HyperFlex Upgrade Testing

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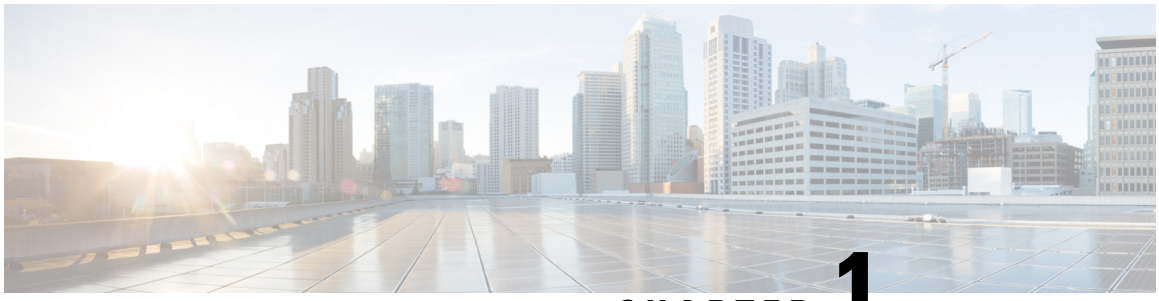


CHAPTER 1

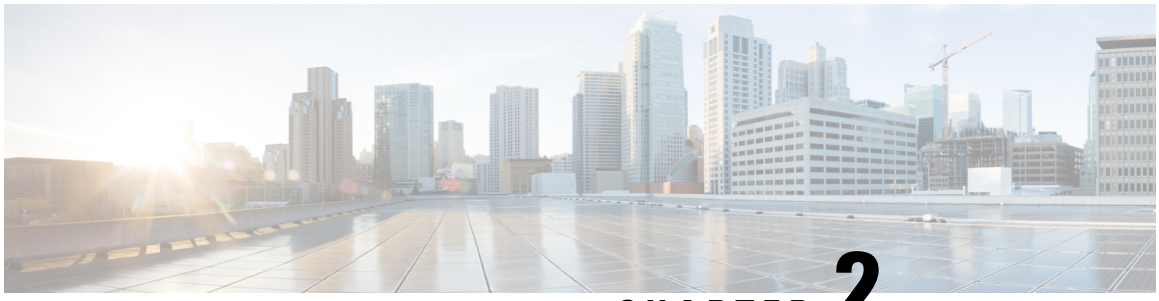
HyperFlex Upgrade Testing

Overview

Cisco HyperFlex Upgrade testing validates the upgrade of HyperFlex system from HXDP 2.6(1e)/3.0(1i)/3.5(2g) to HXDP 4.0(2a). This program also validates the upgrade of ESXi (6.0 U3 to 6.5 U3 and 6.5 U3 to 6.7 U3) installed on the HyperFlex nodes.

Acronyms

Acronym	Description
FI	Fabric Interconnect
HX	HyperFlex
HXAF	HyperFlex All Flash
HXDP	HyperFlex Data Platform
OS	Operating System
UCS	Unified Computing System
UCSM	Unified Computing System Manager
UI	User Interface
VM	Virtual Machine

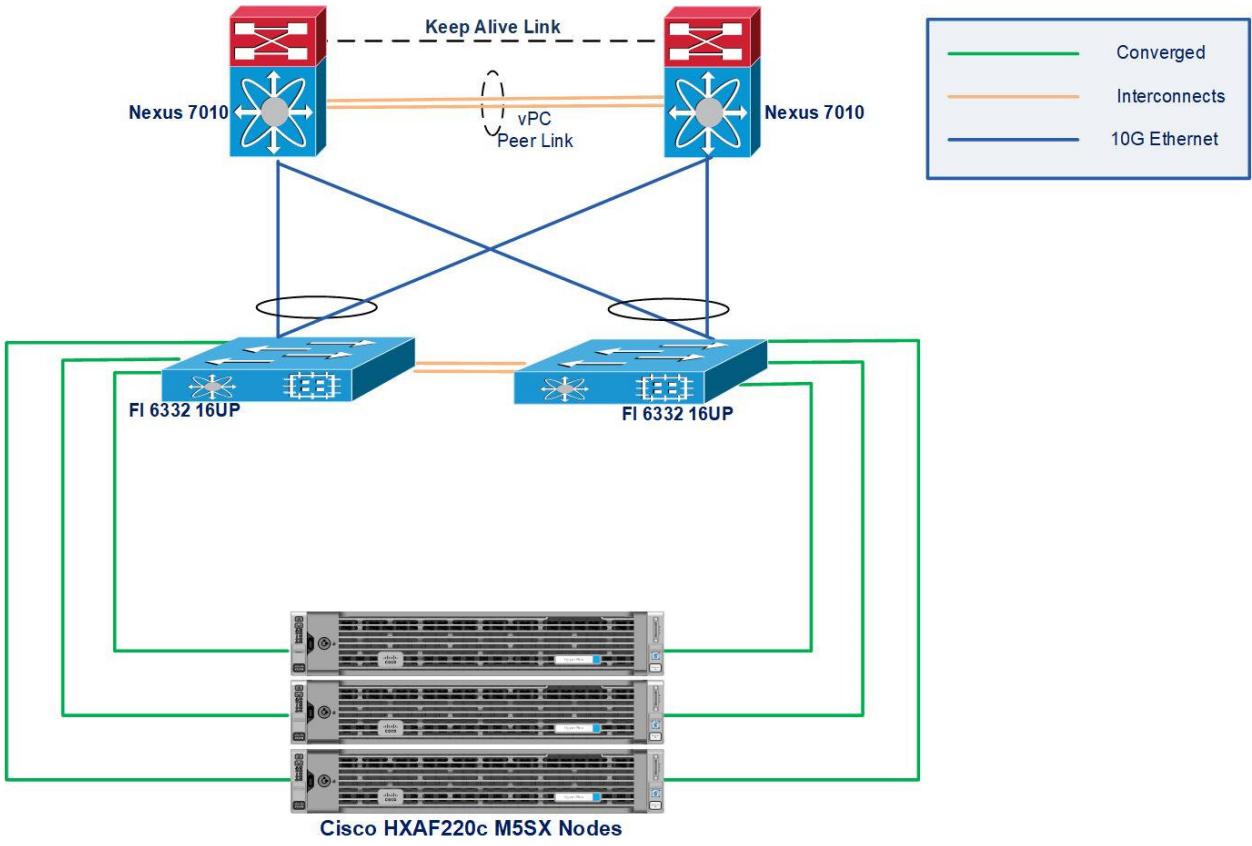


CHAPTER 2

Test Topology and Environment Matrix

Test Topology

Fig 1: Topology in Use

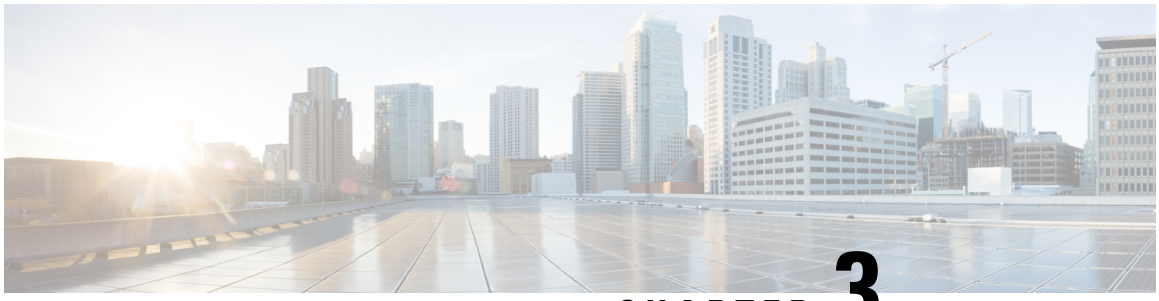


Component Matrix

Component	Model
UCS FI	6332 - 16UP
HyperFlex Serves	HXAF220c M5SX HyperFlex Nodes
UCS Servers	B200 M4 (Infra Server)

Environment Matrix

Component	Version
UCSM	4.0(4g)
ESXi	6.0 U3 - 15169789
	6.5 U3 - 15256549
	6.7 U3 - 15160138
vCenter	6.7 - 8170087
HXDP	2.6(1e) - 26812
	3.0(1i) - 29888
	3.5(2g) - 32110
	4.0(2a) - 35121
Windows Server OS	Windows Server 2016



CHAPTER 3

Test Strategy and Features Tested

Test Strategy and Features Tested

Cisco recommends upgrading the HyperFlex Components in the following order for optimizing the upgrade time:

- Upgrade Cisco UCS Infrastructure
- Upgrade Cisco HX Data Platform
- Upgrade Cisco Customized VMware ESXi
- Upgrade Cisco UCS Firmware

Upgrade Cisco UCS Infrastructure

The UCS Infrastructure has to be upgraded to the latest supported version manually before initiating the upgrade of the HyperFlex components. The Upgrade feature of the HyperFlex software will not upgrade the UCS Infrastructure.

Upgrade Cisco HX Data Platform

The Upgrade feature of HyperFlex software allows you to upgrade HXDP from versions 2.6/3.0/3.5 to version 4.0 . This includes a series of steps - Validation, Bootstrap, Pre-upgrade, Upgrade and Post Upgrade tasks. The detailed steps for the upgrade are listed in the next chapters.

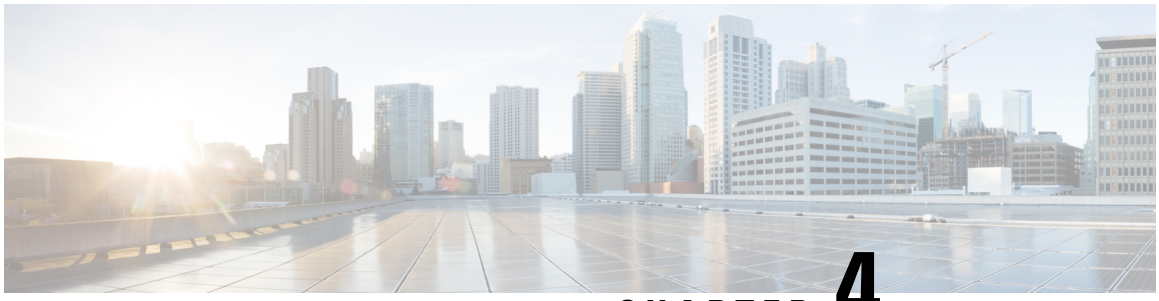
Upgarde Cisco Customized VMware ESXi

The Upgrade feature of HyperFlex software allows you to upgrade VMware ESXi from 6.0 to 6.5/6.7. This includes a series of steps - Validation and Upgrade on individual nodes in a sequence. The detailed steps for the upgrade are listed in the next chapters.

Upgrade Cisco UCS Firmware

The Upgrade feature of HyperFlex software allows you to upgrade the UCS Firmware. UCSM details need to be provided in order to perform the Firnware upgrade.

Test Strategy and Features Tested



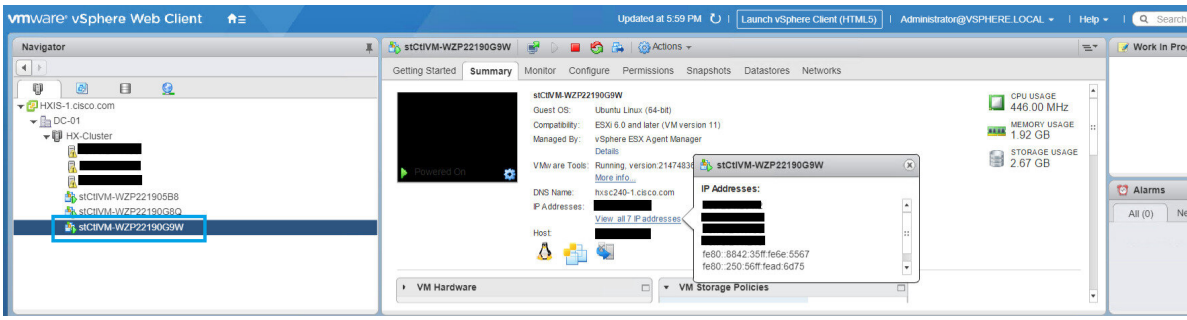
CHAPTER 4

HXDP Upgrade using HyperFlex Connect UI

HXDP Upgrade from 2.6 to 4.0

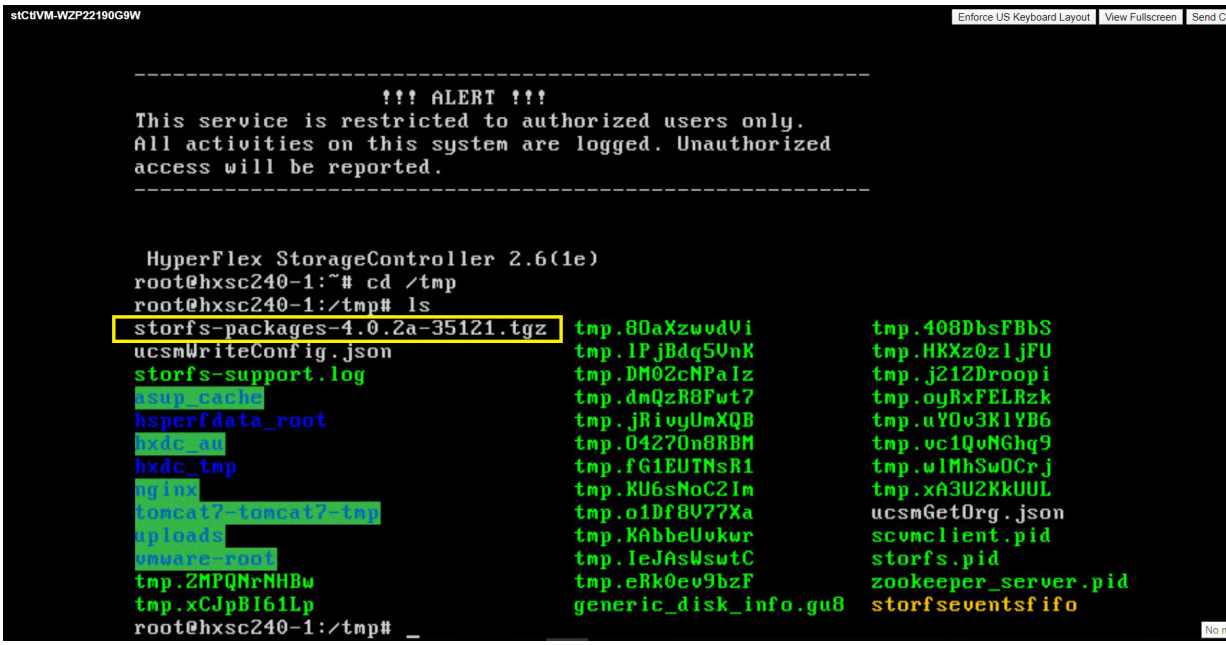
Upgrade of HXDP 2.6(1e) to HXDP 4.0(2a) needs manual bootstrap on the Controller VMs. Check for the pre-requisites are met. Please follow the below procedure for the manual Bootstrap process and the upgrade.

