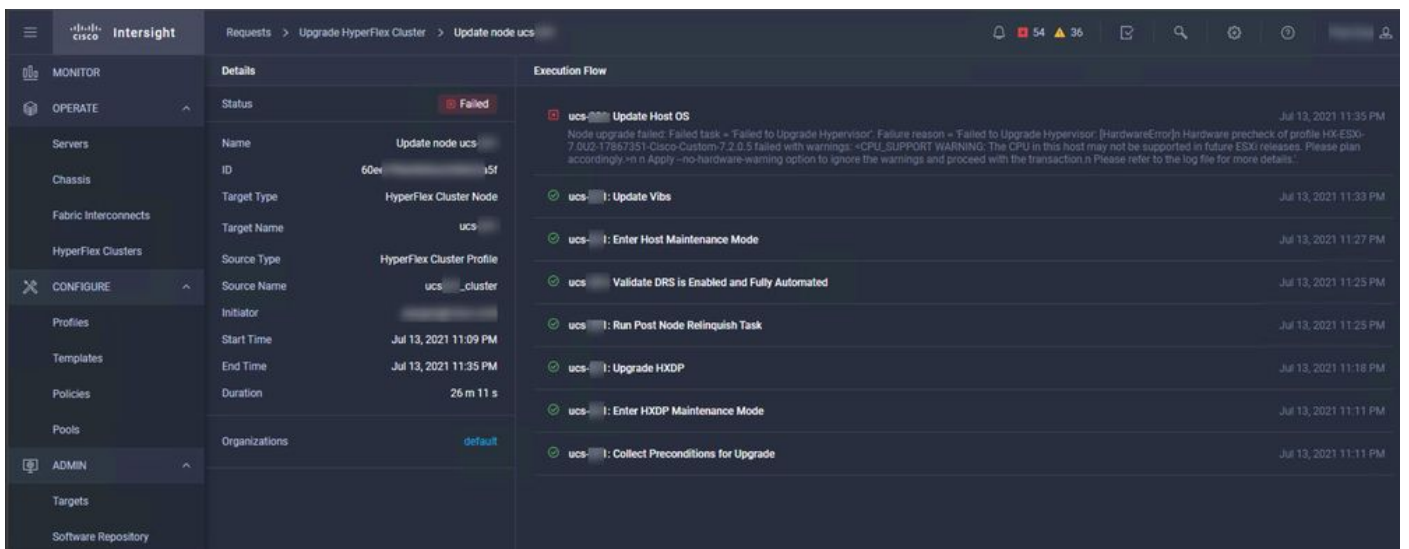
HXDP 4.0(2f) and below that support ESXi 7.0 U2

## Problem

Upgrade attempt to ESXi 7.0 U2 via HX Connect or Intersight on servers running older generation CPUs, notably the Sandy Bridge-EP (E5-2600), Ivy Bridge-EP (E5-2600v2), and Haswell EP (E5-2600v3) CPU families. See VMware KB for full details on the processors impacted by this compatibility check: [VMware knowledge base](#).



## HX connect error message



## Solution

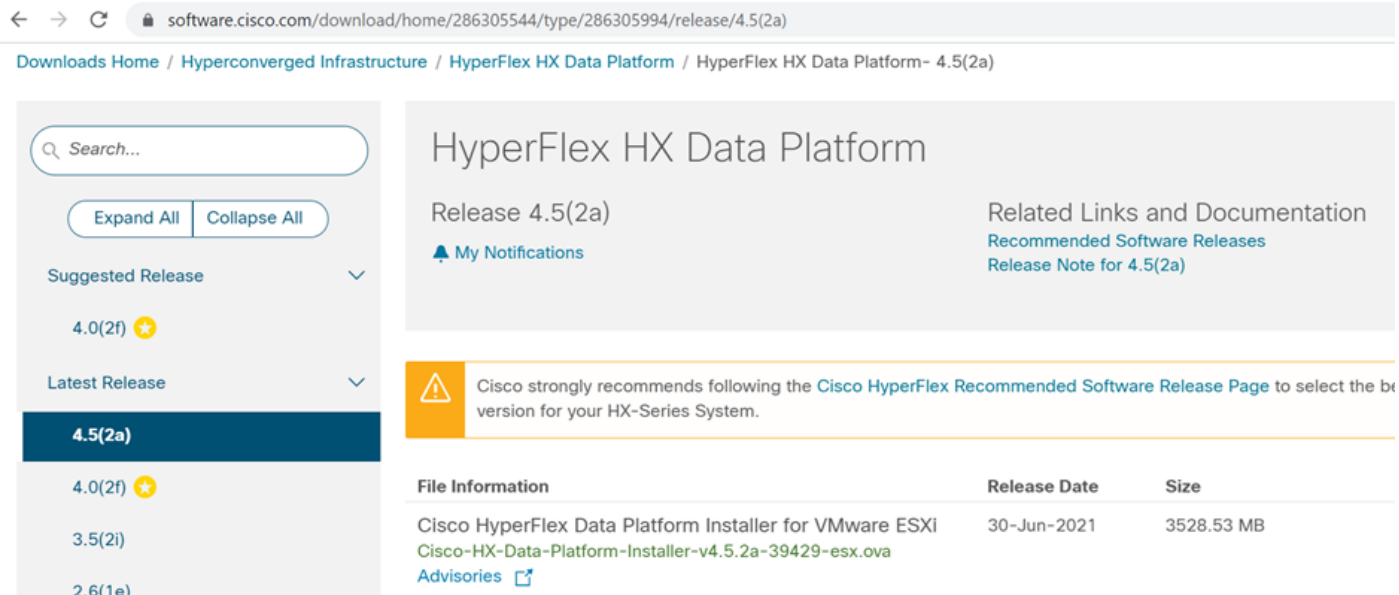
### Scenario A. HXDP + ESXi Combined Upgrade From HX Connect User Interface

For this scenario, you upgrade HXDP to 4.5(2a) and ESXi to 7.0 U2 Build 17867351.

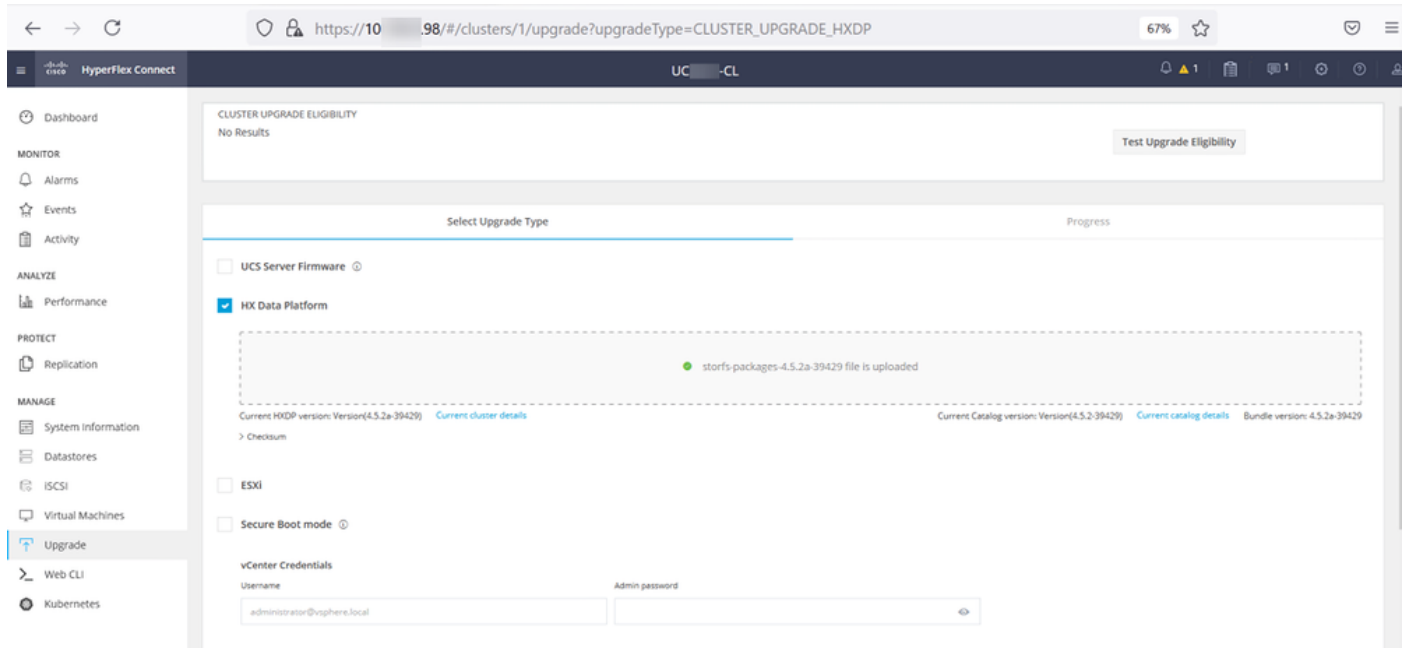
Step 1. Upgrade HXDP Only first.

