



HyperFlex Edge Customer Cleanup Guide

7/24/2019

Before You Begin...

- This field guide is meant to be used by customers for cleaning up an existing HyperFlex Edge deployment for the purposes of reinstalling
- The procedures to follow are DESTRUCTIVE. **Make sure all VMs and data are backed up before proceeding.**
- This procedure is meant for cleaning up a node for the purposes of redeploying HyperFlex. It will not completely remove all HX components from the nodes, just reset the system so it may be easily reinstalled. Contact TAC for the full cleanup procedure.
- Consult the latest version of this document: <https://community.cisco.com/t5/unified-computing-system/hyperflex-edge-customer-cleanup-guide/ta-p/3896668>

Revision History

Version	Date	Author
1.1	7/24/2019	Gina Nienaber

Mandatory ESXi License Check

If you supplied traditional VMware license keys, you may proceed with this cleanup procedure

If your HyperFlex nodes shipped with ESXi licensed from factory (Enterprise Plus or Standard editions), do not continue with this re-image procedure. Contact TAC to assist with an alternate cleanup procedure.

You can determine your licensing by looking in ESXi for the license key. If the key is obfuscated, you must not proceed with a re-image.

Example OEM key: 0J497-XXXXX-XXXXX-XXXXX-0HL0M

Exception: If the key is an OEM Foundation License, you may proceed.

Prerequisites

- In preparation for cleanup procedure, download the VMware ESXi custom image specific to HyperFlex – install-only.iso
- Reminder: Edge does not have Fabric Interconnects and SED drives are not supported.

Note:

After cleanup is finished, there will be a few differences when re-running the install vs. running with a fresh node shipped from factory.

- In this case, the controller VMs have been removed and must be redeployed vs. being already deployed from factory.
 - This will add some small amount of time to the deployment vs. the out-of-box experience on factory fresh nodes.
- Minus this small difference, the process is still automated. The controller VM is automatically redeployed.

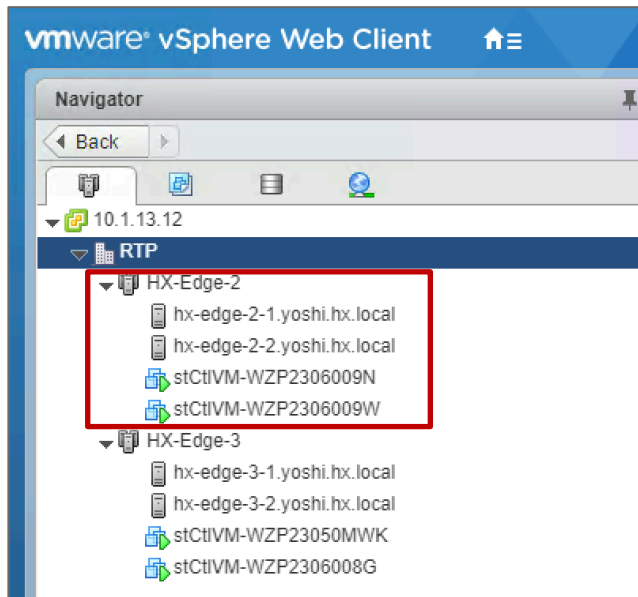
Reimage Cleanup Procedure For HyperFlex Edge

Reimage Cleanup Workflow

- ✓ **Cleanup VMware vCenter**
 - ✓ **Cleanup vCenter GUI**
- ✓ **Reinstall ESXi**
- ✓ **Cleanup Intersight**
 - ✓ **Part 1: Service Profiles**
 - ✓ **Part 2: Devices**

Example Scenario

- RTP Data Center has two (2) HyperFlex 2-Node clusters deployed.
 - HX-Edge-2
 - HX-Edge-3
- In this scenario we will reimage the HX-Edge-2a host in the HX-Edge-2 Cluster.
- Note: This procedure can be used for 3 and 4 node HX-Edge clusters as well.
- Note: If you are not using Cisco Intersight to manage your 3 or 4 node system, disregard the Intersight steps in this guide.





The screenshot shows the Cisco Intersight interface with a table of HyperFlex clusters. The table has columns for Name, Health, Type, and Hype... The row for 'HX-Edge-2' is highlighted with a red border.

<input type="checkbox"/>	Name	Health	Type	Hype...
<input type="checkbox"/>	HX-Edge-1	Healthy	HyperFlex ...	4.0(1a)
<input type="checkbox"/>	HX-Edge-2	Healthy	HyperFlex ...	4.0(1a)
<input type="checkbox"/>	HX-Edge-3	Healthy	HyperFlex ...	4.0(1a)
<input type="checkbox"/>	Kong	Healthy	HyperFlex ...	4.0(1a)
<input type="checkbox"/>	Link	Healthy	HyperFlex ...	4.0(1a)

Before you begin..

- Login here <http://www.cisco.com/c/en/us/support/hyperconverged-systems/hyperflex-hx-data-platform-software/tsd-products-support-series-home.html> and download the ESXi version you wish to deploy.
- Reference the most recent version of the release notes to confirm compatibility.
- In this scenario we downloaded: Cisco HX Custom Image for ESXi 6.5 U2 EP13 Install.

CISCO HX Custom Image for ESXi 6.5 U2 EP13 Install CD for fresh install or reimage of hosts. Do not use for upgrading ESXi. HX-ESXi-6.5U2-13004031-Cisco-Custom-6.5.2.6-install-only.iso	29-Apr-2019	316.12 MB	 
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Details

Description : CISCO HX Custom Image for ESXi 6.5 U2 EP13 Offline Bundle for Upgrading from prior ESXi versions

Release : 4.0(1a)

Release Date : 29-Apr-2019

FileName : HX-ESXi-6.5U2-13004031-Cisco-Custom-6.5.2.6-upgrade-bundle.zip

Size : 306.08 MB (320942969 bytes)

MD5 Checksum : b5a9add32225ba483d49231e5a4755f0 

SHA512 Checksum : 185ac5f10b22a00dbaefcddf4acb14b4 ... 

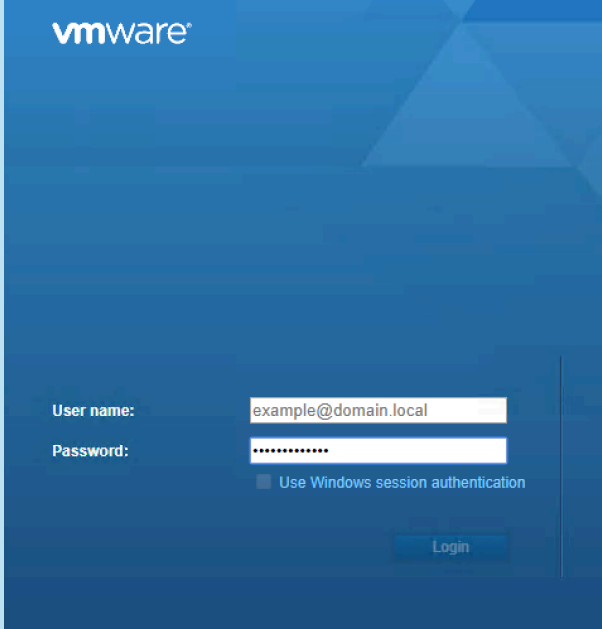
Cleanup vCenter Workflow Overview



Cleanup vCenter GUI

Step 1: Login to VMware vSphere GUI.