1. From the vCenter Server, identify the Controller VM that holds the IP address of the Cluster Management.

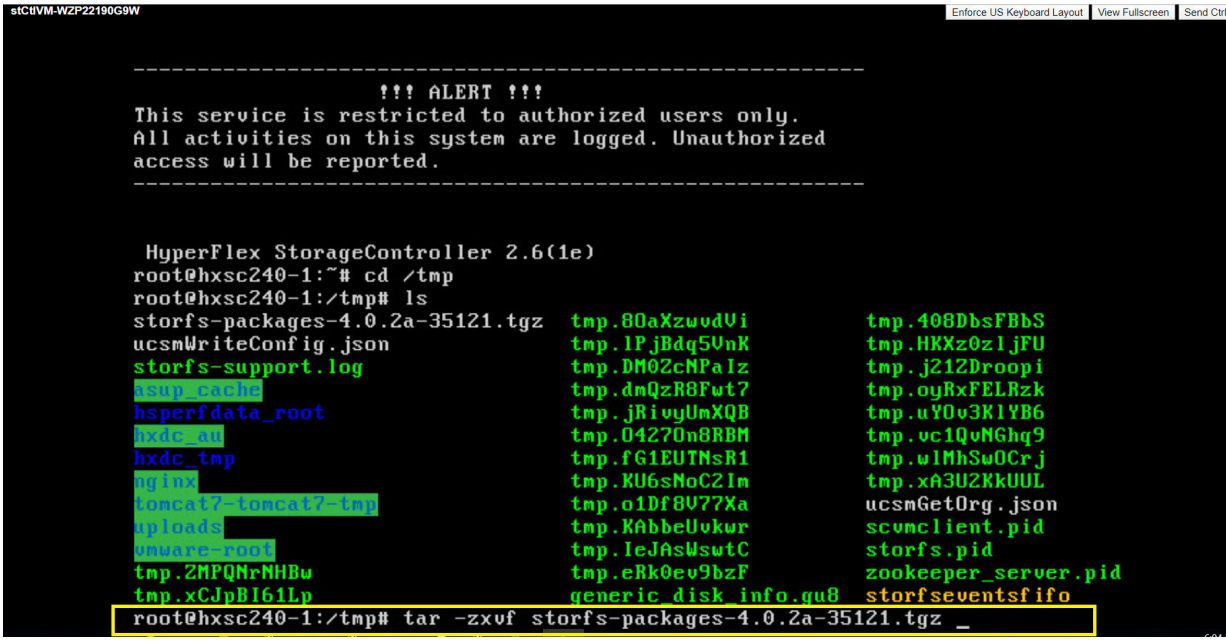


2. Using WinSCP, connect to the Cluster Management IP using the “root” credentials and transfer the HXDP Upgrade package to the “/tmp” directory. Do not create any new folders. (You can follow any other procedure to transfer the upgrade files to the “/tmp” directory.)

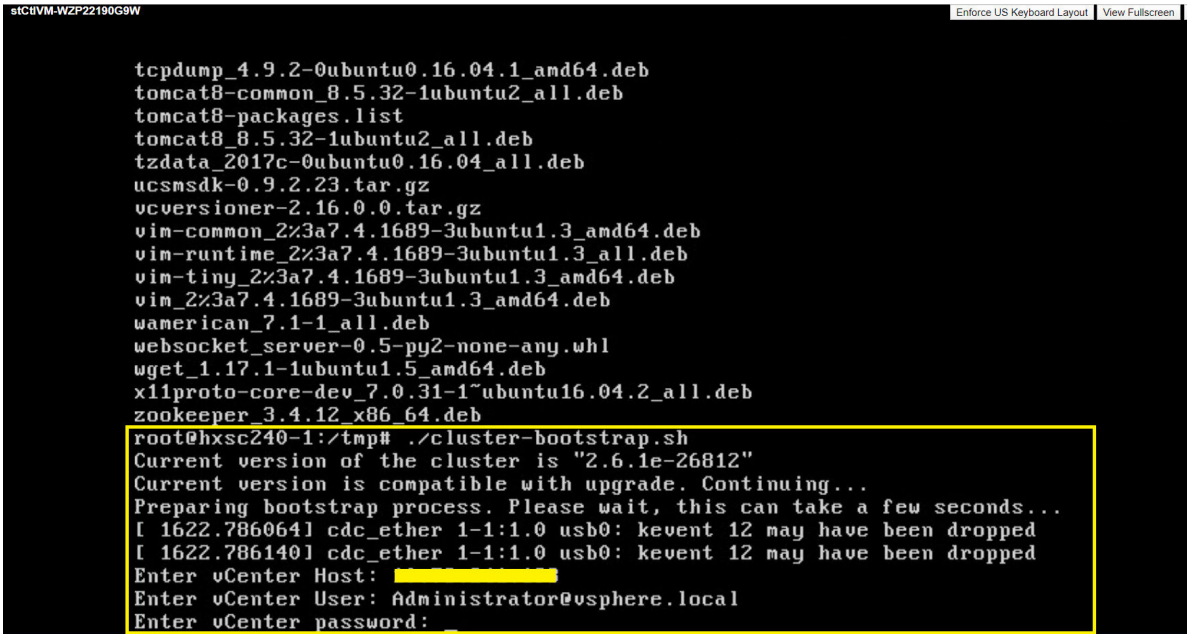
3. From vCenter clinet, open the console of the Controller VM that holds the Cluster Management IP and change to the “/tmp” directory. You can find the upgrade package transferred in the previous step.



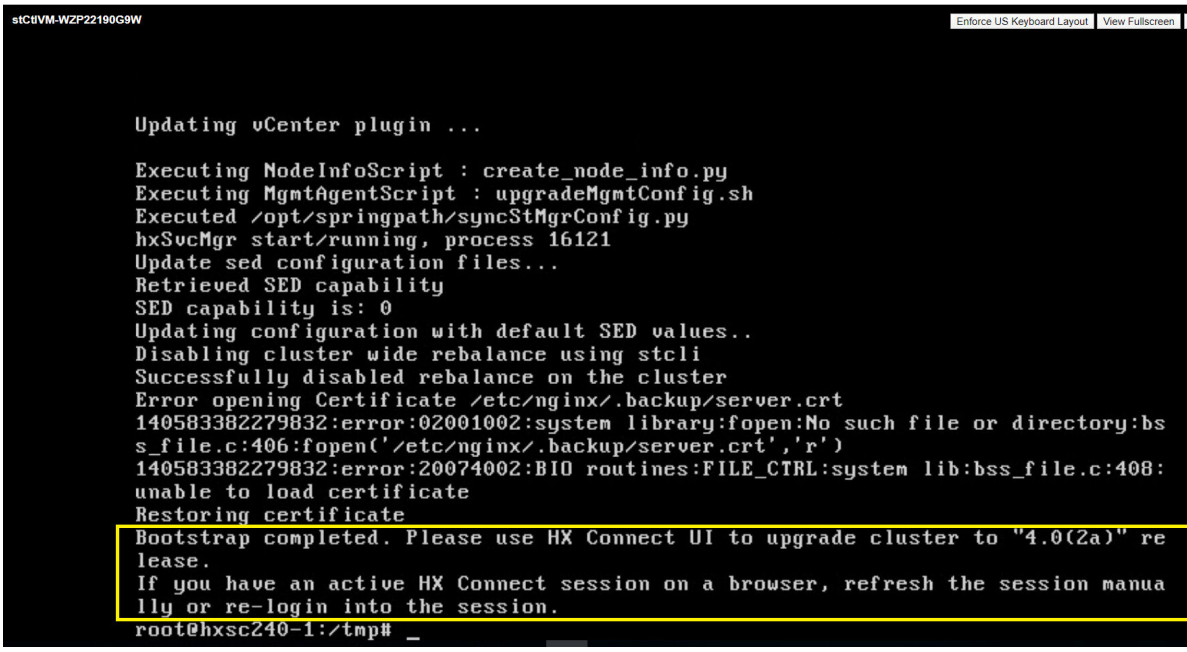
4. Un-compress the package using “tar -zxvf <upgrade-package-name>.tgz. This Un-compresses and extracts all files to the root of the “/tmp” folder.



5. Execute the “./cluster-bootstrap.sh” command to invoke the bootstrap packages for upgrade. Provide the vCenter Server IP, Username and Password as requested.

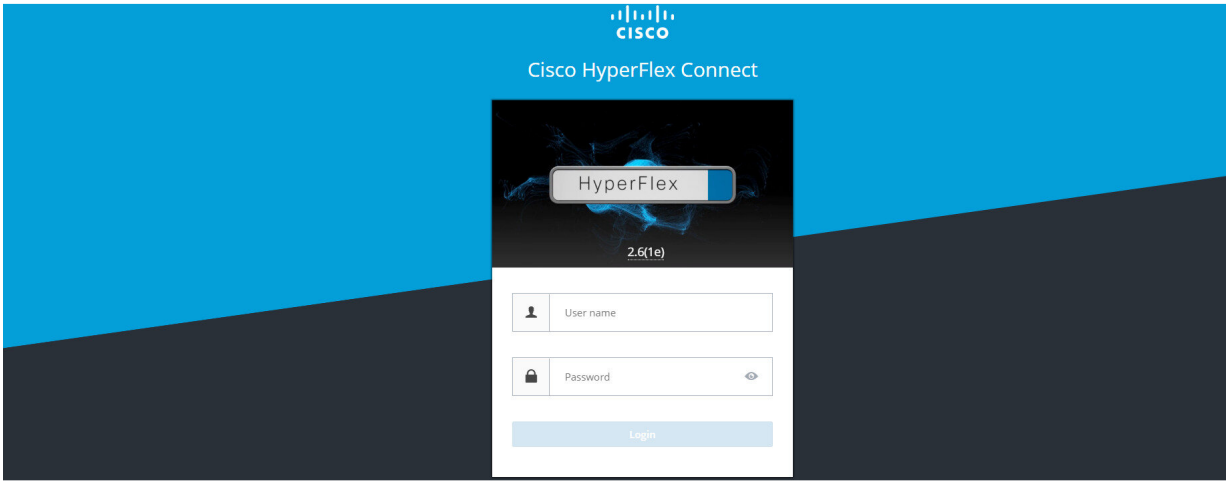


6. Wait for the bootstrap process to complete.

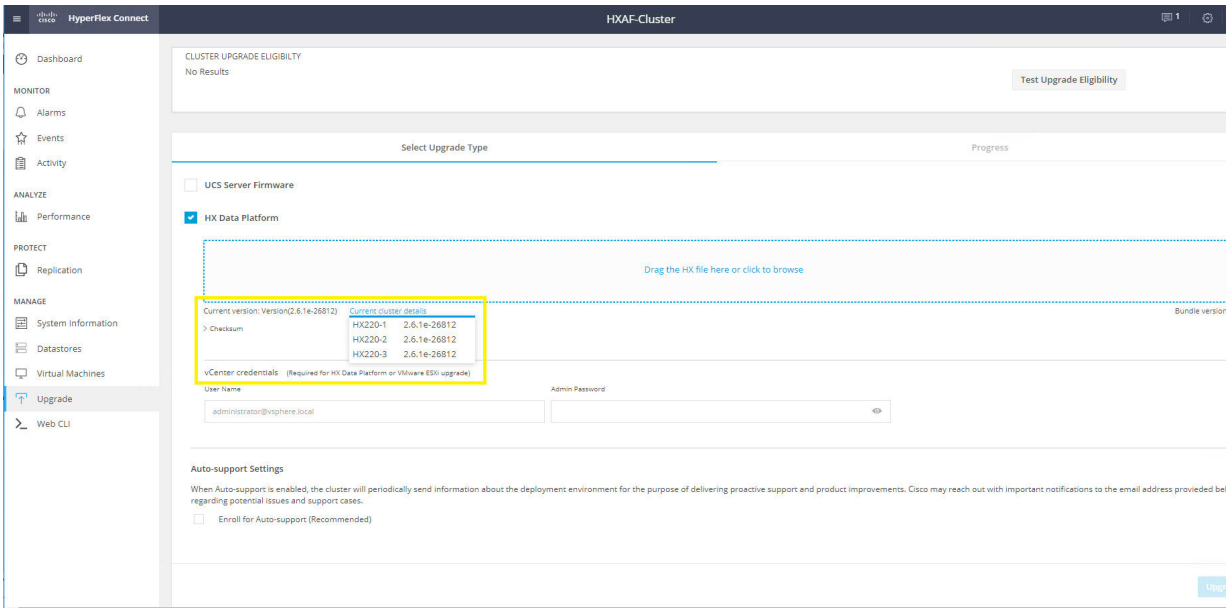


7. Once the bootstrap process is completed, refresh the vCenter and HX Connect UI.

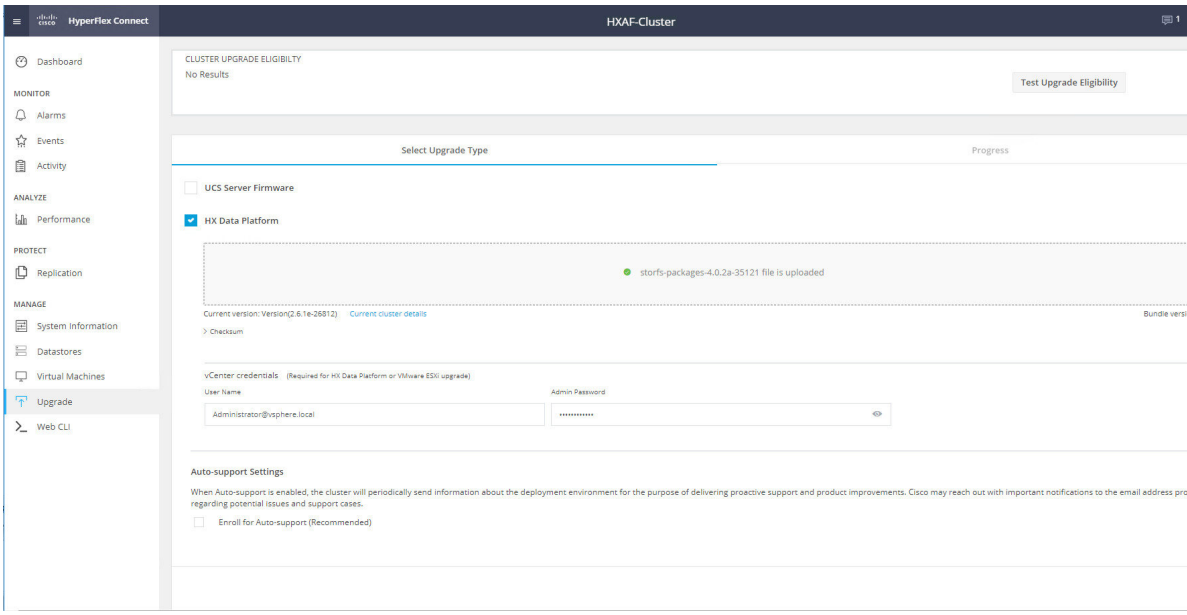
   Login again to the HX Connect UI using the credentials.



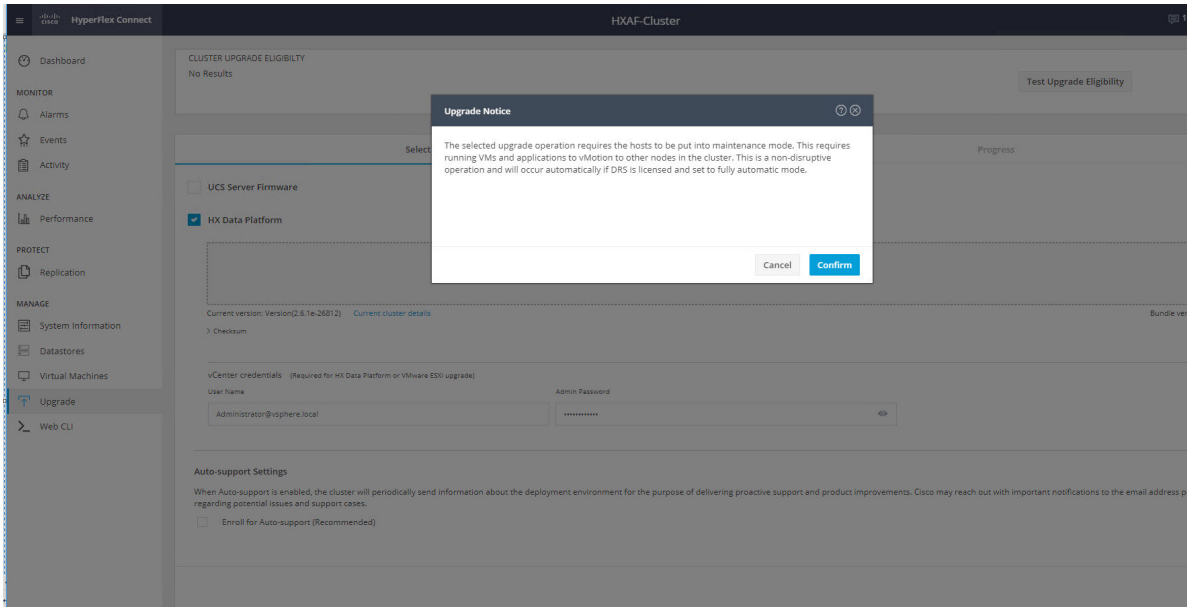
8. Click on “Upgrade” and check for the Current Cluster Version details.



