

在Intersight託管模式域中配置不連續第2層

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簡介

本文檔介紹如何在Intersight管理模式下在交換矩陣互聯的上游部署脫節的第2層網路。

必要條件

需求

思科建議您瞭解以下主題：

- 對不相交的第2層網路有基礎認識。
- 基本瞭解如何在Intersight管理模式下配置UCS域。

採用元件

- Intersight管理模式
- 6454光纖互連
- 4.2.1g韌體

本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除（預設）的組態來啟動。如果您的網路運作中，請確保您瞭解任何指令可能造成的影響。

設定

步驟 1. 建立包括所有VLAN的VLAN策略



注意：這包括我們稱為PROD的生產VLAN和環境中存在的稱為DMZ的非軍事區VLAN。

導覽至 Policies > Create Policy > VLAN。

Select Policy Type

Filters

Search

PLATFORM TYPE

- All
- UCS Server
- UCS Domain
- UCS Chassis
- HyperFlex Cluster
- Kubernetes Cluster

- Ethernet Network Control
- Ethernet Network Group
- Flow Control
- Link Aggregation
- Link Control
- Multicast
- Network Connectivity
- NTP
- Port
- SNMP
- Switch Control
- Syslog
- System QoS
- VLAN
- VSAN

建立名稱並按一下下一步。

Step 1
General
Add a name, description and tag for the policy.



Organization *
default

Name *
IMM-Domain-vlans

Set Tags

Description
=< 1024

按一下「Add VLANs」。

現在，當您為PROD/DMZ網路新增VLAN或VLAN範圍時，請確保取消選中Auto Allow on Uplinks並新增組播策略。這可確保這些VLAN可以分離並在以後分配給特定埠或埠通道。

The screenshot shows the 'Add VLANs' configuration page for the 'PROD' policy. At the top, there is a warning message: '⚠️ VLANs should have one Multicast policy associated to it'. The 'Configuration' section contains fields for 'Name / Prefix *' (set to 'PROD') and 'VLAN IDs *' (set to '101-999'). A radio button labeled 'Auto Allow On Uplinks' is selected. Below this, a 'Multicast' section shows a dropdown menu set to 'Selected Policy IMM-Multicast'.

The screenshot shows the 'Add VLANs' configuration page for the 'DMZ' policy. It has a similar layout to the PROD page. The 'Name / Prefix *' field is set to 'DMZ' and the 'VLAN IDs *' field is set to '20-30'. The 'Auto Allow On Uplinks' radio button is also selected. The 'Multicast' section shows a dropdown menu set to 'Selected Policy IMM-Multicast'.

完成後，按一下Add將VLAN新增到VLAN策略，然後按一下Create。

步驟 2. 建立乙太網路組策略

此策略用於將VLAN組分配給特定的上行鏈路。

導覽至 Policies > Create Policy > Ethernet Network Group。

第一組VLAN用於生產上行鏈路。

Select Policy Type

Filters

PLATFORM TYPE

- All
- UCS Server
- UCS Domain
- UCS Chassis
- HyperFlex Cluster
- Kubernetes Cluster

Search

- Ethernet Network Control
- Ethernet Network Group
- Flow Control
- Link Aggregation
- Link Control
- Multicast
- Network Connectivity
- NTP
- Port
- SNMP
- Switch Control
- Syslog
- System QoS
- VLAN
- VSAN

建立名稱並按一下下一步。

 Step 1
General
Add a name, description and tag for the policy.

Organization *
default

Name *
Prod-vlans

Set Tags

Description
≤ 1024

 Step 2
Policy Details
Add policy details

VLAN Settings

Allowed VLANs
101-999

Native VLAN
1

1 - 4093

第二個組用於DMZ上行鏈路。

 Step 1
General
Add a name, description and tag for the policy.

