

# Add VLANs on Cisco Compute Hyperconverged with Nutanix Cluster

## Contents

---

### [Introduction](#)

### [Prerequisites](#)

[Requirements](#)

[Components Used](#)

### [Background Information](#)

### [Configure](#)

[Intersight Managed Mode](#)

[Step 1. Add VLANs to Domain Profile](#)

[Step 2. Add VLANs to Server Profile](#)

[Intersight Standalone Mode](#)

[UCS Manager Mode](#)

[Step 1. Add VLAN\(s\) to the Fabric Interconnect](#)

[Step 2. Add VLAN to Server Profiles](#)

[Add VLAN on Prism Element](#)

[Add VLAN on Prism Central](#)

[Add/Modify the NIC card to the VMs](#)

[Prism Element](#)

[Prism Central](#)

### [Related Information](#)

---

## Introduction

This document describes the correct way to add VLANs in CCHN Clusters.

## Prerequisites

### Requirements

Cisco recommends that you have knowledge of these topics:

- UCS knowledge
- Networking Concepts

Ensure that you have these requirements before you attempt this configuration:

- VLAN ID

### Components Used

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure that you understand the potential impact of any command.

## Background Information

Cisco Compute Hyperconverged with Nutanix have three different management modes:

### UCS Manager Mode (UMM):

UCS Manager Mode leverages classic UCSM and Fabric Interconnects for centralized management of compute, networking, and profiles:

- Nodes are connected to Fabric Interconnects, which manage server policies, firmware, and connectivity.
- UCS classic features: Service Profiles and centralized management through UCSM.

### Intersight Managed Mode (IMM):

Intersight Managed Mode enables Cisco Intersight to directly manage Fabric Interconnects and UCS servers:

- Provides cloud-based management (or through local appliance) for server and network policies, profiles, and lifecycle operations.
- Supports automation, firmware upgrades, profile assignments, and remote management using Intersight's portal.
- All compute nodes, FI policies, and networking are managed through Intersight.

### Intersight Standalone Mode (ISM):

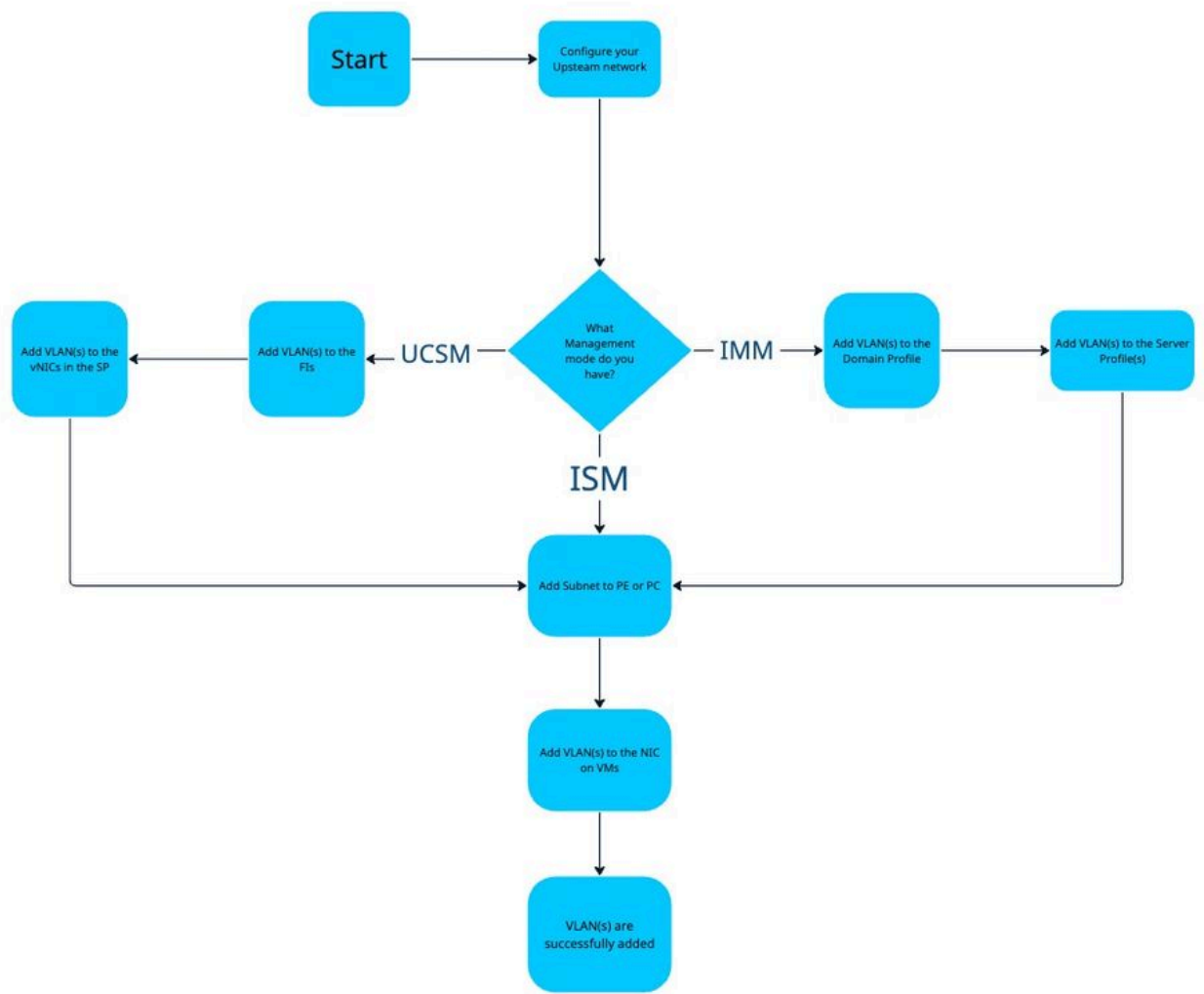
In this mode, servers are managed individually by Cisco Intersight, without Fabric Interconnects:

- Nodes are networked directly to Top-of-Rack (ToR) switches, and only the servers are managed by Intersight.
- Suitable for environments where you prefer not to use Fabric Interconnects; all management – including firmware, policies, and monitoring – happens through Intersight but on a per-server basis.

The process for adding VLANs to the cluster varies depending on your management mode.

## Configure

The overall workflow to add VLAN(s) depends on your management mode.