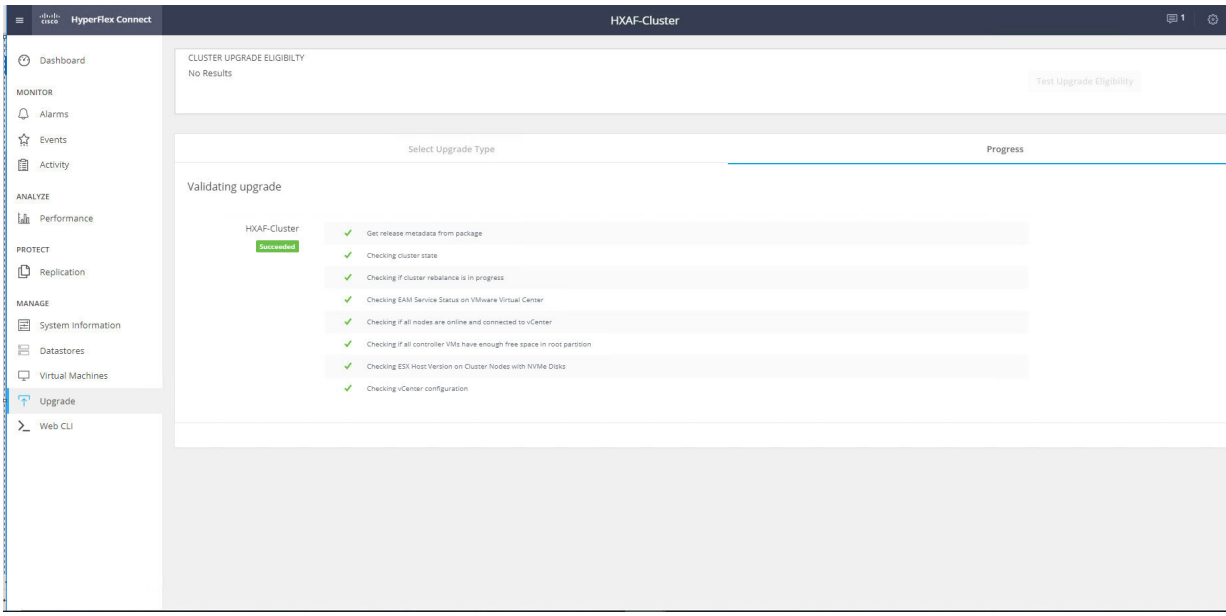
9. Select the HX Data Platform checkbox, browse and upload the Upgrade package. Provide the vCenter credentials and click on “Upgrade”.



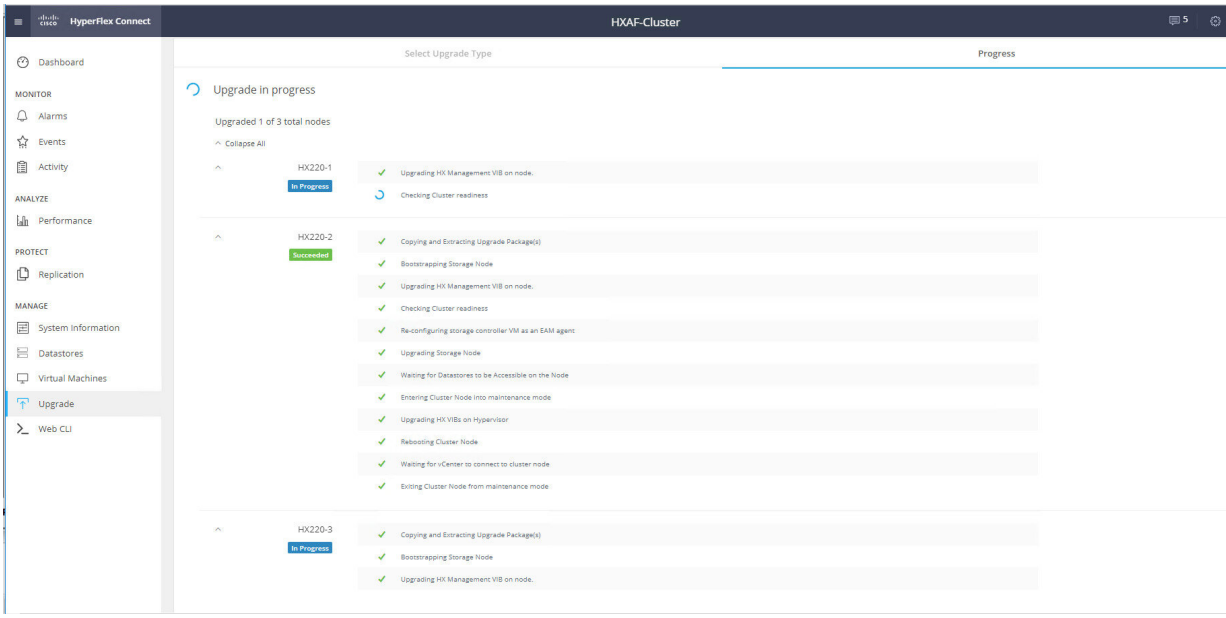
10. Click on “Confirm” to proceed with the validation and upgrade process to begin.



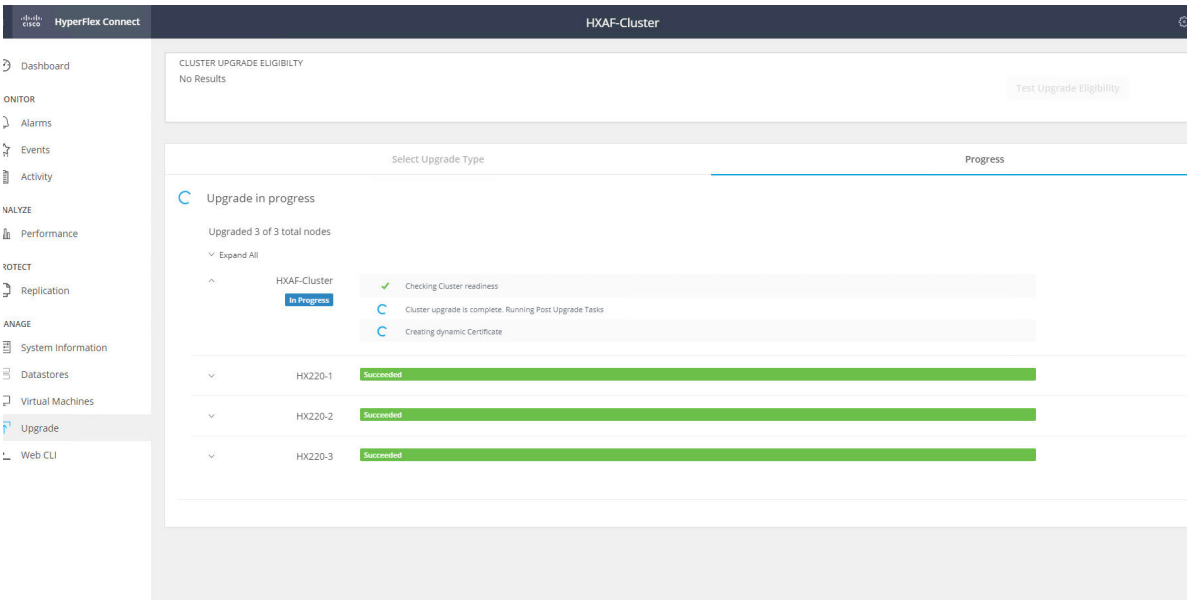
11. Wait for the Validation to be completed.



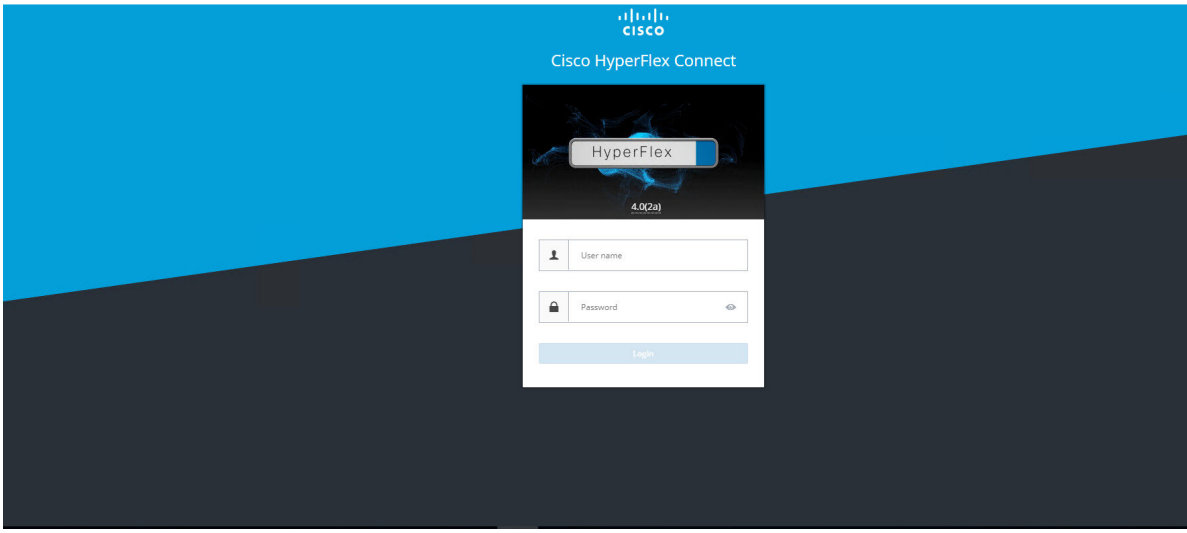
12. Once the validation completes, Upgrade process starts.



13. Once the upgrade is successful on the HyperFlex nodes, wait for the Post upgrade tasks to be completed.



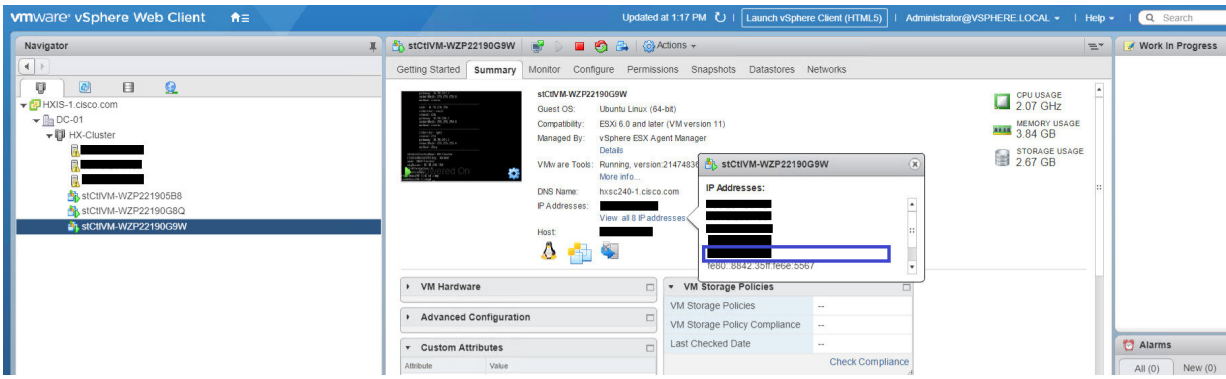
14. The Upgrade is completed, refresh the browser and access the HX Connect UI from the browser. You can see the HXDP upgraded to HXDP 4.0(2a).



HXDP Upgrade from 3.0 to 4.0

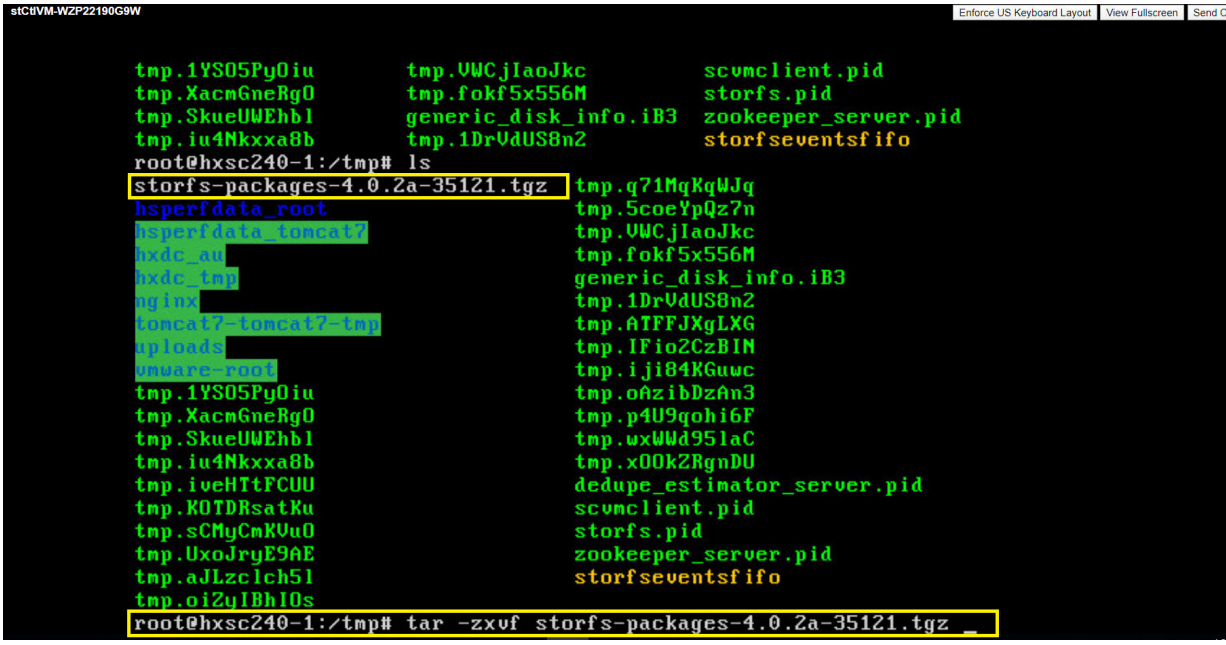
Upgrade of HXDP 3.0(1e) to HXDP 4.0(2a) needs manual bootstrap on the Controller VMs. Check for the pre-requisites are met. Please follow the below procedure for the manual Bootstrap and Upgrade process.

1. Identify the Controller VM that holds the IP address of the Cluster Management.

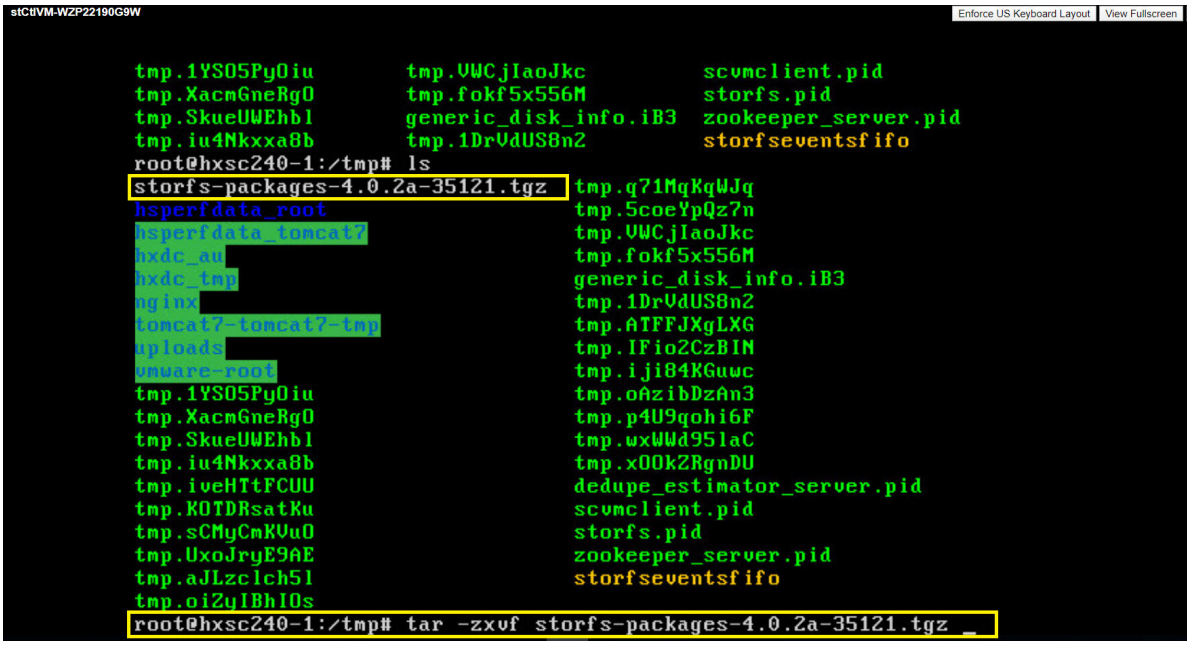


2. Using WinSCP, connect to the Cluster Management IP using the “root” credentials and transfer the HXDP Upgrade package to the “/tmp” directory. Do not create any new folders. (You can follow any other procedure to transfer the upgrade files to the “/tmp” directory.)