Login to VMware vSphere GUI for the cluster you would like to cleanup. In this case, HX-Edge-2.



User name: example@domain.local

Password:

Use Windows session authentication

Login

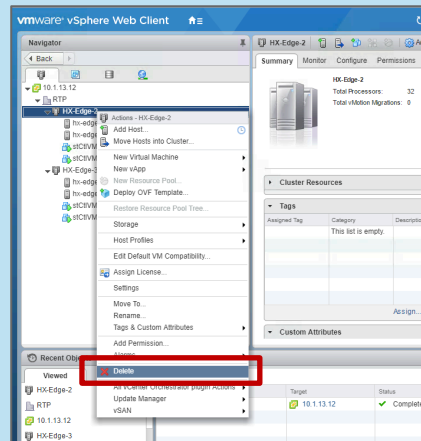
Cleanup vCenter GUI

Step 2: Delete the HyperFlex Cluster.

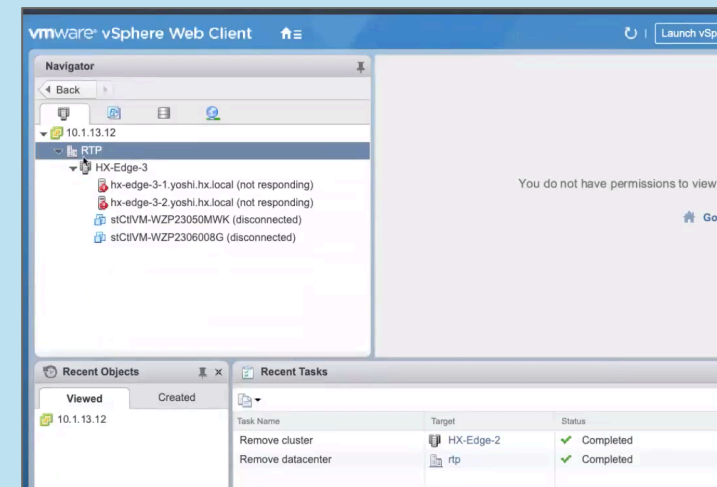
Delete the HyperFlex cluster you would like to cleanup. In this case, HX-Edge-2. HX ESXi hosts must be removed from the vCenter inventory (in case they happen to be elsewhere under another DC object).

WARNING! Do not delete the top level datacenter (RTP)! especially if you have multiple clusters installed under the datacenter and your intention is to only cleanup one (1) cluster.

‘Right click’ on the ‘HX-Edge-2’ cluster, and select ‘delete’. This will remove the cluster from vCenter

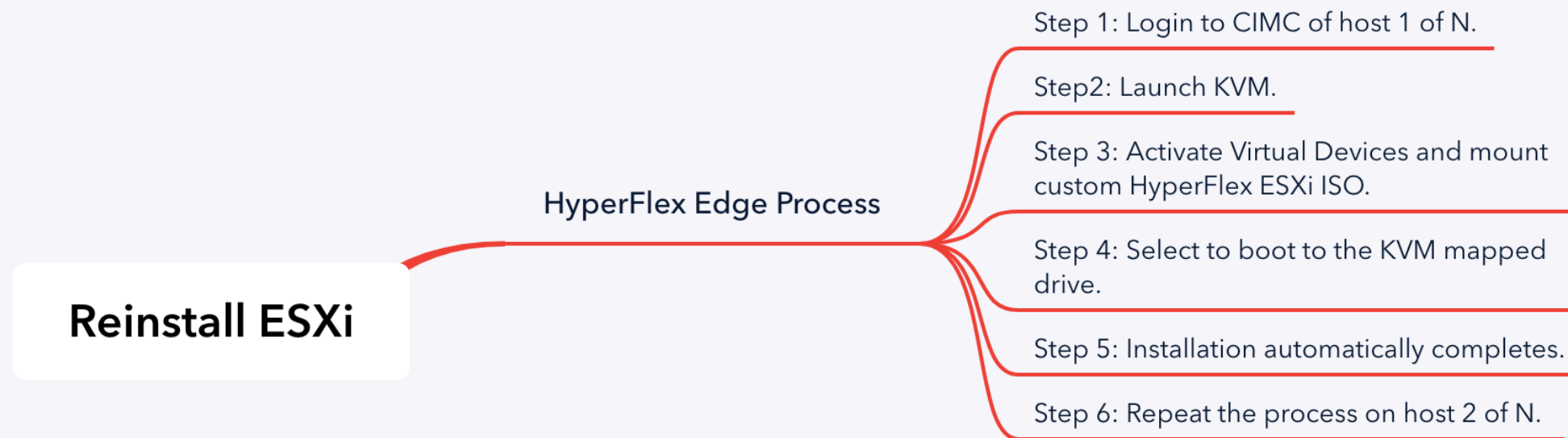


HX-Edge-2 cluster is now deleted from the RTP datacenter in vCenter.



vCenter is now cleaned-up!

Reinstall ESXi Workflow Overview



Reinstall ESXi

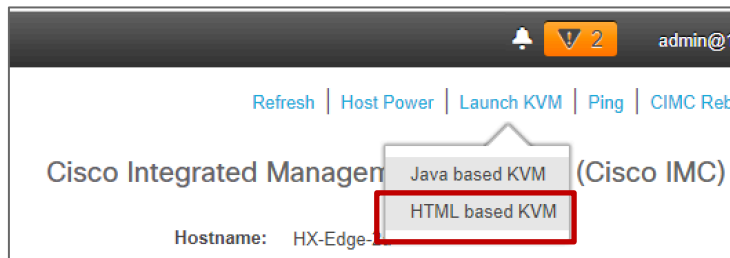
Step 1: Login to the CIMC of host 1 of N.

You must RE-INSTALL ESXi on each server in the cluster. In this case we will login to HX-Edge-2a and HX-Edge-2b. This example will show the re-install process on HX-Edge-2a.