Organization *
default

Name *
DMZ-vlans

Set Tags

Description
<= 1024

 Step 2
Policy Details
Add policy details

VLAN Settings

Allowed VLANs 20-30	Native VLAN 1	1 - 4093
------------------------	------------------	----------

步驟 3.為虛擬NIC建立新的乙太網路組策略（可選）

此步驟是可選的，因為您在步驟2中建立的乙太網路組策略也可重複使用，將其分配到服務配置檔案中的vNIC。

 注意：如果策略被重複使用，則上行鏈路上允許的所有VLAN也允許在vNIC上使用。如果優先使用僅允許VLAN的子集，則需要建立單獨的策略並在vNIC上允許首選VLAN。

導覽至 Policies > Create Policy > Ethernet Network Group。

建立名稱並按一下下一步。



Step 1
General
Add a name, description and tag for the policy.

Organization *

default

Name *

MGMT-VNIC-167

Set Tags

Description

<= 1024



Step 2
Policy Details
Add policy details

VLAN Settings

Allowed VLANs	167	Native VLAN	1	1 - 4093
---------------	-----	-------------	---	----------

為另一個DMZ VLAN建立另一個乙太網路組。



Step 1
General
Add a name, description and tag for the policy.

Organization *

default

Name *

DMZ-VNIC-20

Set Tags

Description

<= 1024



Step 2
Policy Details
Add policy details

VLAN Settings

Allowed VLANs
20

Native VLAN
1

1 - 4093

步驟 4. 建立或修改埠策略

建立埠策略或修改已經存在的埠策略，然後將其分配給乙太網路組和相應的上行鏈路。

導航到 Policies (策略) 頁籤 > Create Policy > 選擇 Port > Create a Name > Next。

選擇 Port 或 Port-channel，然後按一下 Configure。

Name	Type	Role	Port Channel
Port 1	Ethernet	Unconfigured	-
Port 2	Ethernet	Unconfigured	-
Port 3	Ethernet	Unconfigured	-
Port 4	Ethernet	Unconfigured	-
Port 5	Ethernet	Unconfigured	-
Port 6	Ethernet	Unconfigured	-
Port 7	Ethernet	Unconfigured	-
Port 8	Ethernet	Unconfigured	-
Port 9	Ethernet	Unconfigured	-
Port 10	Ethernet	Unconfigured	-
Port 11	Ethernet	Unconfigured	-
Port 12	Ethernet	Unconfigured	-
Port 13	Ethernet	Unconfigured	-
Port 14	Ethernet	Unconfigured	-
Port 15	Ethernet	Ethernet Uplink	-

分配步驟2中建立的乙太網路組。

Configure Port

Configuration

Selected Port Port 15

Role **Ethernet Uplink**

Admin Speed Auto FEC Auto

Ethernet Network Group ⓘ
Selected Policy DMZ-vlans ⌂ | X

Flow Control
Select Policy ⌂

Link Control
Select Policy ⌂

對另一個上行鏈路重複相同的過程。

The screenshot shows the 'Port Roles' configuration page. On the left, a sidebar lists 'General', 'Unified Port', and 'Port Roles'. The main area has tabs for 'Port Roles' and 'Port Channels', with 'Configure' selected. Below this is a port map showing 16 ports. Port 16 is highlighted with a blue border and labeled 'Selected Ports'. Buttons for 'Selected Ports' and 'Port 16' are present. A legend at the bottom indicates: Ethernet Uplink (pink), Ethernet Uplink Port Channel Member (light blue), Server (blue), and Unconfigured (black). To the right is a table listing port details:

Name	Type	Role	Port Channel
Port 1	Ethernet	Unconfigured	-
Port 2	Ethernet	Unconfigured	-
Port 3	Ethernet	Unconfigured	-
Port 4	Ethernet	Unconfigured	-
Port 5	Ethernet	Unconfigured	-
Port 6	Ethernet	Unconfigured	-
Port 7	Ethernet	Unconfigured	-
Port 8	Ethernet	Unconfigured	-
Port 9	Ethernet	Unconfigured	-
Port 10	Ethernet	Unconfigured	-
Port 11	Ethernet	Unconfigured	-
Port 12	Ethernet	Unconfigured	-
Port 13	Ethernet	Unconfigured	-
Port 14	Ethernet	Unconfigured	-
Port 15	Ethernet	Ethernet Uplink	-
Port 16	Ethernet	Ethernet Uplink	-

The screenshot shows the 'Configure Port' dialog for Port 16. At the top is a gear and wrench icon with the title 'Configure Port'.