Step 1.1. Download HXDP package via

[https://software.cisco.com/download/home/286305544/type/286305994/release/4.5\(2a\)](https://software.cisco.com/download/home/286305544/type/286305994/release/4.5(2a)) as shown in the image:



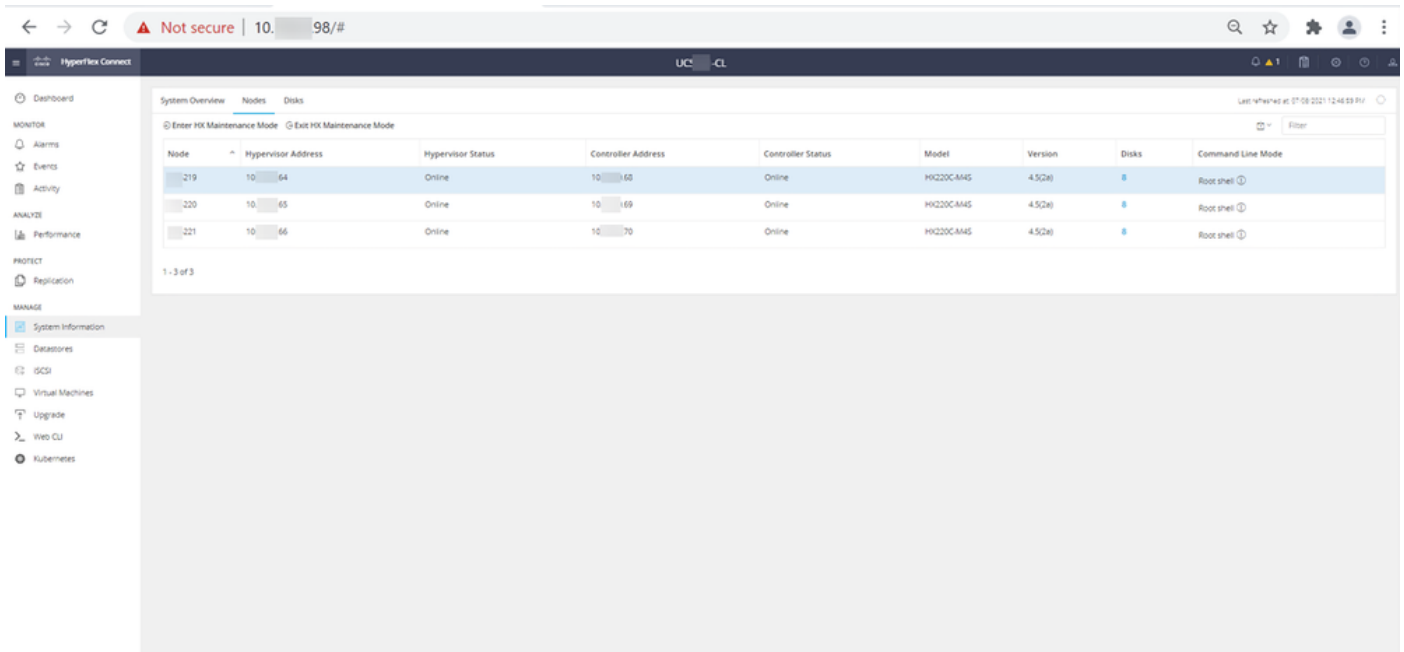
Step 1.2. Open the HX-Connect, choose **Upgrade**, check the **HX Data Platform** checkbox, upload the package, enter the **Username** and **Admin Password** for **vCenter Credentials** and click **Upgrade** as shown in the image:



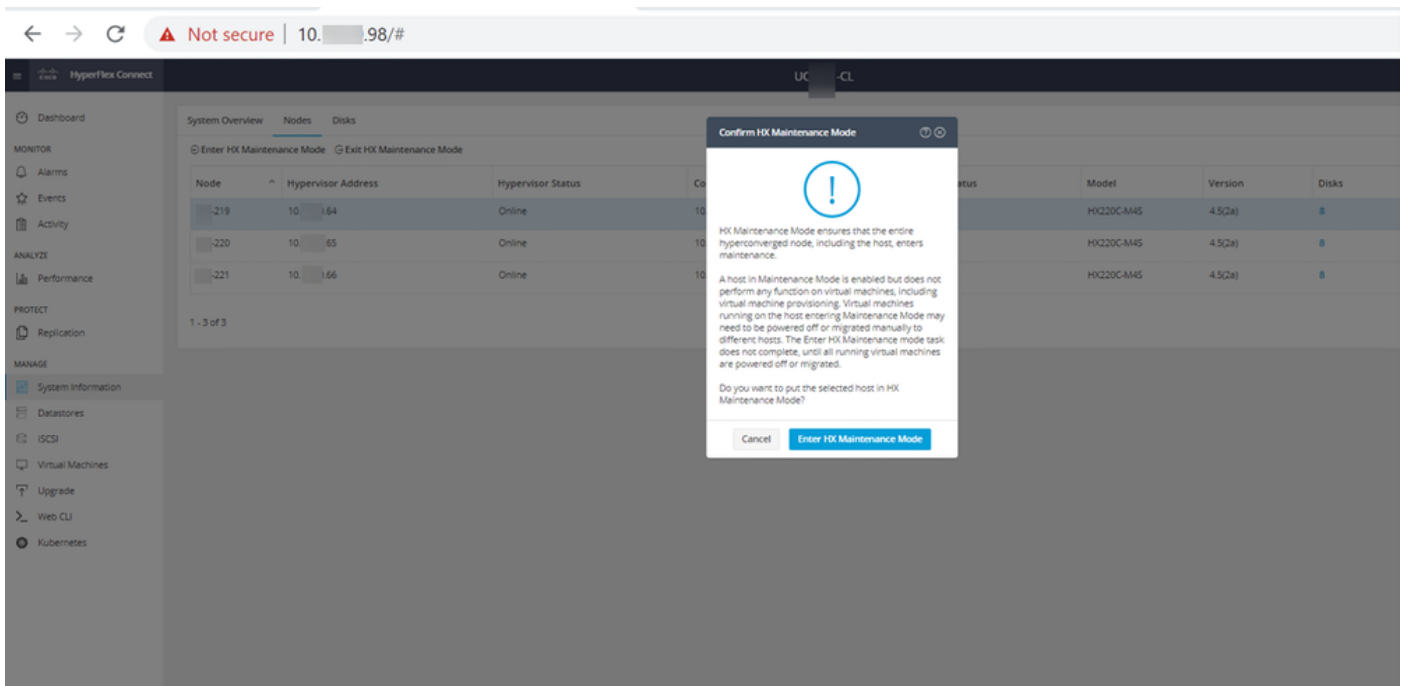
HX connect upgrade HXDP

Once the upgrade is complete, proceed to Step 2.

Step 2. Open the HX Connect, choose **System information > Nodes**, choose the node which you want to upgrade Esxi on and click **Enter HX Maintenance Mode** as shown in the images.

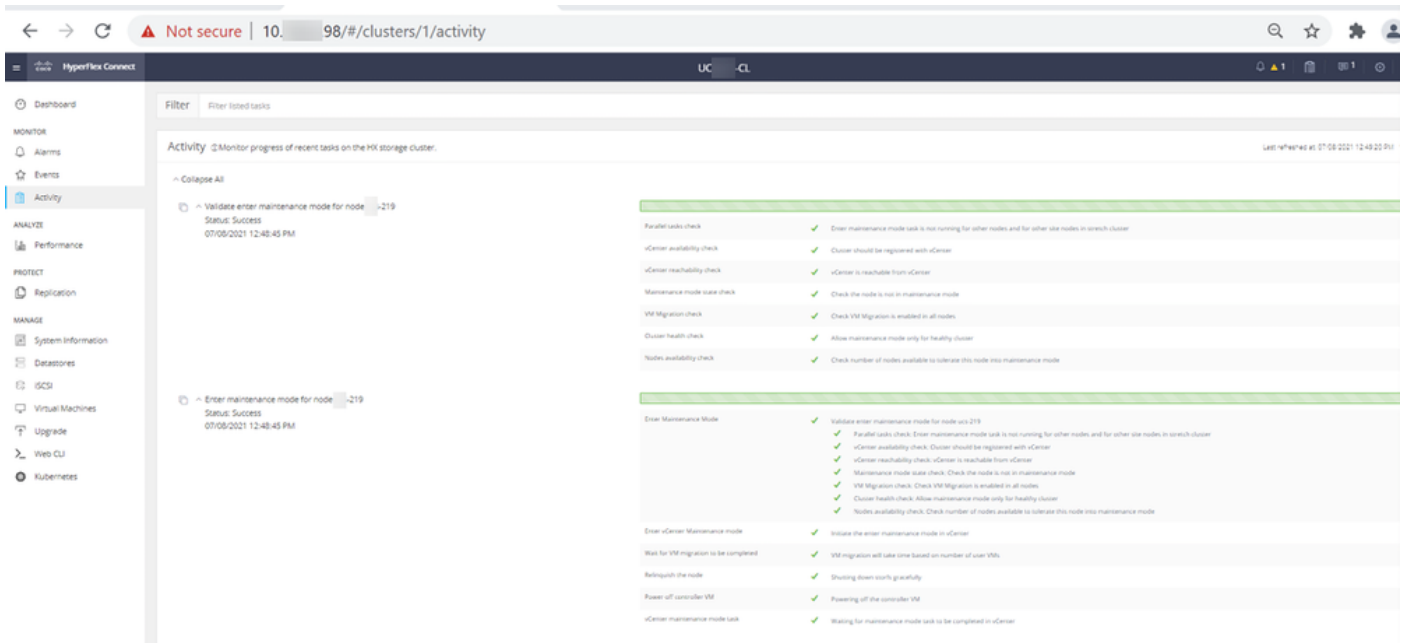


HX connect nodes



HX connect maintenance mode popup

You can see the activity complete under the **Activity** tab as shown in the image:



## HX connect Activity tab

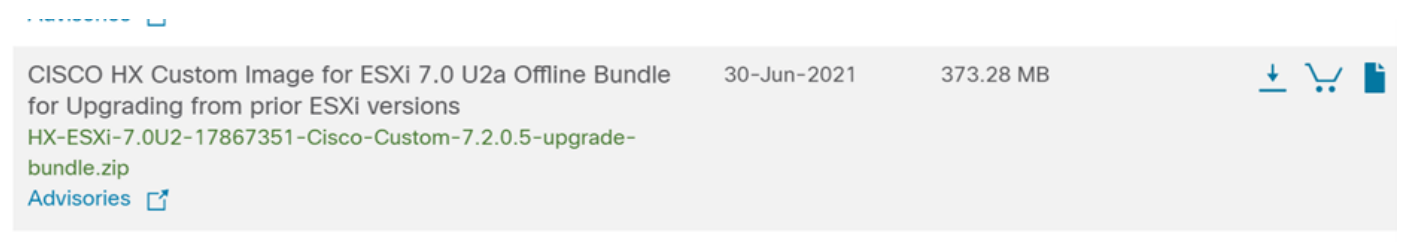
Step 3. Secure Shell (SSH) into the ESXi host placed into Maintenance Mode as root.

Step 4. Create a folder and upload ESXi package into it.

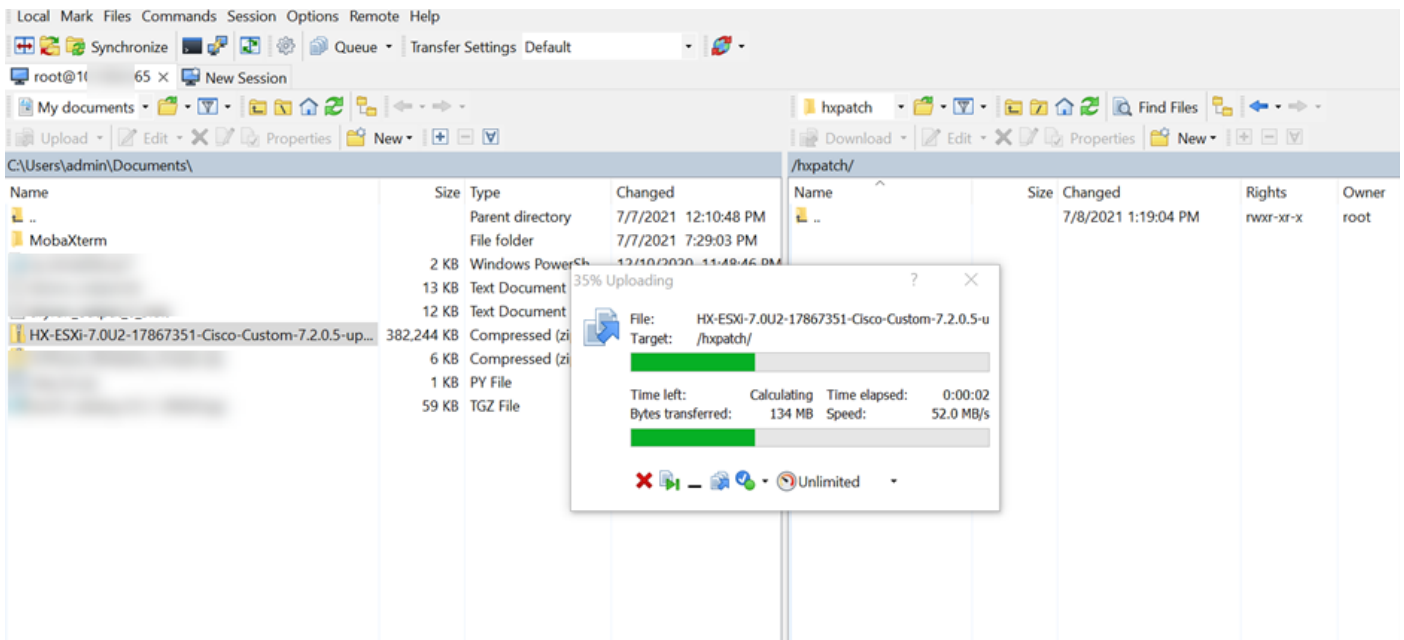
Step 4.1. Run the command: **mkdir /hpatch**

Step 4.2. Create a ramdisk to store package with the command: **esxcli system visorfs ramdisk add -m 500 -M 500 -n hpatch -t /hpatch -p 0755.**

Step 5. Download ESXi-7.2.0.5 package from cisco downloads to a local repo with the link [https://software.cisco.com/download/home/286305544/type/286305994/release/4.5\(2a\)](https://software.cisco.com/download/home/286305544/type/286305994/release/4.5(2a)) as shown in the image:



Step 5.1. Copy package from the local repo to **/hpatch** folder. The example below uses WinSCP:



Step 6. SSH back into the host in maintenance mode.

Step 7. Run this command in order to view the package profile details: **esxcli software sources profile list --depot=/hpatch/HX-ESXi-7.0U2-17867351-Cisco-Custom-7.2.0.5-upgrade-bundle.zip** as shown in the image:

```
[root@-220:/hpatch] esxcli software sources profile list --depot=/hpatch/HX-ESXi-7.0U2-17867351-Cisco-Custom-7.2.0.5-upgrade-bundle.zip
```

| Name  | Vendor | Acceptance Level | Creation Time       | Modification Time   |
|---|--------|------------------|---------------------|---------------------|
| HX-ESXi-7.0U2-17867351-Cisco-Custom-7.2.0.5 | Cisco  | PartnerSupported | 2021-04-29T18:21:43 | 2021-04-29T18:21:43 |

```
[root@-220:/hpatch]
```

Step 8. Run this command to upgrade ESXi package to 7.0 U2:

```
esxcli software profile update --allow-downgrades -d /hpatch/HX-ESXi-7.0U2-17867351-Cisco-Custom-7.2.0.5-upgrade-bundle.zip -p HX-ESXi-7.0U2-17867351-Cisco-Custom-7.2.0.5 --no-hardware-warning
```

Step 9. Reboot the host.

Step 10. SSH into the host and verify the version with the command: **vmware -v**.

The time and date of this login have been sent to the system logs.

**WARNING:**

All commands run on the ESXi shell are logged and may be included in support bundles. Do not provide passwords directly on the command line. Most tools can prompt for secrets or accept them from standard input.