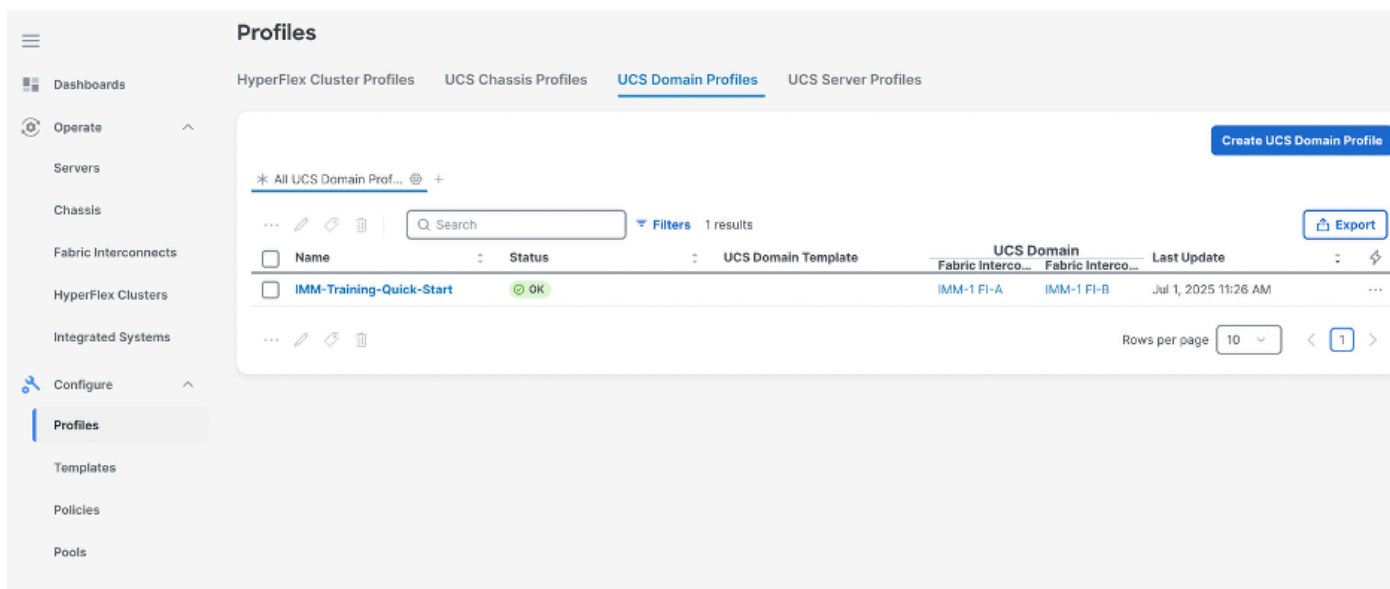


*Workflow to add VLAN(s)*

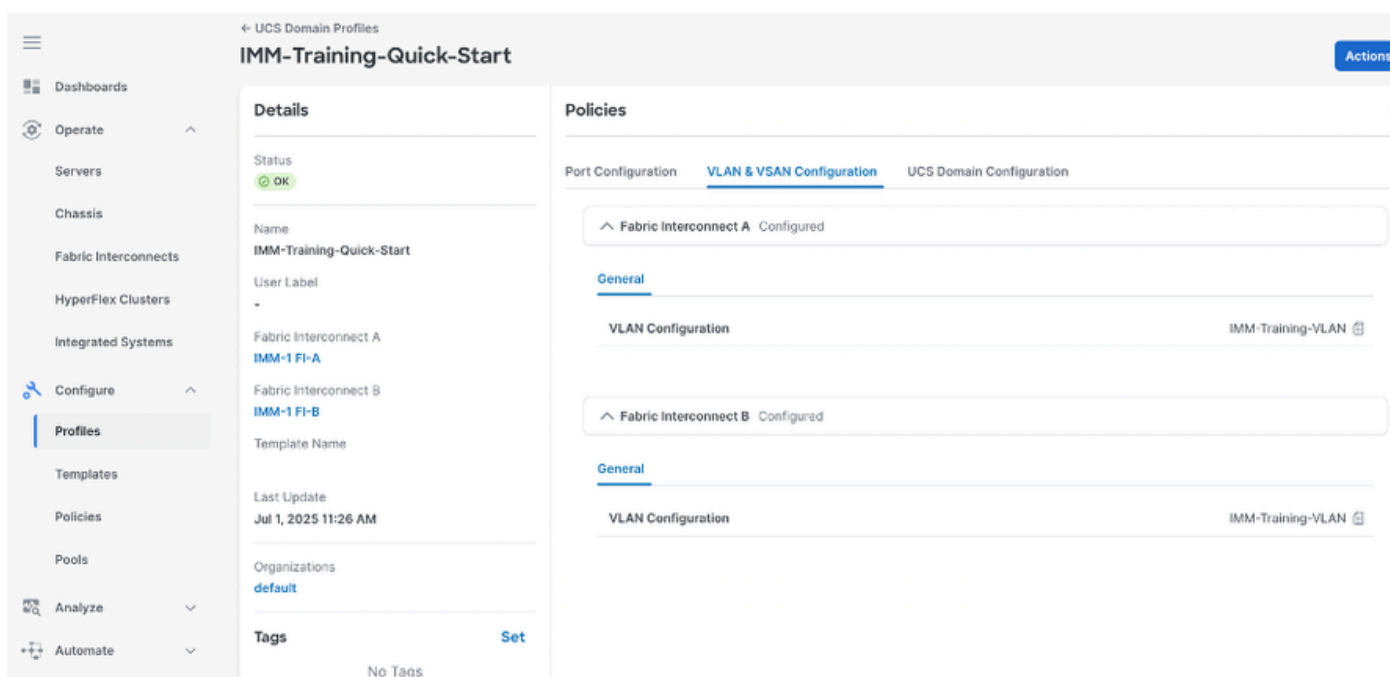
## Intersight Managed Mode

### Step 1. Add VLANs to Domain Profile

Navigate to **Profiles> UCS Domain Profiles** and select the **Domain Profile** assigned to the Fabric Interconnects where you need to add VLANs.



Select the UCS domain profile that belongs to the IMM Nutanix Cluster.



Click **Edit** to modify the VLAN policy

**Add** the required VLANs. In prefix, you can enter a prefix that identify the VLAN.

**Select** a Multicast Policy.

⋮

Dashboards

Operate

Servers

Chassis

Fabric Interconnects

HyperFlex Clusters

Integrated Systems

Configure

Profiles

Templates

Policies

Pools

Policies > VLAN > IMM-Training-VLAN

Edit

Add VLANs

Add VLANs to the policy

⚠

VLANs should have one Multicast policy associated to it

Configuration

Prefix \* ⓘ

VLAN IDs \* ⓘ

500

500

Auto Allow On Uplinks ⓘ

Enable VLAN Sharing ⓘ

Multicast Policy \*

Selected Policy

Multicast-Policy

👁

✎

Edit Selection

🗑

Save the changes.

Select **Actions** and click **Deploy**.

← UCS Domain Profiles

IMM-Training-Quick-Start

Dashboards

Operate

Servers

Chassis

Fabric Interconnects

HyperFlex Clusters

Integrated Systems

Configure

Profiles

Templates

Policies

Pools

Details

Status

OK

Name

IMM-Training-Quick-Start

User Label

-

Fabric Interconnect A

IMM-1 FI-A

Fabric Interconnect B

IMM-1 FI-B

Template Name

Last Update

Jul 1, 2025 11:26 AM

Organizations

default

Policies

VLAN Configuration

IMM-Training-VLAN

^ Fabric Interconnect B Configured

General

VLAN Configuration

IMM-Training-VLAN

Actions

Deploy

Unassign

Edit

Clone

Delete

Set User Label

Attach to Template

Create a Template



**Note:** The deployment of the Domain Profile after a VLAN is added or removed does not disrupt traffic on the pre-existing VLANs.