Configuration

Selected Port: Port 16

Role: Ethernet Uplink

Admin Speed: Auto

FEC: Auto

Ethernet Network Group: Prod-vlans

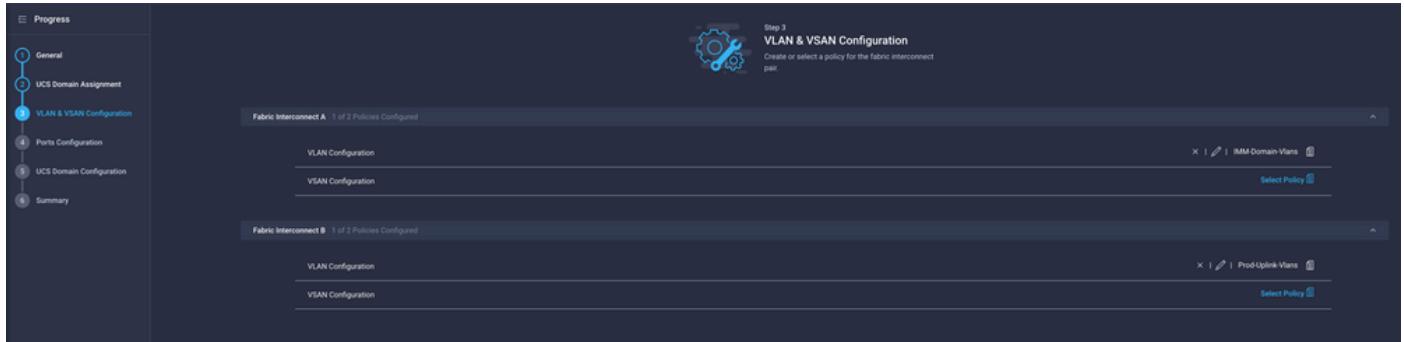
Flow Control: Select Policy

Link Control: Select Policy

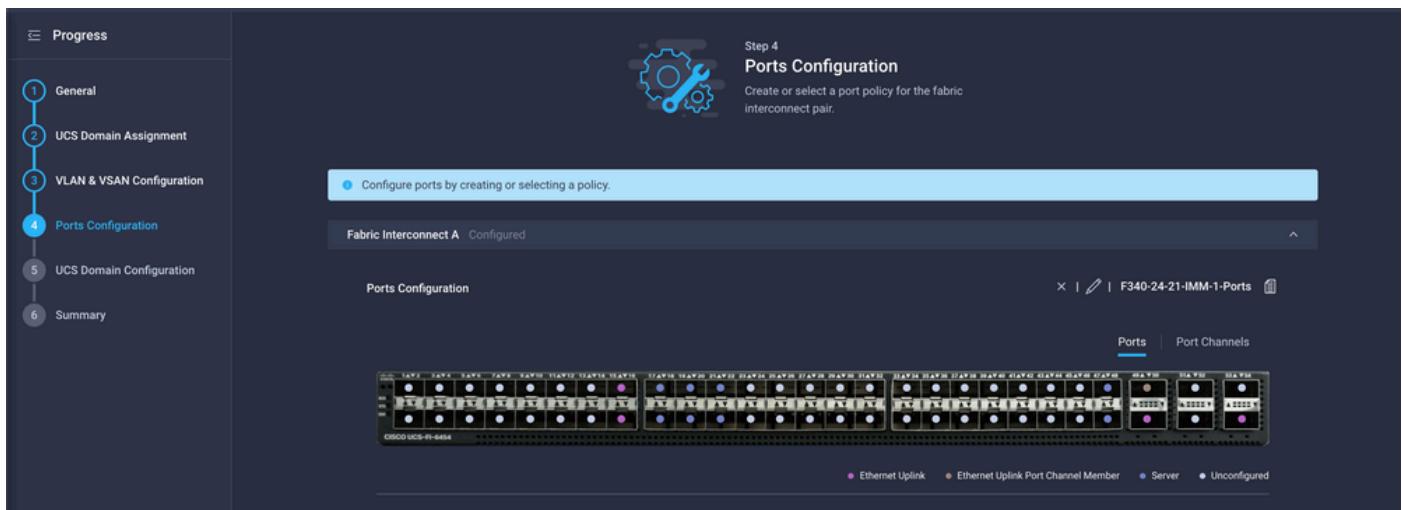
步驟 5. 將VLAN策略和埠策略分配給域配置檔案

導航到Profiles > UCS Domain Profiles 並選擇適當的Domain Profile。

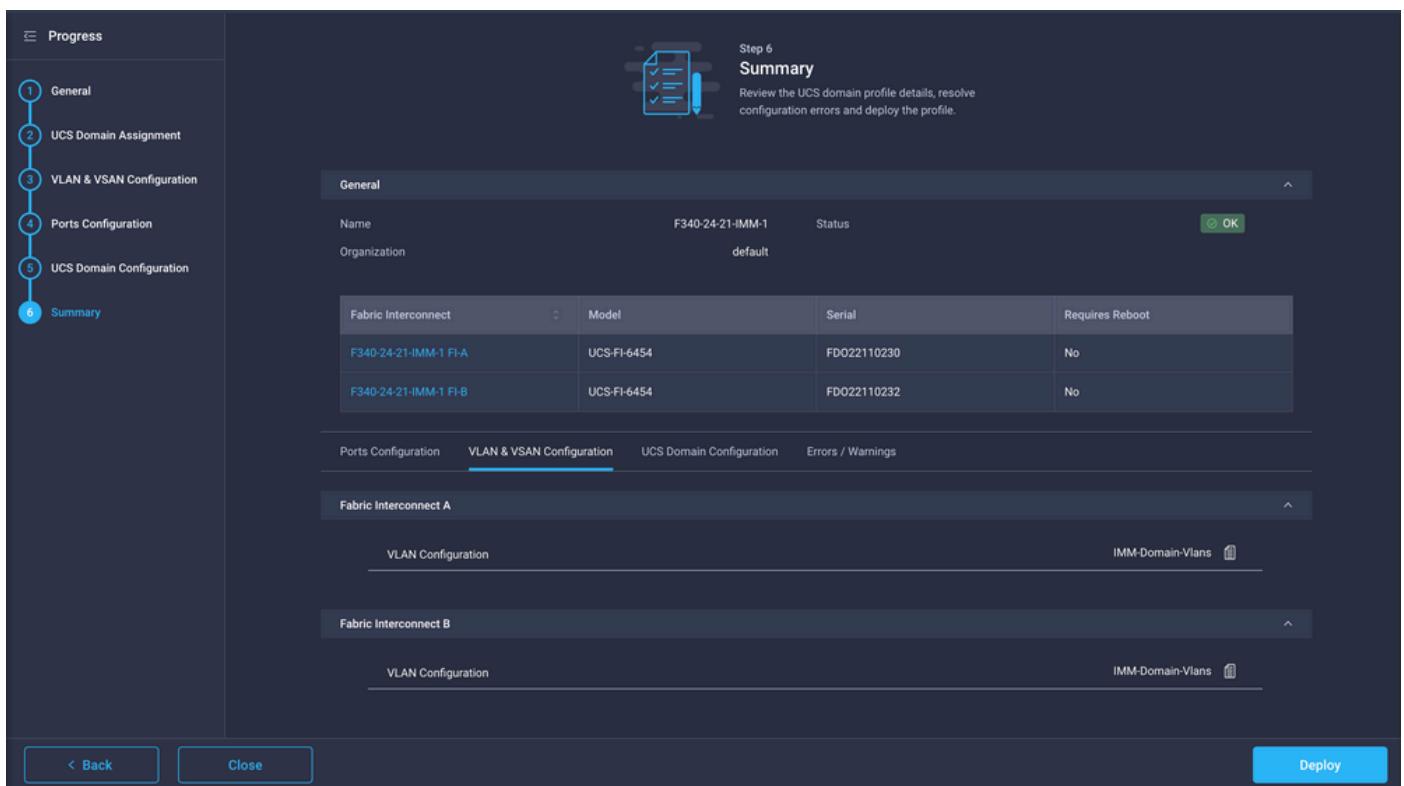
導覽至連線埠組態一節。



將步驟4.中建立的埠策略分配給交換矩陣互聯A和B，然後進入Summary部分。



檢視應用於域配置檔案的配置，然後按一下Deploy。



步驟 6. 將乙太網組策略分配給LAN連線策略

您可以使用已經存在的LAN連線策略或建立新的連線策略。

導覽至Policies > Create Policy > Select LAN Connectivity。

The screenshot shows a user interface for selecting a policy type. On the left, there is a sidebar titled 'Filters' with a 'PLATFORM TYPE' section containing several radio button options: 'All', 'UCS Server' (which is selected), 'UCS Domain', 'UCS Chassis', 'HyperFlex Cluster', and 'Kubernetes Cluster'. To the right of the sidebar is a main content area with a title 'Select Policy Type' and a search bar labeled 'Search'. Below