

# Cisco Intersight - Hyperflex Installation, Configuration & Deployment on VMware ESXi

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## Introduction

Cisco Intersight, simplifies data center operations by delivering systems management as-a-service, alleviating the need to maintain islands of on-premise management infrastructure.

Cisco Intersight provides an installation wizard to install, configure, and deploy Cisco HyperFlex clusters — HX Edge and FI-attached. The wizard constructs a pre-configuration definition of your cluster called an HX Cluster Profile. This definition is a logical representation of the HX nodes in your HX cluster and includes-

- **Security**— credentials for HyperFlex cluster such as controller VM password, hypervisor username, and password.
- **Configuration** — server requirements, firmware, etc.
- **Connectivity**— upstream network, virtual network, etc.

This document provides the steps and screen shot of how to deploy FI-attached Hyperflex clusters using intersight.

## Prerequisites

### Requirements

#### Supported versions for HX FI-attached Cluster Deployments

Component	Version/Release
M4, M5 Servers	HX220C-M4S
	HXAF220C-M4S
	HX240C-M4SX
	HXAF240C-M4S

HX220C-M5SX  
HXAF220C-M5SX  
HX240C-M5SX  
HXAF240C-M5SX

Device Connector

Auto-upgraded by Cisco Intersight

#### Intersight Connectivity

Consider the following prerequisites pertaining to Intersight connectivity-

- Make sure that the **device connector** on the corresponding UCS Manager instance is properly configured to connect to **Cisco Intersight** and claimed.
- All device connectors must properly resolve **svc.ucs-connect.com** and allow outbound initiated HTTPS connections on port 443.
- Hyperflex Installer version **till 3.5(2a) supports the use of an HTTP proxy, except when the cluster is redeployed and is not new from the factory.**
- All controller VM management interfaces must properly resolve download.intersight.com and allow outbound initiated HTTPS connections on port 443. **The current version of HX Installer supports the use of an HTTP proxy if direct Internet connectivity is unavailable, except when the cluster is redeployed and is not new from the factory.**
- The intended ESX server, HX Controller network, and vCenter host must be accessible through UCS Fabric Interconnect management interfaces.
- Starting with HXDP release 3.5(2a), the Intersight installer does not require a factory installed controller VM to be present on the HyperFlex servers. **However, this requirement will still be applicable if connectivity to Intersight is through a HTTP proxy.** All NEW HX servers may be deployed as-is with an HTTP proxy.

#### Other requirements

[Software Requirements](#)

[Physical Requirements](#)

[Network Requirements](#)

[Port Requirements](#)

[Deployment Information](#)

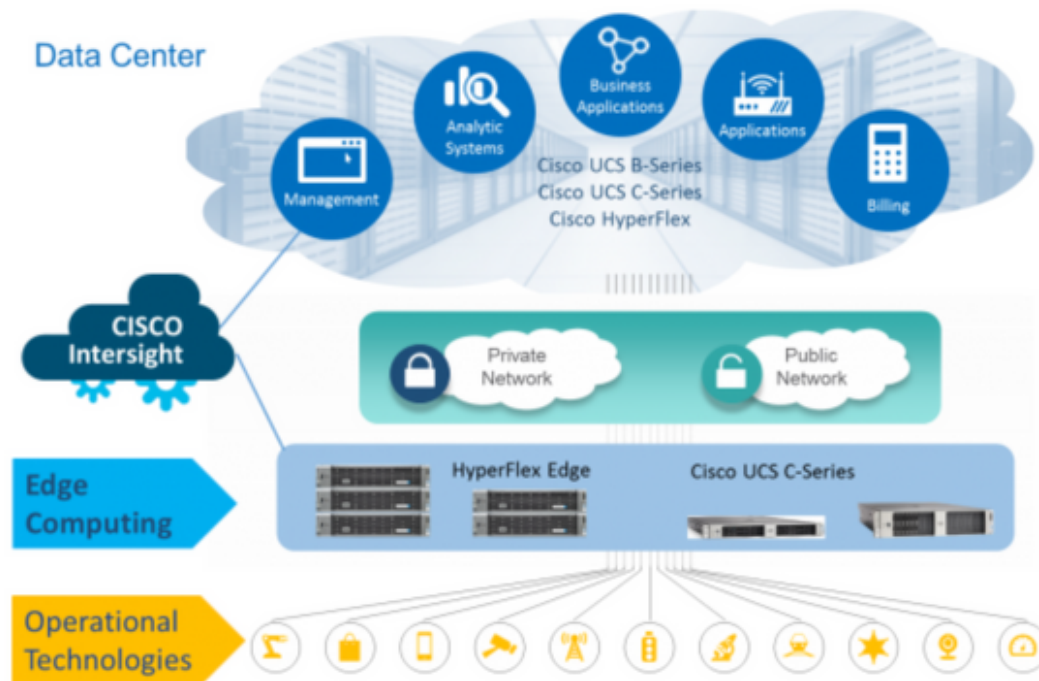
#### Components Used

- Cisco Intersight
- Cisco UCSM
- Cisco HX Servers
- Cisco Hyperflex
- VMWare ESXi
- VMware vCenter

# Configure

## Network Diagram

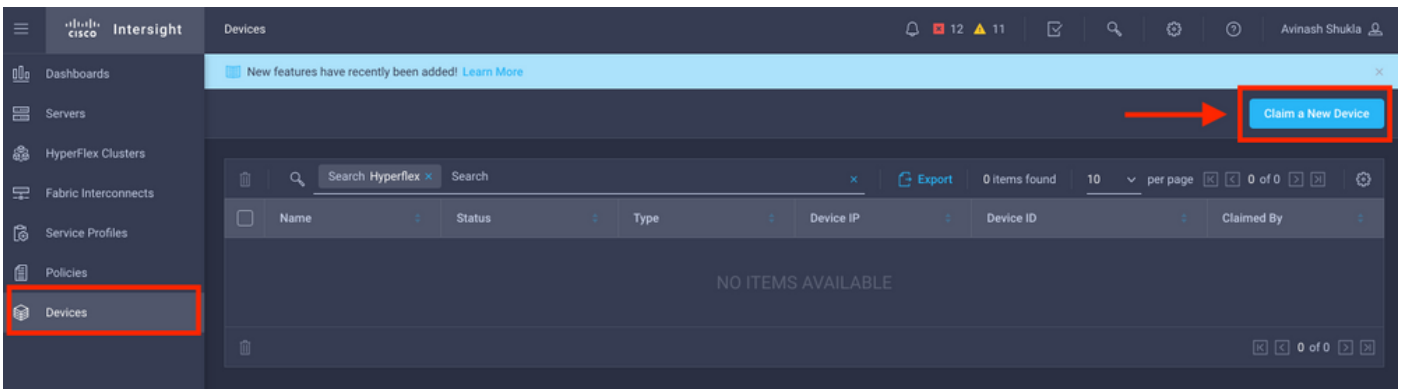
- Cisco Intersight provides an easy way to deploy HyperFlex Clusters by including the HyperFlex Installer in all Editions of Cisco Intersight.



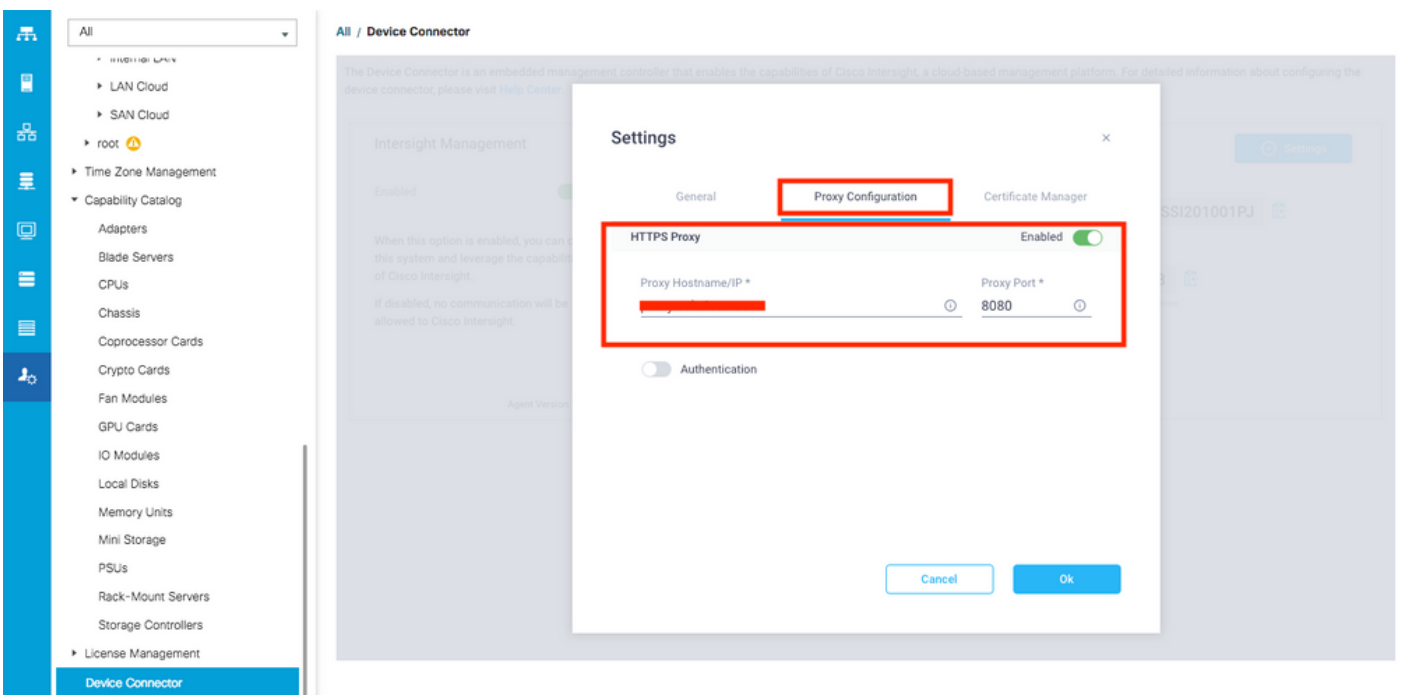
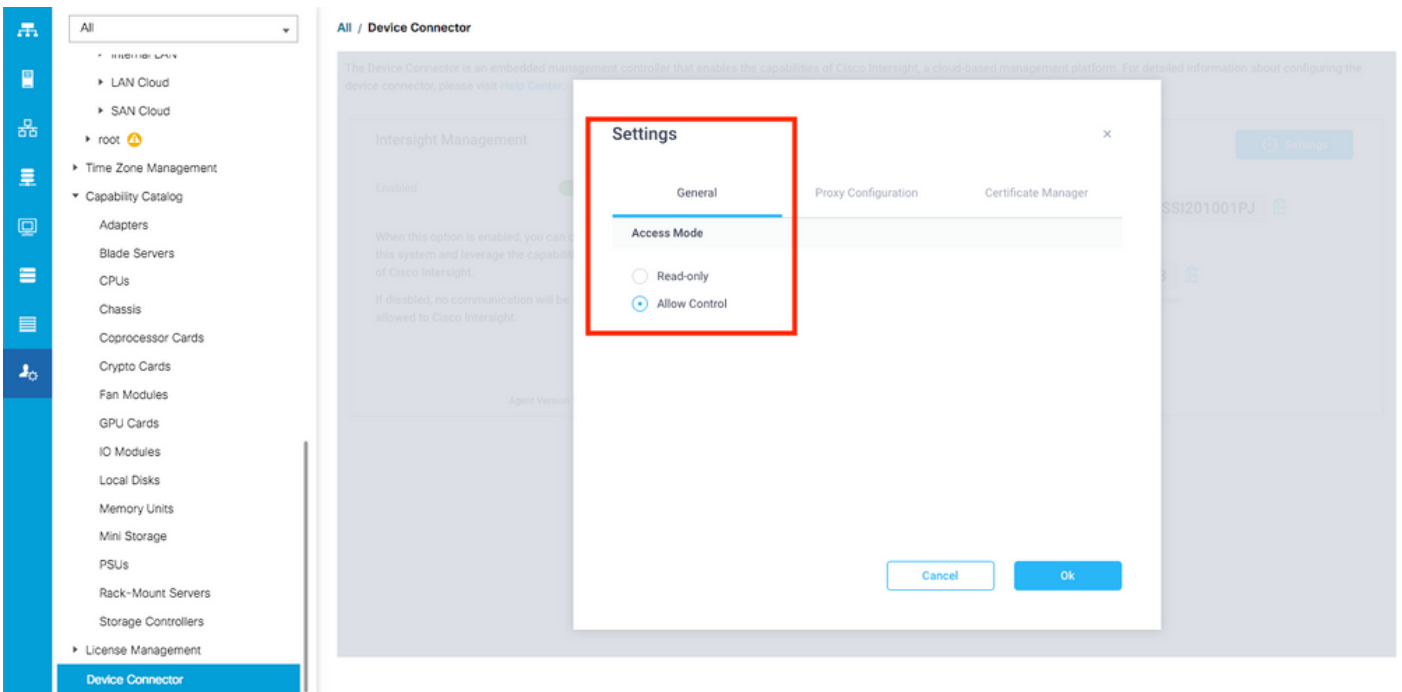
## Configuration Steps