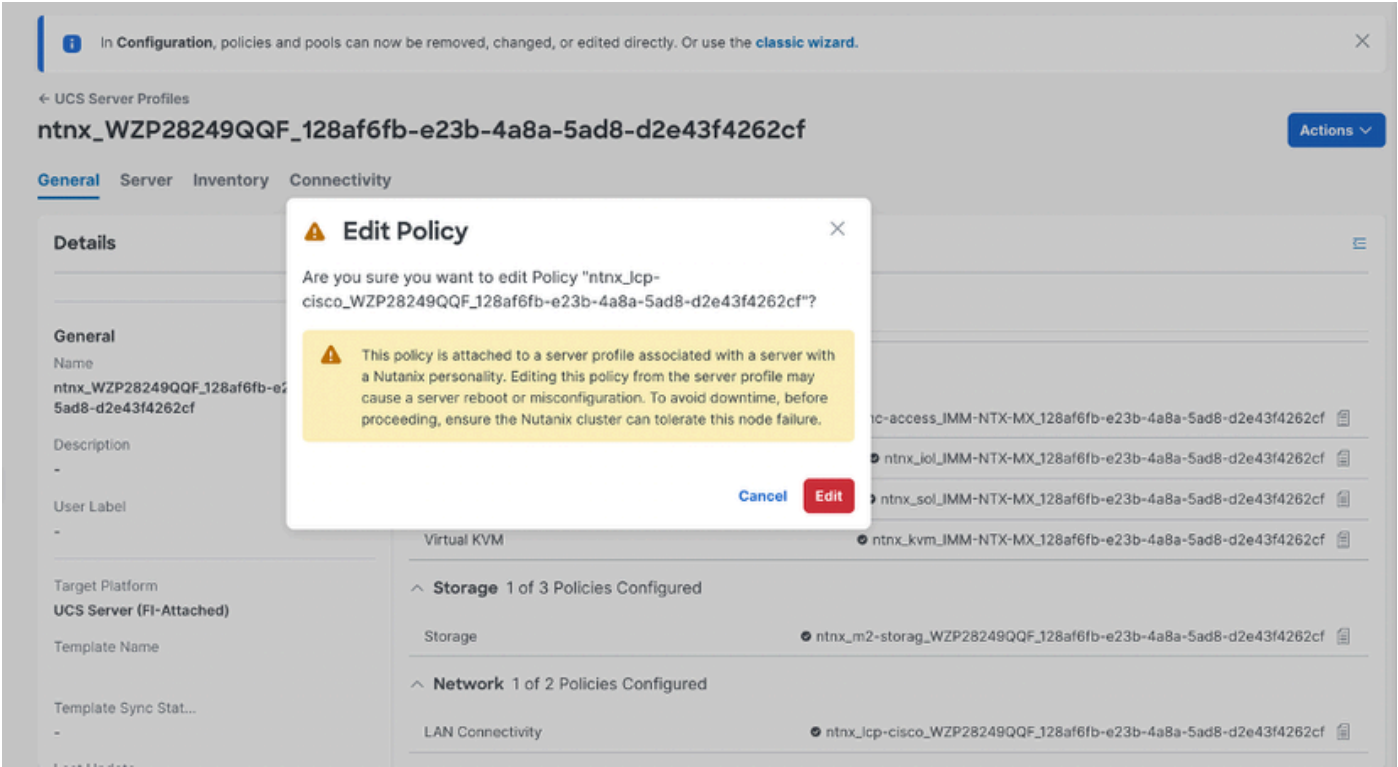
---

## Step 2. Add VLANs to Server Profile

Navigate to **Profiles > UCS Server Profiles** and select the **Service Profile** assigned to your server where you are going to add the VLANs.



Select edit in the **LAN Connectivity Policy**.







**Note:** Add additional VLAN(s) do not trigger a server reboot.

---

In the LAN Connectivity Policy, select the **Ethernet Network Group Policy** from the vNICs.



**Note:** Ensure you modify the correct **Ethernet Network Group Policy** and **LAN Connectivity Policy** as there may be multiple policies configured in the cluster.

---

Select **Actions** and then **Edit**.

Policies

ntnx\_eth-network-group\_IMM\_128af6fb-e23b-4a8a-5ad8-d2e43f4262cf

Details

Name  
ntnx\_eth-network-group\_IMM\_128af6fb-e23b-4a8a-5ad8-d2e43f4262cf

Description  
-

Type  
Ethernet Network Group

Target Platform  
-

Last Update  
Jul 29, 2025 12:11 PM

Organization  
default

Tags

Set

ntnx\_dep\_uuid 128af6fb-e2...

ntnx\_policy\_... cluster

ntnx\_policy\_l... eth-network...

ntnx\_cluster... 00063b15-3...

Usage

Profiles and Templates

Policies

Search

Filters 3 results

Export

Name	Status	Platform T...	Type	Device Na...	Last ...
ntnx_WZP2	OK	UCS Server	Server Pr...	IMM-1-1	Aug 1, 2
ntnx_WZP2	OK	UCS Server	Server Pr...	IMM-1-3	Jul 29, :
ntnx_WZP2	OK	UCS Server	Server Pr...	IMM-1-2	Jul 29, :

Rows per page 10

1

Configuration

VLAN Settings

Native VLAN  
1

Enable QinQ Tunneling  
Off

Allowed VLANs  
470

Edit

Delete

Clone

Add the required VLANs and click **Save**.

Policies > Ethernet Network Group > ntnx\_eth-network-group\_IMM\_128af6fb-e23b-4a8a-5ad8-d2e43f4262cf

Edit

General

Policy Details

Policy Details

Manage policy settings and allowed VLANs.

☐ Enable QinQ (802.1Q-In-802.1Q) Tunneling on the vNIC

Add VLANs

☐ Show VLAN ID Ranges

Enter Manually

From Policy

From CSV File

VLAN ID

☐ 1 Native VLAN

☐ 470

Rows per page 10

1

Policies > Ethernet Network Group > ntnx\_eth-network-group\_IMM\_128af6fb-e23b-4a8a-5ad8-d2e43f4262cf

## Edit

General

**2 Policy Details**

### Policy Details

Manage policy settings and allowed VLANs.

☐ Enable QinQ (802.1Q-in-802.1Q) Tunneling on the vNIC

[Add VLANs](#) Show VLAN ID Ranges

**i** To set a native VLAN, in the row actions, select **Set Native VLAN**. To remove a native VLAN, select **Unset Native VLAN**. If a native VLAN is already assigned, any change may lead to brief network interruptions at the time of profile deployment.

Filters 3 results
Export

VLAN ID	
<input type="checkbox"/> 1 Native VLAN	...
<input type="checkbox"/> 470	...
<input type="checkbox"/> 500	...

Rows per page 10 < 1 >

[Cancel](#) [Back](#) [Save](#)

**i** "1" VLAN added successfully. Pre-existing VLANs were skipped without affecting the policy. For more information, check "Details".

[Details](#)

Once the VLAN is added, a **Pending Changes** warning is present.

← UCS Server Profiles

## ntnx\_WZP28249QQF\_128af6fb-e23b-4a8a-5ad8-d2e43f4262cf

[Actions](#)

[General](#) [Server](#) [Inventory](#) [Connectivity](#)

### Details

Status

**Inconsistent**

Inconsistency Reas...

**Pending Changes**

---

### General

[Edit](#)

Name

ntnx\_WZP28249QQF\_128af6fb-e23b-4a8a-5ad8-d2e43f4262cf

Description

-

User Label

-

Target Platform

UCS Server (FI-Attached)

Template Name

### Configuration

Inconsistency Reason

**1** Pending Changes 1

[Policies](#) [Identifiers](#) [vNICs / vHBAs](#) [Errors/Warnings \(0\)](#)