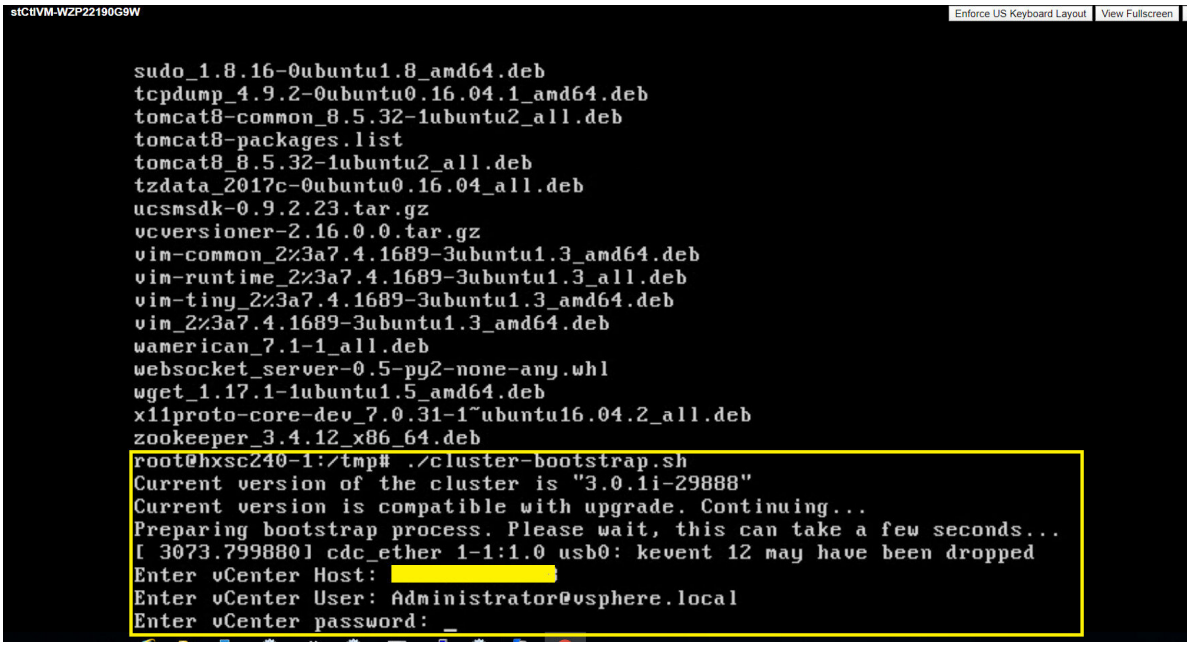
3. From vCenter clinet, open the console of the Controller VM that holds the Cluster Management IP and change to the “/tmp” directory. You can find the upgrade package transferred in the previous step.



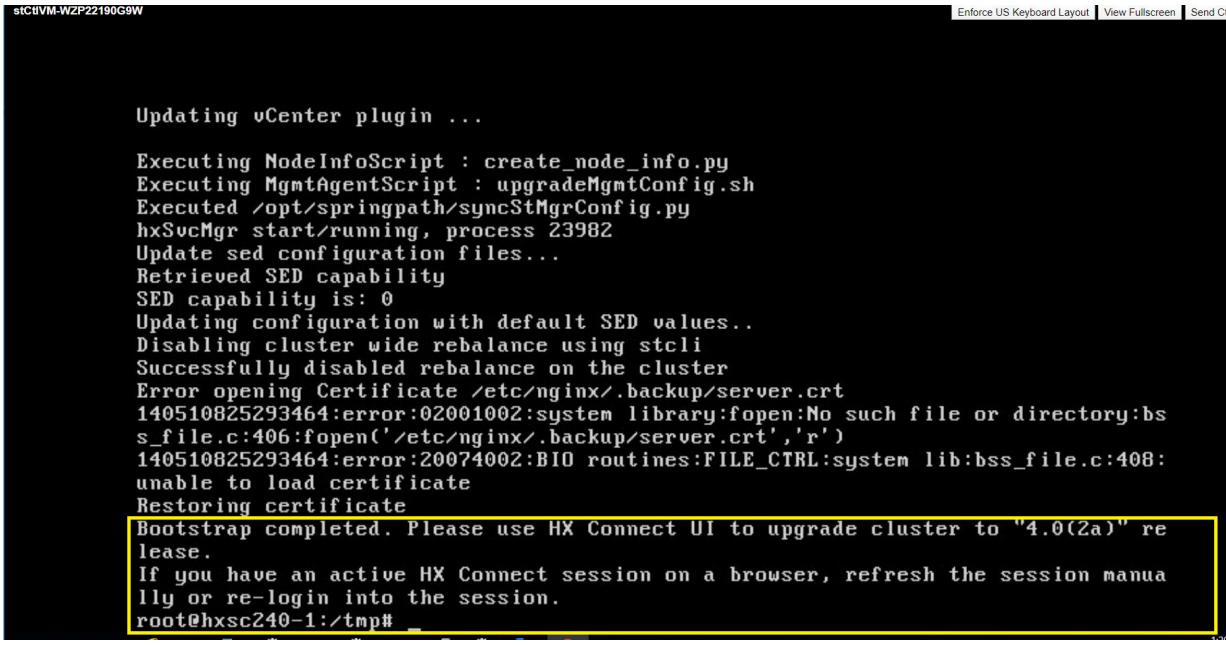
4. Un-compress the package using “tar -zxvf <upgrade-package-name>.tgz. This Un-compresses and extracts all files to the root of the “/tmp” folder.



5. Execute the "./cluster-bootstrap.sh" command to invoke the bootstrap packages for upgrade. Provide the vCenter Server IP, Username and Password as requested.

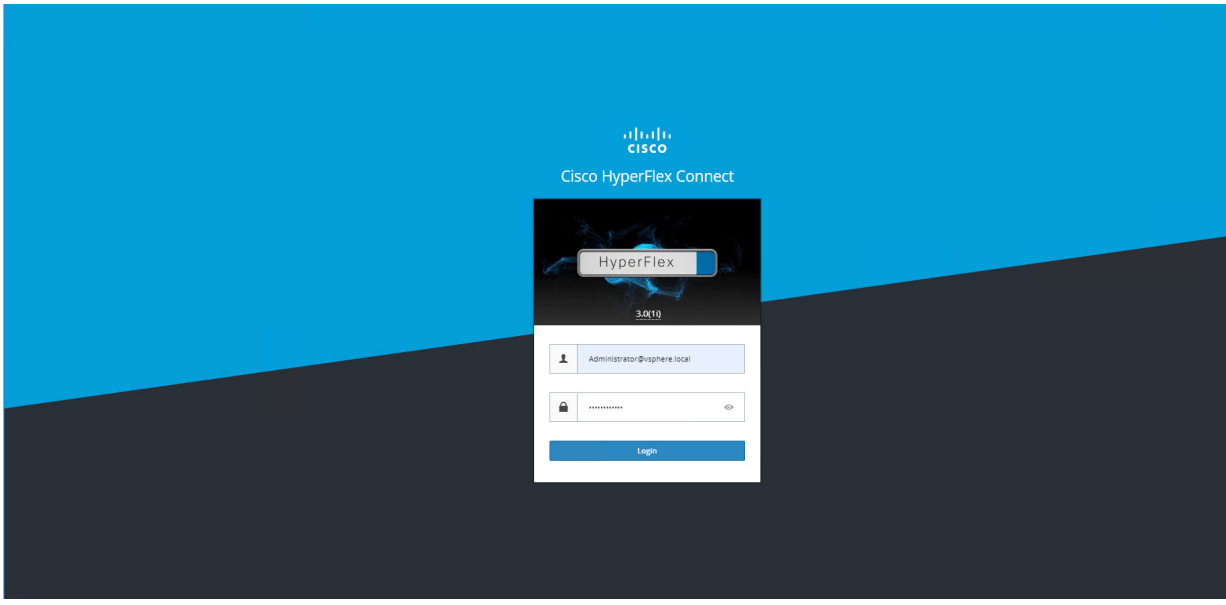


6. Wait for the bootstrap process to complete.

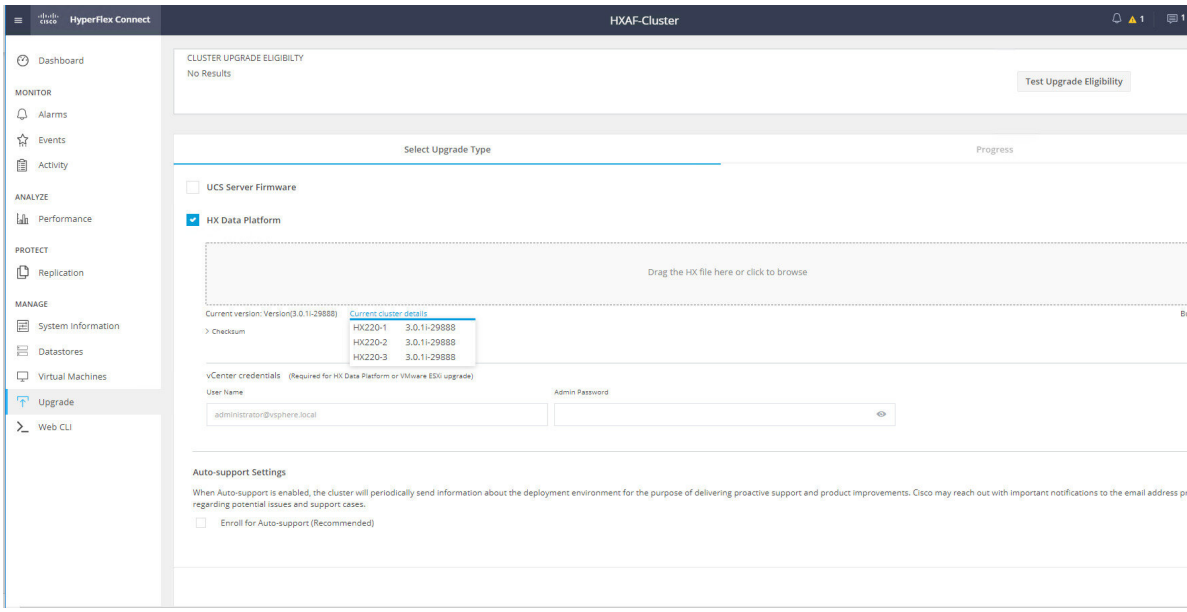


7. Once the bootstrap process is completed, refresh the vCenter and HX Connect UI.

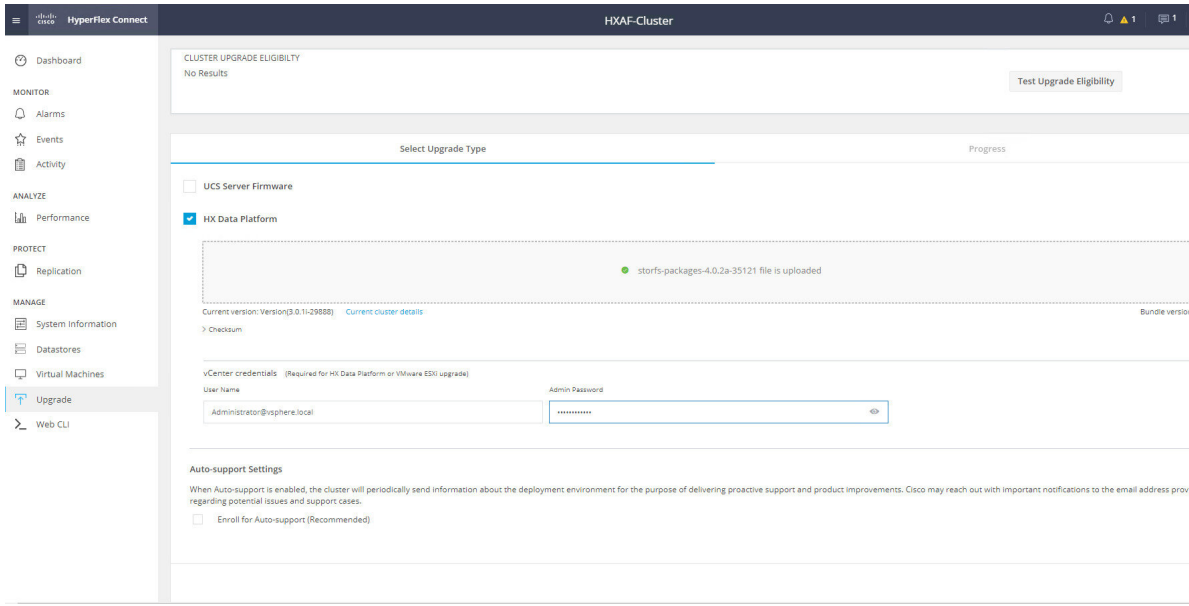
   Login to the HX Connect UI using the credentials.



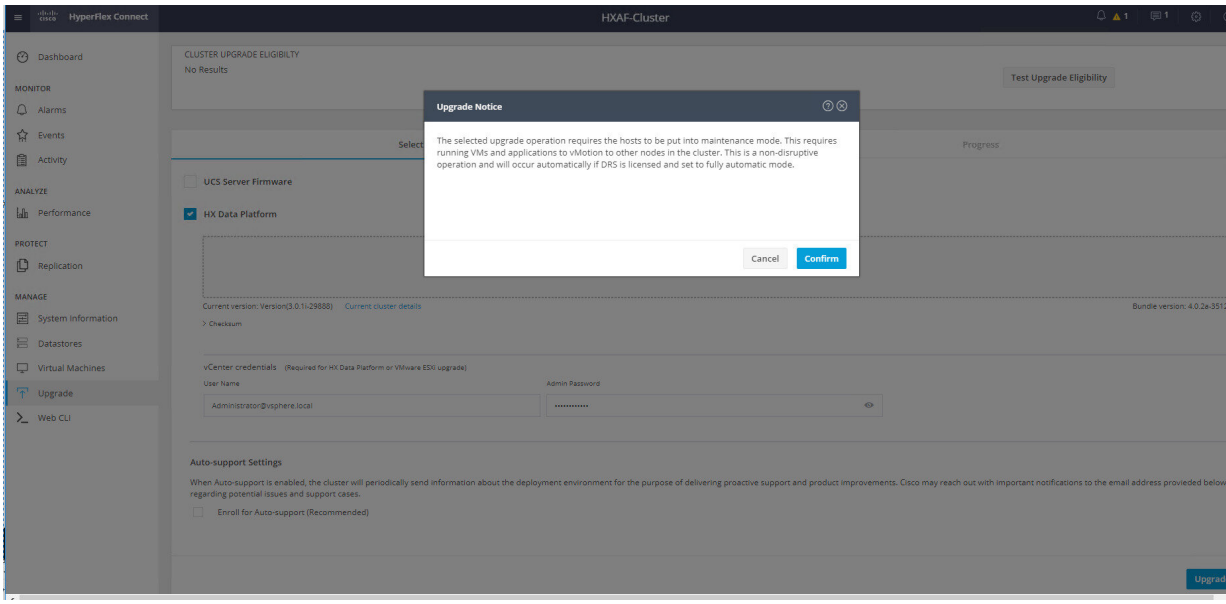
8. Click on “Upgrade” and check for the Current Cluster Version details.