**Step 1.** Login to Cisco Intersight and select the user account as shown below-

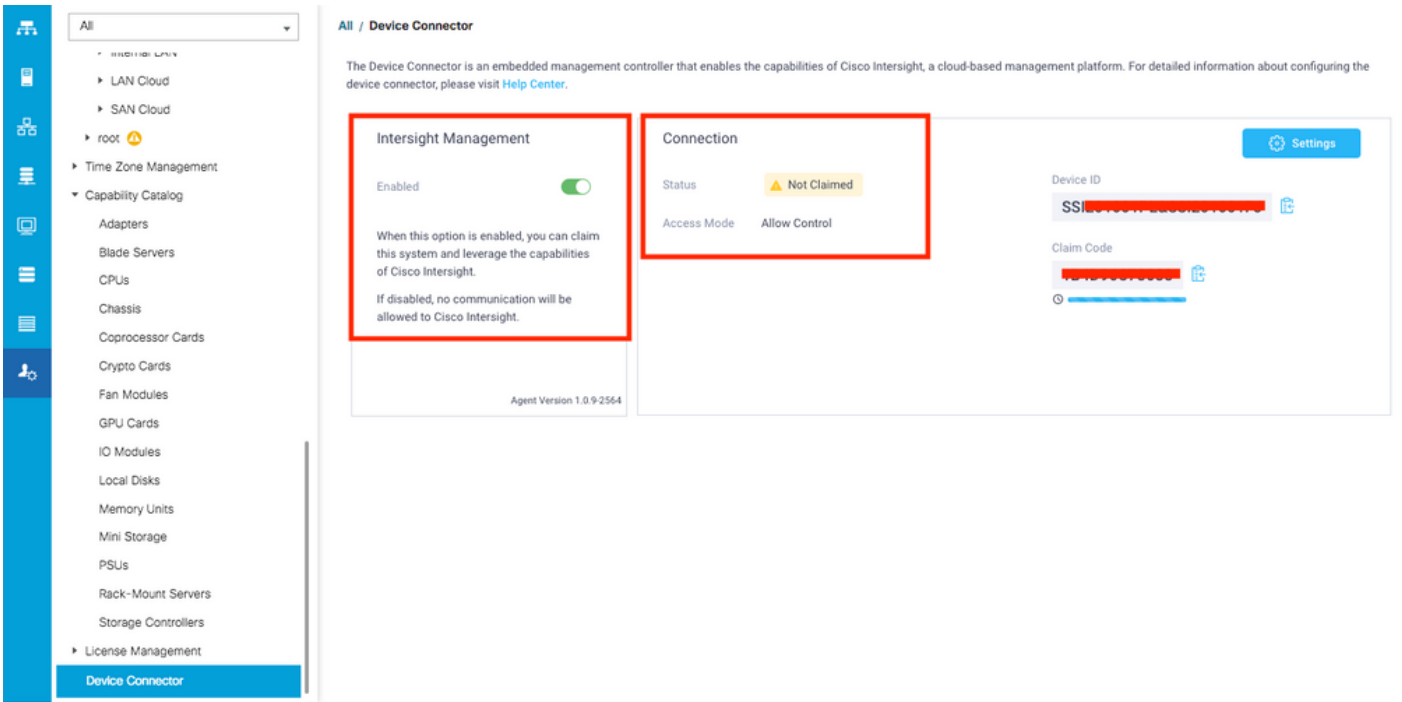




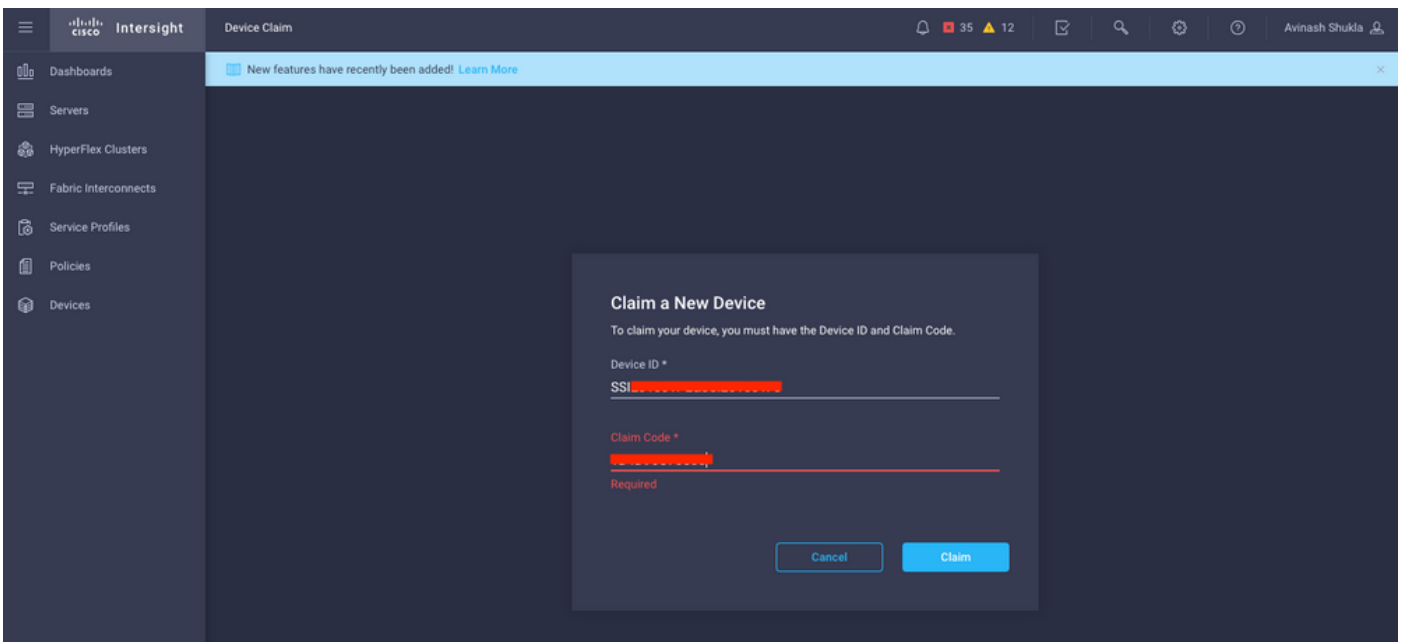
**Step 4.** Login to UCS Manager, browse to **Admin -> Device Connector**. Click on **Settings** to configure **Access Mode** and **Proxy Configuration**



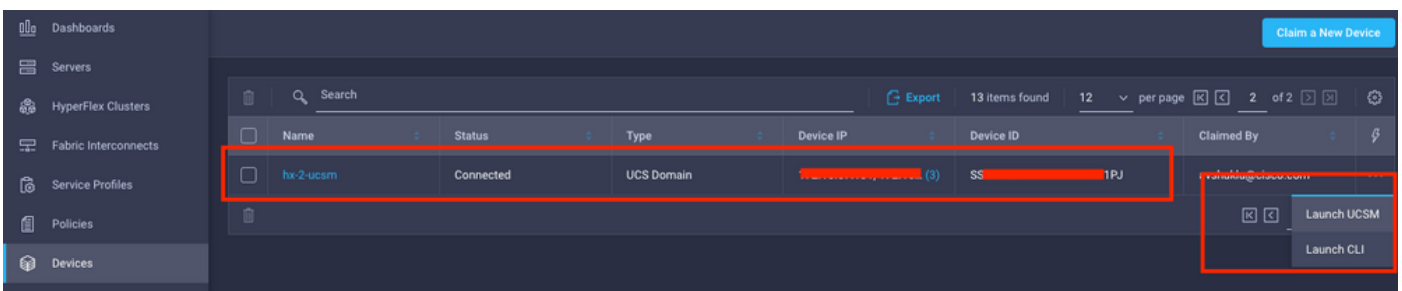
**Step 5.** In UCS Manager, browse to **Admin -> Device Connector**. Enable **Intersight Management** toggle button and get the Device ID and the Claim Code.