☒ Show Attached Policies

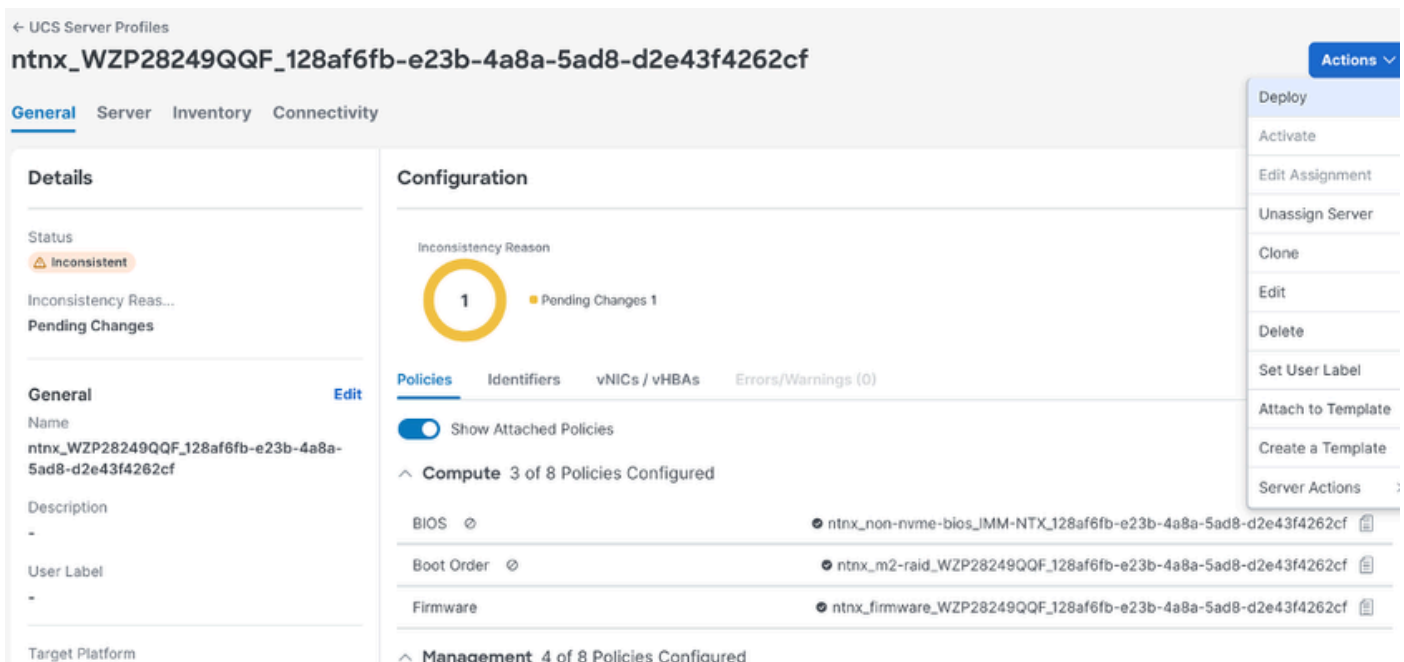
**Compute** 3 of 8 Policies Configured

BIOS	ntnx_non-nvme-bios_IMM-NTX_128af6fb-e23b-4a8a-5ad8-d2e43f4262cf
Boot Order	ntnx_m2-raid_WZP28249QQF_128af6fb-e23b-4a8a-5ad8-d2e43f4262cf
Firmware	ntnx_firmware_WZP28249QQF_128af6fb-e23b-4a8a-5ad8-d2e43f4262cf

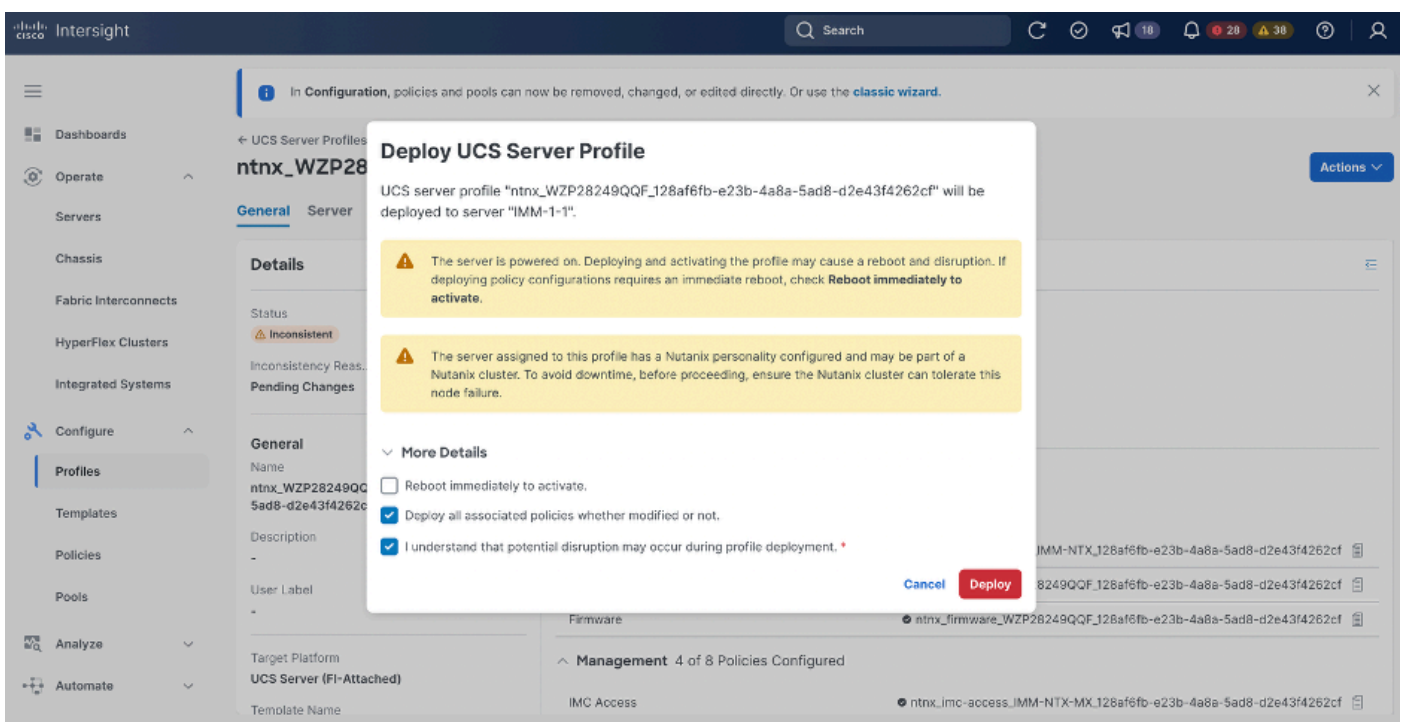
**Management** 4 of 8 Policies Configured

IMC Access	ntnx_imc-access_IMM-NTX-MX_128af6fb-e23b-4a8a-5ad8-d2e43f4262cf
------------	---

Select **Action** and click **Deploy**.



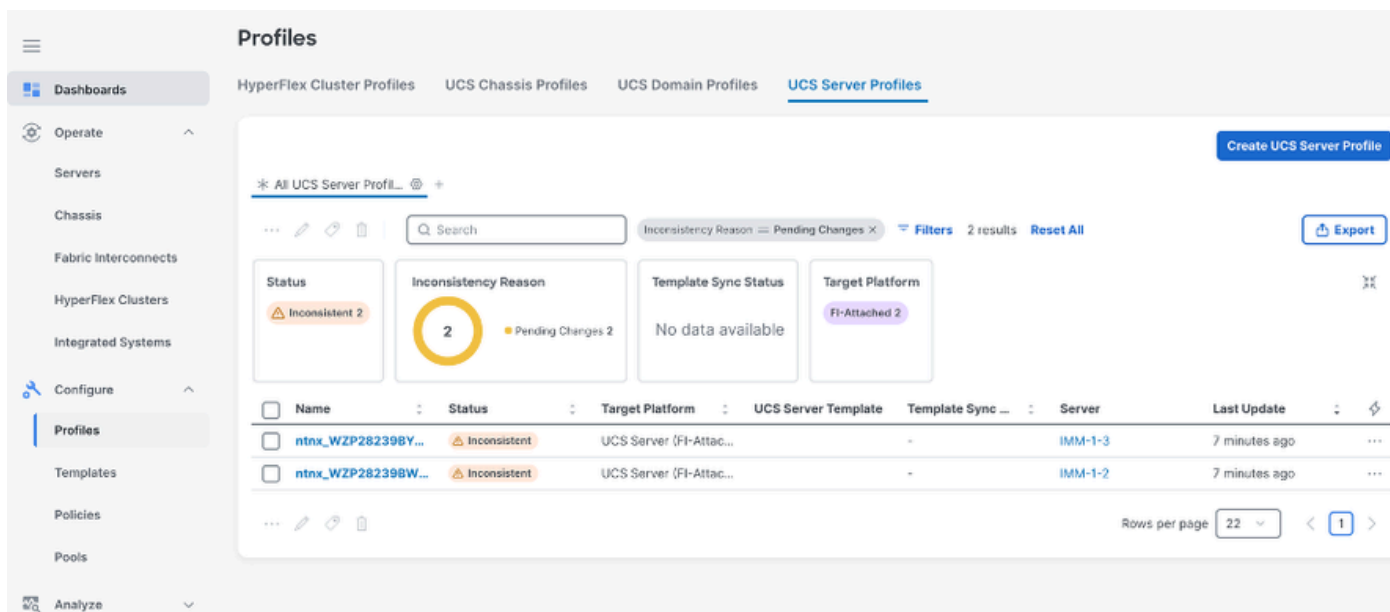
Select the option **Deploy all associated policies whether modified or not** and **I understand the potential disruption may occur during profile deployment** and click **Deploy**.