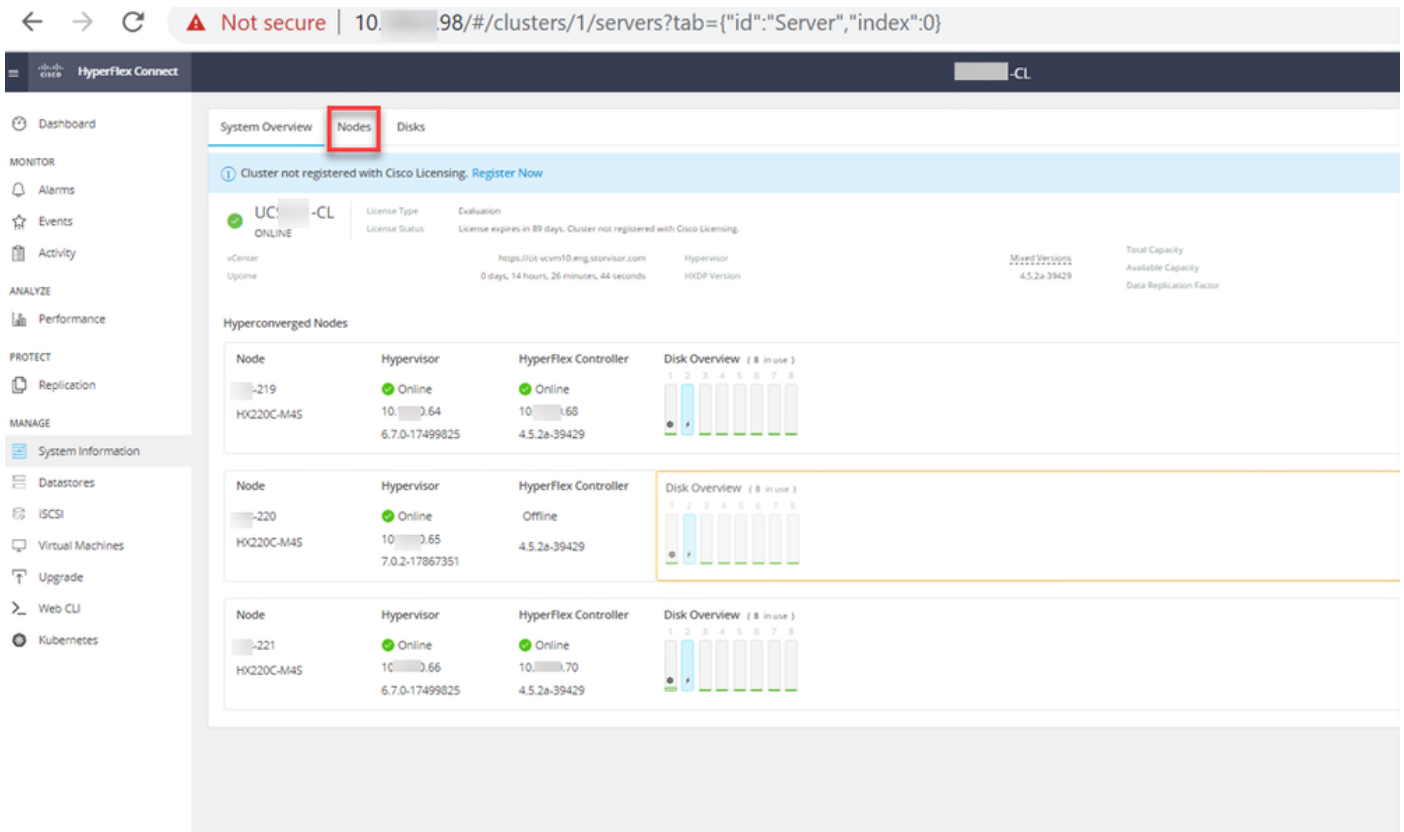
VMware offers supported, powerful system administration tools. Please see [www.vmware.com/go/sysadmintools](http://www.vmware.com/go/sysadmintools) for details.

The ESXi Shell can be **disabled** by an administrative user. See the vSphere Security documentation for more [information](#).

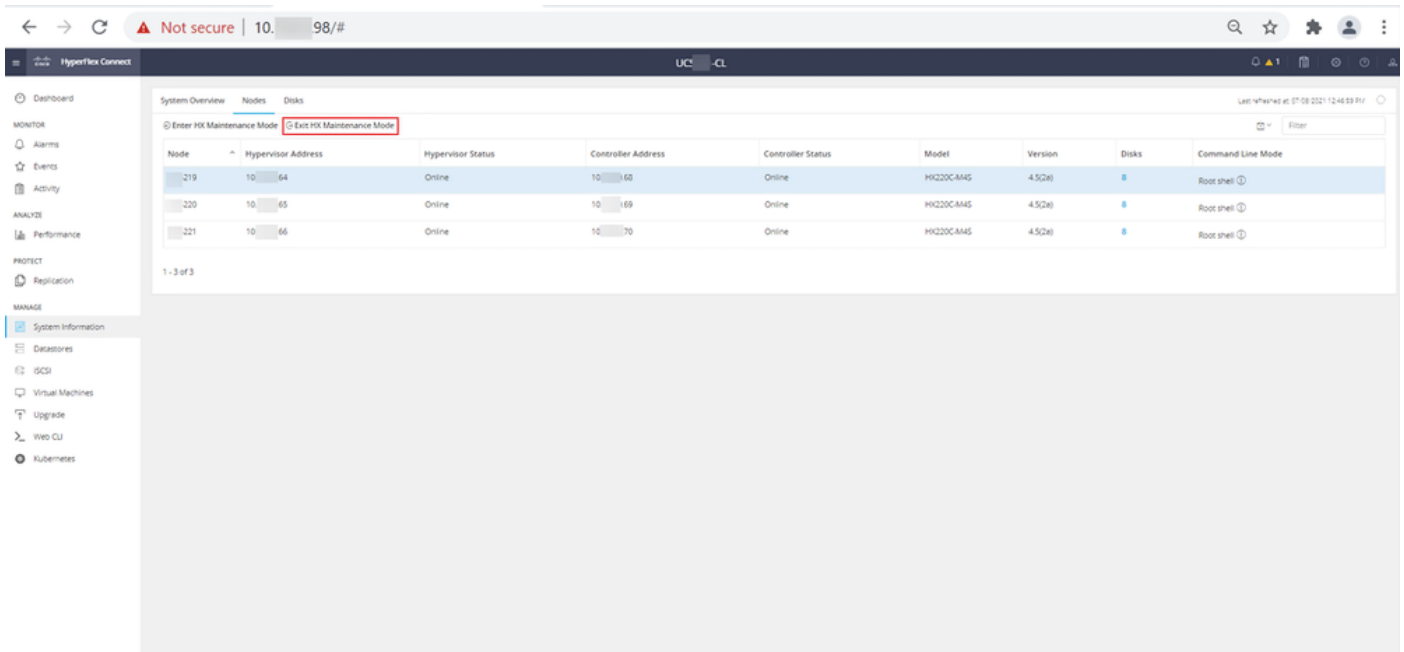
```
[root@-220:~] vmware -v
VMware ESXi 7.0.2 build-17867351
[root@-220:~]
```

Step 11. Exit the node from maintenance mode and wait for the cluster to become healthy.

Step 11.1. Open the HX-Connect, choose **System Information > Nodes**, choose the node in maintenance mode and click **Exit HX Maintenance Mode** as shown in the images:

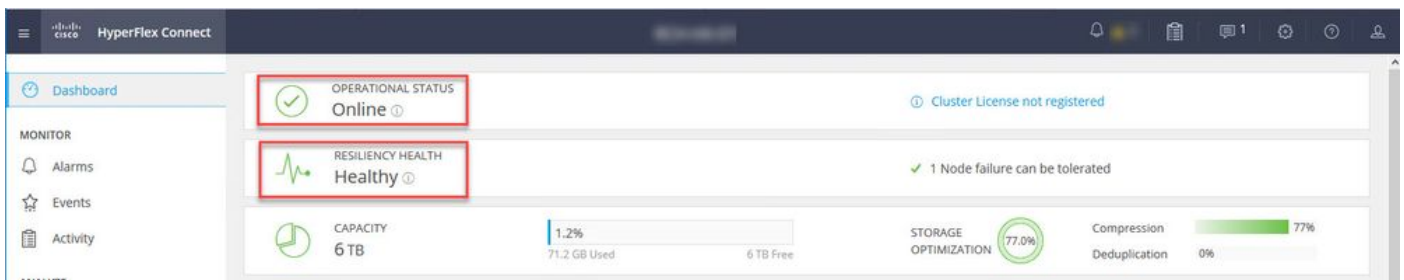


HX connect Nodes



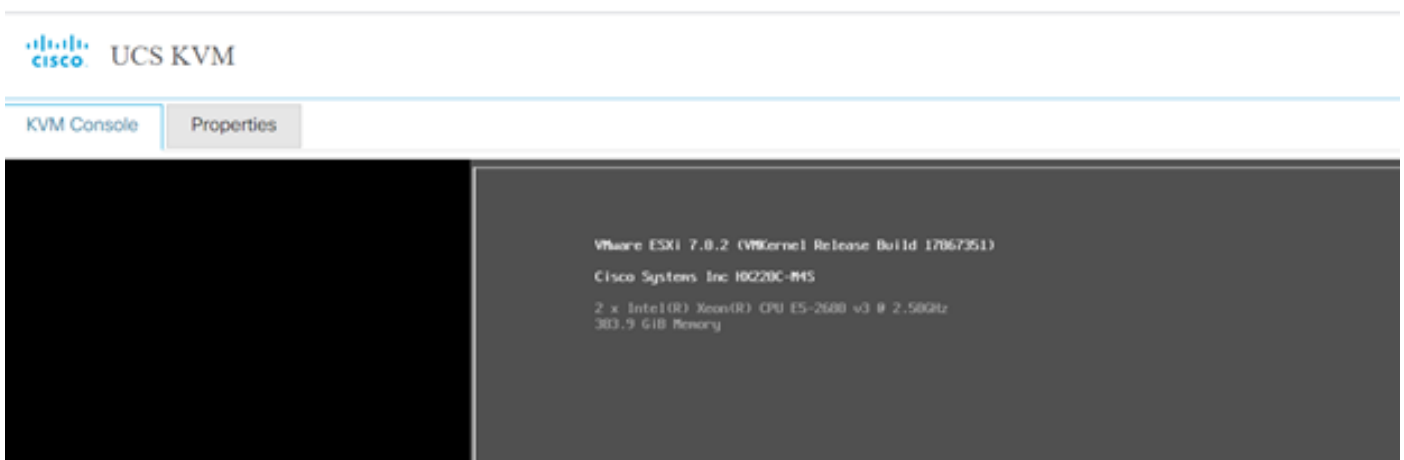
## HX connect Exit MM

Step 11.2. The HX Connect Dashboard shows you the Operational Status, it must be **Online**, and the Resiliency Health must be **Healthy**.