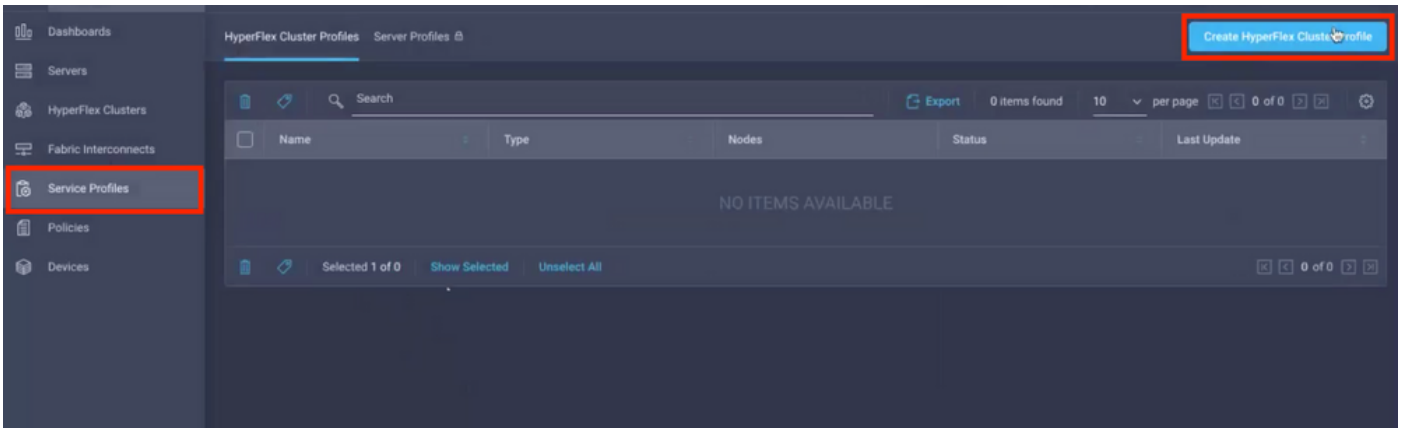
**Step 6.** On Intersight account, use the **Claim Code** and **Device ID** (captured in step 5) to Claim the device. Now the UCSM domain is claimed.



**Step 7.** Check under Devices to confirm the new domain shows "**Connected**" and "**Claimed**". Also, check that you now have the option to cross launch UCSM UI and UCSM CLI from Intersight.