Reinstall ESXi

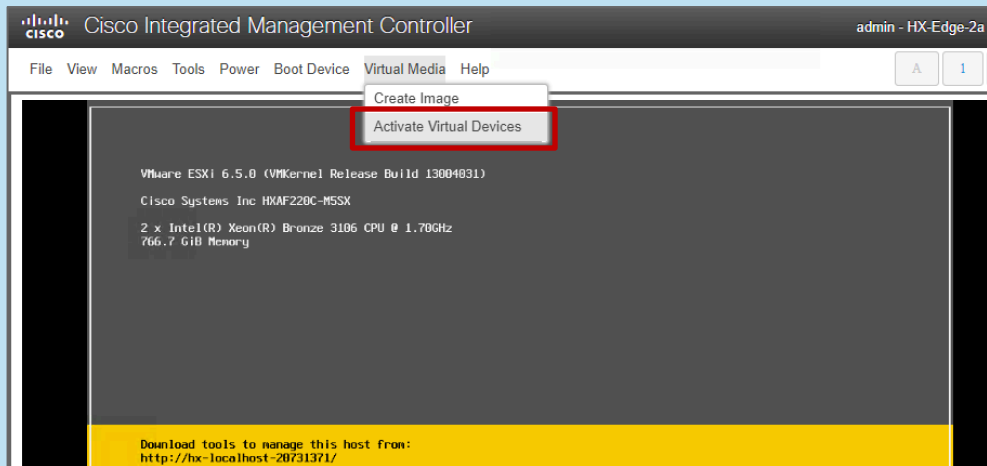
Step 2: Launch KVM.



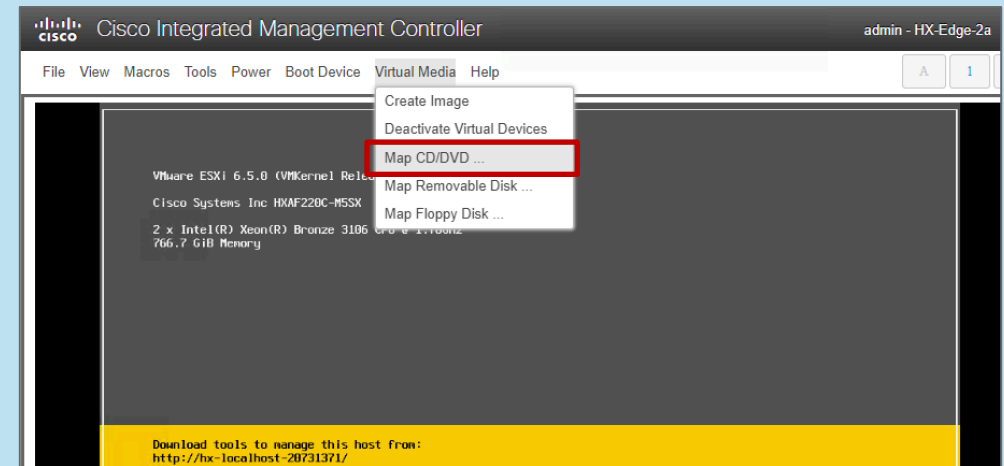
Reinstall ESXi

Step 3: Activate Virtual Devices and mount the 'custom HyperFlex ESXi install only ISO'.

1. Click on 'Virtual Media' and select 'Activate Virtual Devices'. This allows you to attach a virtual CD ROM to the servers and mount the HyperFlex ESXi install only ISO.



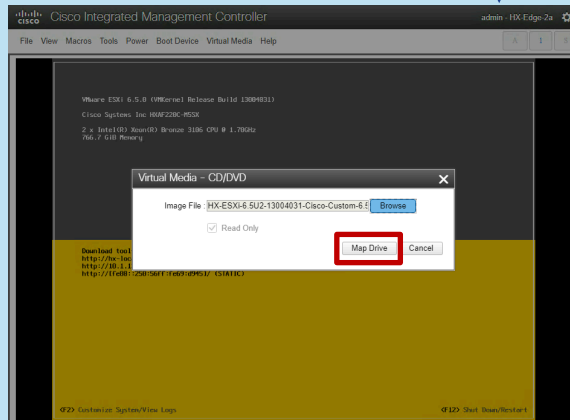
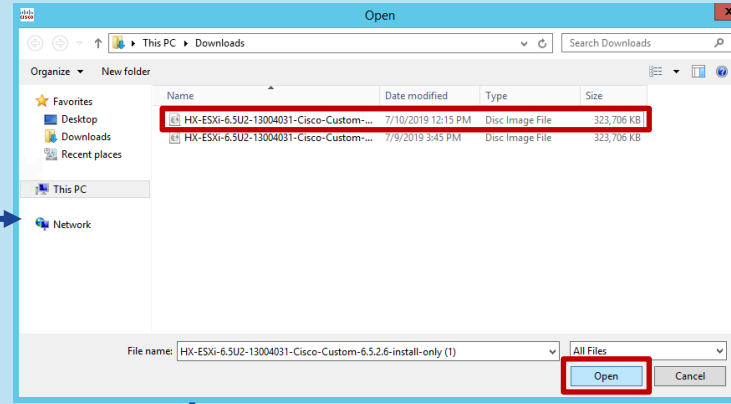
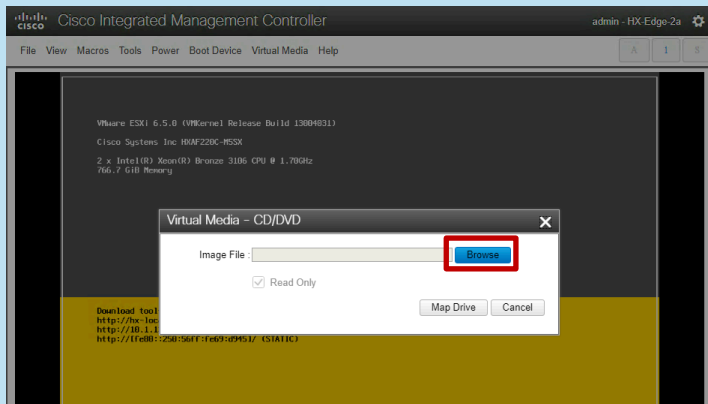
2. Click on 'Virtual Media' and select 'Map CD/DVD'.



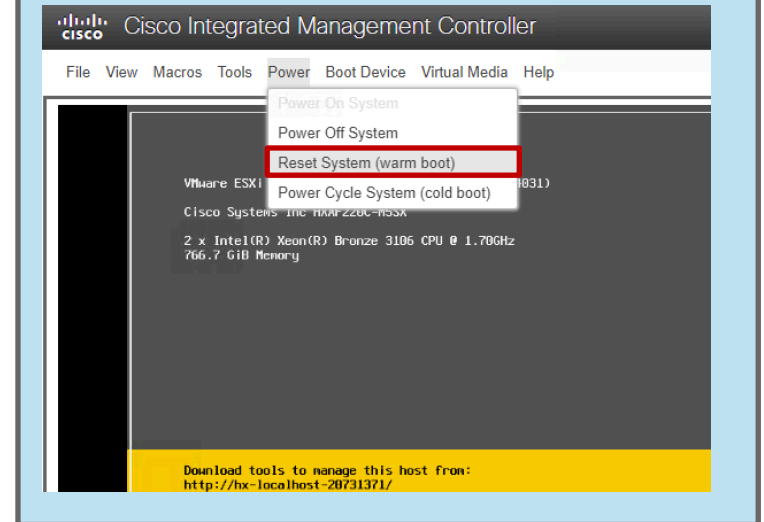
Reinstall ESXi

Step 3: Activate Virtual Devices and mount the custom 'HyperFlex ESXi install only ISO'.