The deployment of the Server Profile must be done in each server profile on the IMM cluster.

Navigate to **Profiles> UCS Server Profiles** and redeploy the remaining **Server Profile**.

Click on the 3-dot icon and select **Deploy**.



## Intersight Standalone Mode

In this management mode, you only need to add the VLAN(s) to the upstream switches.

```
N5KA# show run inter ethernet 1/20
!Command: show running-config interface Ethernet1/20
!Time: Tue Aug 12 21:38:21 2025
```

```
version 7.0(2)N1(1)
```

```
interface Ethernet1/20
description CIMC Nutanix ISM C240-M6
switchport mode trunk
spanning-tree port type edge trunk
```

```
N5KA# show vlan | grep 500
500 VLAN0500 active Eth1/16, Eth1/19, Eth1/20
```

## UCS Manager Mode

### Step 1. Add VLAN(s) to the Fabric Interconnect

In UCS Manager, Navigate to **LAN > LAN Cloud > VLANs**.

UCS Manager

LAN / LAN Cloud

LAN Uplinks **VLANs** Server Links MAC Identity Assignment IP Identity Assignment QoS Global Policies Faults Events FSM

All Dual Mode Fabric A Fabric B VLAN Groups VP Optimization Sets

Advanced Filter Export Print

Name	ID	Fabric ID	Type	Transport	Native	VLAN Sharing	Primary VLAN ...	Multicast Policy...
VLAN defau...	1	Dual	Lan	Ether	Yes	None		
VLAN Nutan...	1540	Dual	Lan	Ether	No	None		

+ Add - Delete i Info

Details

General Org Permissions VLAN Group Membership Faults Events

Fault Summary

Properties

Name : default VLAN ID : 1

Native VLAN : Yes Fabric ID : Dual

Network Type : Lan If Type : Virtual

Locale : External Transport Type : Ether

Owner : Local

Multicast Policy Name : <not set> Create Multicast Policy

Multicast Policy Instance : org-root/mc-policy-default

Sharing Type : ☒ None ☐ Primary ☐ Isolated ☐ Community

Save Changes Reset Values

Logged In as admin@10.10.5.97 System Time: 2025-08-14T17:44

In the right panel, click **Add**.

UCS Manager

LAN / LAN Cloud

LAN Uplinks **VLANs** Server Links MAC Identity Assignment IP Identity Assignment QoS Global Policies Faults Events FSM

All Dual Mode Fabric A Fabric B VLAN Groups VP Optimization Sets

Advanced Filter Export Print

Name	ID	Fabric ID	Type	Transport	Native	VLAN Sharing	Primary VLAN ...	Multicast Policy...
VLAN defau...	1	Dual	Lan	Ether	Yes	None		
VLAN 500 (...)	500	Dual	Lan	Ether	No	None		default

+ Add - Delete i Info

Details

General Org Permissions VLAN Group Membership Faults Events

Fault Summary

Properties

Name : default VLAN ID : 1

Native VLAN : Yes Fabric ID : Dual

Network Type : Lan If Type : Virtual

Locale : External Transport Type : Ether

Owner : Local

Multicast Policy Name : <not set> Create Multicast Policy

Multicast Policy Instance : org-root/mc-policy-default

Sharing Type : ☒ None ☐ Primary ☐ Isolated ☐ Community

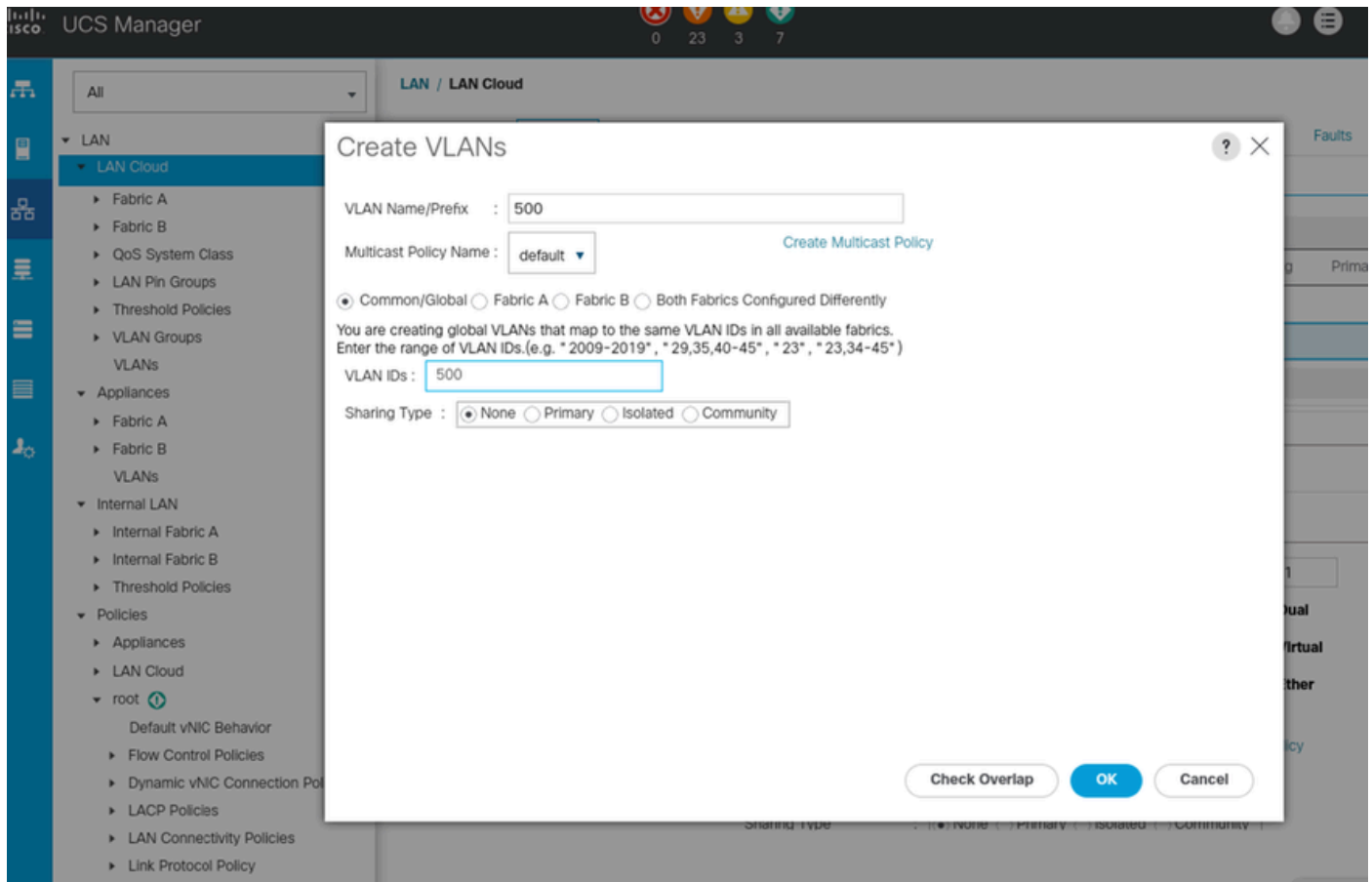
Save Changes Reset Values

Logged In as admin@10.10.5.97 System Time: 2025-08-14T17:46

Enter the required information and Click **OK**.