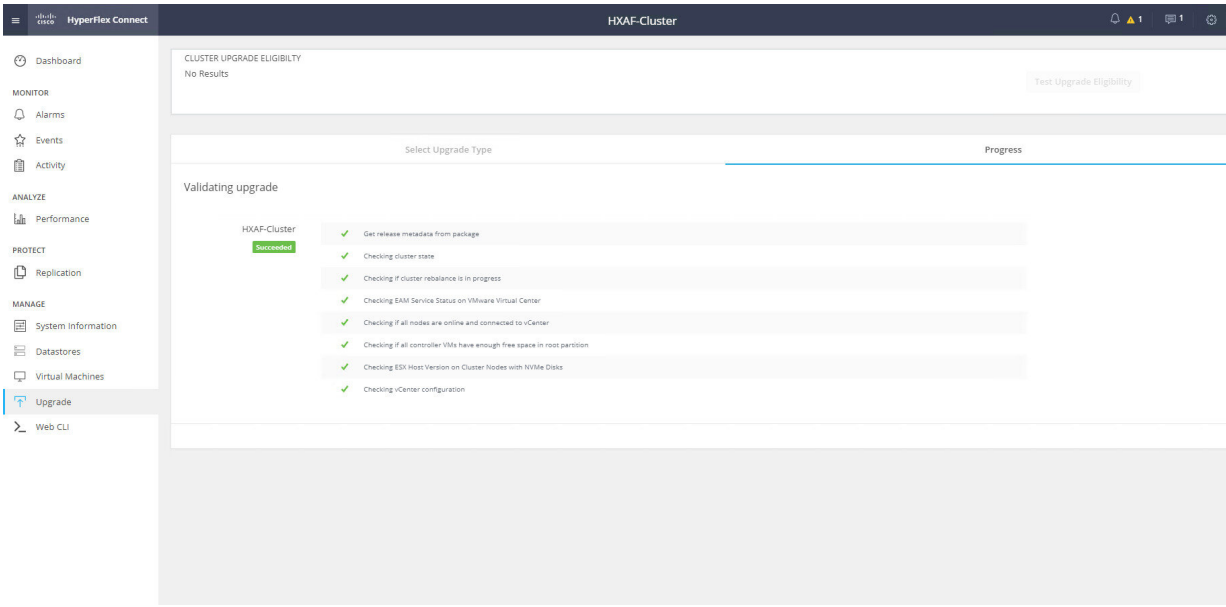
9. Select the HX Data Platform checkbox, browse and upload the Upgrade package. Provide the vCenter credentials and click on “Upgrade”.



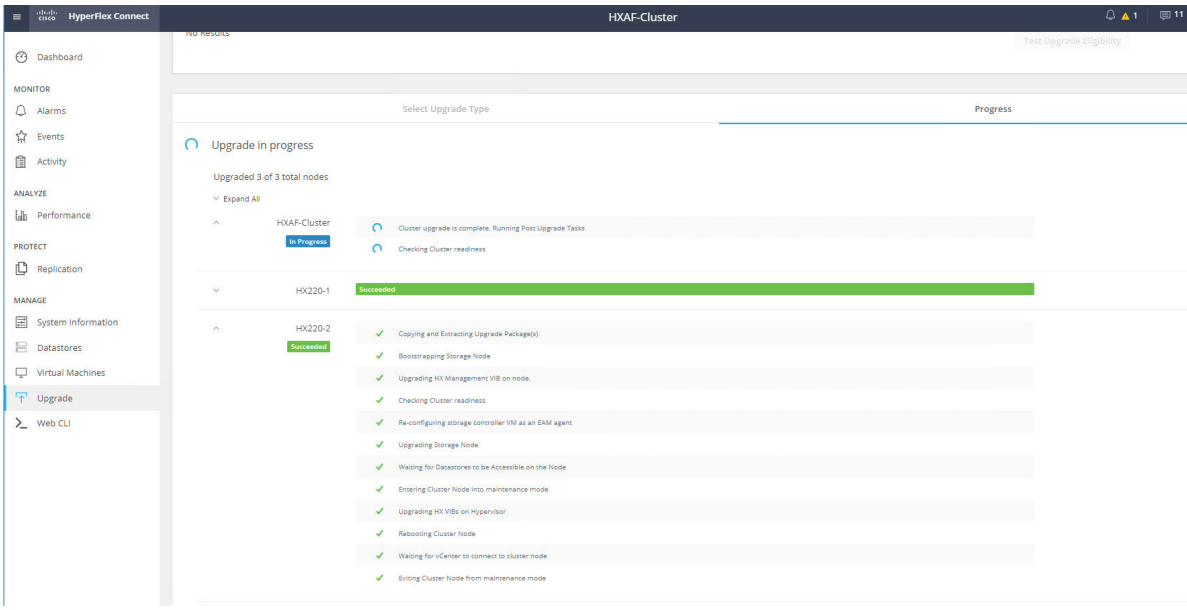
10. Click on “Confirm” to proceed with the validation and upgrade process to begin.



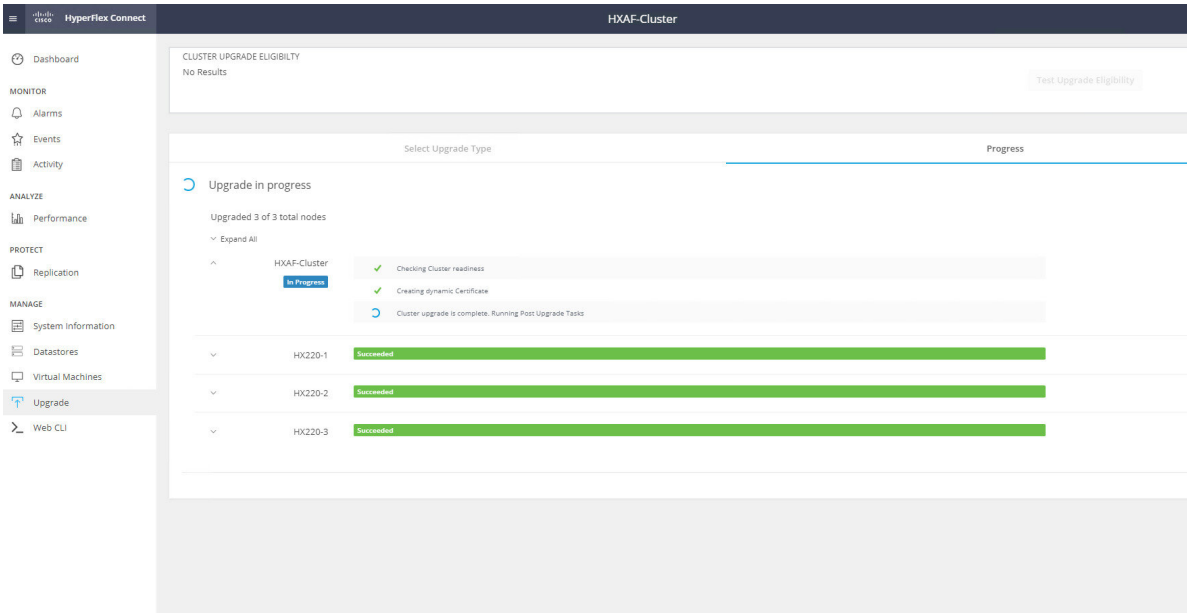
11. Wait for the Validation to be completed.



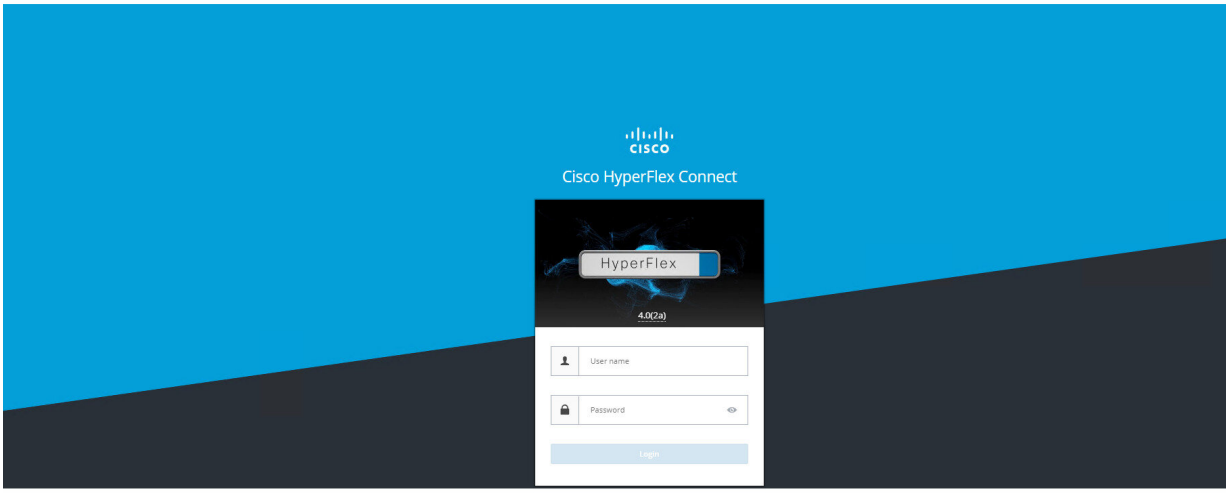
12. Once the validation completes, Upgrade process starts.



13. Once the upgrade is successful on the HyperFlex nodes, wait for the Post upgrade tasks to be completed.



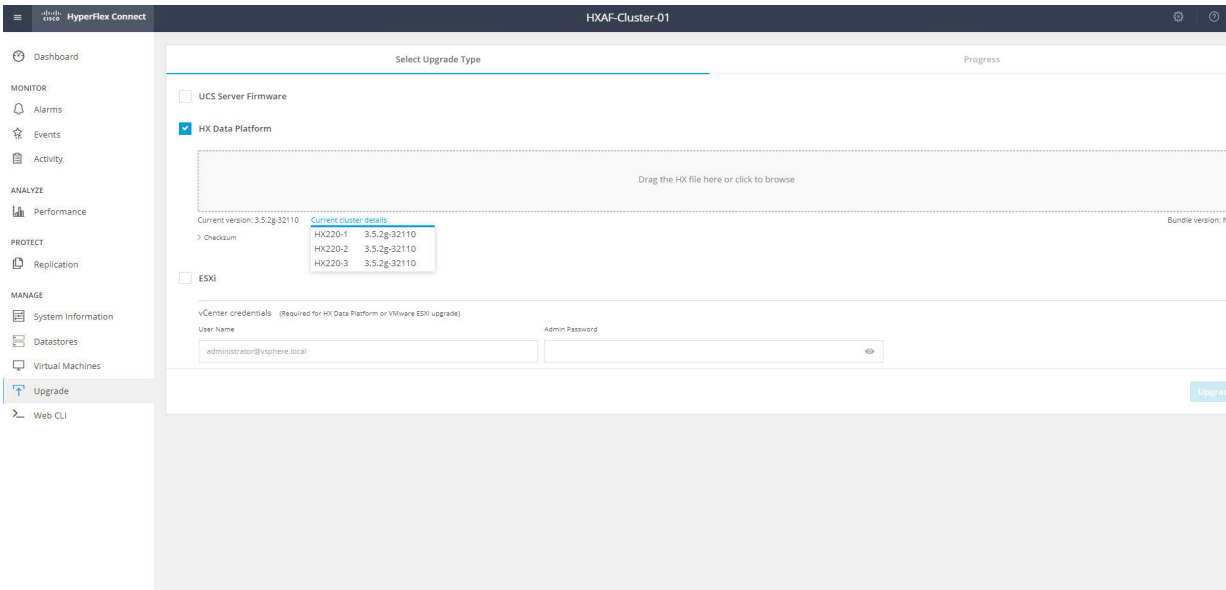
14. The Upgrade is completed, refresh the browser and access the HX Connect UI from the browser. You can see the HXDP upgraded to HXDP 4.0(2a).



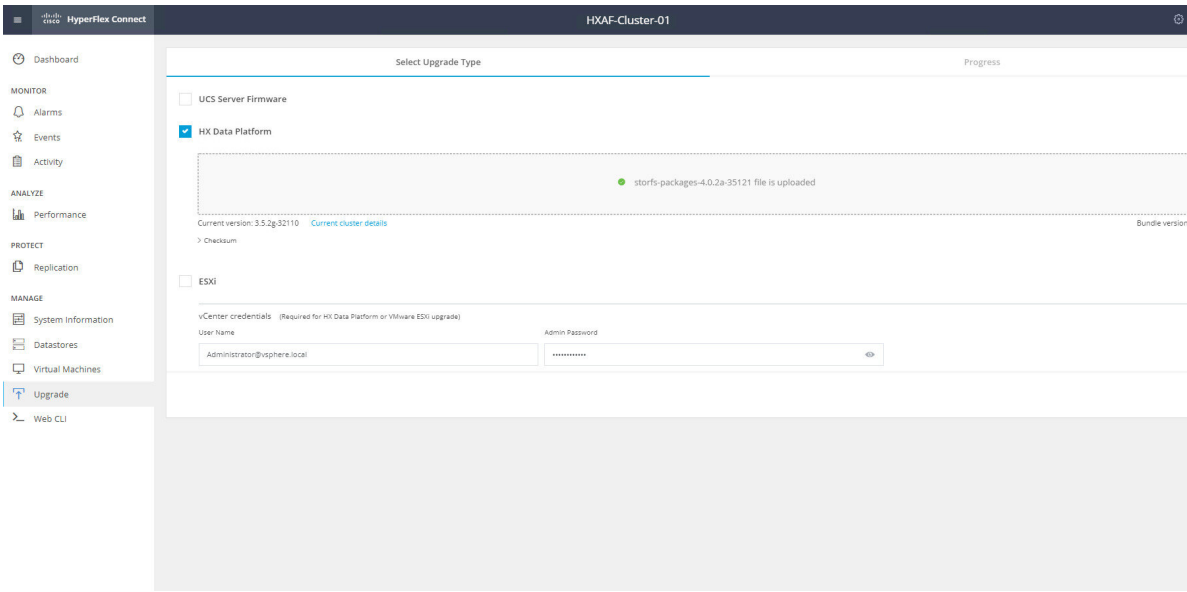
HXDP Upgrade from 3.5 to 4.0

Upgrade of HXDP 3.5(2g) to HXDP 4.0(2a) starts with automatic bootstrap on the Controller VMs. Please follow the below procedure for the upgrade process.

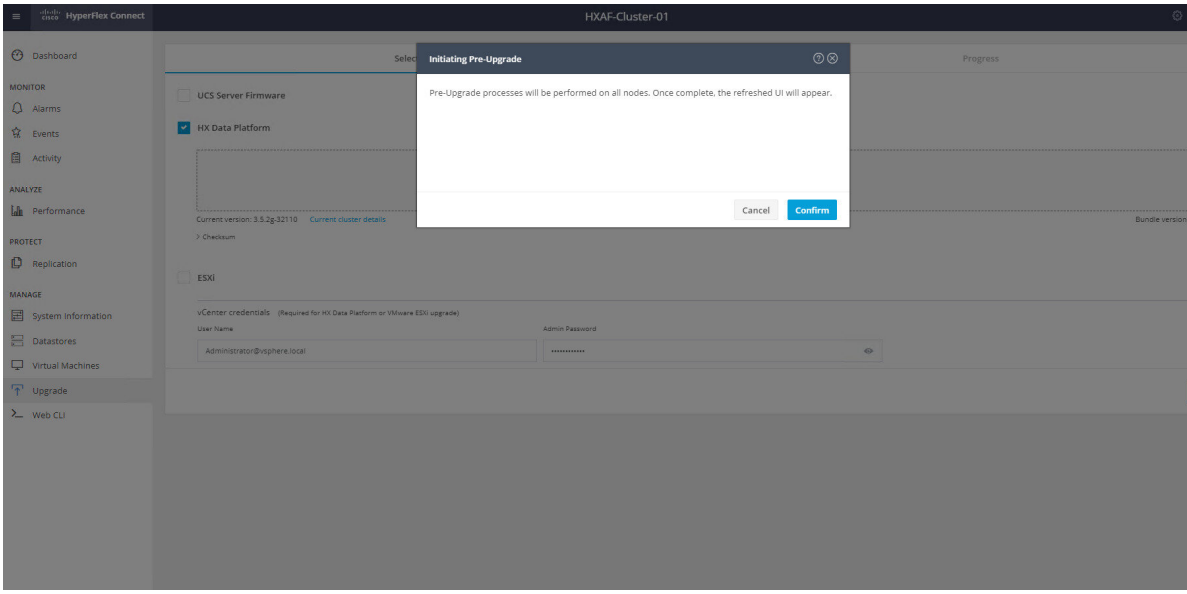
1. Login to the HX Connect UI using the credentials.
2. Click on “Upgrade” and check for the Current Cluster Version details.