3. Browse to the ESXi ISO image you downloaded (HX Custom ESXi image), open, and map drive.



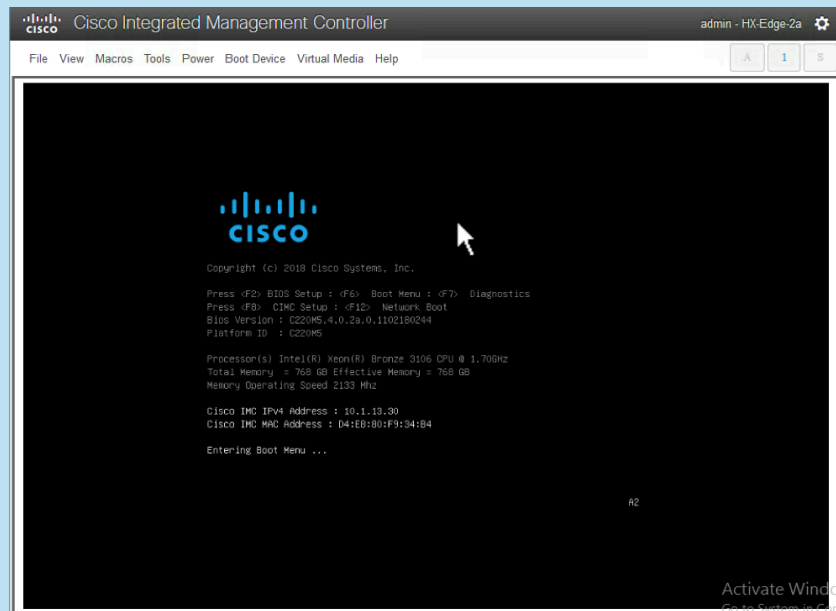
4. Power Cycle the host.



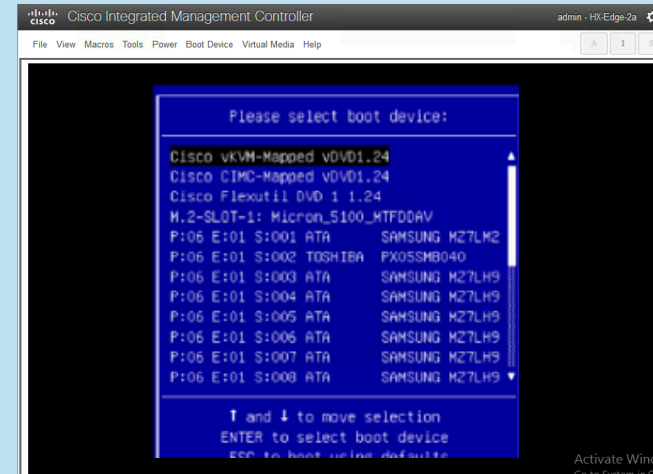
Reinstall ESXi

Step 4: Select to boot to the Cisco vKVM mapped drive.

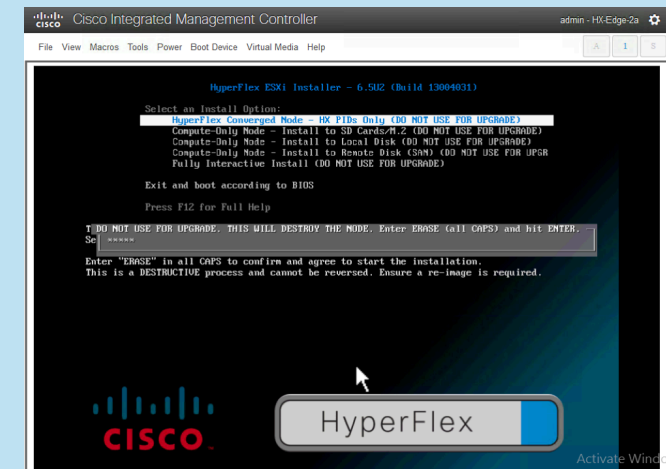
5. During boot up, Select <F6> to open the 'BOOT MENU'.



6. Select to boot device 'Cisco KVM-Mapped vDVD1.24'.



7. Select HyperFlex Converged Node – HX PIDs-Only. Enter ERASE (all CAPS) and hit enter.



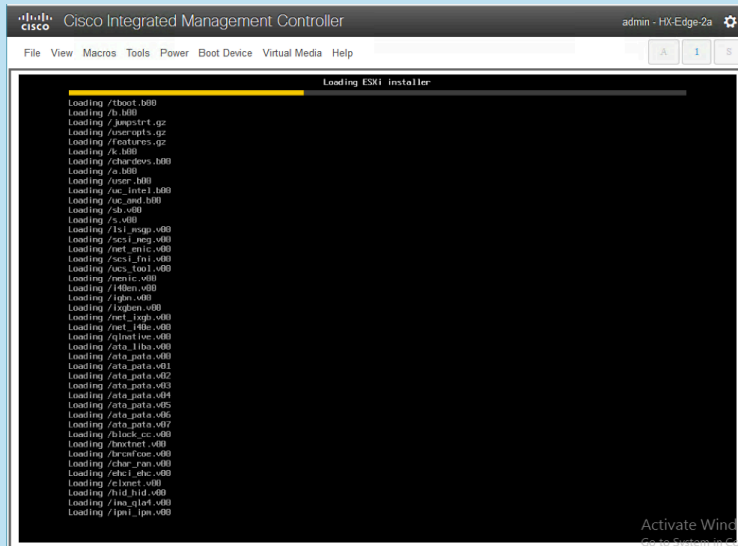
Note: If the ESXi image was downloaded from HX 4.5 or later download page, please use username 'erase' and password 'erase' for ESXi installation.



Reinstall ESXi

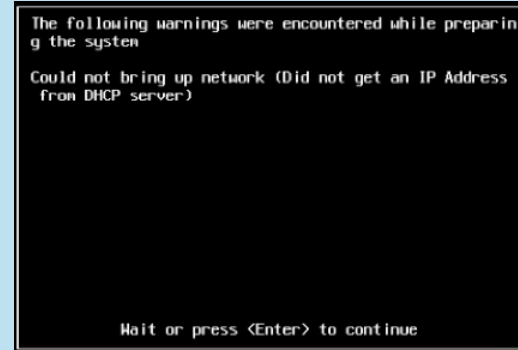
Step 5: Installation automatically completes.