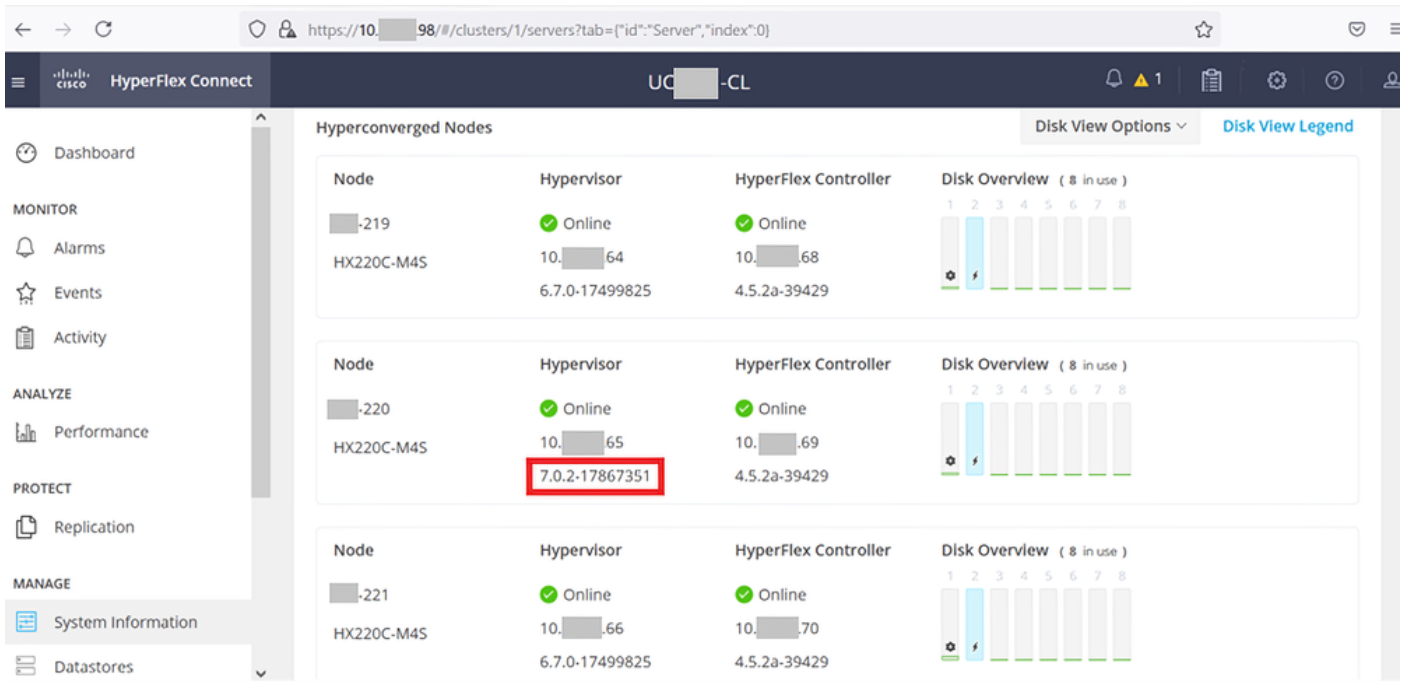
Step 12. Repeat steps 2-11 on all nodes which are part of the cluster, one at a time.

Once the ESXi upgrade is complete, you can see the version details on the Keyboard, Video, Mouse (KVM) console of the HX Server as shown in the image:



You can also verify within HX Connect that the new ESXi version is present on the **System Information** tab as shown in the image:



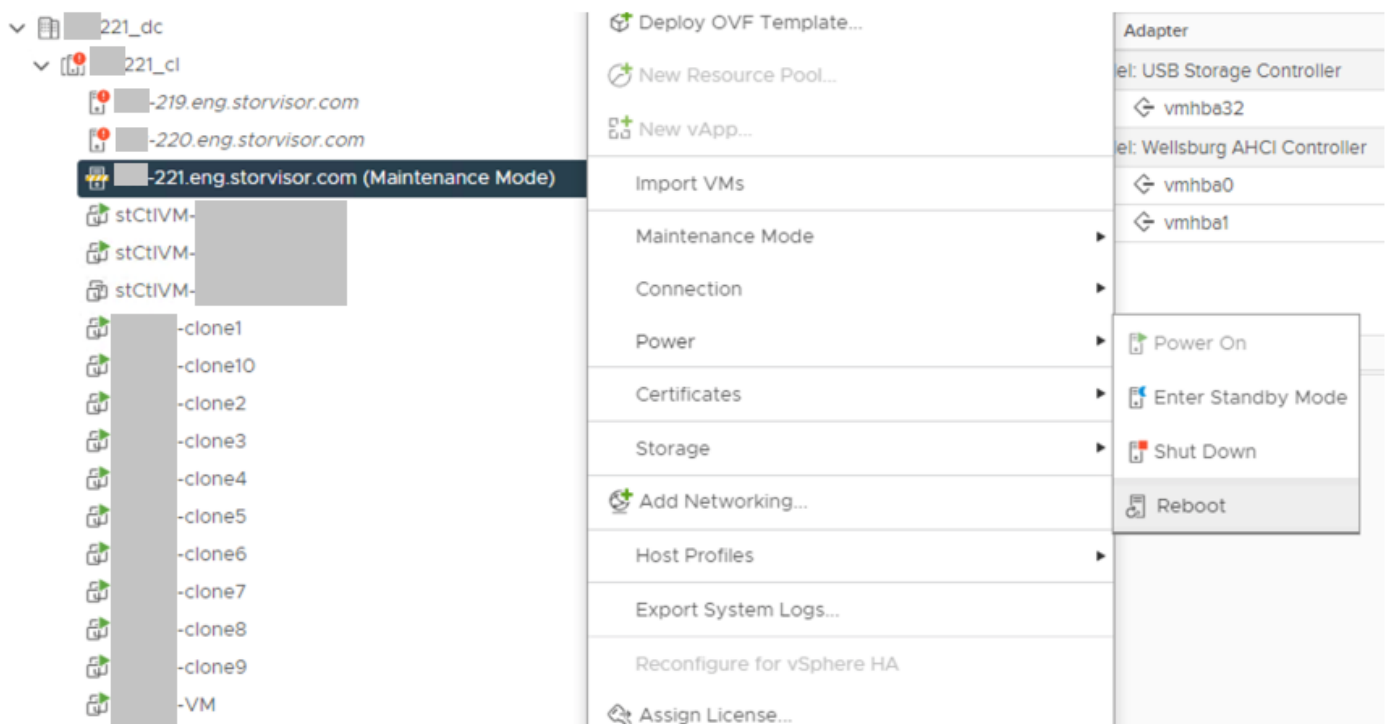


HX connect updated Esxi

## Scenario B. HXDP + ESXi Combined Upgrade From Intersight

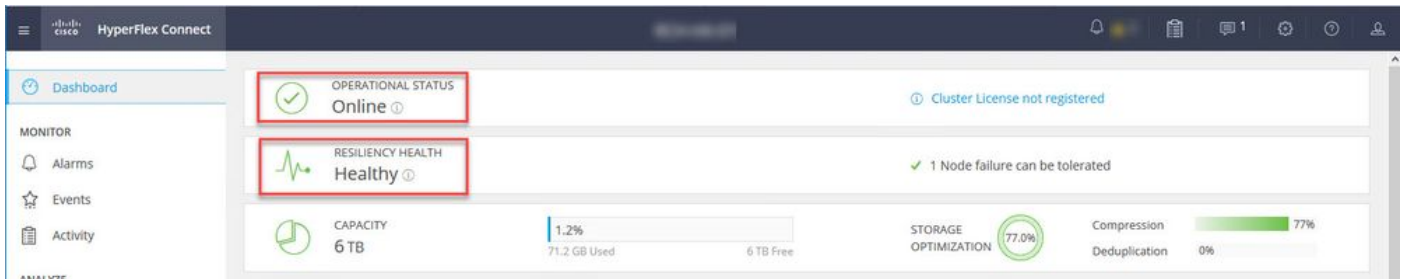
For this scenario, you upgrade HXDP to 4.5(2a) and ESXi to 7.0 U2 Build 17867351 from Intersight.