VLAN Name/Prefix: name-VLANID

## Multicast Policy Name VLAN ID



## Step 2. Add VLAN to Server Profiles

Navigate to **Servers > Service Profiles**

Look for the sub Organization created for Nutanix



UCS Manager

Servers / Service Profiles / root / Sub-Organizations / NX-AHV-M6 / Service Profile...

General Storage Network iSCSI vNICs vMedia Policy Boot Order Virtual Machines FC Zones Policies Server Details CIMC >

**Fault Summary**

0 7 1 2

**Status**

Overall Status : **OK**

+ Status Details

**Actions**

Set Desired Power State  
Boot Server  
Shutdown Server  
Reset  
KVM Console >>  
SSH to CIMC for SoL >>  
Rename Service Profile  
Create a Clone  
Create a Service Profile Template  
Disassociate Service Profile  
Change Service Profile Association  
Inherit from the Template

**Properties**

Name : fdtnWZP271107PJ  
User Label :  
Description :  
Asset Tag :  
Owner : Local  
Unique Identifier : Hardware Default  
UUID Pool :  
UUID Pool Instance :  
Associated Server : sys/rack-unit-1  
Service Profile Template : NTN-SP-template  
Template Instance : org-root/org-NX-AHV-M6/is-NTNX-SP-template

+ Assigned Server or Server Pool  
+ Management IP Address  
+ Maintenance Policy

Save Changes Reset Values

Logged in as admin@10.10.5.97 System Time: 2025-08-14T17:55

Select the desired Service Profile. Service Profiles created by Nutanix Installed have the format **fdtn\_<serial\_number>**.

Navigate to **Network**, select the vNIC and click **Modify**.

UCS Manager

Servers / Service Profiles / root / Sub-Organizations / NX-AHV-M6 / Service Profile...

General Storage **Network** iSCSI vNICs vMedia Policy Boot Order Virtual Machines FC Zones Policies Server Details CIMC >

3 All ethernet,fc  
4 All ethernet,fc

**LAN Connectivity Policy**

LAN Connectivity Policy : <not set>  
LAN Connectivity Policy Instance :  
Create LAN Connectivity Policy

**vNICs**

Advanced Filter Export Print

Name	MAC Address	Desired Order	Actual Order	Fabric ID	Desired Place...	Actual Placeme...	Admin Host Port	Actual Host Port
vNIC 1-fabri...	00:25:B5:66:0...	unspecified	2	A	1	1	ANY	NONE
vNIC 1-fabri...	00:25:B5:66:0...	2	1	B	1	1	ANY	NONE
vNIC 2-fabri...	00:25:B5:66:0...	1	1	A	2	2	ANY	NONE
vNIC 2-fabri...	00:25:B5:66:0...	unspecified	2	B	2	2	ANY	NONE

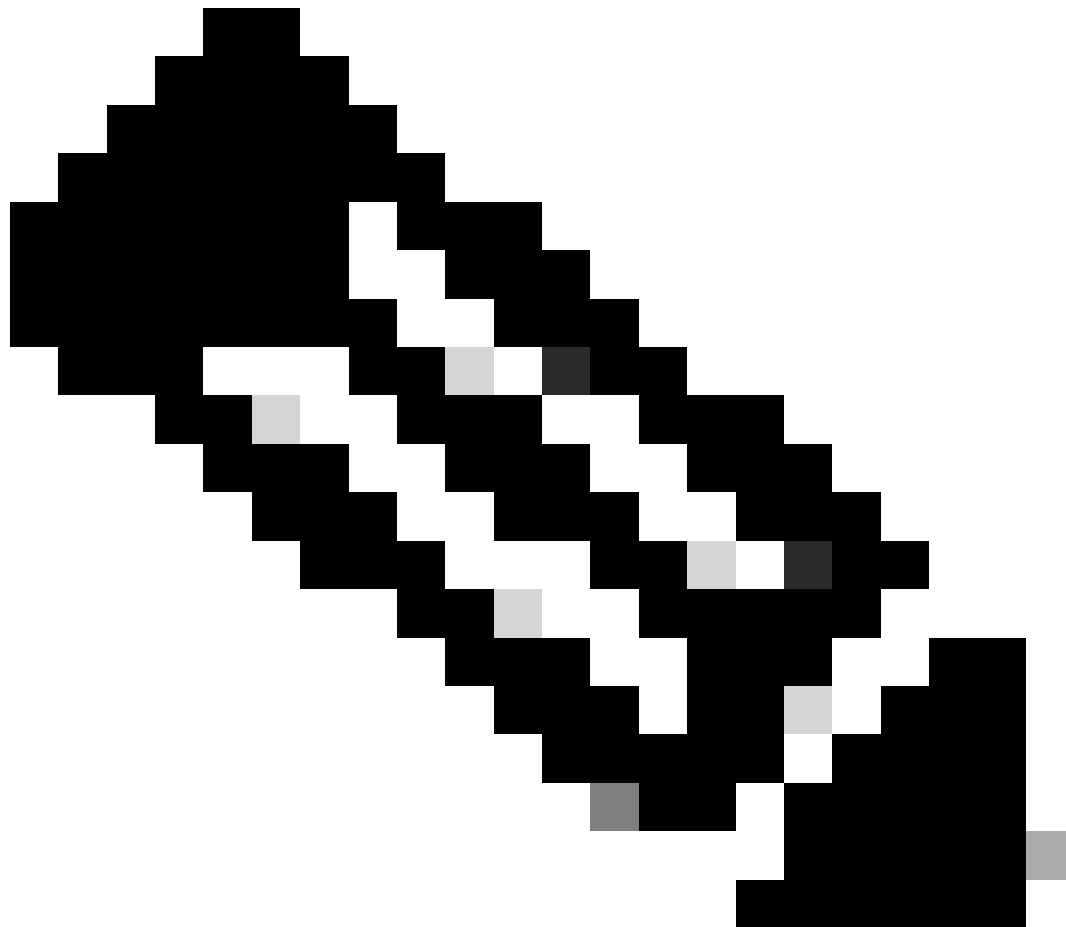
Delete + Add **Modify**

Save Changes Reset Values

Select the VLAN you want to enable and click **OK**.

Click on **Save Changes**.

---



**Note:** This must be done on all vNICs that carry VM traffic on both side A and side B, as well as on all node service profiles that belong to the cluster.

---

Now that you have configured the VLAN(s) at UCS level, there are two options to configure the VLAN(s) at cluster level :

On Prism element, you can add the VLAN(s) for a single cluster

On Prism Central, you can add the VLAN(s) for all the cluster managed by PC

## Add VLAN on Prism Element



**Note:** This process is the same independently of the cluster management mode.

---

In Prism Element navigate to **VM** and select **Table**.

IMM-NTX-MX

VM

Home

Health

VM

Storage

Network

Hardware

File Server

Data Protection

Analysis

Alerts

Tasks

LCM

Settings

Overview • Table

VM

VM Name

NTNX-10-31-123-1

VM-1

VM-2

Host	IP Addresses	Cores	Memc
MEX-NTX-IMM-2/AHV	10.31.123.199	6	
MEX-NTX-IMM-3/AHV	10.31.123.238	8	
MEX-NTX-IMM-1/AHV	10.31.123.239	8	

Click **Networking Config** and select **+ create Subnet**.