8. The rest of the install is hands off. The server will reboot multiple times.



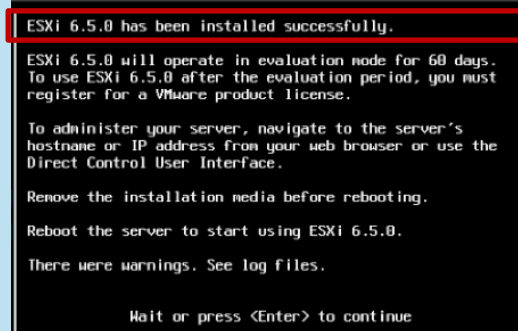
```
admin - HX-Edge-2a
File View Macros Tools Power Boot Device Virtual Media Help
Loading ESXi installer
Loading /tboot.bin
Loading /t0.bin
Loading /jumpstrt.gz
Loading /useropts.gz
Loading /fontfiles.gz
Loading /k.bin
Loading /chpasswd.bin
Loading /a.bin
Loading /user.bin
Loading /ac.intel.bin
Loading /ac.and.bin
Loading /sb.bin
Loading /a.vdi
Loading /fsi.roop.vdi
Loading /fsi.zmp.vdi
Loading /net.enic.vdi
Loading /scsi.fn1.vdi
Loading /scsi.fn2.vdi
Loading /hba.vdi
Loading /lun.vdi
Loading /lun2.vdi
Loading /net.19b.vdi
Loading /net.19c.vdi
Loading /ata.lib.vdi
Loading /ata.pat0.vdi
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Loading /ata.pat87.vdi
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Loading /ata.pat89.vdi
Loading /ata.pat90.vdi
Loading /ata.pat91.vdi
Loading /ata.pat92.vdi
Loading /ata.pat93.vdi
Loading /ata.pat94.vdi
Loading /ata.pat95.vdi
Loading /ata.pat96.vdi
Loading /ata.pat97.vdi
Loading /ata.pat98.vdi
Loading /ata.pat99.vdi
Loading /ata.pat100.vdi
Activate Windows
Go to Settings to activate Windows.
```

9. Ignore Warnings! These are expected and can be safely ignored. Let ESXi reboot automatically.



```
The following warnings were encountered while preparing the system
Could not bring up network (Did not get an IP Address from DHCP server)

Wait or press <Enter> to continue
```



```
ESXi 6.5.0 has been installed successfully.
ESXi 6.5.0 will operate in evaluation mode for 60 days.
To use ESXi 6.5.0 after the evaluation period, you must register for a VMware product license.
To administer your server, navigate to the server's hostname or IP address from your web browser or use the Direct Control User Interface.
Remove the installation media before rebooting.
Reboot the server to start using ESXi 6.5.0.
There were warnings. See log files.

Wait or press <Enter> to continue
```

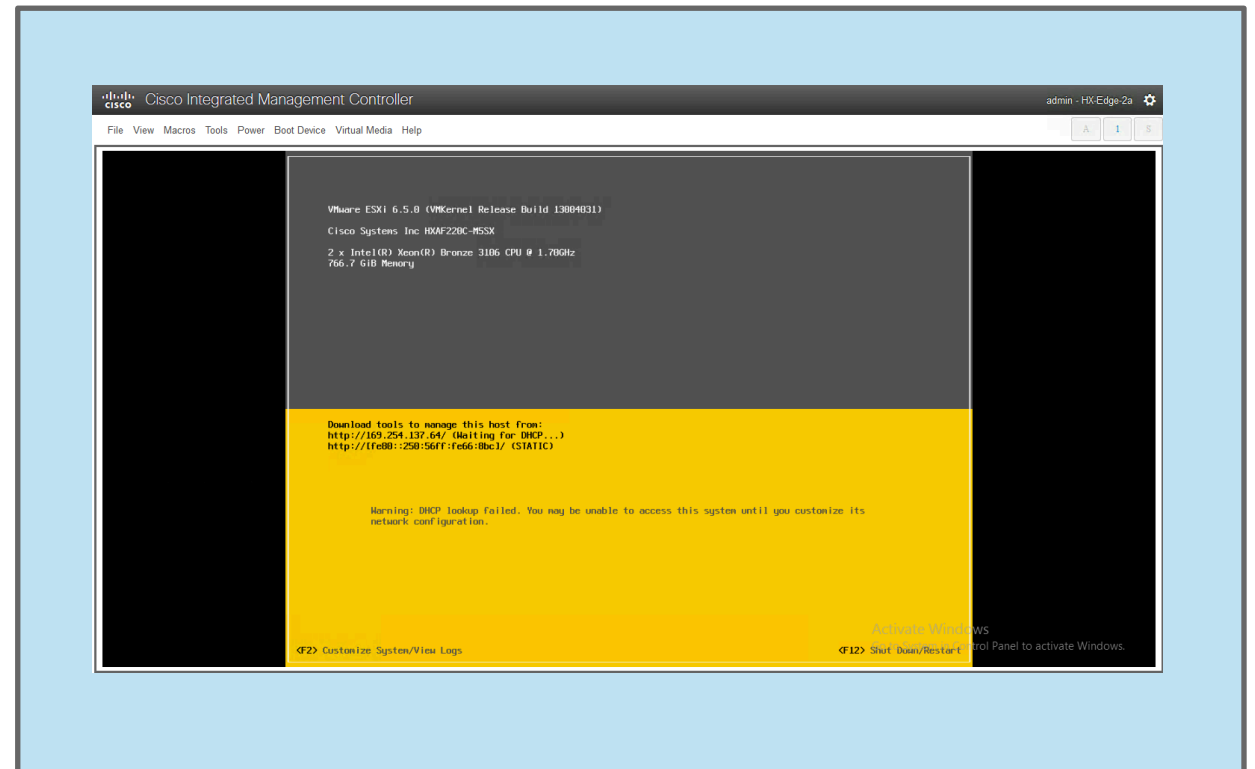
Reinstall ESXi

Step 5: Installation automatically completes.

You will see the message on the previous page about the system finishing install. ESXi will automatically restart.

The first time ESXi boots, it will run a customization script. This will cause ESXi to **reboot a second time**.

Once ESXi boots again, you will be at the DCUI as shown to the right, ready for graceful shutdown and new HX deployment.