Step 1. If one of the HX servers is in maintenance mode, then reboot this server through vCenter or ucs KVM console.

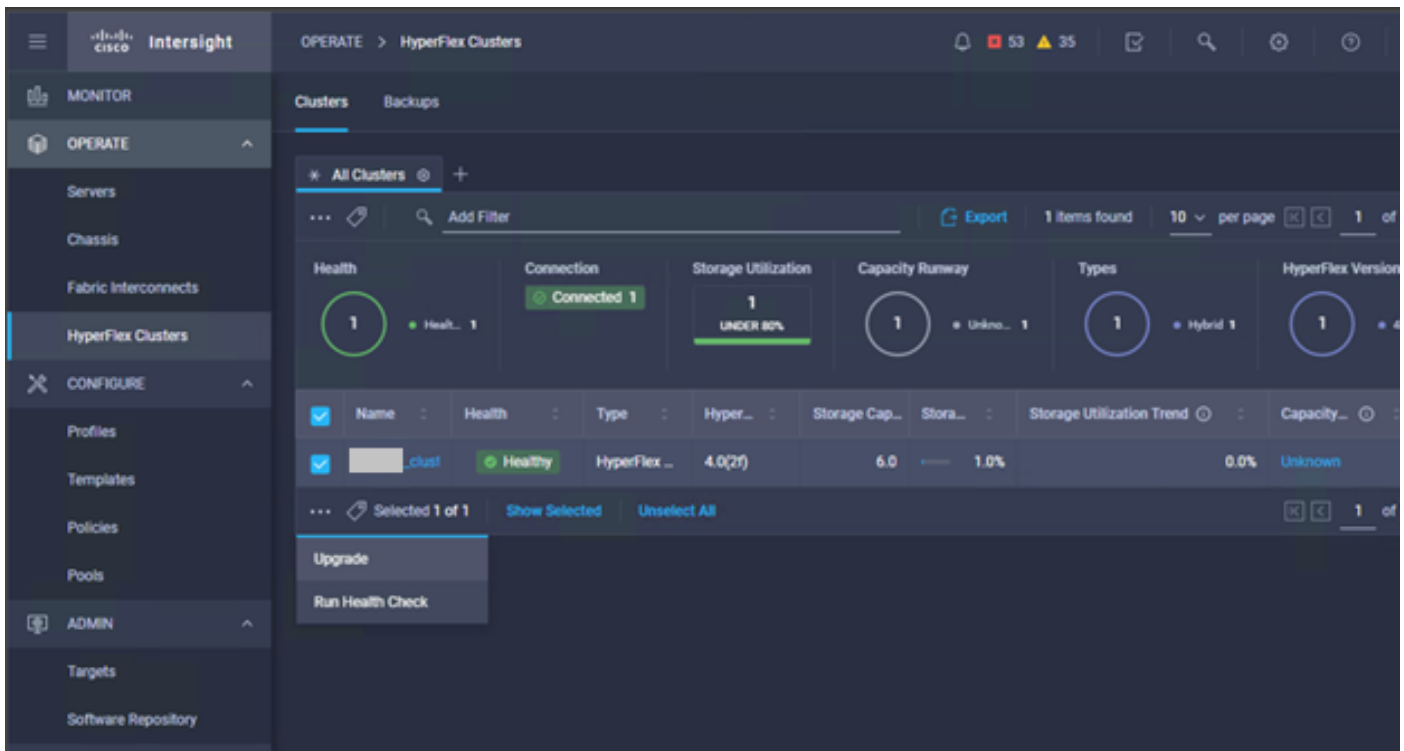


Step 2. Once the Server has been rebooted, exit HX Maintenance Mode from the HX Connect UI. Open the HX-Connect, select **System Information > Nodes**, choose the node in maintenance mode and click **Exit HX Maintenance Mode**.

Step 3. Allow a few minutes for the Hyperflex Cluster to complete healing. The HX Connect **Dashboard** shows you the Operational Status, it must be **Online**, and the Resiliency Health must show **Healthy**.



Step 4. Open Intersight, choose **Upgrade**, click **Expert Mode > Upgrade HyperFlex Data Platform** as shown in the images:



Intersight HyperFlex Cluster Upgrade

MONITOR OPERATE CONFIGURE ADMIN

Progress

1 Version Selection  
2 Compatibility Check  
3 Summary

Step 1  
**Version Selection**  
Select the desired upgrade bundle

Settings Expert Mode

Upgrade HyperFlex Data Platform

HyperFlex Data Platform Version \*

- 4.5(2a)
- 4.5(1a)
- 4.0(2f)
- 4.0(2e)
- 4.0(2d)

Upgrade Hypervisor

Intersight HyperFlex Cluster Upgrade

MONITOR OPERATE CONFIGURE ADMIN

Progress

1 Version Selection  
2 Compatibility Check  
3 Summary

Step 2  
**Compatibility Check**  
Ensure all clusters meet the upgrade requirements. If any cluster does not meet the pre-upgrade requirements, unselect the cluster and continue with the upgrade.

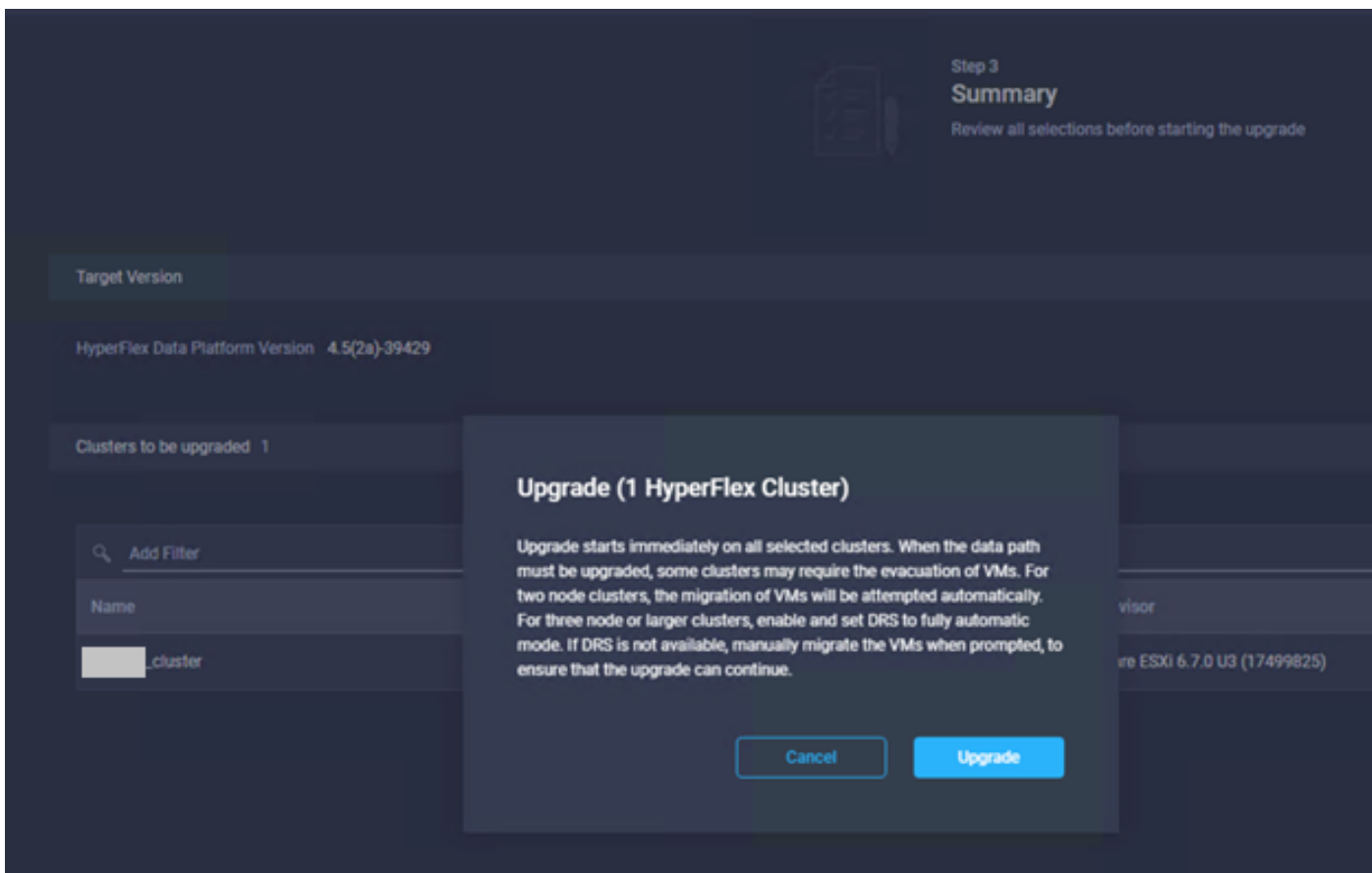
All clusters meet upgrade requirements

1 items found 10 per page 1 of 1

Add Filter

| <input checked="" type="checkbox"/> | Name     | HyperFlex Data Platf... | Hypervisor                      |
|-------------------------------------|----------|-------------------------|---------------------------------|
| <input checked="" type="checkbox"/> | _cluster | 4.0.2f-35930            | VMware ESXi 6.7.0 U3 (17499825) |