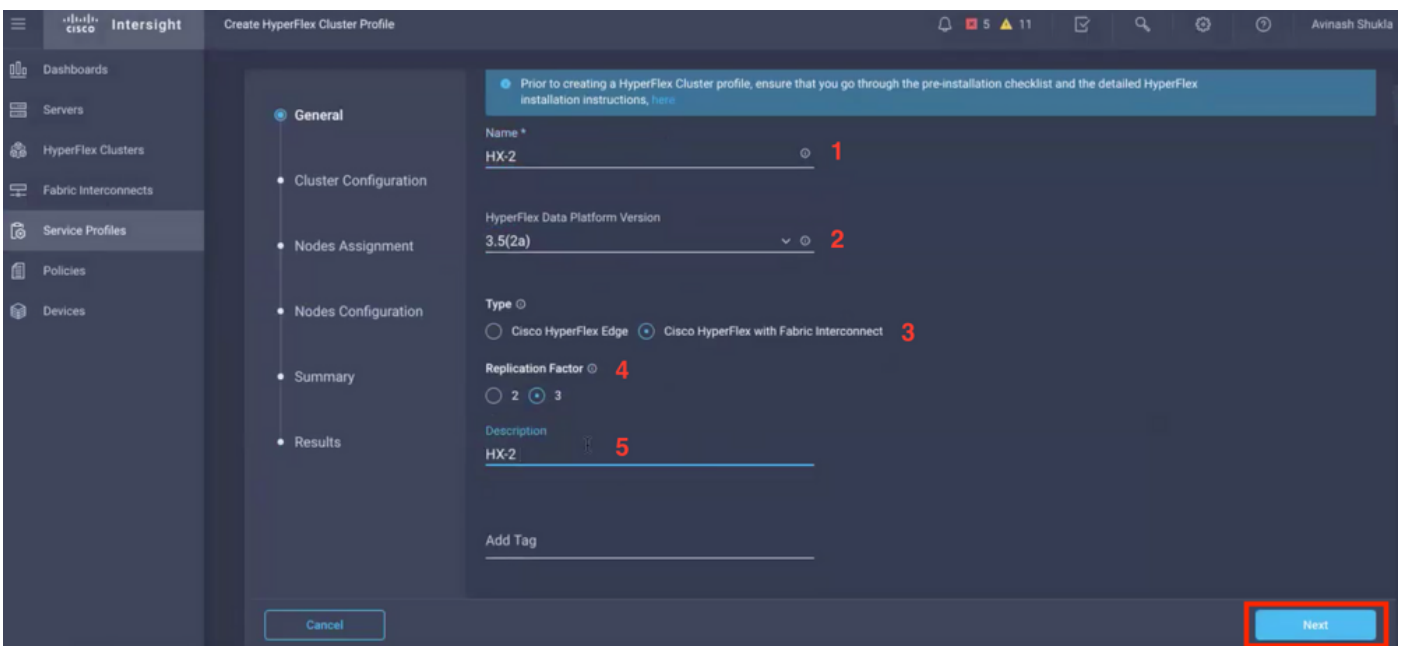


**Step 8.** Under **Service Profiles**, click **Create Hyperflex Cluster Profile**

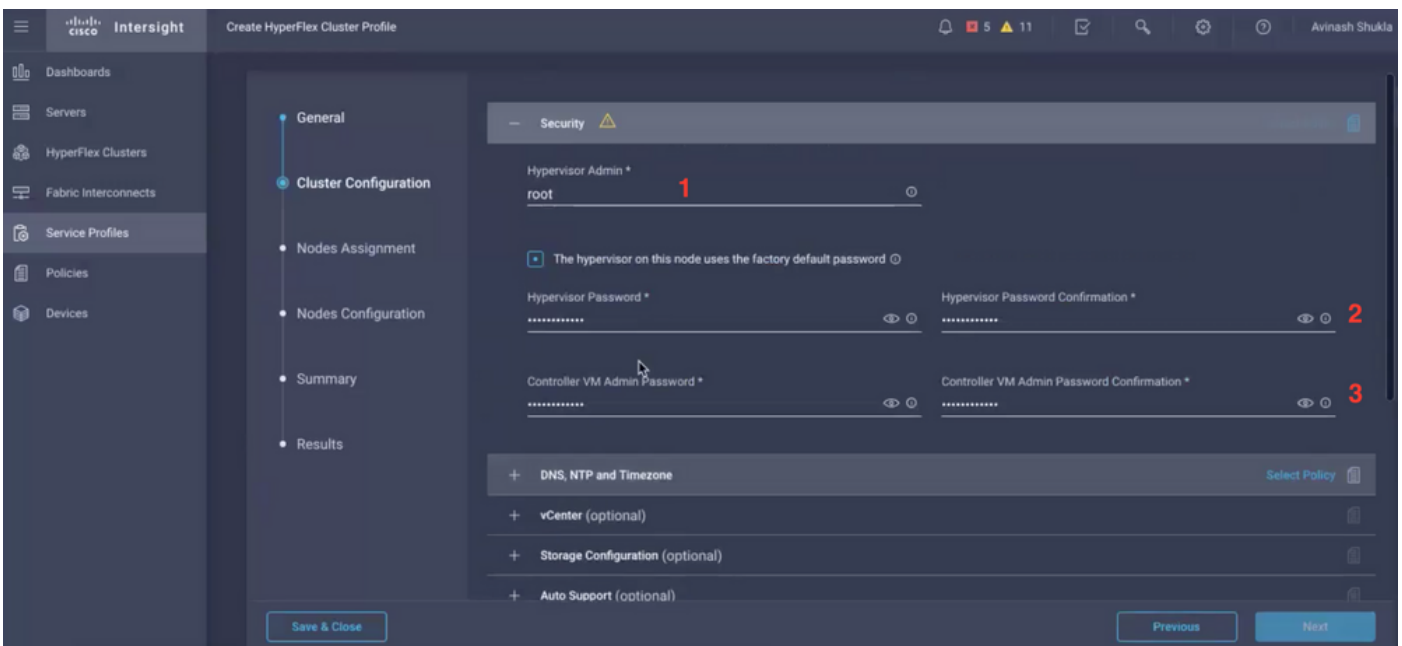


**Step 9.** Configure the Service Profile using the below steps,

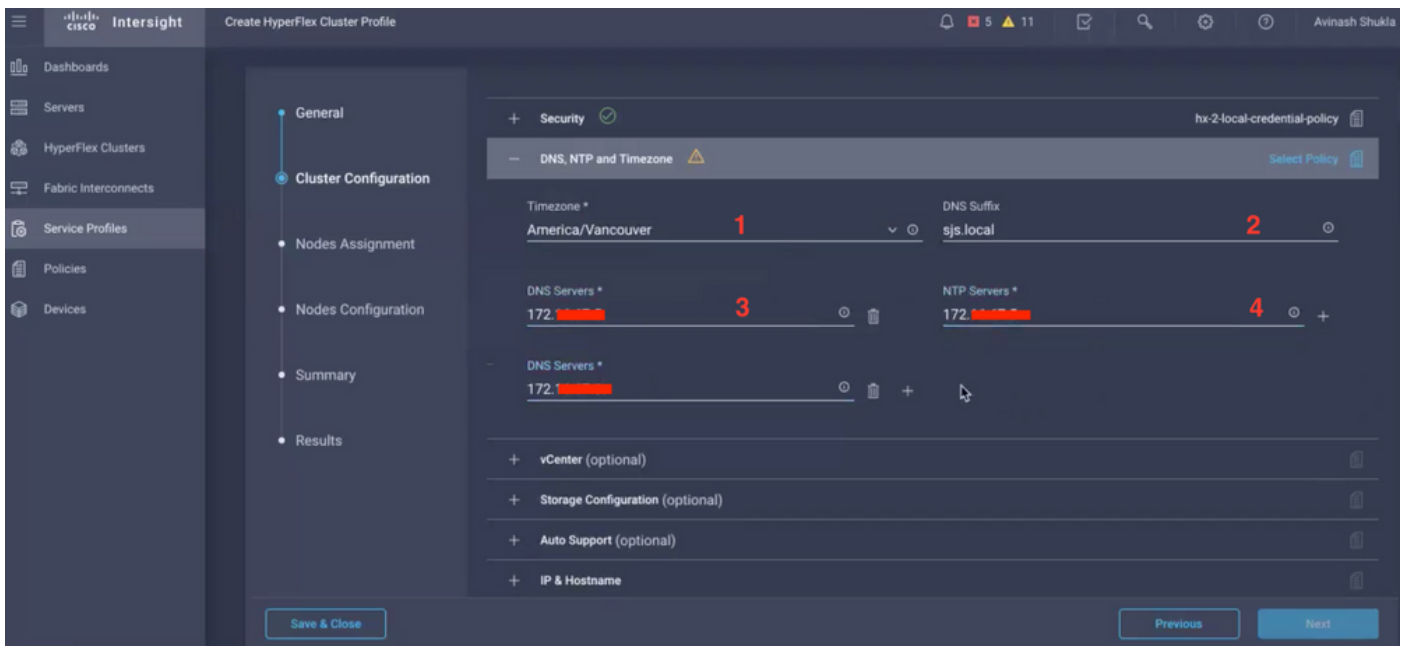
## General Tasks



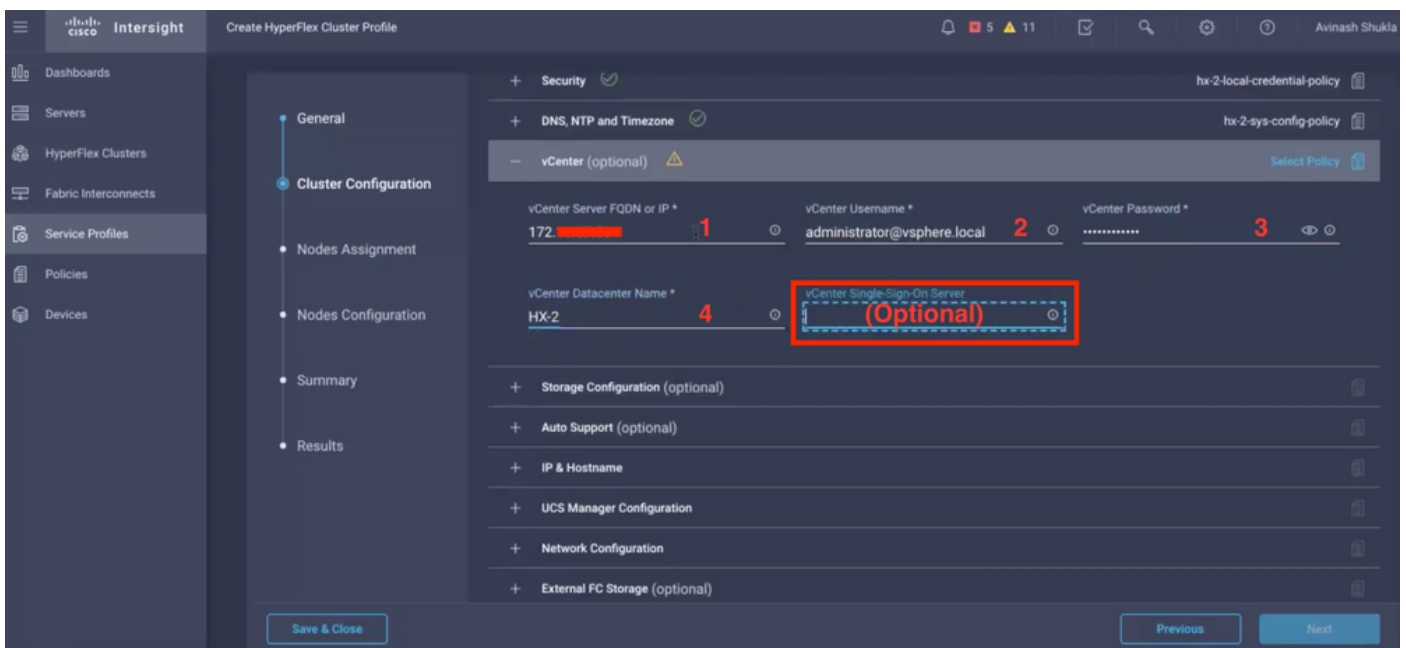
## Cluster Configuration - Security



## Cluster Configuration - DNS, NTP and Timezone



## Cluster Configuration - vCenter Configuration

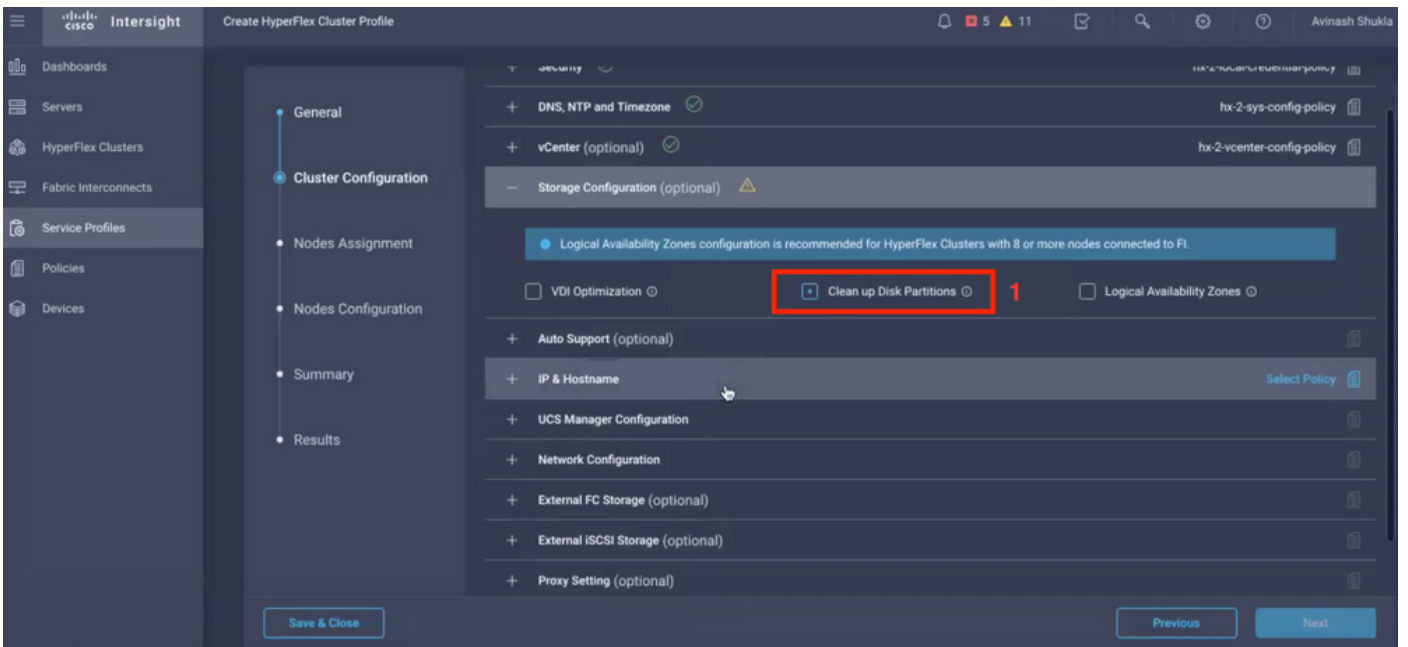


**Note:-** For vCenter Configuration it is recommended to skip the vCenter Single-Sign-On Server. Please check below document page 27,

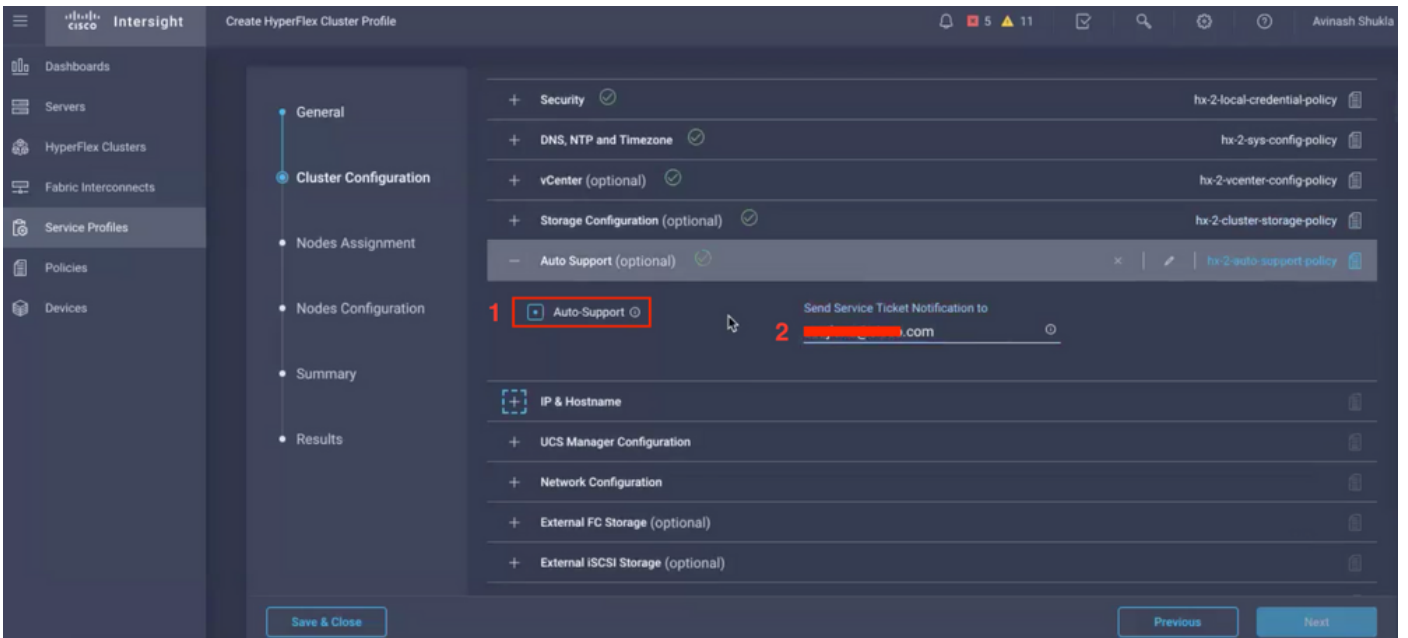
<https://www.cisco.com/c/dam/en/us/products/collateral/hyperconverged-infrastructure/hyperflex-hx-series/whitepaper-c11-740456.pdf>