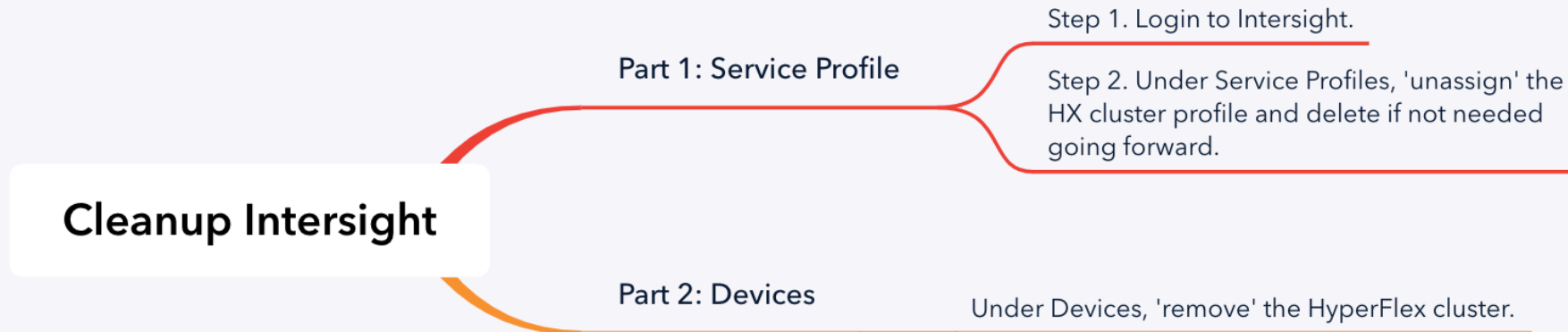
ESXi is now reinstalled!

Reinstall ESXi

Step 6: Repeat the process on host 2 of N.

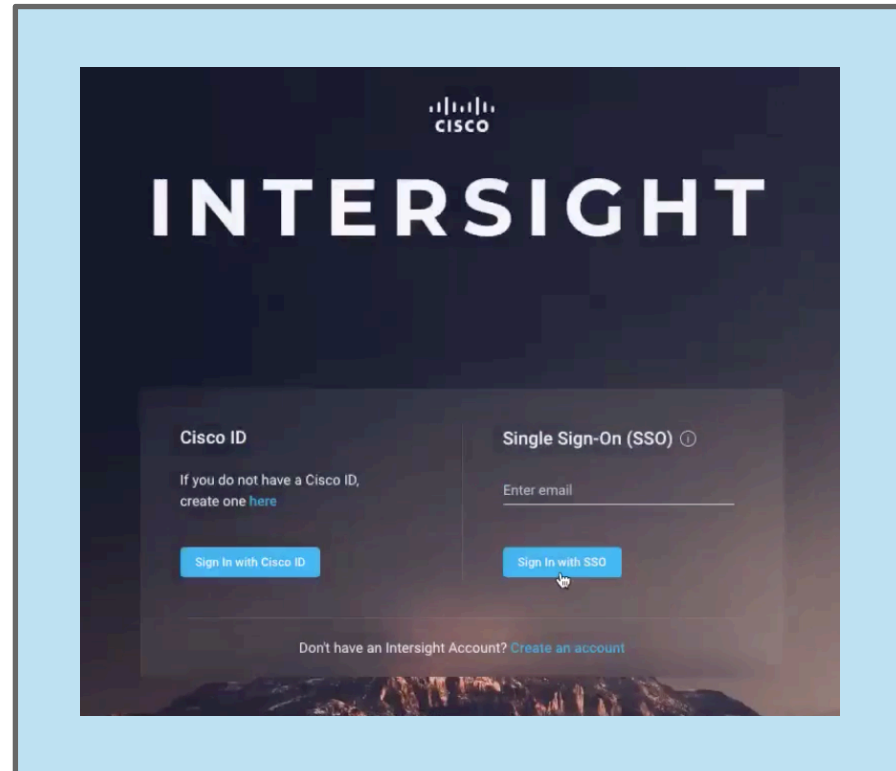
10. In this case, re-install ESXi on the second server, HX-Edge-2b.

Cleanup Intersight Workflow Overview



Part 1: Cleanup Intersight Service Profile

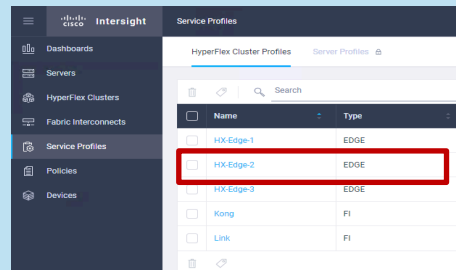
Step 1: Login to Intersight



Part 1: Cleanup Intersight Service Profile

Step 2: Under Service Profiles, unassign the HX cluster profile and delete if not needed going forward.

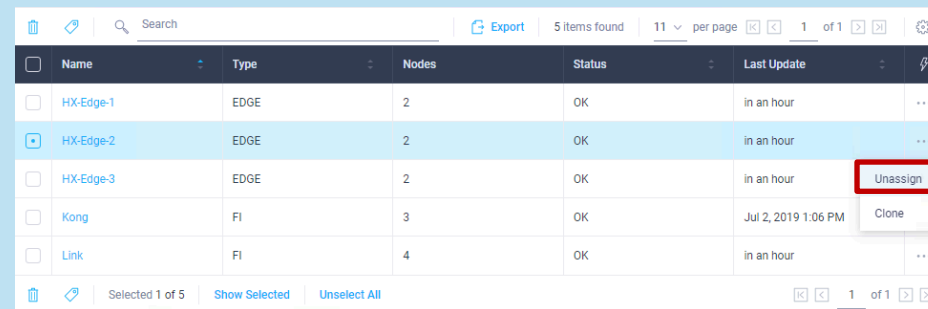
1. Locate the cluster you want to remove under Service Profiles. In this case we will be removing HX-Edge-2.



The screenshot shows the Intersight 'Service Profiles' page. A table lists several HyperFlex Cluster Profiles. The row for 'HX-Edge-2' is highlighted with a red box.

Name	Type
HX-Edge-1	EDGE
HX-Edge-2	EDGE
HX-Edge-3	EDGE
Kong	FI
Link	FI

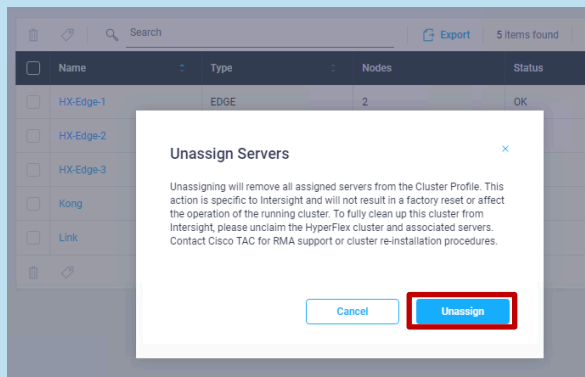
2. Click on '...' and then on 'unassign' to remove the nodes from the HX Cluster.



The screenshot shows a table of HyperFlex Cluster Profiles. The 'HX-Edge-2' row is selected. A context menu is open over the '...' button, with the 'Unassign' option highlighted by a red box.