Create Subnet

Subnet Name

VLAN 500

Virtual Switch

vs0

VLAN ID ?

500

☐ Enable IP address management

This gives AHV control of IP address assignments within the network.

Cancel

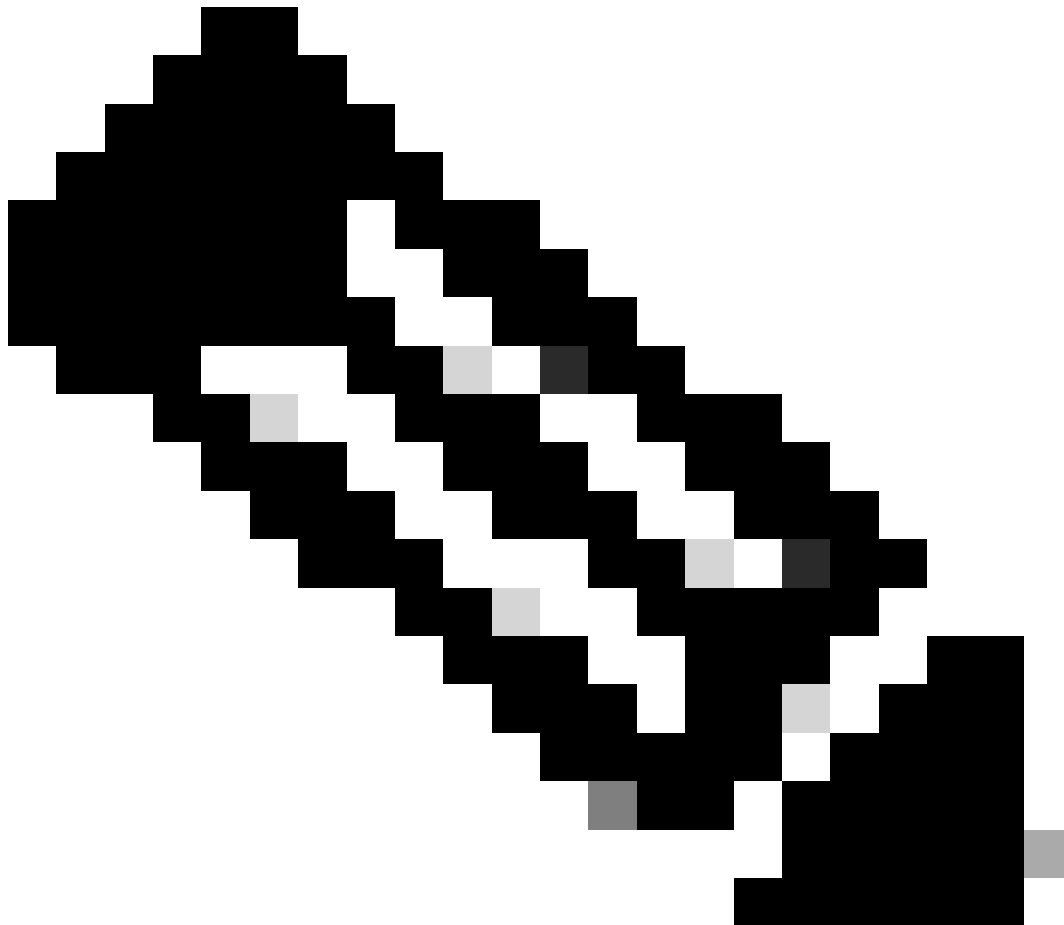
Save

Add the information about VLAN and click **Save**.

Optionally, you can enable the option **Enable IP address management** to provision the IP automatically to the VMs.

## Add VLAN on Prism Central

---



**Note:** This process is the same independent of the cluster management mode.

---

Navigate to **Infrastructure > Network & Security > Subnets**.

Click **Create Subnet**.

Dashboard

Compute

Storage

Network & Security

Virtual Switches

Subnets

Virtual Private Clouds

Network Services

Floating IPs

Connectivity

Security Policies

Security Dashboard

System Accounts

Data Protection

Hardware

Activity

Operations

Administration

Prism Central Settings

Subnets

List

Network Controller for VLAN Management : This is necessary for using centralised VLAN management, Flow Network Security Next-Gen and Flow Virtual Networking.  
[Enable Network Controller](#) [Learn More](#)

Create SubnetActionsMigrate

☆ Type text to filter by

Viewing all 2 Subnets

<input type="checkbox"/> Name	External Connectivity	Type	VLAN ID	VPC
<input type="checkbox"/> Mgmt	No	VLAN Basic	470	-
<input type="checkbox"/> VLAN 500	No	VLAN Basic	500	-

Fill the information with VLAN Name , VLAN ID, and select the virtual switch where the VLAN is assigned.

Select the **IP address Management**.



On Network Adapter (NIC), you can either modify the current NIC configuration or add additional NICs.

In this example, the current NIC configuration is modified.

Click on the pencil icon.




## Update VM



### Network Adapters (NIC)

[+ Add New NIC](#)

VLAN ID	Virtual Switch	Private IP	MAC	
470 Mgmt	vs0	-	...d:fa:62:e0	 

### VM Host Affinity

You haven't pinned the VM to any hosts yet.

[+ Set Affinity](#)

☐ **Enable Flash Mode** 

Close

Save

Select the new VLAN and click **Save**.

Update NIC

?