## Cluster Configuration - Storage Configuration

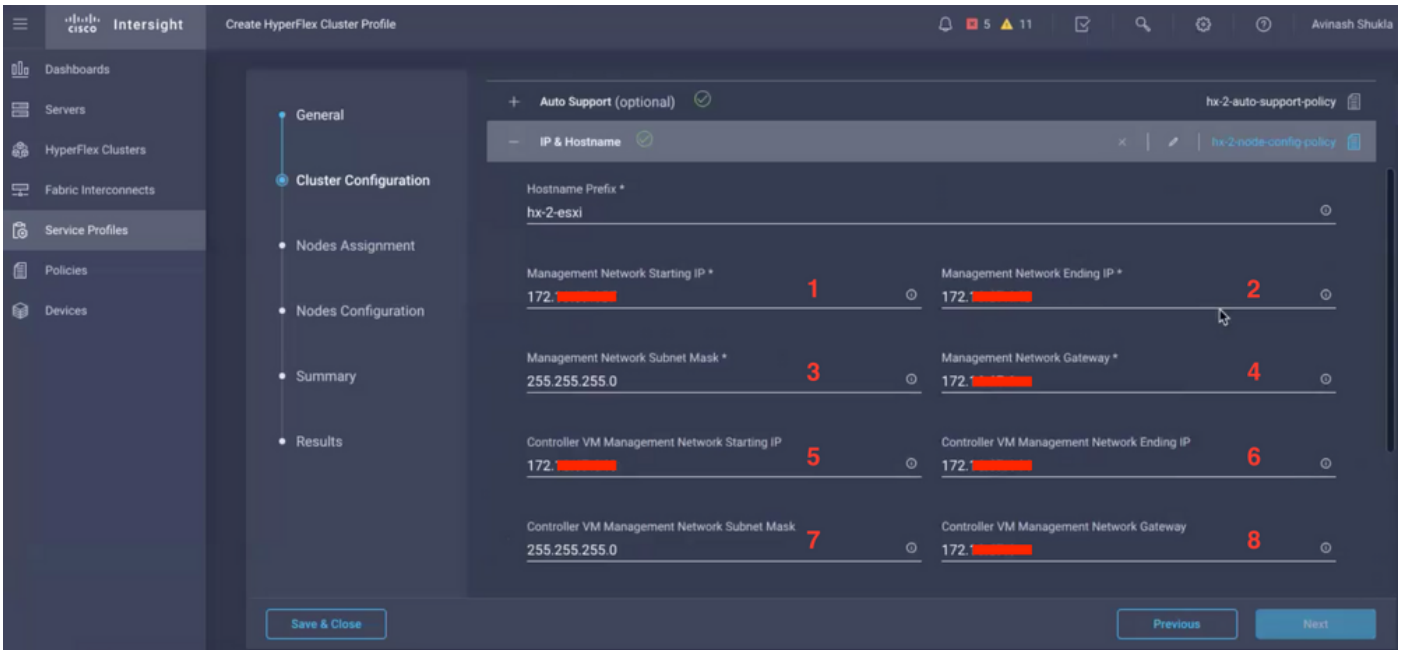




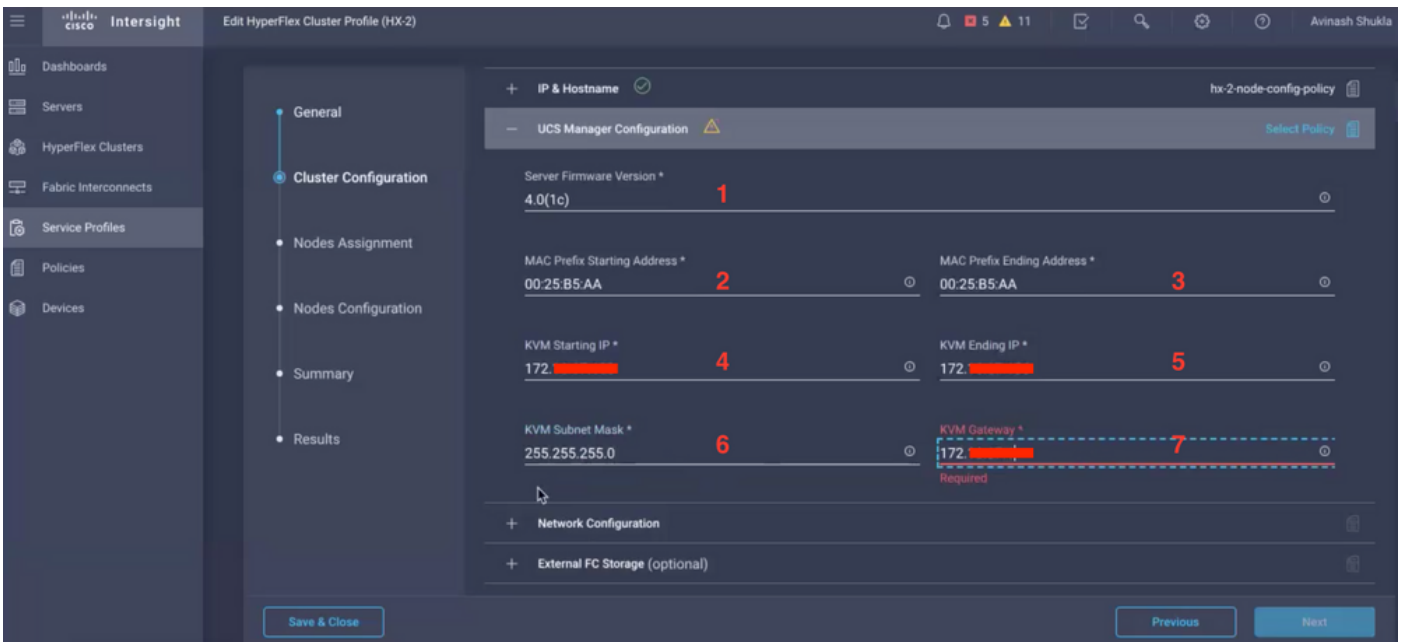
## Cluster Configuration - Auto Support



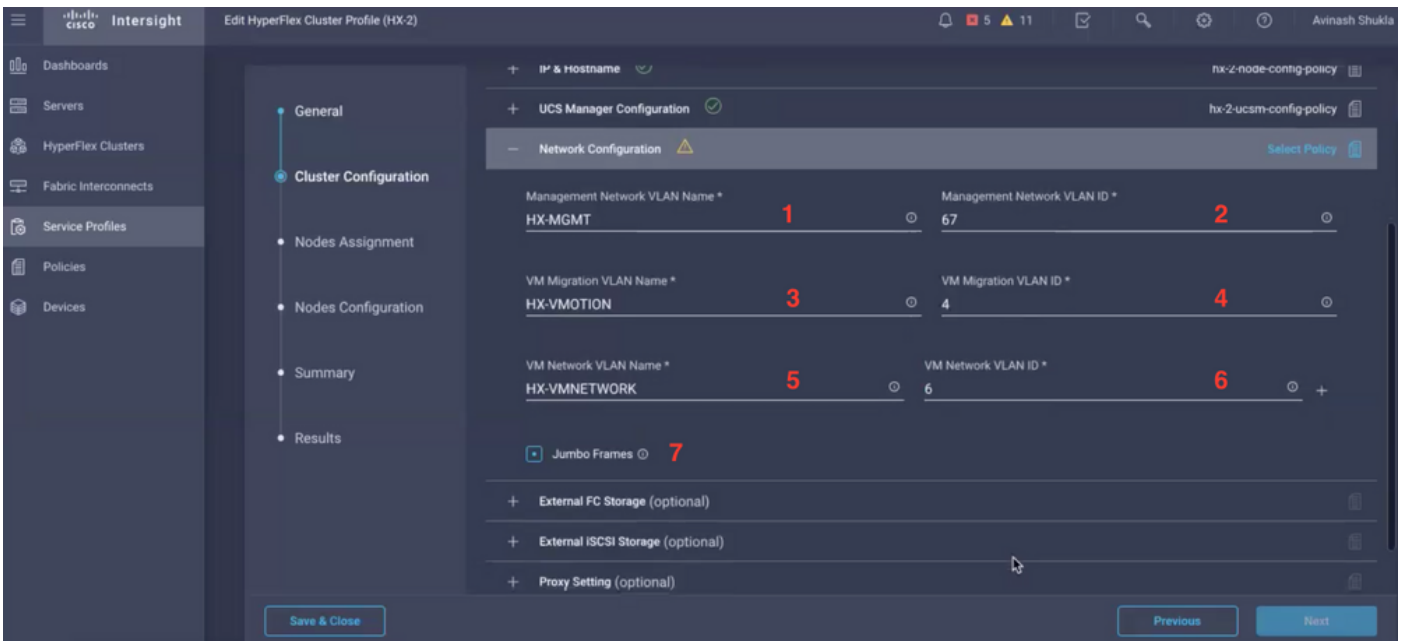
## Cluster Configuration - IP & Hostname