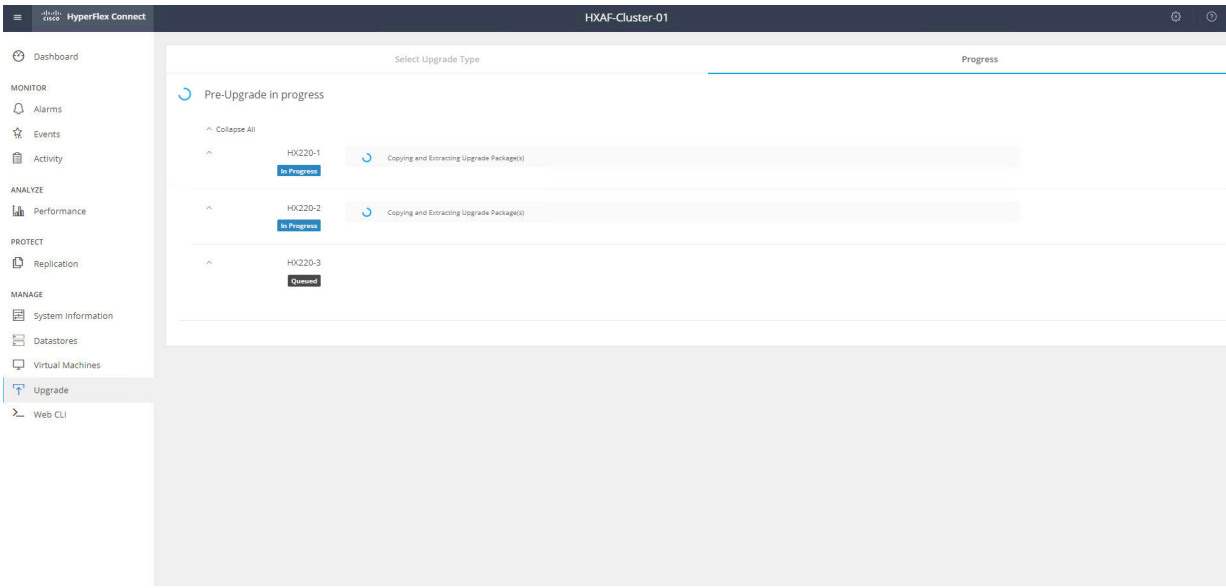
3. Select the HX Data Platform checkbox, browse and upload the Upgrade package. Provide the vCenter credentials and click on “Upgrade”



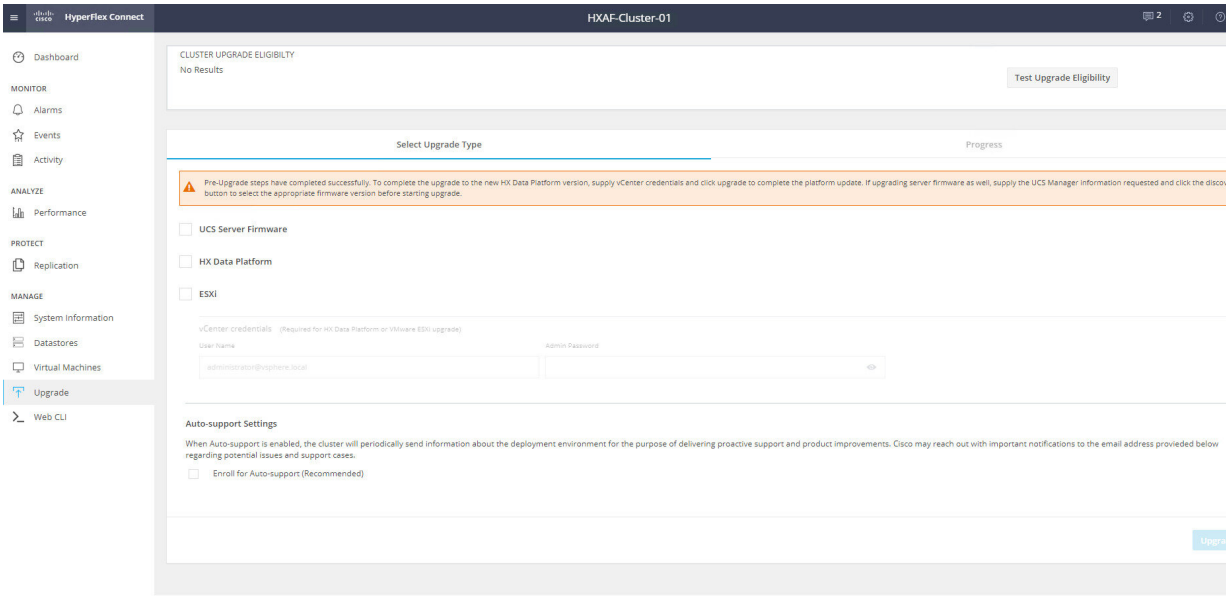
4. Click on “Confirm” to proceed with the validation and pre-upgrade process to begin.



5. Wait for the Pre-upgrade process to be completed.

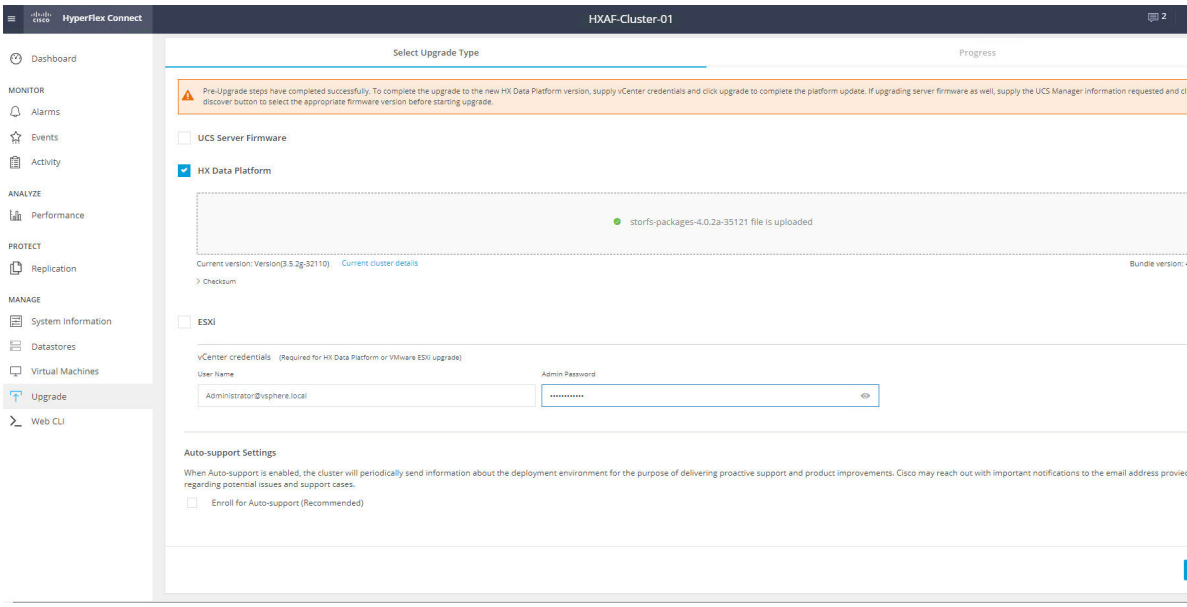


6. Once the Pre-upgrade process is completed, refresh the browser and login again to the HX Connect.

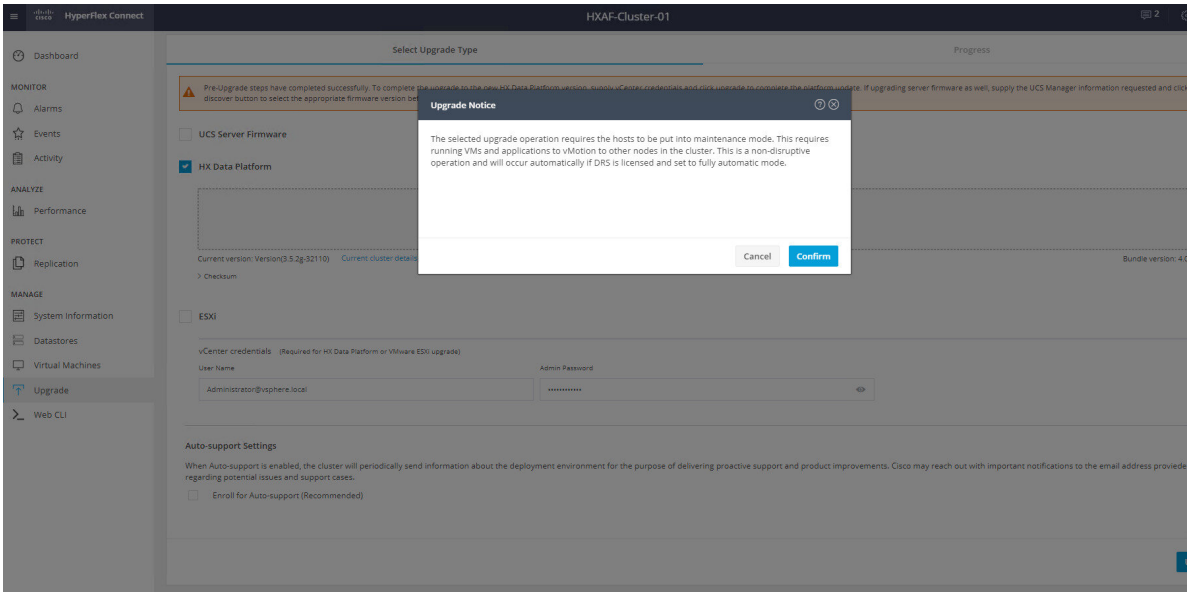


7. After the Pre-upgrade process is completed, it has to be upgraded again in order to perform the full upgrade.

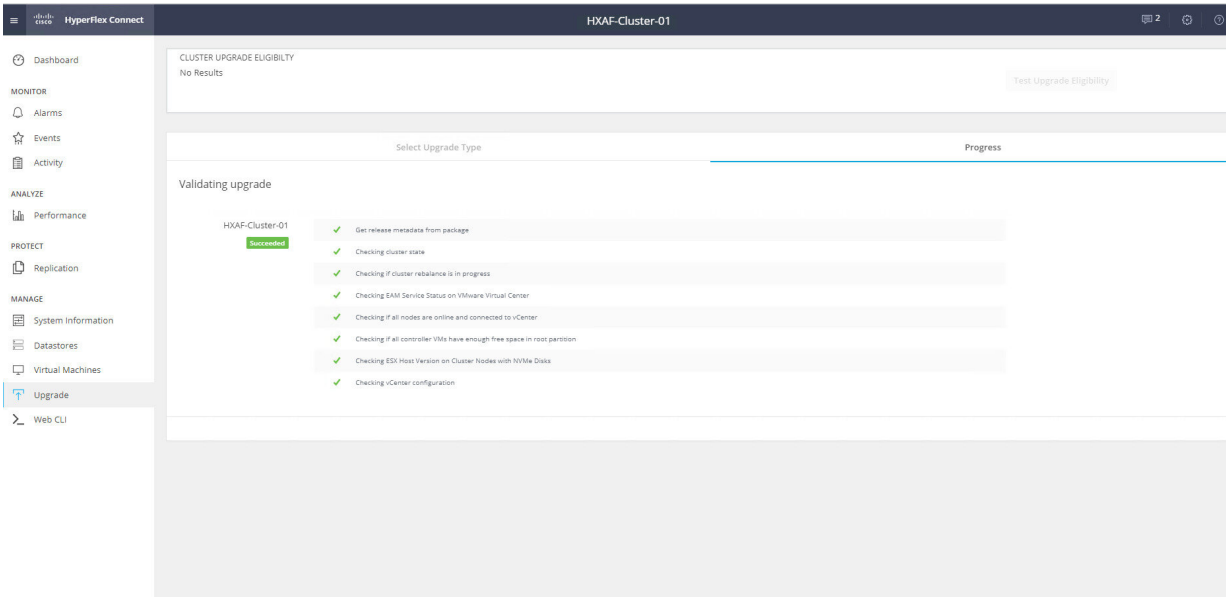
   Go to “Upgrade”, select the “HX Data Platform” check box, provide the vCenter credentials and click on “Upgrade”



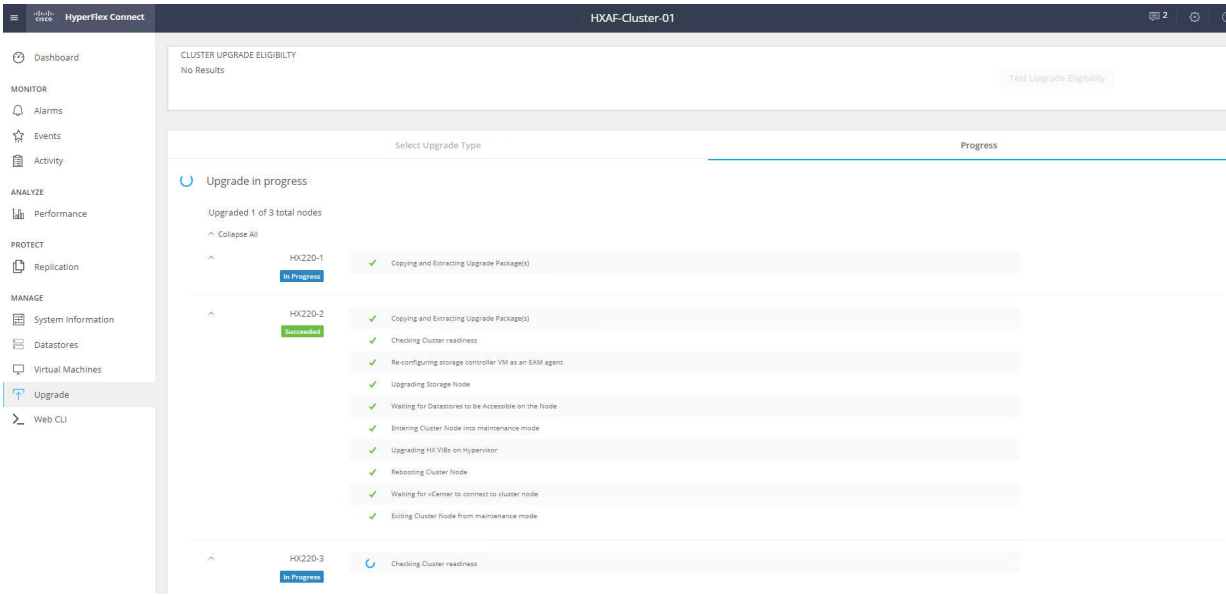
8. Click on “Confirm” to proceed with the validation and upgrade process to begin.