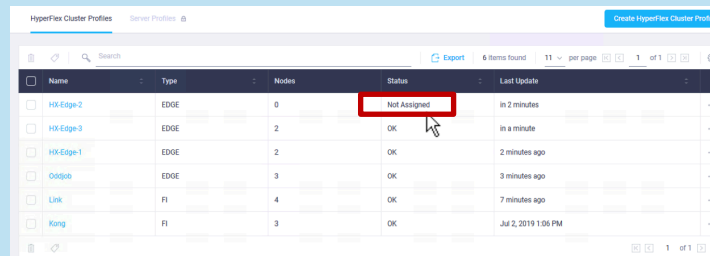
Name	Type	Nodes	Status	Last Update
HX-Edge-1	EDGE	2	OK	in an hour
HX-Edge-2	EDGE	2	OK	in an hour
HX-Edge-3	EDGE	2	OK	in an hour
Kong	FI	3	OK	Jul 2, 2019 1:06 PM
Link	FI	4	OK	in an hour

3. Click on 'unassign'.



4. Status is now 'not assigned'.

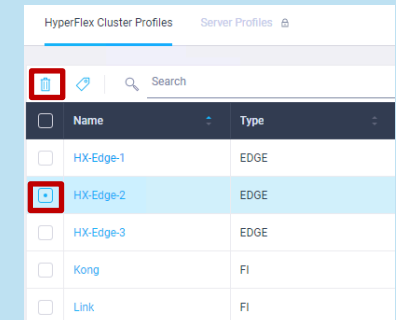
Note: If you are going to re-deploy this cluster, don't delete this service profile. You can use all the information contained within it when you re-install your cluster. If you are not going to re-use the service profile, the next step would be to delete this profile as shown in step 6.



The screenshot shows the same table as in step 2, but now the status for 'HX-Edge-2' is 'Not Assigned', highlighted with a red box.

Name	Type	Nodes	Status	Last Update
HX-Edge-2	EDGE	0	Not Assigned	in 2 minutes
HX-Edge-3	EDGE	2	OK	in a minute
HX-Edge-1	EDGE	2	OK	2 minutes ago
Dodob	EDGE	3	OK	3 minutes ago
Link	FI	4	OK	7 minutes ago
Kong	FI	3	OK	Jul 2, 2019 1:06 PM

5. If you are not going to re-use the profile on re-install, delete the service profile.



The screenshot shows the 'HyperFlex Cluster Profiles' page. The 'HX-Edge-2' row is highlighted with a red box, indicating it is selected for deletion.

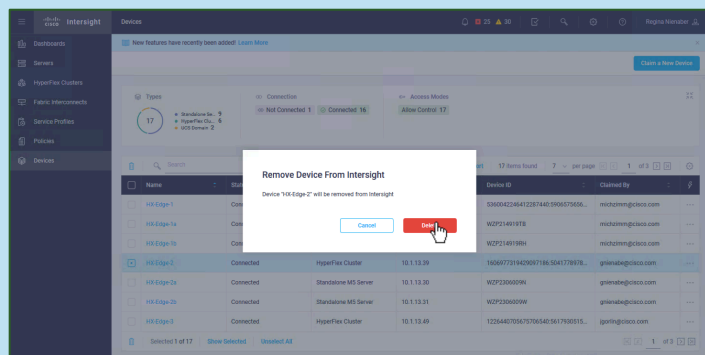
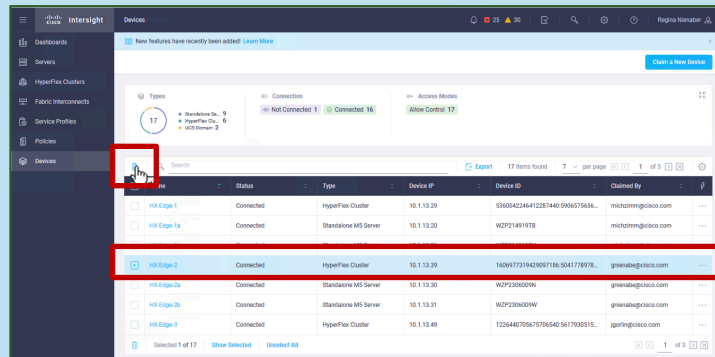
Name	Type
HX-Edge-1	EDGE
HX-Edge-2	EDGE
HX-Edge-3	EDGE
Kong	FI
Link	FI

Part 2: Cleanup Intersight Devices

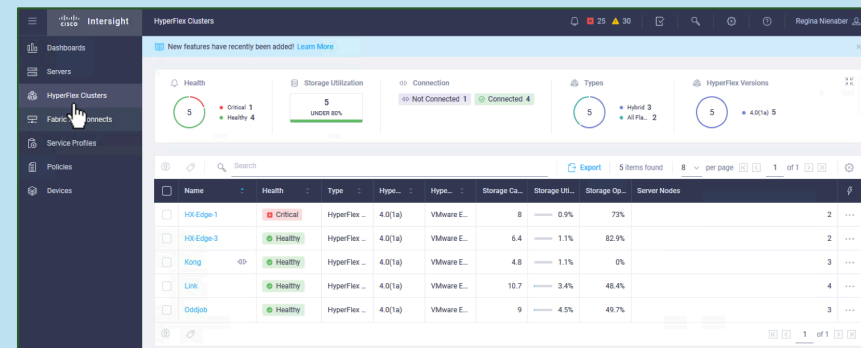
Under Devices, remove the HyperFlex cluster

6. Under 'devices' remove the 'HyperFlex cluster' as a device from Intersight by 'deleting' the HyperFlex Cluster.

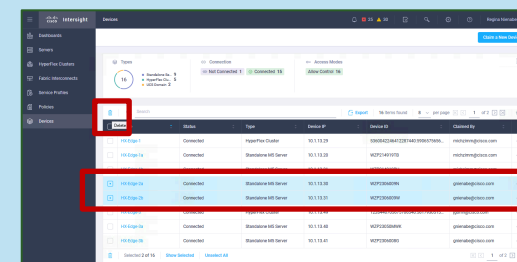
Warning: Don't delete the individual servers, only the hyperflex cluster.



7. After removing the HyperFlex Cluster from Devices it will no longer appear under HyperFlex Clusters, as shown below.



8. If you want to completely remove the servers from Intersight, the last step in the process would be to 'unclaim' the servers under 'devices'. Select the devices and delete. **Do Not delete if you plan to re-install the nodes.**