## Cluster Configuration - UCSM Configuration

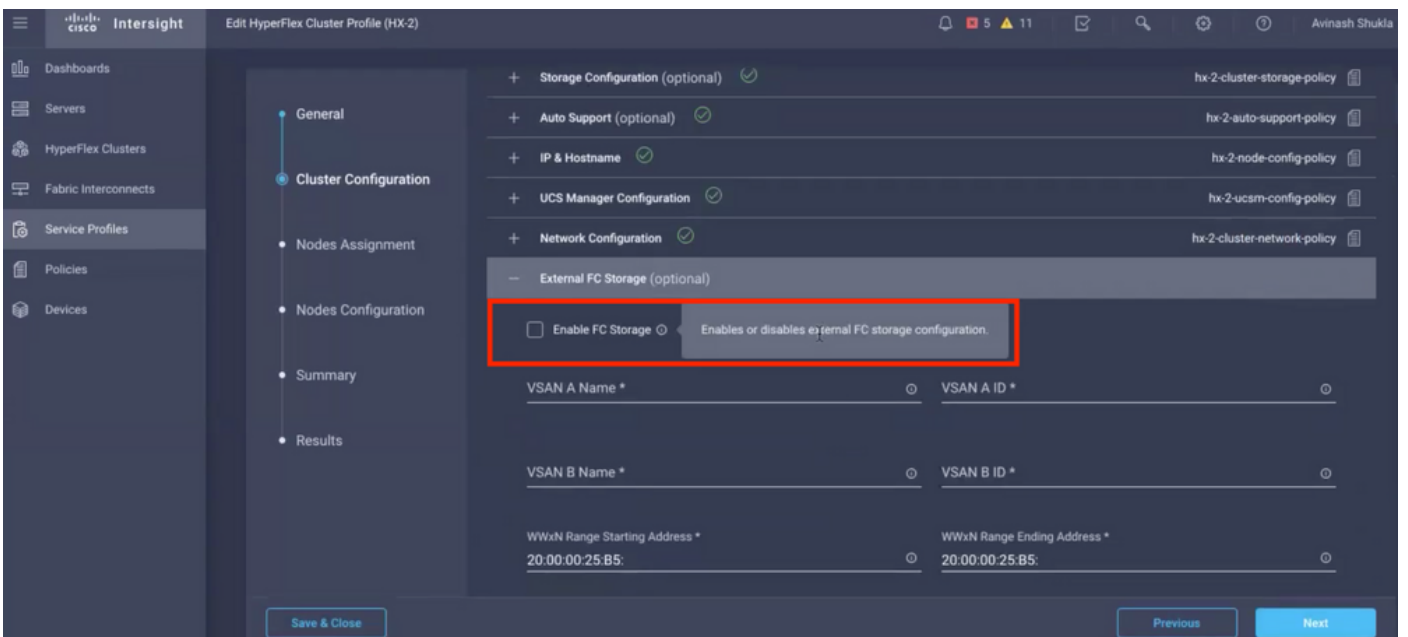


## Cluster Configuration - Network

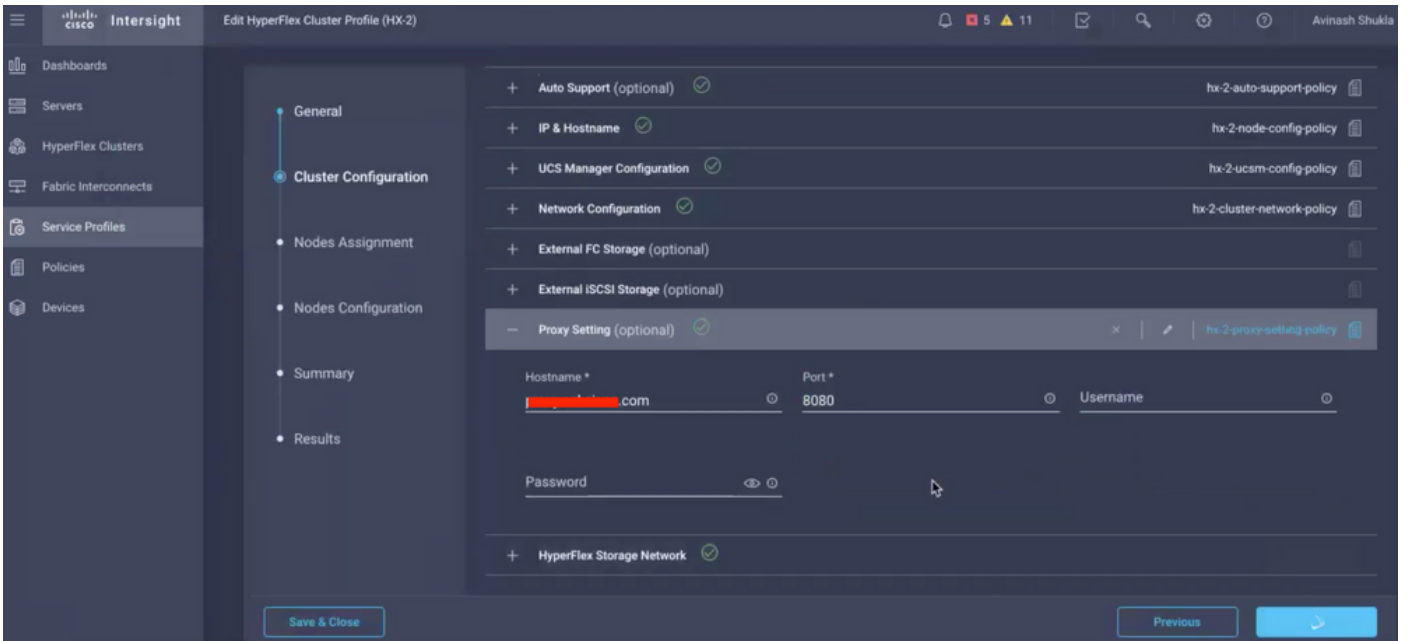


## Cluster Configuration - External Storage (Optional)

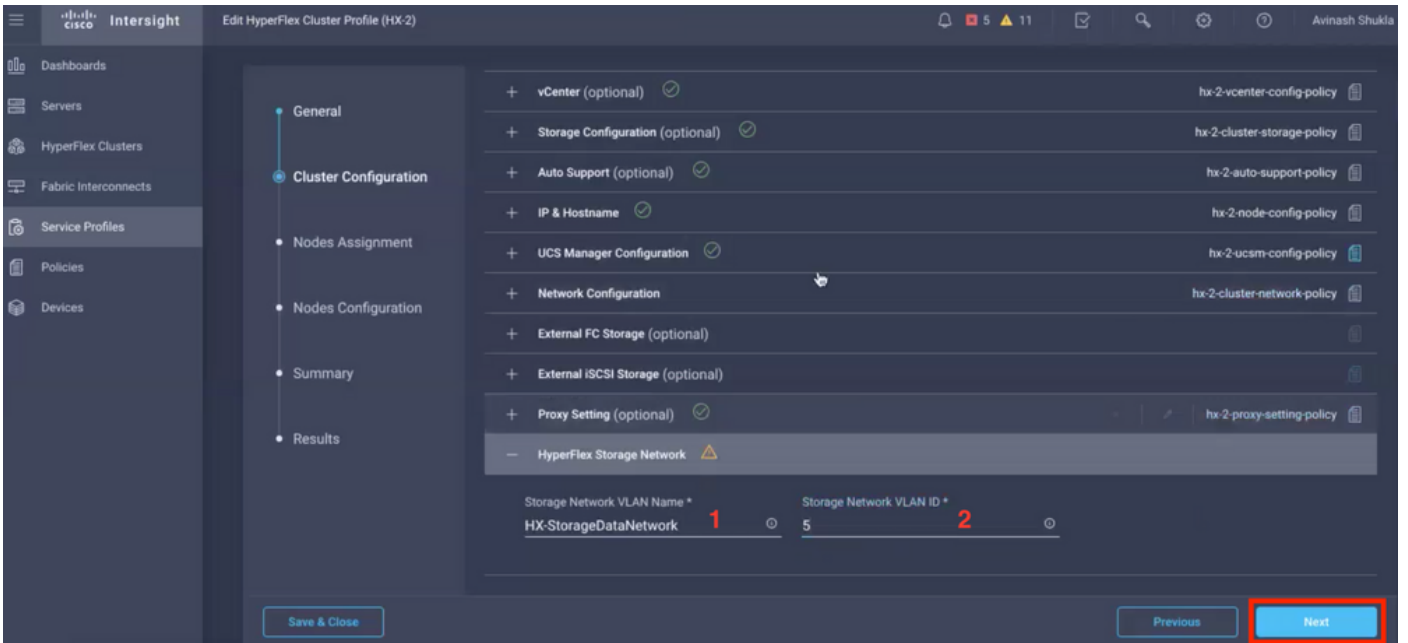
*If enabled, fill the VSAN name and VSAN ID for FI A and FI B respectively.*