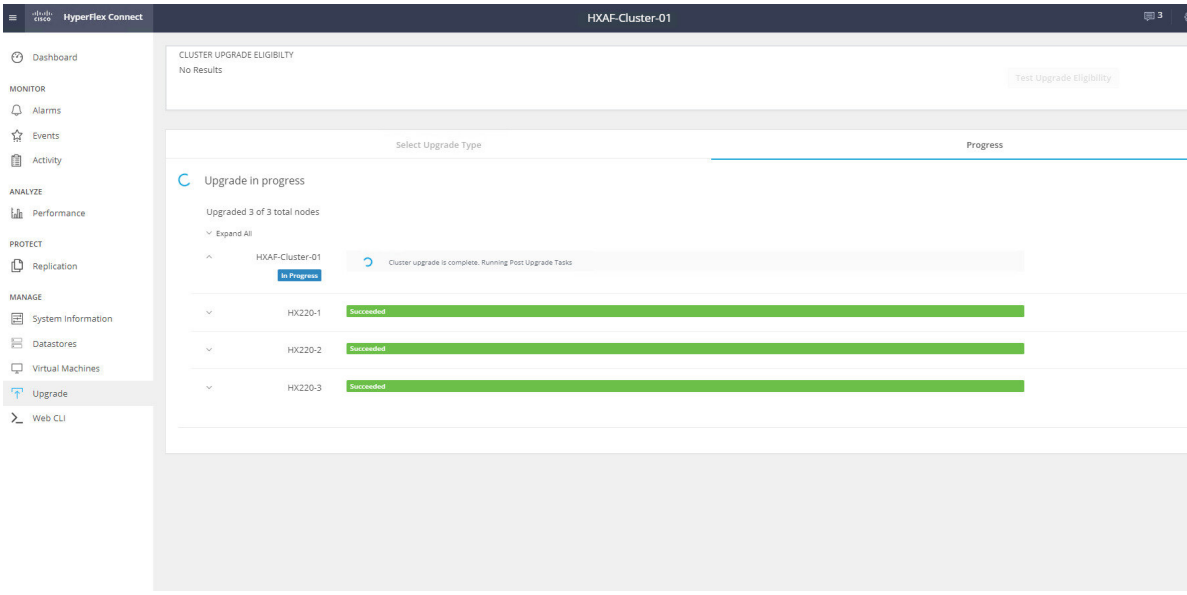
9. Wait for the Validation to be completed.



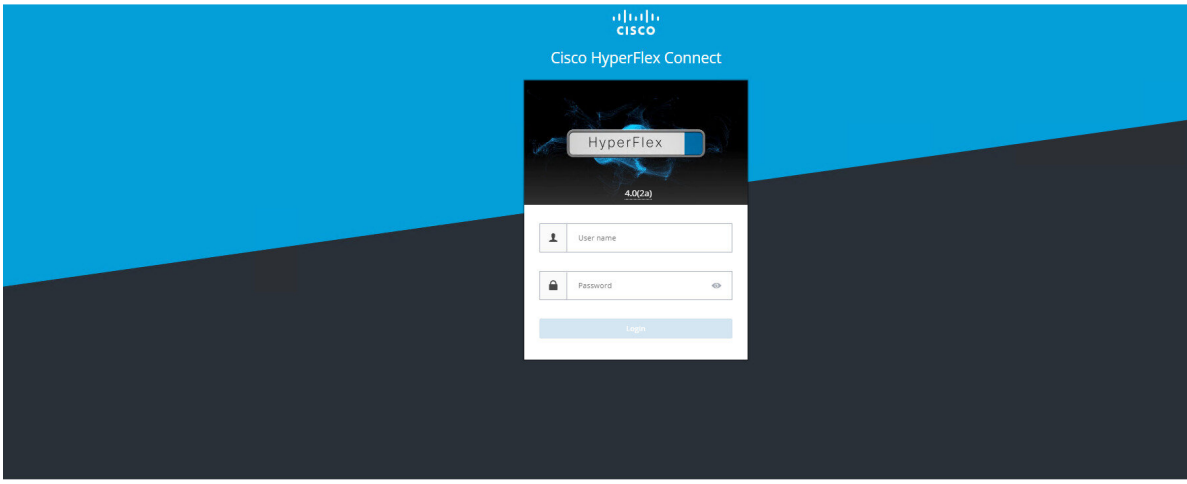
10. Once the validation completes, Upgrade process starts.

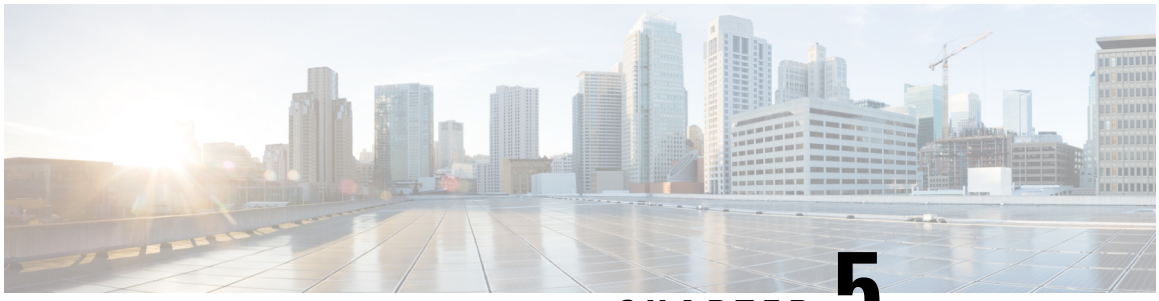


11. Once the upgrade is successful on the HyperFlex nodes, wait for the Post upgrade tasks to be completed.



12. Once the Upgrade is completed, refresh the browser and access the HX Connect UI from the browser. You can see the HXDP upgraded to HXDP 4.0(2a).



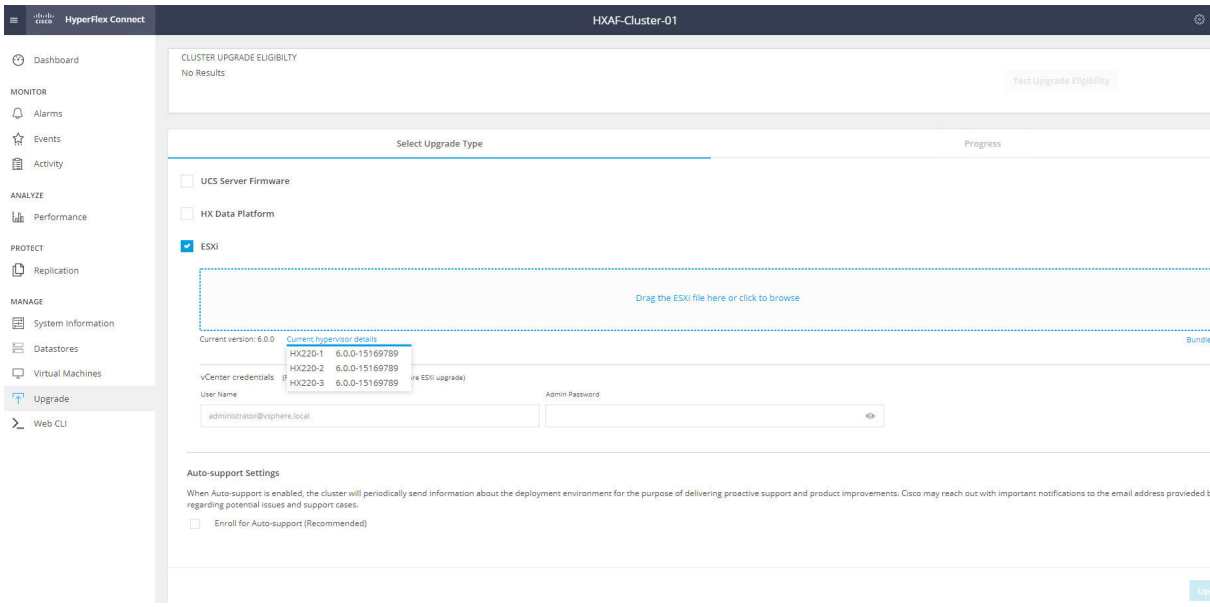


CHAPTER 5

ESXi Upgrade using HyperFlex Connect UI

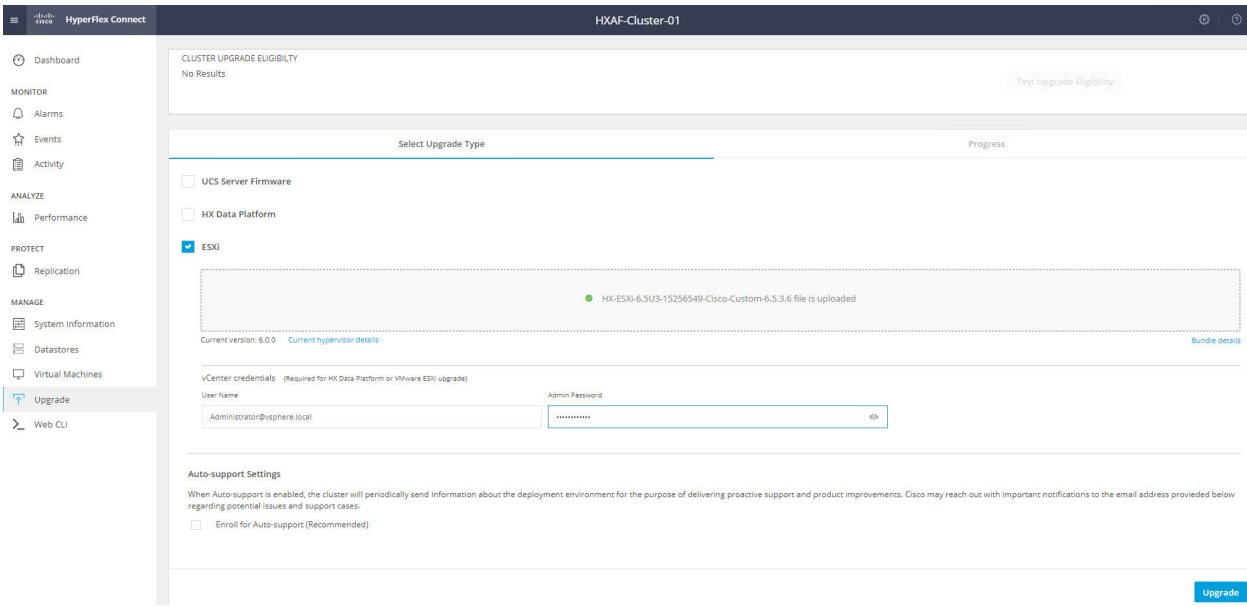
ESXi Upgrade from 6.0 to 6.5 using HyperFlex Connect UI

1. Login to HX Connect UI, Go to Upgrade and Select ESXi. Check for the current ESXi Version installed.

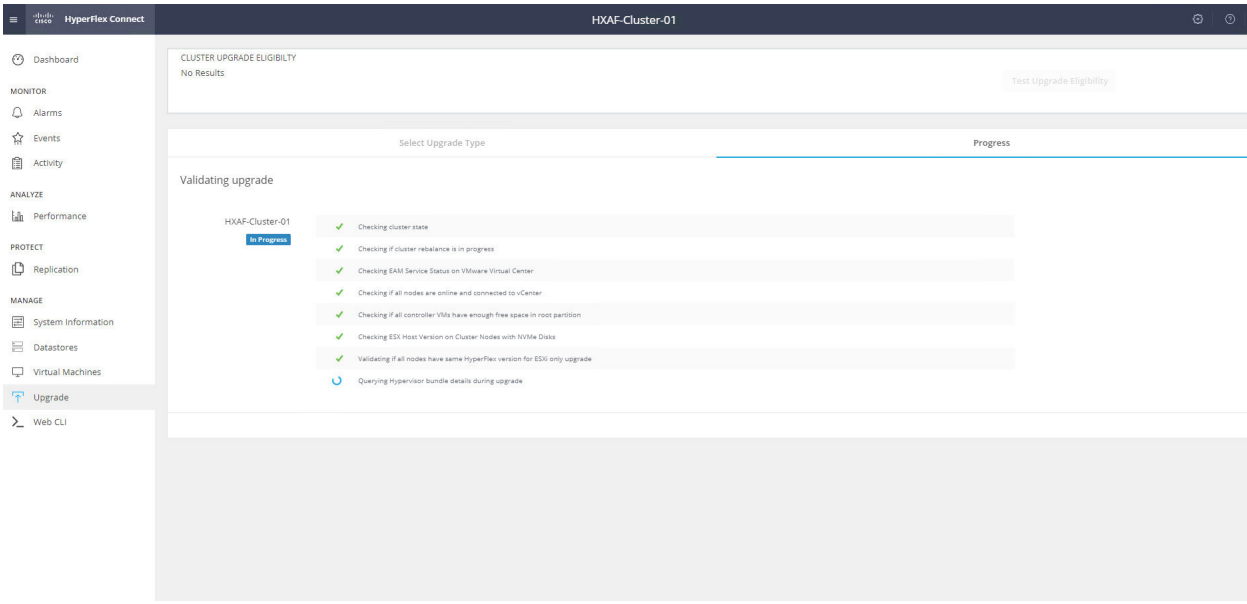


2. Click on “Drag the ESXi file here or click to browse”, browse to the ESXi file location and upload the ESXi 6.5 U3 Upgrade bundle.

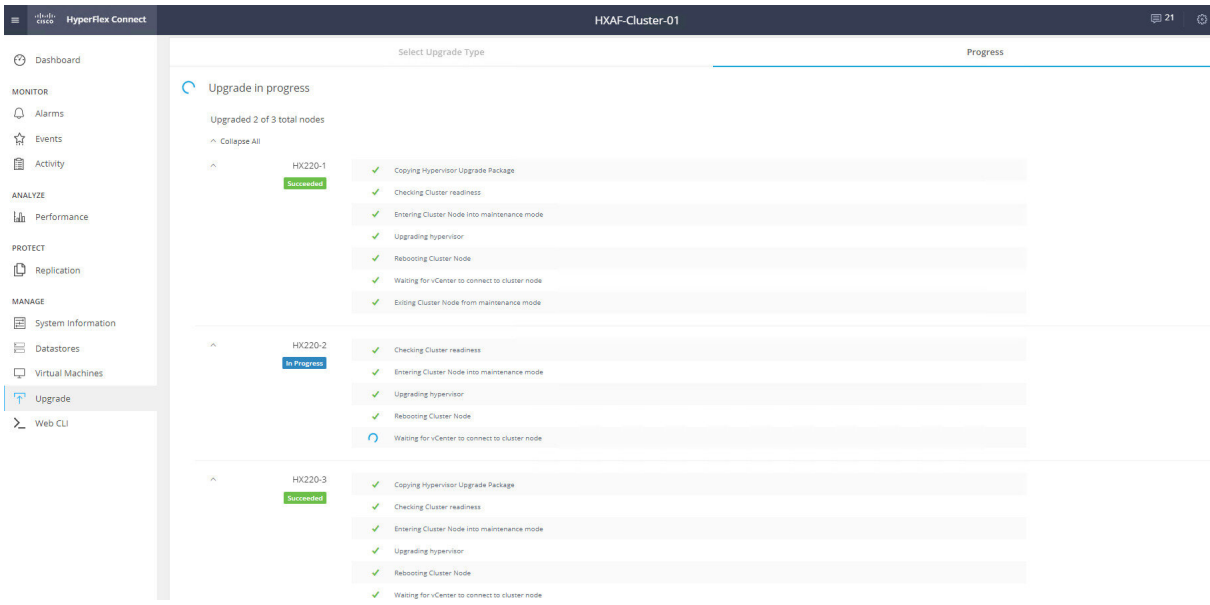
   Also Enter the vCenter Credentials and Click on Upgrade.