the search bar is a list of policy types, each represented by a radio button. The 'LAN Connectivity' option is selected, indicated by a blue dot in the radio button. Other options listed include Adapter Configuration, BIOS, Boot Order, Certificate Management, Device Connector, Ethernet Adapter, Ethernet Network, Ethernet Network Control, Ethernet Network Group, LDAP, Local User, Network Connectivity, NTP, Persistent Memory, Power, SAN Connectivity, and SD Card.

Policy Type	Status
Adapter Configuration	<input type="radio"/>
LAN Connectivity	<input checked="" type="radio"/>
BIOS	<input type="radio"/>
Boot Order	<input type="radio"/>
Certificate Management	<input type="radio"/>
Device Connector	<input type="radio"/>
Ethernet Adapter	<input type="radio"/>
Ethernet Network	<input type="radio"/>
Ethernet Network Control	<input type="radio"/>
Ethernet Network Group	<input type="radio"/>
LDAP	<input type="radio"/>
Local User	<input type="radio"/>
Network Connectivity	<input type="radio"/>
NTP	<input type="radio"/>
Persistent Memory	<input type="radio"/>
Power	<input type="radio"/>
SAN Connectivity	<input type="radio"/>
SD Card	<input type="radio"/>

輸入名稱，然後按一下下一步。



Step 1

General

Add a name, description and tag for the policy.

Organization *

default



Name *

IMM-LCP

Target Platform ⓘ

UCS Server (Standalone) UCS Server (FI-Attached)

Set Tags

Description

<= 1024

使用所需的設定配置vNIC並包括步驟3中建立的乙太網路組。或者，您可以重複使用步驟2中建立的組。

Step 2
Policy Details
Add policy details

Enable Azure Stack Host QoS (Optional)

IQN

None Pool Static

This option ensures the IQN name is not associated with the policy

vNIC Configuration

Manual vNICs Placement Auto vNICs Placement

For manual placement option you need to specify placement for each vNIC. Learn more at [Help Center](#)

Add vNIC Graphic vNICs Editor

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Name	Slot ID	Switch ID	PCI Link	PCI Order	Failover
<input checked="" type="checkbox"/> vnic0	MLOM	A	0	0	Disabled
<input type="checkbox"/> vnic3	MLOM	A	0	3	Disabled