Redeploying HyperFlex Overview

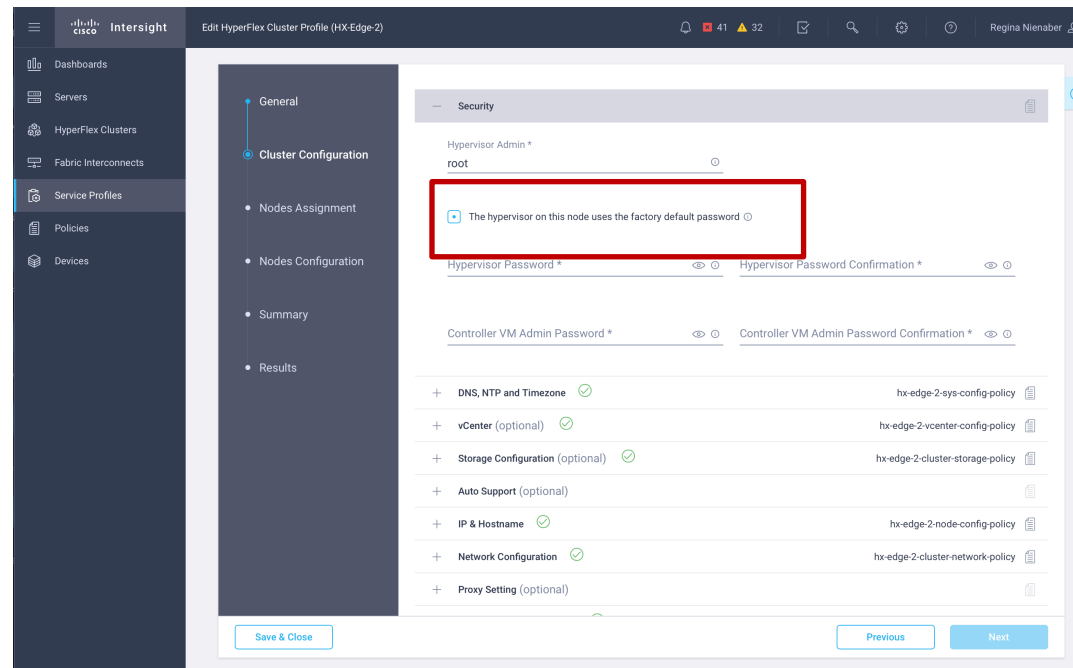


When Redeploying HyperFlex via Intersight

Step 1: Check the box for The hypervisor on this node uses the default password.

This checkbox must be checked to ensure a new password is set.

This box is found on the cluster configuration page under the security policy. The password will be set to a secure user-defined password as part of installation.

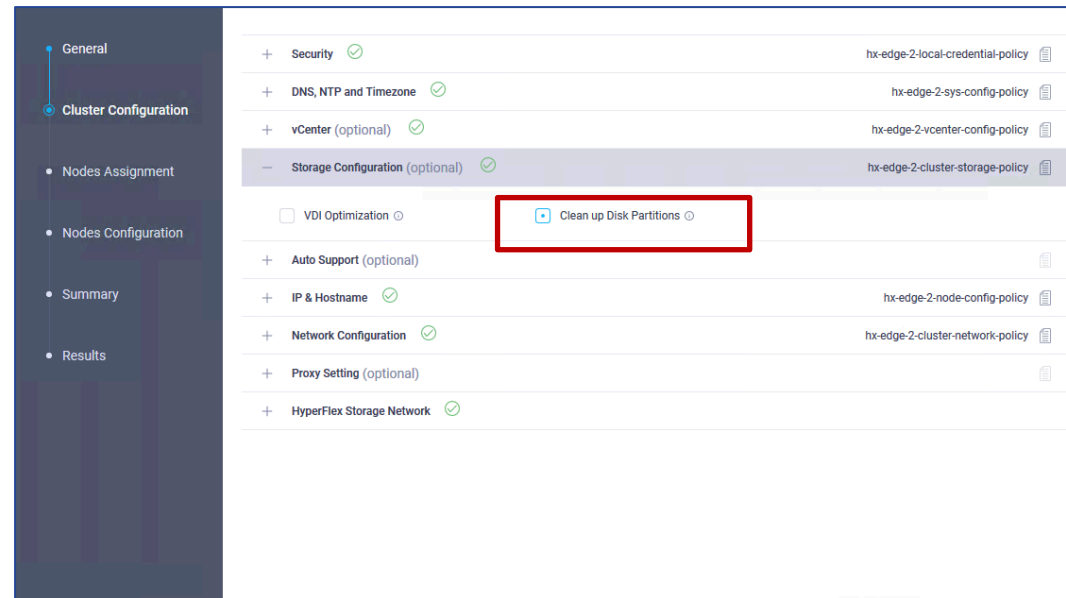


When Redeploying HyperFlex via Intersight

Step 2: Check the box to clean up disk partitions.

Make sure this box is checked to clean up disk partitions!

It is found on the cluster configuration page.



When Re-Deploying HyperFlex via On-Premise Installer OVA

Step 1: When redeploying, check the box for The hypervisor on this node uses the default password.

The default password must be used when redeploying HyperFlex.

This box is found on the credentials tab (Hypervisor Credentials).

Note: When the cluster is reimaged the password is set to the default.

Hypervisor Credentials

Admin User name

The hypervisor on this node uses the factory default password

i You are required to change the factory default password. Please enter a new password for the hypervisor

New Password

Confirm New Password

When Re-Deploying HyperFlex via On-Premise Installer OVA

Step 2: When redeploying, check to clean up disk partitions.

Make sure this box is checked to clean up disk partitions!

It is found on the final page (cluster configuration) before starting deployment.

Advanced Configuration

Virtual Desktop (VDI)

Optimize for VDI only deployment

Jumbo Frames

Enable Jumbo Frames on Data Network

Disk Partitions

Clean up disk partitions

vCenter Single-Sign-On Server

`https://<address>:7444/sts/STSService`

Troubleshooting

Disk /dev/... is Formatted as a storfs Disk

- Click edit configuration ▶ Continue
- Check the box to “Clean Up Disk Partitions”
- Click Continue ▶ Click “Retry Deploy” at the top of the page
- [See this step](#)

172.16.100.71

Failed

- ! Installing Software Packages on Storage Controller VM
Checking and Clearing Disk information if requested. Checking and Clearing Disk information if requested. failed with 'disk /dev/sdc is formatted as a storfs disk'
- ✓ Initializing Configuration
create compute group
- ✓ Preparing ESXi Host for Installation
Basic ESX Configuration.
- ✓ Configuring Hypervisor
- ✓ Deploying Storage Controller VM on ESXi Host
Force a backup of ESXi configuration data
- ✓ Configuring Storage Node
Updating Host List

Host x.x.x.x is Disconnected

You must remove the stale ESXi host from vCenter inventory, even if using a new management IP. The unique ID of the server is remembered by VC and must be removed.

Clear out the old host entry from the vCenter inventory and retry deployment.

172.16.100.72

Failed

- ! Host not managed by different VC
Host '172.16.100.72' is disconnected. Please make sure it is connected in vCenter or remove from vCenter.
- ✓ ESXi Management IP resolvability check
- ✓ ESXi Data IP resolvability check
- ✓ Controller Management IP resolvability check
- ✓ Controller Data IP resolvability check
- ✓ ESXi reachability check
- ✓ ESXi credential check
- ✓ Check for datastore inputs
- ✓ ESXi-Version

HyperFlex Resources

- <https://www.cisco.com/c/en/us/support/hyperconverged-systems/hyperflex-hx-data-platform-software/tsd-products-support-series-home.html>

Thank You



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TOMORROW starts here.