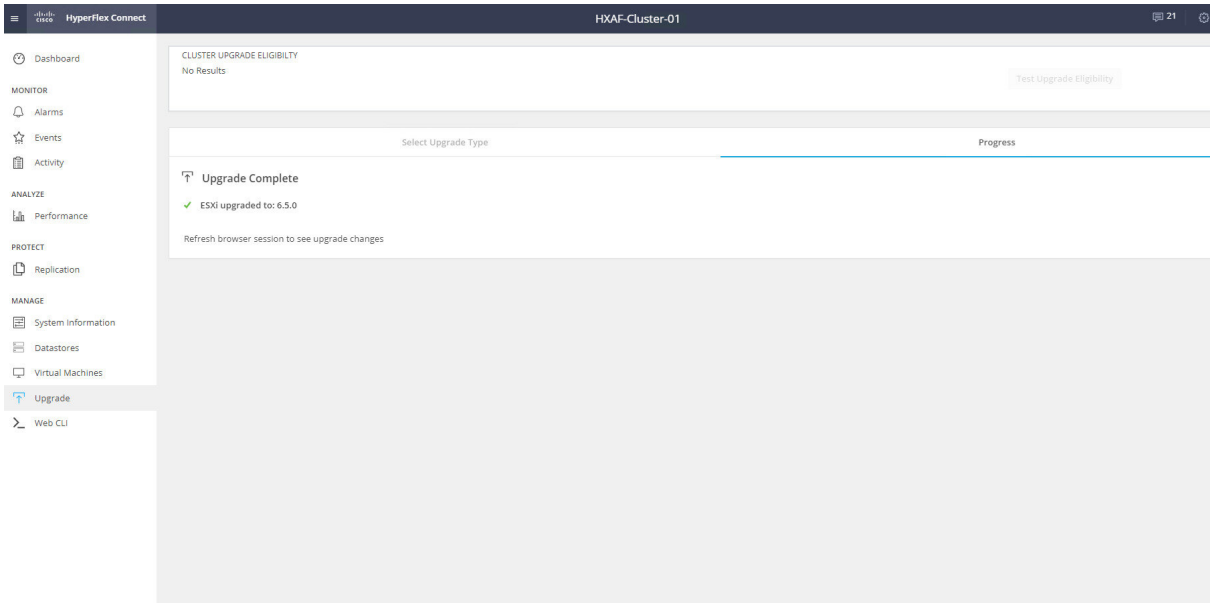
3. Wait for the upgrade validation to be completed



4. Once the validation completed, Upgrade of 3 HyperFlex nodes starts and completes one after one

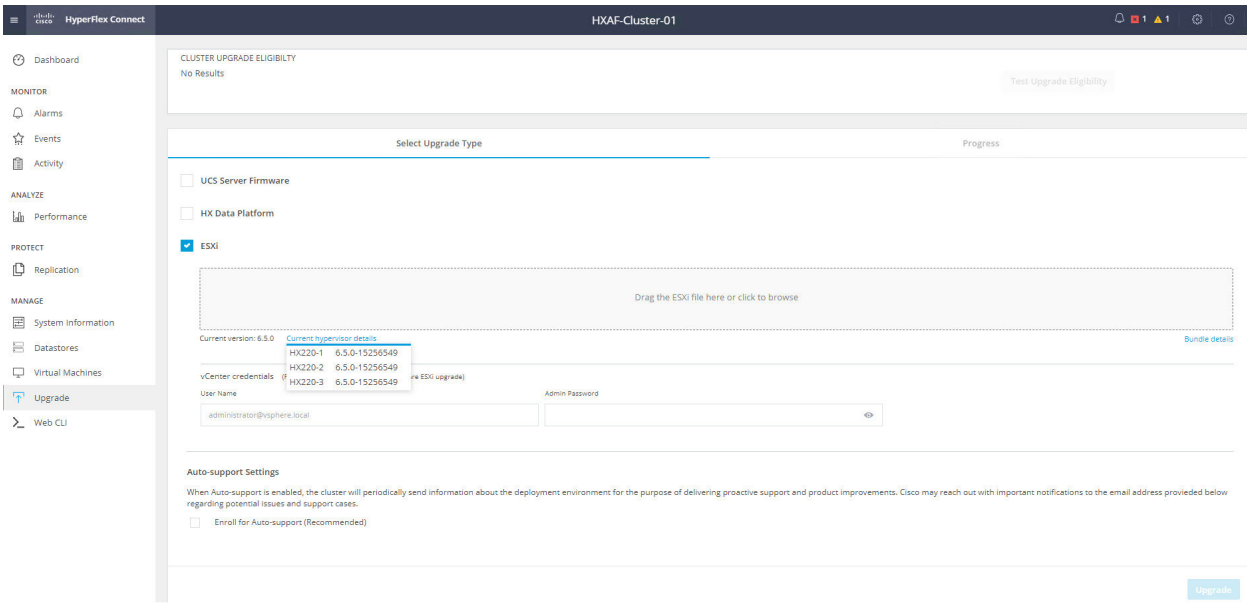


5. ESXi has been upgraded on all the 3 nodes.



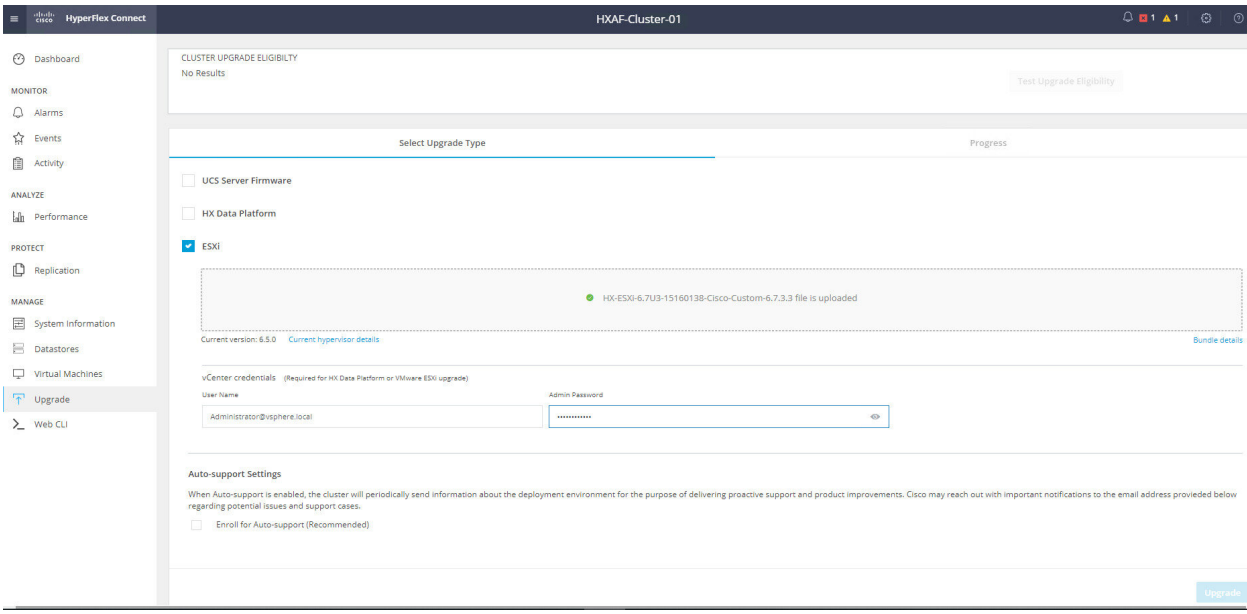
ESXi Upgrade from 6.5 to 6.7 using HyperFlex Connect UI

1. Login to HX Connect UI, Go to Upgrade and Select ESXi. Check for the current ESXi Version installed.

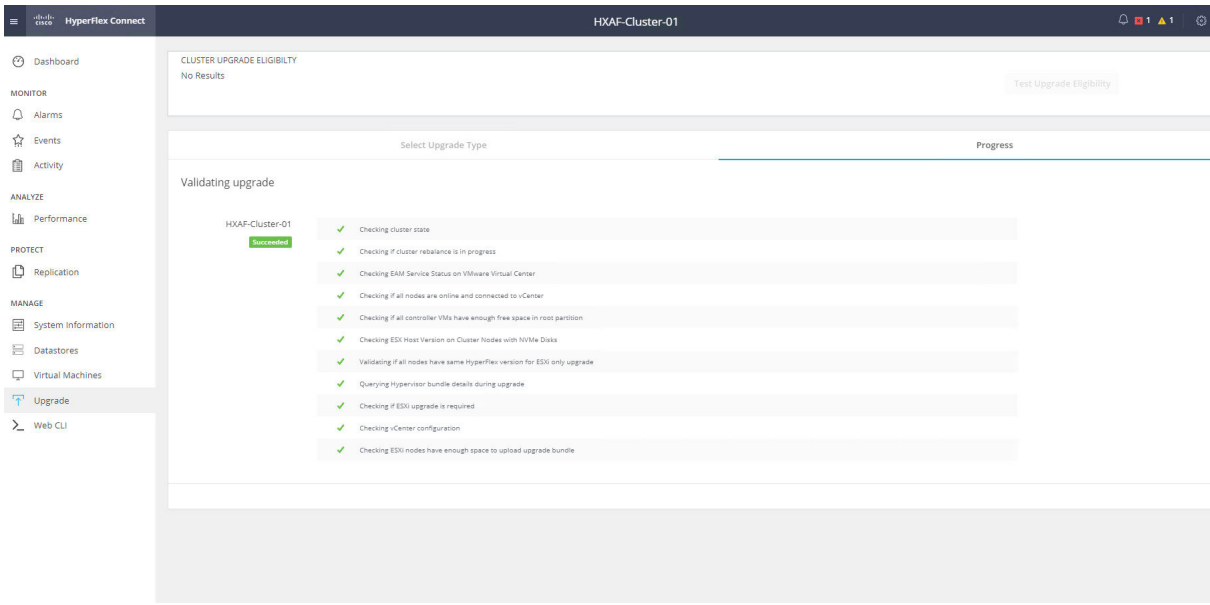


2. Click on “Drag the ESXi file here or click to browse”, browse to the ESXi file location and upload the ESXi 6.7 U3 Upgrade bundle.

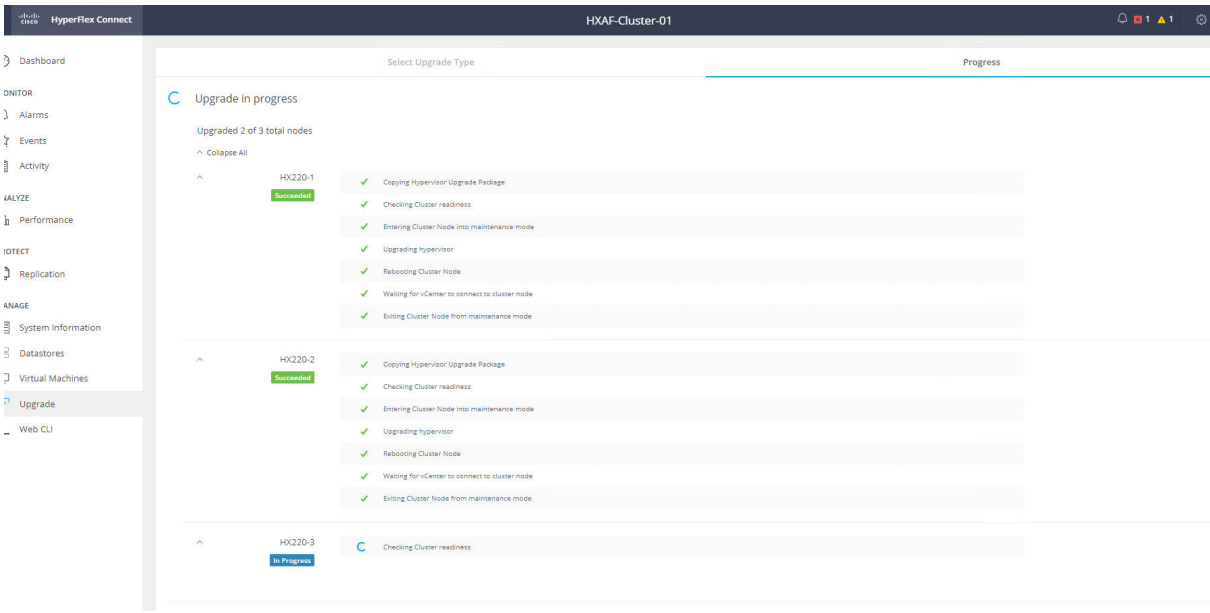
   Also Enter the vCenter Credentials and Click on Upgrade.



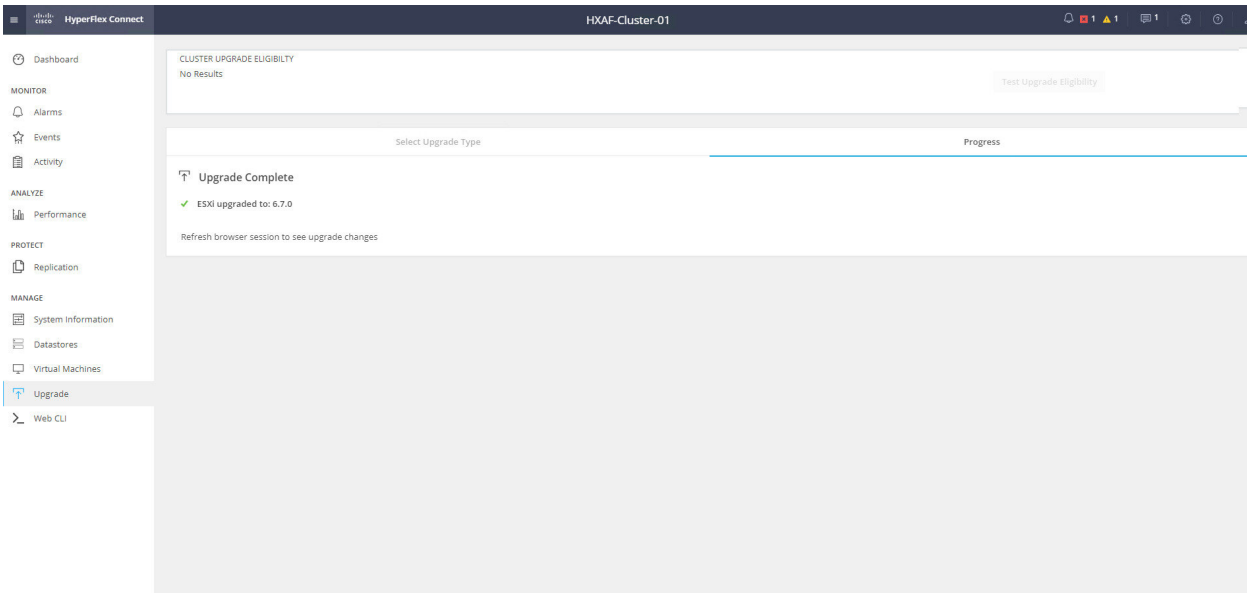
3. Wait for the upgrade validation to be completed

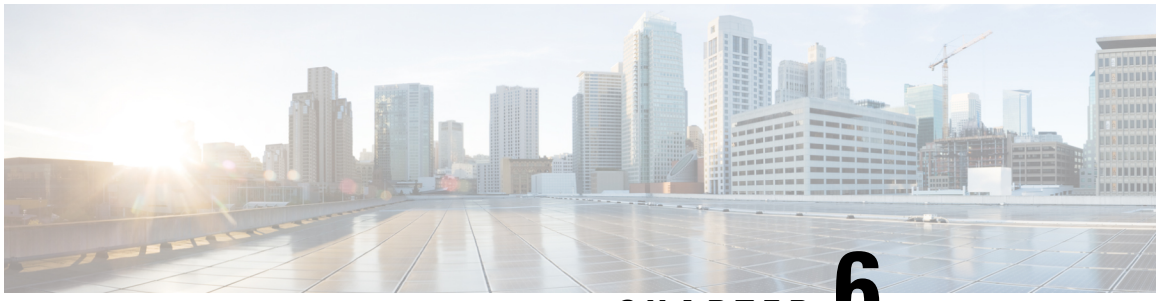


4. Once the validation completed, Upgrade of 3 HyperFlex nodes starts and completes one after one.



5. ESXi has been upgraded on all the 3 nodes.


HyperFlex Connect
HXAF-Cluster-01
Dashboard
MONITOR
Alarms
Events
Activity
ANALYZE
Performance
PROTECT
Replication
MANAGE
System Information
Datastores
Virtual Machines
Upgrade
Web CLI
CLUSTER UPGRADE ELIGIBILTY
No Results
Test Upgrade Eligibility
Select Upgrade Type
Progress
Upgrade Complete
ESXi upgraded to: 6.7.0
Refresh browser session to see upgrade changes



CHAPTER 6

Issues and Related Documentation

Issues

S.No	Defect ID	Description	Severity
1	CSCvs87611	M5 Current version is not discovered after upgrading HXDP from 3.5(2g) to 4.0(2a)	Major

Related Documentation

Cisco Downloads

https://software.cisco.com/download/home/286305544/type/286305994/release/3.5(2g)

Cisco HyperFlex Installation Guide

https://www.cisco.com/c/en/us/td/docs/hyperconverged_systems/HyperFlex_HX_DataPlatformSoftware/Installation_VMWare_ESXi/3_5/b_HyperFlexSystems_Installation_Guide_for_VMware_ESXi_3_5.html

Cisco HyperFlex Upgrade Guide

https://www.cisco.com/c/en/us/td/docs/hyperconverged_systems/HyperFlex_HX_DataPlatformSoftware/HyperFlex_upgrade_guide/4-0/b_HyperFlexSystems_Upgrade_Guide_for_VMware_ESXi_4_0/b_HyperFlexSystems_Upgrade_Guide_for_VMware_ESXi_4_0_chapter_0110.html