X

Subnet Name

VLAN 500

VLAN ID	IPAM	Virtual Switch
500	Not Managed	vs0

MAC Address

50:6b:8d:fa:62:e0

Network Connection State

Connected

Private IP Assignment

Network address / prefix

NONE

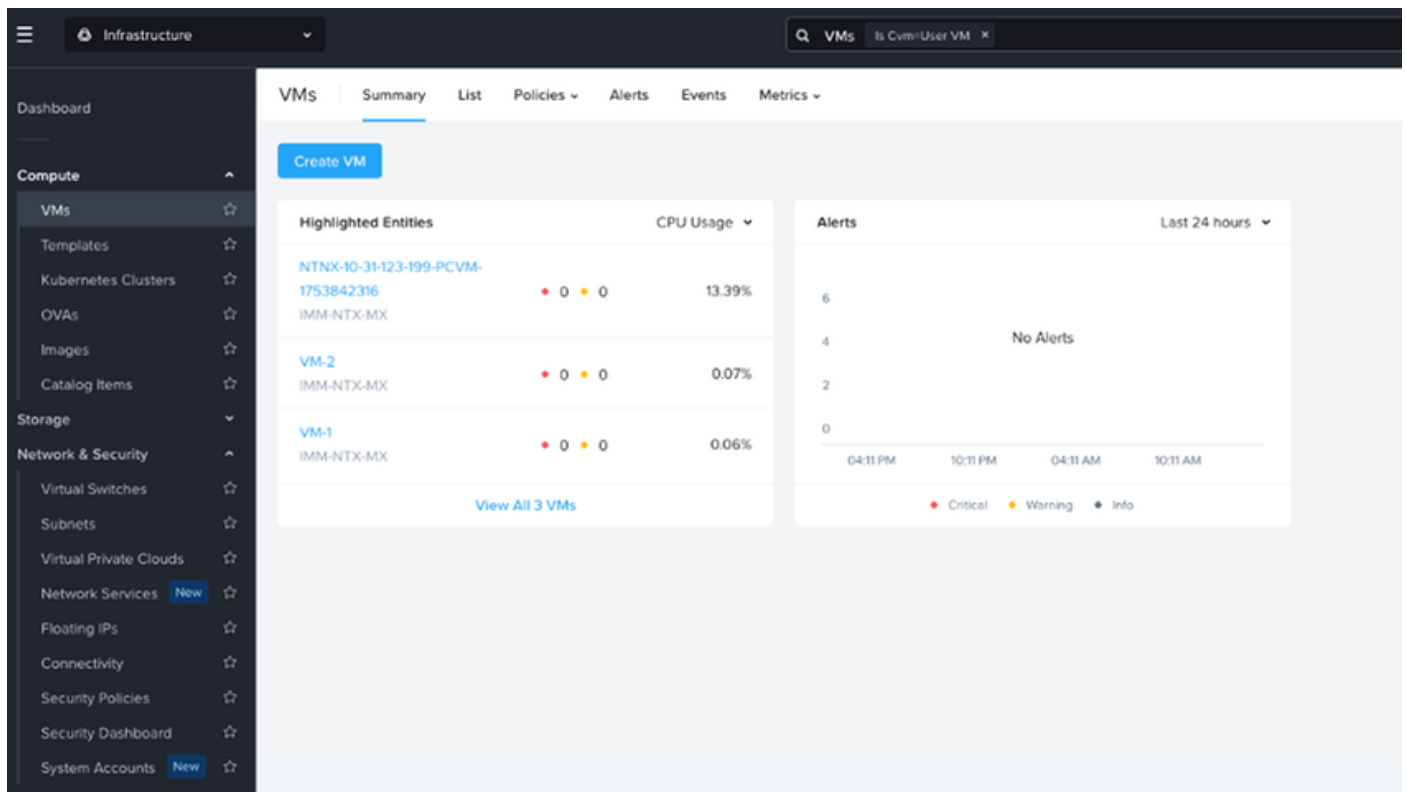
Cancel

Save

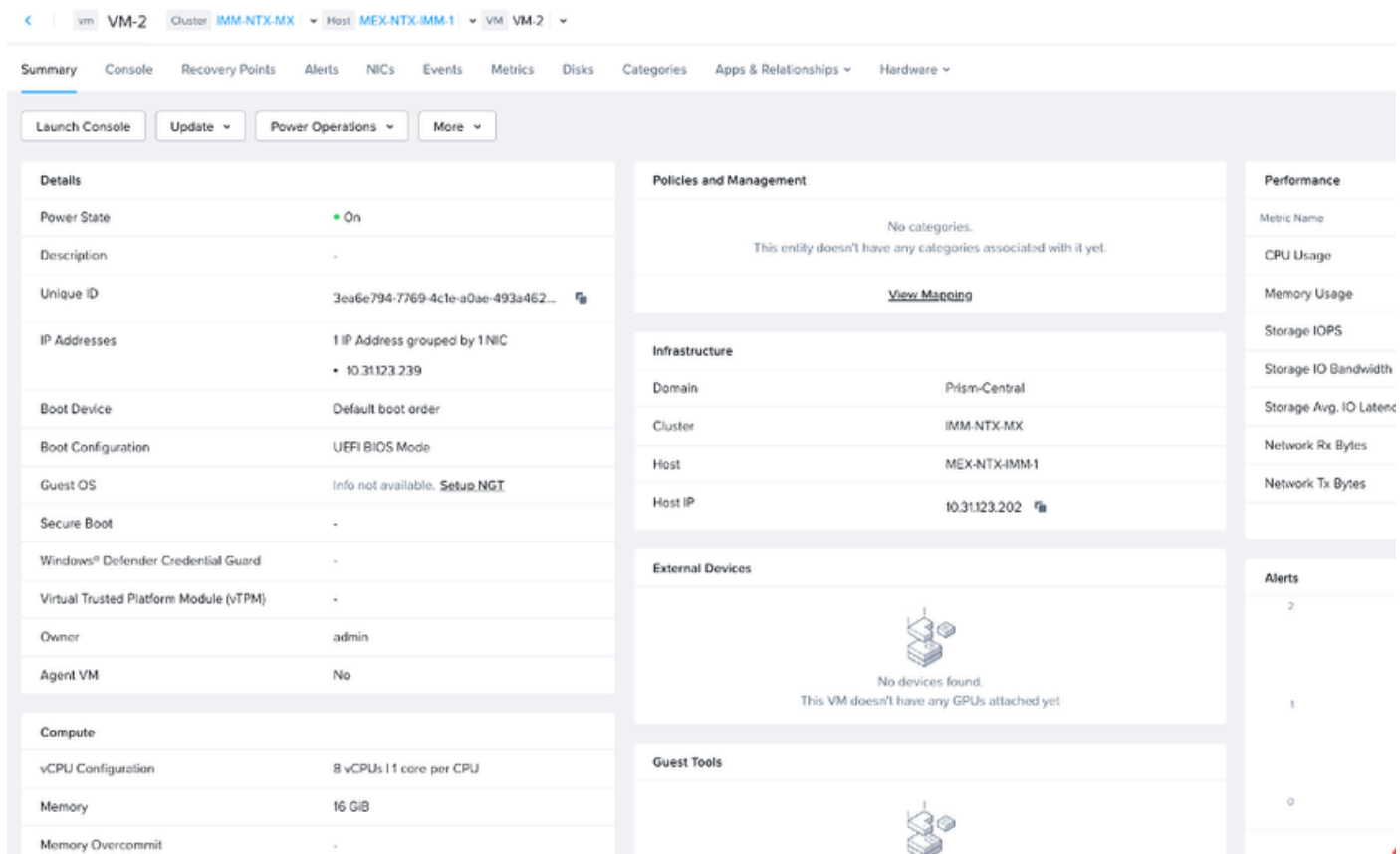
## Prism Central

You can add additional VLANs from Prism Central as well.

Navigate to **Infrastructure > Compute > VMs**.



Click **List** and then select the desired VM.



Select **Update** and click **Select Network**.

The screenshot shows the OpenStack VM configuration page for VM-2. The 'Update' button is highlighted with a red box, and its dropdown menu is open, showing 'General Configuration', 'Storage', 'Network', and 'GPUs'. The 'Network' option is also highlighted with a red box. The left sidebar shows the navigation menu with 'VMs' selected under 'Compute'. The main content area shows the VM details table.

Details		Policy
Power State	On	
Description	-	
Unique ID	3ea6e794-7769-4c1e-a0ae-493a462...	
IP Addresses	1 IP Address grouped by 1 NIC • 10.31.123.239	Infrastr
Boot Device	Default boot order	Domain
Boot Configuration	UEFI BIOS Mode	Cluster
Guest OS	Info not available. <a href="#">Setup NGT</a>	Host
Secure Boot	-	Host IP

Click on + **Attach to Subnet**.

Select the VLAN you want to add and click **Save**.

<

vm VM-2

Cluster IMM-NTX-MX

Host MEX-NTX-IMM-1

VM VM-2

SummaryConsoleRecovery PointsAlertsNICsEventsMetricsDisksCategoriesApps & RelationshipsHardware

+ Attach to Subnet

More Network Options

Actions

1 Normal NIC(s)

<input type="checkbox"/>	NIC Type	MAC Address
<input type="checkbox"/>	Normal	50:6b:8d:e3:49:97

0 Network Service NIC(s)

0 SR-IOV NIC(s)

Create Normal Nic

Subnet Attachment

Subnet

VLAN 500

VLAN ID	IPAM	Virtual Switch
500	Not Managed	vs0

Network Connection State

Connected

NIC Configuration

Attachment Type

Access

Cancel

Create



**Note:** From Prism Central, you can add additional NICs but cannot modify the existing NICs.

---

You can select the attachment mode to be accessed or trunk depending on your network configuration on the upstream network.

Now you have added the VLAN at cluster level and UCS level.

## Related Information

[Configuring VLANs on UCS](#)

[Add and Remove VLANs for UCS in Intersight Managed Mode](#)

[Creating a Basic VLAN Subnet for Guest VM Interfaces](#)