Selected 1 of 1 Show Selected Unselect All

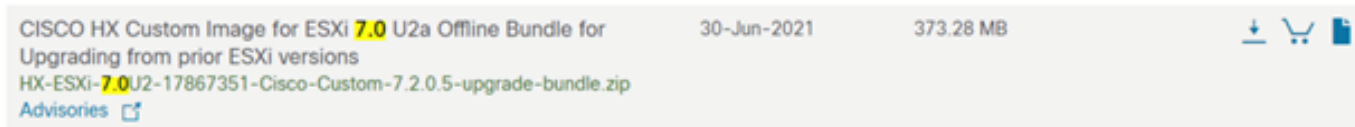


Step 5. You can observe the Upgrade start and then finish:



Step 6. Start the ESXi upgrade for each server. Copy the ESXi 7.0 U2 upgrade bundle to the ESXi hosts.

Step 6.1. Download the ESXi 7.0U2 upgrade bundle from cisco downloads with the link: [https://software.cisco.com/download/home/286305544/type/286305994/release/4.5\(2a\)](https://software.cisco.com/download/home/286305544/type/286305994/release/4.5(2a)):



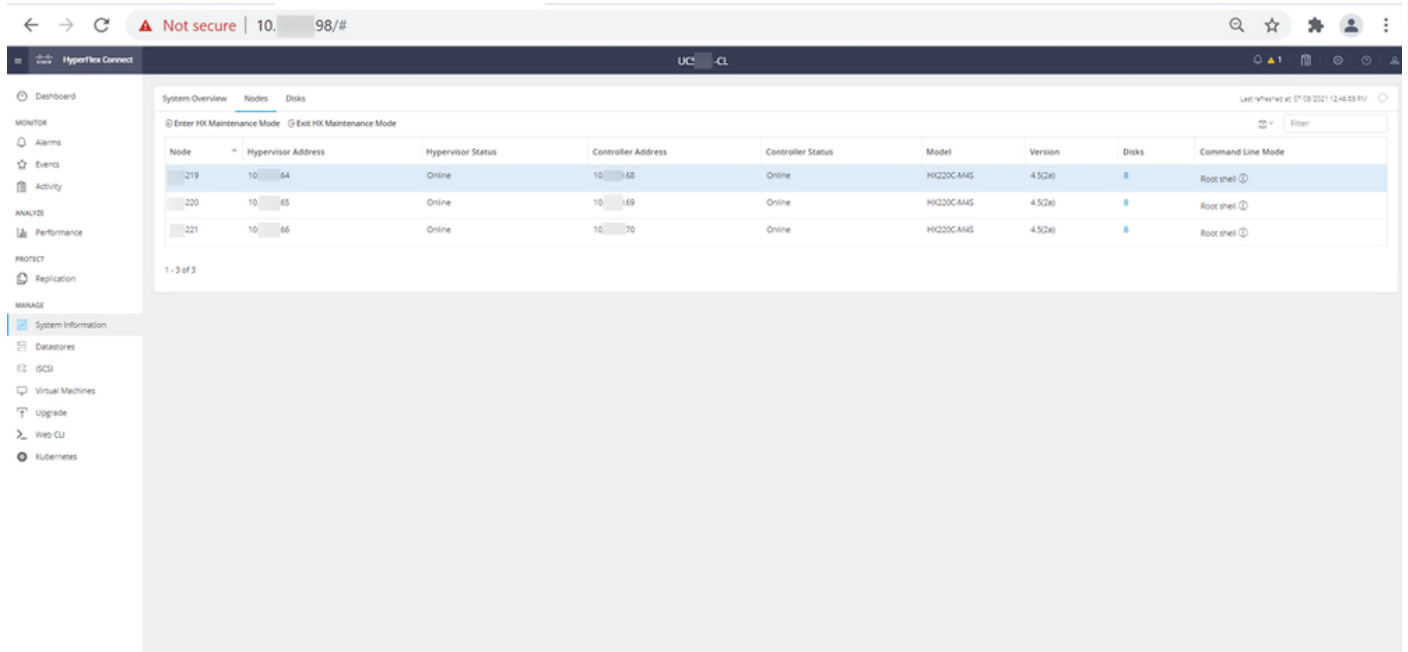
Step 6.2. On each ESXi host, copy the ESXi 7.0U2 upgrade bundle into an available datastore directory (use methods such as scp, wget). Once complete, you must see:

```
[root@ucs-221:/vmfs/volumes] pwd
/vmfs/volumes

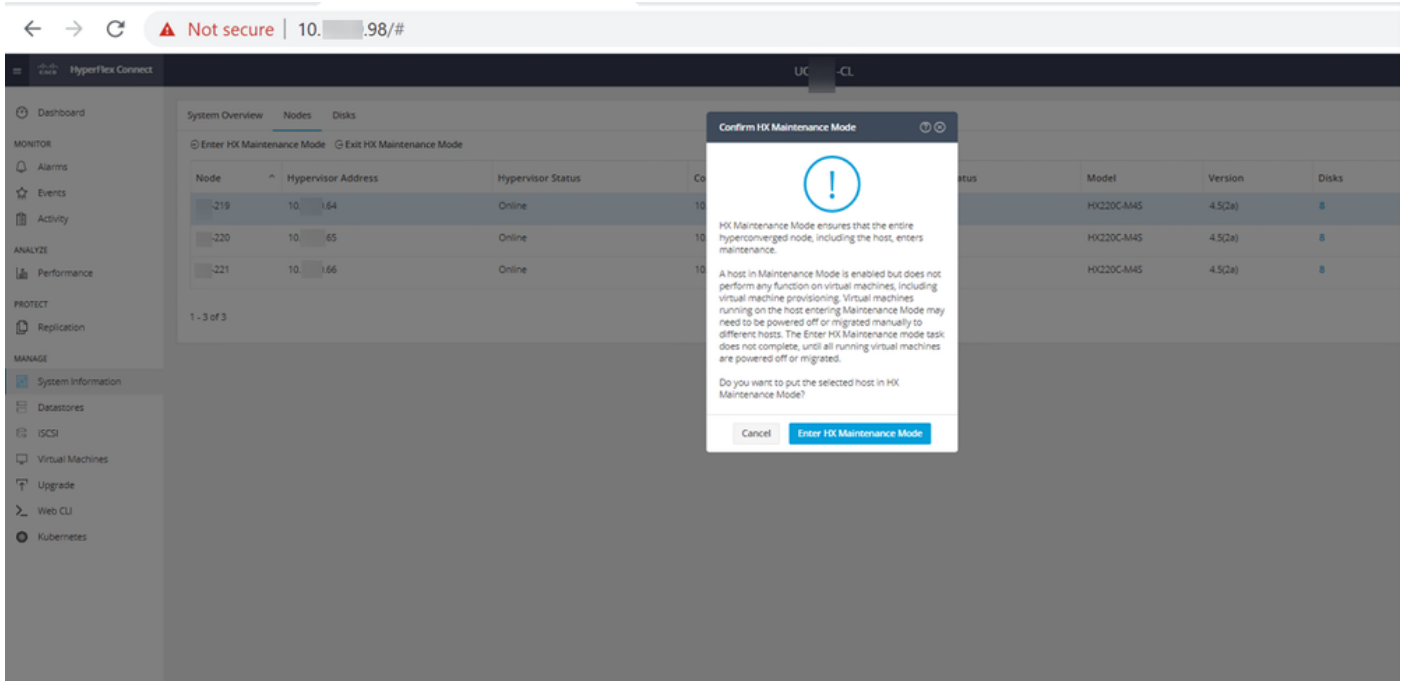
[root@ucs-221:/vmfs/volumes] ls
MyDataStore                               60ee5dfc-6f05dc8b-05cf-0025b5b1a116
60ef8a79-63aadd3f-ee0d-0025b5b1a116      BOOTBANK2
SpringpathDS-FCH2008V1M1
..
[root@ucs-221:/vmfs/volumes] cd MyDataStore /
[root@ucs-221:/vmfs/volumes/ac08f584-9a2f8a67] ls -al
total 0
drwx----- 1 root root          686 Jul 14 05:19 .
drwxr-xr-x  1 root root          512 Jul 15 01:21 ..
-rw-r--r--  1 root root 391417386 Jul 15 00:55 HX-ESXi-7.0U2-17867351-Cisco-Custom-7.2.0.5-upgrade-bundle.zip
drwxr-xr-x  1 root root          2793 Jul 14 20:03 ucs221-VM

[root@ucs-221:/vmfs/volumes/ac08f584-9a2f8a67] pwd
/vmfs/volumes/ MyDataStore
```