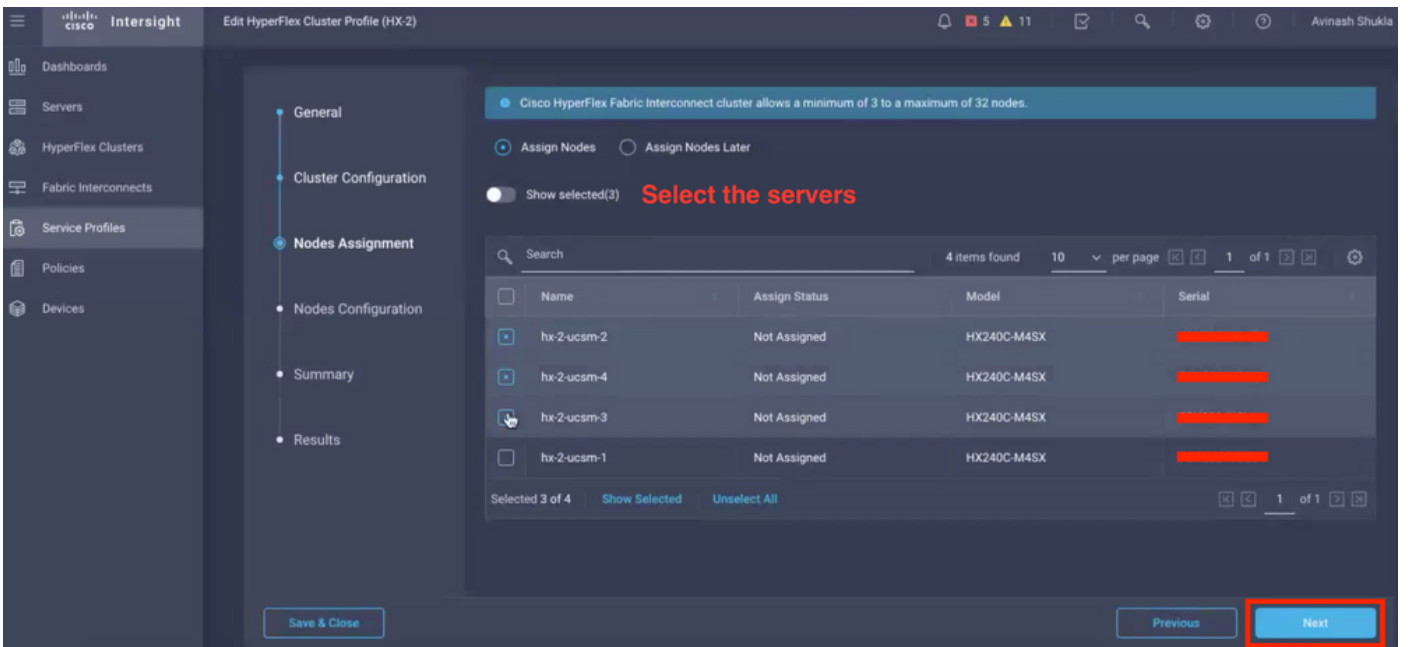
## Cluster Configuration - Proxy Setting (Optional)



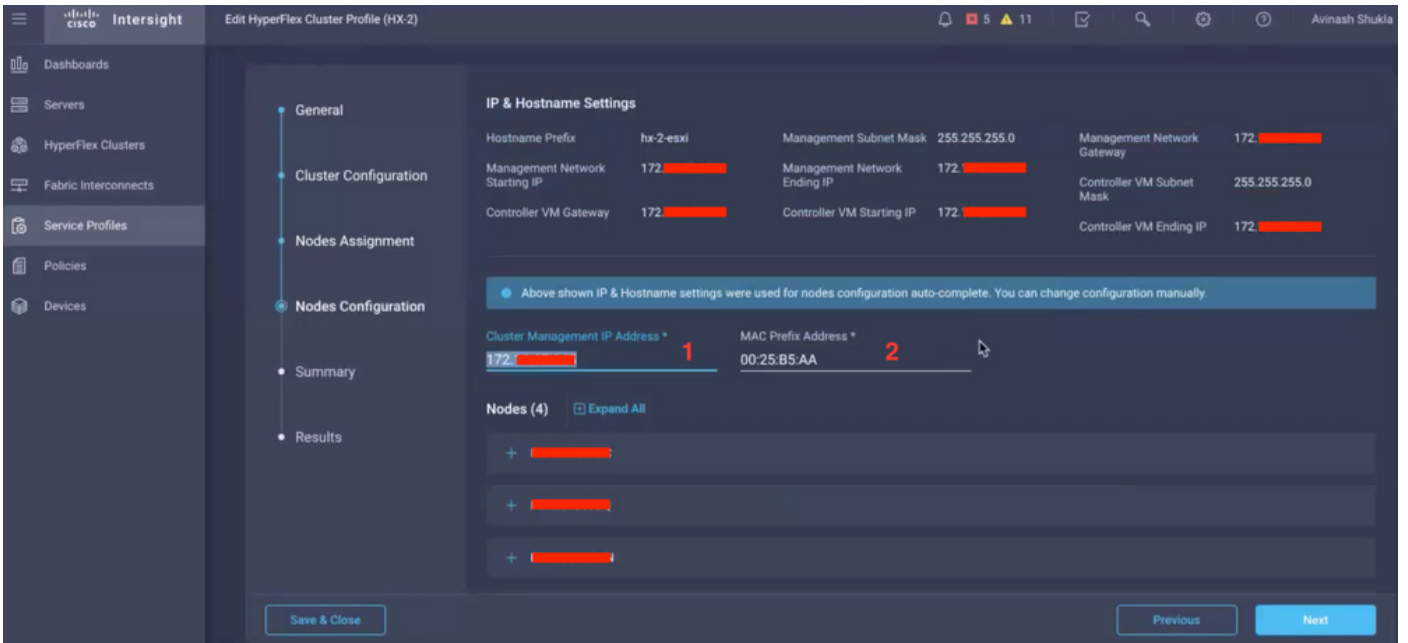
## Cluster Configuration - Hyperflex Storage Network

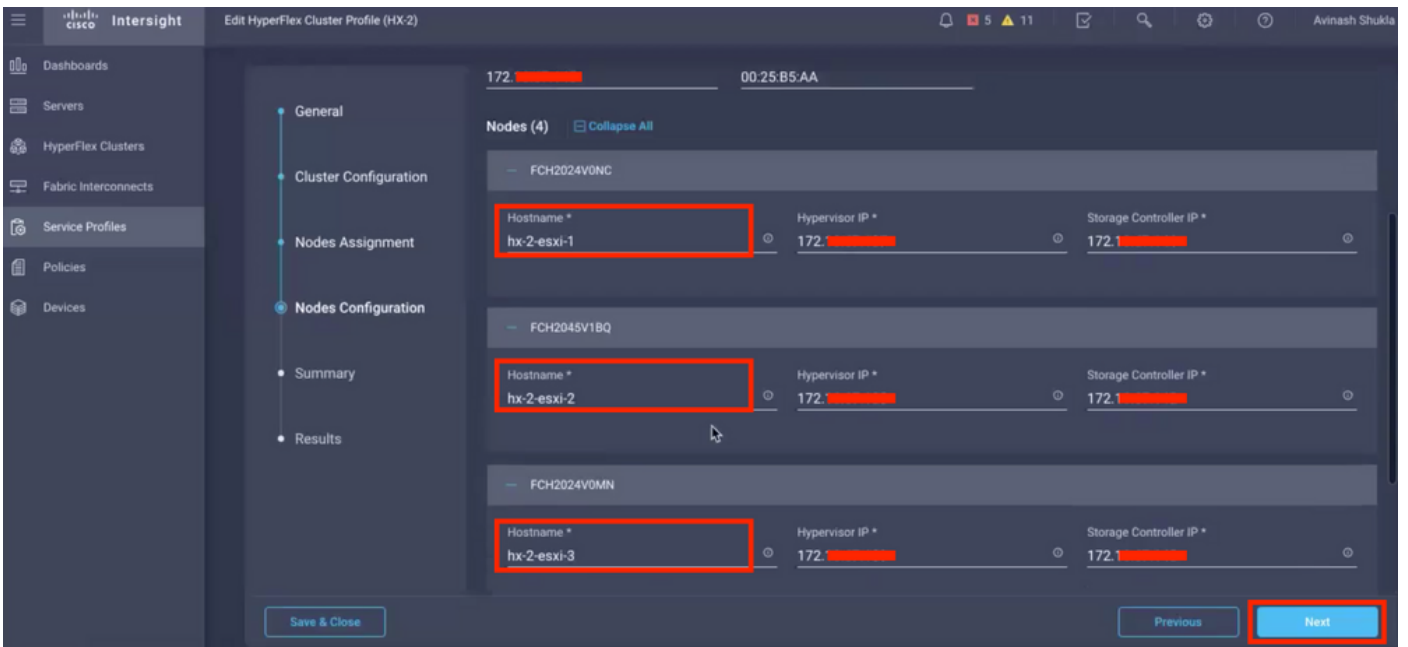


**Step 10.** Select the servers as a part of Node Assignment.

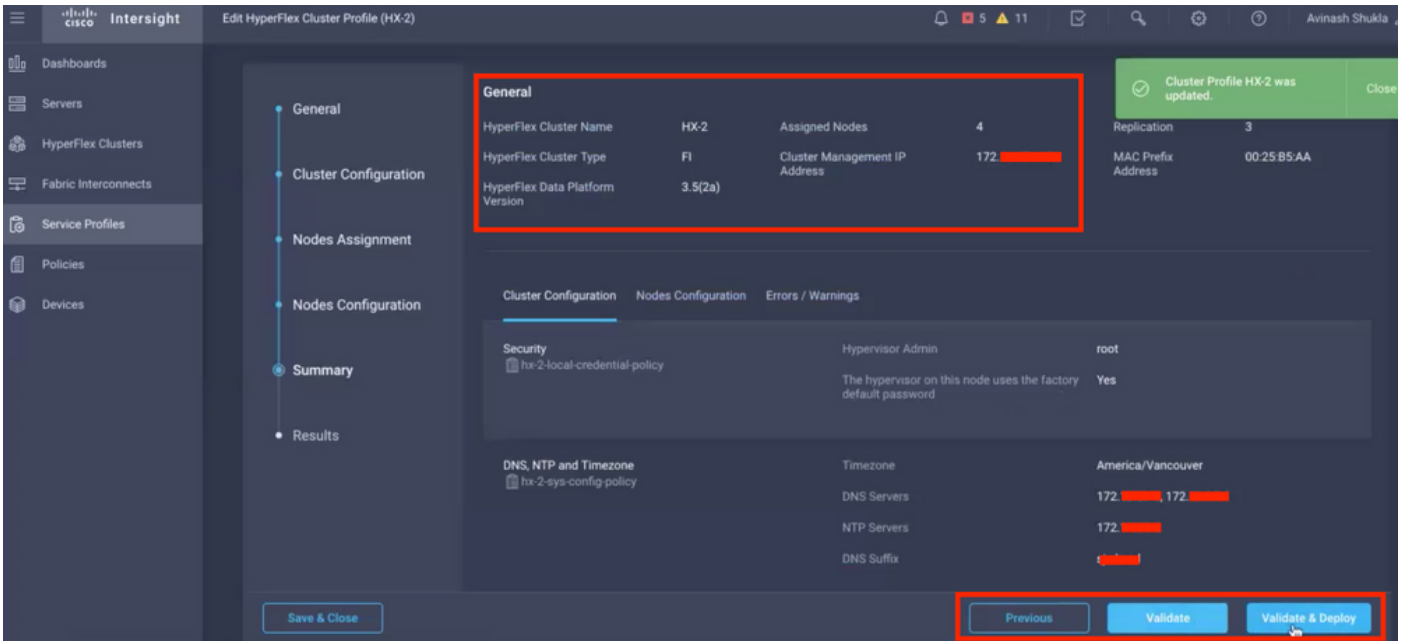


**Step 11. Configure and confirm Hypervisor IP & Storage Controller IP address for Node Configuration,**





**Step 12.** Click **Validate & Deploy** and check the progress status and wait for the installation to complete.



**Step 13.** Check progress status and wait for the installation to complete.

HyperFlex Cluster Name: HX-2

HyperFlex Cluster Type: FI

Assigned Nodes: 4

Progress: 67%

Start Time: Mar 9, 2019 9:04 AM

Duration: 17m 17s

Current Stage: Cluster deployment

Expand All

All (434) In Progress (4) Success (428) Failed (0) Warning (2)