Selected Pool IMM-MAC-POOL Edit | X

Placement

Slot ID * PCI Link 0 - 1

Switch ID * ▾

PCI Order

Consistent Device Naming (CDN)

Source ▾

Failover

Enabled

Ethernet Network Group Policy *

Selected Policy MGMT-VNIC-167 Edit | X

Ethernet Network Control Policy *

Selected Policy IMM-Netcontrol Edit | X

Ethernet QoS *

MAC Address Pool * ⓘ
 |

Placement

Slot ID *	PCI Link	
MLOM	0	<input type="button" value="0"/> <input type="button" value="1"/>
0 - 1		

Switch ID *

PCI Order

Consistent Device Naming (CDN)

Source

Failover

Enabled

Ethernet Network Group Policy * ⓘ
 |

Ethernet Network Control Policy * ⓘ
 |

將LAN連線策略分配到服務配置檔案並進行部署。

驗證

使用本節內容，確認您的組態是否正常運作。

部署域配置檔案後，您可以驗證是否將VLAN分配到適當的上行鏈路

預設（所有上行鏈路上自動允許）配置：

```
<#root>
```

```
LAB-IMM-B(nx-os)#

```

```
show run interface ethernet 1/15
```

```
!Command: show running-config interface Ethernet1/15
!Running configuration last done at: Wed Mar  9 20:20:55 2022
!Time: Thu Mar 10 14:28:00 2022
version 9.3(5)I42(1g) Bios:version 05.42
interface Ethernet1/15
  description Uplink
```

```

pinning border
switchport mode trunk
switchport trunk allowed

vlan 1,101-999

no shutdown

LAB-IMM-B(nx-os)#

show run interface ethernet 1/16

!Command: show running-config interface Ethernet1/16
!Running configuration last done at: Wed Mar  9 20:20:55 2022
!Time: Thu Mar 10 14:28:06 2022
version 9.3(5)I42(1g) Bios:version 05.42
interface Ethernet1/16
  description Uplink
  pinning border
  switchport mode trunk
  switchport trunk allowed

vlan 1,101-999

no shutdown

```

將DMZ VLAN分配到埠1/15並將生產Vlan分配到埠1/16後：

```

<#root>

LAB-IMM-B(nx-os)#

show run interface ethernet 1/15

!Command: show running-config interface Ethernet1/15
!Running configuration last done at: Thu Mar 10 18:13:38 2022
!Time: Thu Mar 10 18:21:54 2022
version 9.3(5)I42(1g) Bios:version 05.42
interface Ethernet1/15
  description Uplink
  pinning border
  switchport mode trunk
  switchport trunk allowed

vlan 1,20-30

no shutdown

LAB-IMM-B(nx-os)#

show run interface ethernet 1/16

!Command: show running-config interface Ethernet1/16
!Running configuration last done at: Thu Mar 10 18:13:38 2022

```

```
!Time: Thu Mar 10 18:21:57 2022
version 9.3(5)I42(1g) Bios:version 05.42
interface Ethernet1/16
  description Uplink
  pinning border
  switchport mode trunk
  switchport trunk allowed

vlan 1,101-999

  no shutdown
```

相關資訊

- [Intersight中的域配置檔案](#)
- [Intersight中的伺服器策略](#)
- [Intersight中的域策略](#)
- [使用API Explorer和NXOS排除UCS域上的IMM網路故障](#)
- [技術支援與文件 - Cisco Systems](#)

關於此翻譯

思科已使用電腦和人工技術翻譯本文件，讓全世界的使用者能夠以自己的語言理解支援內容。請注意，即使是最佳機器翻譯，也不如專業譯者翻譯的內容準確。Cisco Systems, Inc. 對這些翻譯的準確度概不負責，並建議一律查看原始英文文件（提供連結）。