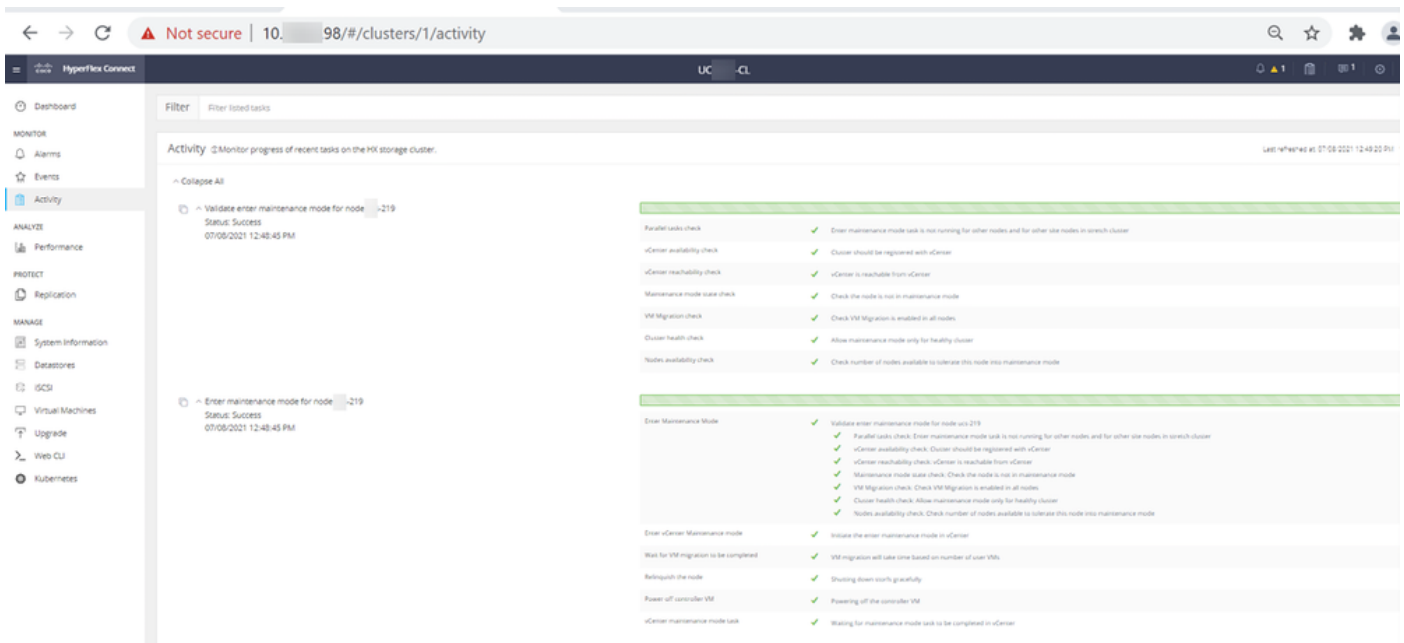
Step 7. Open the HX-Connect, choose **System information > Nodes**, choose the node which you want to upgrade Esxi on and click **Enter HX Maintenance Mode** as shown in the images:



HX connect Nodes



You can see the activity complete under the **Activity** tab as shown in the image:



Step 8. SSH into the ESXi host which is in HX Maintenance Mode.

Step 8.1. Find the upgrade bundle profile name:

```
[root@abcd-221:/vmfs/volumes/ac08f584-9a2f8a67] esxcli software sources profile list --
depot=/vmfs/volumes/0714051143/HX-ESXi-7.0U2-17867351-Cisco-Custom-7.2.0.5-upgrade-bundle.zip
Name                               Vendor  Acceptance Level  Creation Time
Modification Time
-----
HX-ESXi-7.0U2-17867351-Cisco-Custom-7.2.0.5  Cisco  PartnerSupported  2021-04-29T18:21:43
2021-04-29T18:21:43
```

Step 8.2. Execute the upgrade command with the **no-hardware-warning** parameter specified:

```
[root@abcd-221:/vmfs/volumes/ac08f584-9a2f8a67] esxcli software profile update --
depot=/vmfs/volumes/0714051143/HX-ESXi-7.0U2-17867351-Cisco-Custom-7.2.0.5-upgrade-bundle.zip --
profile HX-ESXi-7.0U2-17867351-Cisco-Custom-7.2.0.5 --no-hardware-warning
```

Step 8.3. You see a success message once the upgrade completes:

Update Result

Message: The update completed successfully, but the system needs to be rebooted for the changes to be effective.

Reboot Required: true

Step 9. Reboot the host.

Step 10. Log in into the ESXi host and verify the new version with the command: **vmware -v**.

The time and date of this login have been sent to the system logs.

**WARNING:**

All commands run on the ESXi shell are logged and may be included in support bundles. Do not provide passwords directly on the command line. Most tools can prompt for secrets or accept them from standard input.

VMware offers supported, powerful system administration tools. Please see [www.vmware.com/go/sysadmintools](http://www.vmware.com/go/sysadmintools) for details.

The ESXi Shell can be **disabled** by an administrative user. See the vSphere Security documentation for more [information](#).

```
[root@-220:~] vmware -v
VMware ESXi 7.0.2 build-17867351
[root@-220:~] █
```

Step 11. Once the Server has been rebooted, exit **HX Maintenance Mode** from the HX Connect UI. Open the HX-Connect, choose **System Information > Nodes**, choose the node in maintenance mode and click **Exit HX Maintenance Mode** as shown in the images:

← → ↻ Not secure | 10.98/#/clusters/1/servers?tab={"id":"Server","index":0}

HyperFlex Connect -CL

System Overview **Nodes** Disks

Cluster not registered with Cisco Licensing. Register Now

UC: ONLINE License Type Evaluation License Status License expires in 89 days. Cluster not registered with Cisco Licensing.

vCenter: https://flok-vcvm10.eng.storvisor.com Hypervisor: VMware ESXi 6.5U2-39429  
 Uptime: 0 days, 14 hours, 26 minutes, 44 seconds 10DP Version: 4.5.2a-39429  
 Total Capacity: Available Capacity: Data Replication Factor

Hyperconverged Nodes

| Node              | Hypervisor              | HyperFlex Controller    | Disk Overview (8 in use) |
|-------------------|-------------------------|-------------------------|--------------------------|
| 219<br>HX220C-M45 | 10.64<br>6.7.0-17499825 | 10.68<br>4.5.2a-39429   |                          |
| 220<br>HX220C-M45 | 10.65<br>7.0.2-17867351 | Offline<br>4.5.2a-39429 |                          |
| 221<br>HX220C-M45 | 10.66<br>6.7.0-17499825 | 10.70<br>4.5.2a-39429   |                          |

← → ↻ Not secure | 10.98/#

HyperFlex Connect UC: -CL

System Overview Nodes Disks

Enter HX Maintenance Mode **Exit HX Maintenance Mode**

| Node | Hypervisor Address | Hypervisor Status | Controller Address | Controller Status | Model      | Version | Disks | Command Line Mode |
|------|--------------------|-------------------|--------------------|-------------------|------------|---------|-------|-------------------|
| 219  | 10.64              | Online            | 10.68              | Online            | HX220C-M45 | 4.5.2a  | 8     | Root shell        |
| 220  | 10.65              | Online            | 10.69              | Online            | HX220C-M45 | 4.5.2a  | 8     | Root shell        |
| 221  | 10.66              | Online            | 10.70              | Online            | HX220C-M45 | 4.5.2a  | 8     | Root shell        |

1 - 3 of 3

HX connect exit MM

Step 12. Allow a few minutes for the Hyperflex Cluster to complete healing. The HX Connect **Dashboard** shows you the Operational Status, it must be **Online**, and the Resiliency Health must show **Healthy**.

HyperFlex Connect

Dashboard

**OPERATIONAL STATUS**  
Online

Cluster License not registered

**RESILIENCY HEALTH**  
Healthy

1 Node failure can be tolerated

CAPACITY: 6 TB (1.2% Used, 71.2 GB Used, 6 TB Free)

STORAGE OPTIMIZATION: 77.0% (Compression: 77%, Deduplication: 0%)



Step 13. Repeat Steps 6.-12. for each ESXi host 1 at a time. Ensure that the cluster state shows **Healthy** before you move on to the next node.