- HyperFlex Cluster HX-2 ✓
- Witness Node IP Reachability Check ✓
- Witness Node IP Reachability Check ✓
- DNS reachability ✓
- NTP reachability ✓
- Controllers not in existing cluster check ✓
- vCenter Reverse Proxy Port check ✓
- ESXi uniform version check ✓

Close Summary

Cluster HX-2 was created successfully

HyperFlex Cluster Name: HX-2

HyperFlex Cluster Type: FI

Assigned Nodes: 4

Progress: 100%

Start Time: Mar 9, 2019 9:04 AM

Duration: 1h 1m 9s

Current Stage: Cluster creation

Expand All

All (560) In Progress (0) Success (558) Failed (0) Warning (2)

- HyperFlex Cluster HX-2 ✓
- UCS - hx-2-ucsm ✓
- rack-unit-1 hx-2-esxi-4 (172.16.67.140) ✓
- rack-unit-2 hx-2-esxi-1 (172.16.67.137) ⚠
- rack-unit-3 hx-2-esxi-3 (172.16.67.139) ✓
- rack-unit-4 hx-2-esxi-2 (172.16.67.138) ⚠
- Node disk summary: e60b7bbb-f86f-b748-bb5d-5c6d1fdd087c ✓
- Configuring static ip on the specified ESXi servers ✓
- Host data subnet check ✓
- Host data subnet check ✓
- Host data subnet check ✓
- Host data subnet check ✓

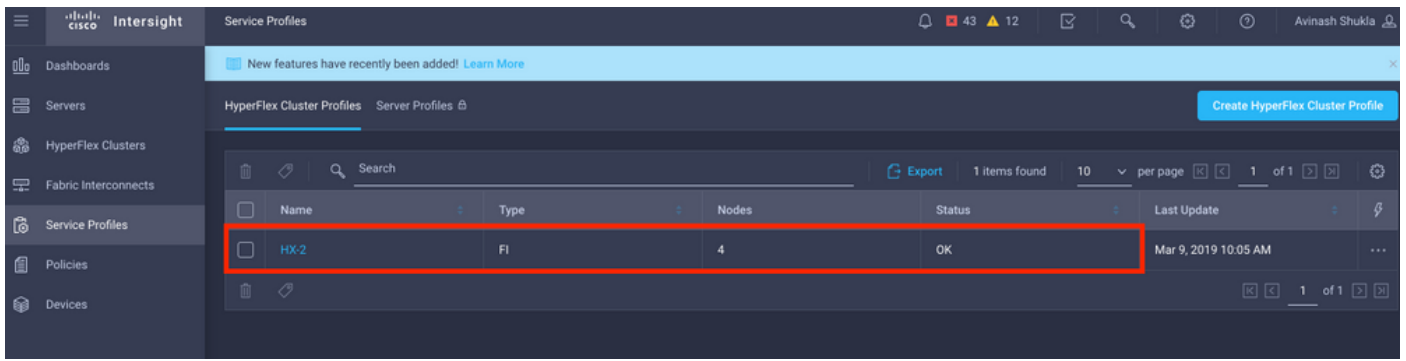
Close OK

**Step 14.** Please verify that cluster is **ONLINE** and **HEALTHY** and **RUN** the **post\_install.py** script.

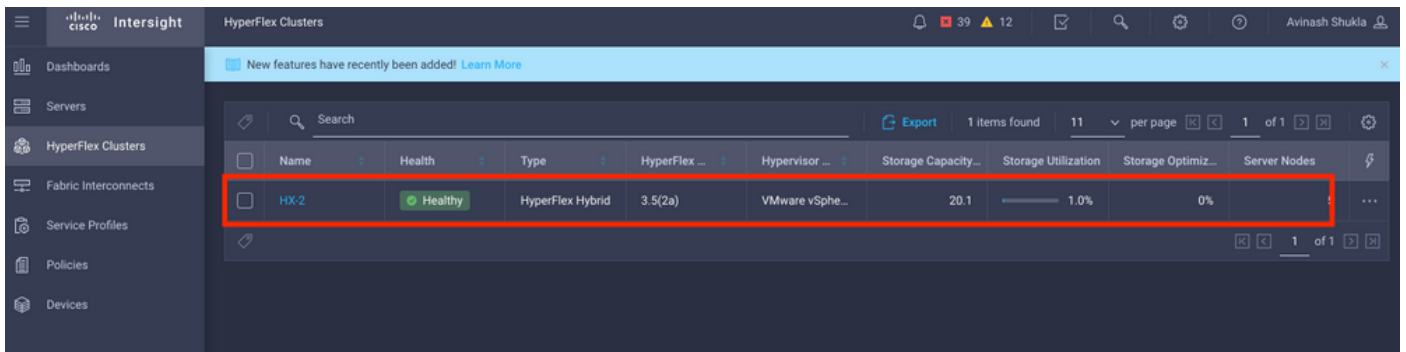
- SSH to the cluster management IP address and login using <root> (HX 4.0 and below) or <admin> (HX 4.5 and above) username and the controller VM password provided during installation.
- Paste the following command in the Shell, and hit enter: **hx\_post\_install**

## Verify

**Step 1.** Check the Service Profile status under Service Profiles.



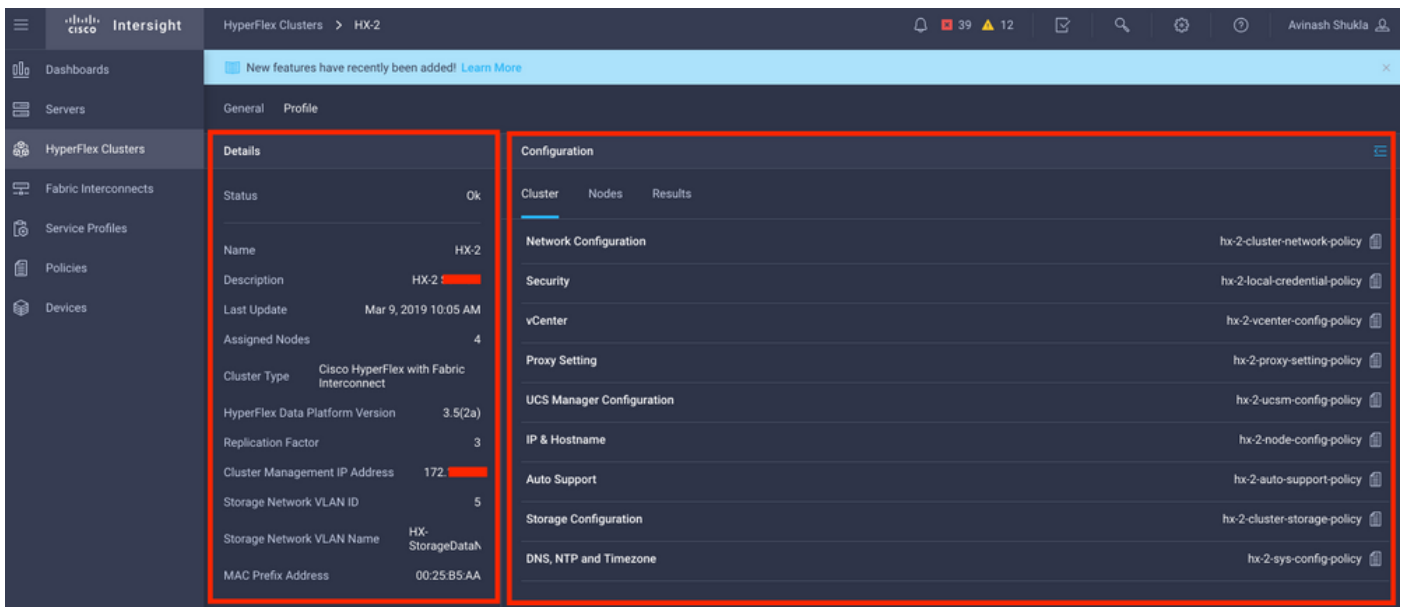
**Step 2.** Under **Hyperflex Cluster**, confirm the HX cluster **Health** and other details,



**Step 3.** Click the **Name HX-2** and browse to profile details, verify the following under **Details**,

- Cluster Management IP Address
- Storage VLAN ID
- Replication Factor
- Cluster Type

Verify the various policies and node details under **Configuration**,



**Step 4.** **Cross launch** Hyperflex Connect from **Hyperflex Clusters** on Intersight and verify the cluster status from **Hyperflex Connect**.



Intersight HyperFlex Clusters

New features have recently been added! [Learn More](#)

Name	Health	Type	HyperFlex ...	Hypervisor ...	Storage Capacity...	Storage Utilization	Storage Optimiz...	Server Nodes
HX-2	Healthy	HyperFlex Hybrid	3.5(2a)	VMware vSphe...	20.1	1.0%	0%	

Launch HyperFlex Connect

HyperFlex Connect HX-2

OPERATIONAL STATUS  
Online

RESILIENCY HEALTH  
Healthy 1 Node failure can be tolerated

CAPACITY  
20.1 TB  
1.0%  
195.9 GB Used 19.9 TB Free

STORAGE OPTIMIZATION  
Storage optimization, compression and deduplication ratios will be calculated once we have sufficient information regarding cluster usage.