在Intersight管理模式域中配置不连续的第2层

简介

本文档介绍如何在Intersight管理模式下在交换矩阵互联的上游部署不连续的第2层网络。

先决条件

要求

Cisco 建议您了解以下主题:

- 基本了解不连续的第2层网络。
- 基本了解如何在Intersight管理模式下配置UCS域。

使用的组件

- Intersight管理模式
- 6454交换矩阵互联
- 4.2.1g固件

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原 始(默认)配置。如果您的网络处于活动状态,请确保您了解所有命令的潜在影响。

配置

步骤1:创建包含所有VLAN的VLAN策略

✤ 注意:这包括要在环境中存在的生产VLAN(称为PROD)和隔离区VLAN(称为DMZ)。

导航到策略 > 创建策略 > VLAN。

	Select Policy Ty	De	
Filters	۹, Search		
PLATFORM TYPE	Ethernet Network Control	O Port	
	Ethernet Network Group		
UCS Server	Flow Control	Switch Control	
O UCS Domain	Link Aggregation	Syslog	
UCS Chassis	C Link Control	◯ System QoS	
HyperFlex Cluster	O Multicast	O VLAN	
C Kubernetes Cluster	Network Connectivity	🔿 VSAN	

创建名称,然后单击下一步。

	Step 1 General Add a name, description and tag for the policy.	
Organization *		
default		<u>~</u>
Name *		
IMM-Domain-vl	ans	_
Set Tags		
Description		
	<= 1	024

单击Add VLANs。

现在,当您为PROD/DMZ网络添加VLAN或VLAN范围时,请确保取消选中Auto Allow on Uplinks并 添加组播策略。这可确保这些VLAN可以分离并在以后分配给特定端口或端口通道。

		Add VLAI	NS the policy		
VLANs should have	one Multicast policy associated to	it			
Configuration					
Name / Prefix * PROD			VLAN IDs * 101-999		
Auto Allow On L	Uplinks O				
Multicast *	IM-Multicast ⊚ ×				
		Add VLAN Add VLANs to th	S ne policy		
VLANs should have one	Multicast policy associated to it				
Configuration					
Name / Prefix *			VLAN IDs *		
			20-30		
	nks ①				
Auto Allow On Uplin					
Auto Allow On Uplin Multicast *					

完成后,单击Add将VLAN添加到VLAN策略,然后单击Create。

第二步:创建以太网网络组策略

此策略用于将VLAN组分配给特定的上行链路。

导航到策略 > 创建策略 > 以太网网络组。

第一组VLAN用于生产上行链路。

ilters	Q Search		
LATFORM TYPE	Ethernet Network Control	O Port	
	Ethernet Network Group		
UCS Server	Flow Control	Switch Control	
UCS Domain	Link Aggregation	Syslog	
UCS Chassis	Link Control	System QoS	
HyperFlex Cluster	O Multicast	🔿 VLAN	
Kubernetes Cluster	Network Connectivity	🔿 VSAN	

创建名称,然后单击下一步。

		Step 1 General Add a name, des	scription and tag	g for the policy.		
	Organization *					
	default			~		
	Name *					
	Dradylana					
	Set Tags					
	Description			,		
				<= 1024		
		Step 2 Policy Deta	ails ^{ills}			
VLAN Setti	ings					
Allowed VL	ANs		Native VLAN			
101-999			1		0 0	
					1-4093	

第二个组用于DMZ上行链路。

		Step 1 General Add a name, o	description a	nd tag for the p	olicy.		
	Organization *						
	default				~		
	Name *						
	DMZ-vlans						
	Set Tags						
	Description				<u> </u>		
					<= 1024		
	Ę	Step 2 Polic Add po	cy Details licy details				
VLAN S	ettings						
Allowed	VLANS		Native VL 1	AN) © 1 - 4093	

第三步:为虚拟NIC创建新的以太网网络组策略(可选)

T此步骤是可选的,因为您在第2步中创建的以太网网络组策略也可重复使用,将其分配到服务配置 文件上的vNIC。

✤ 注意:如果策略被重复使用,则上行链路上允许的所有VLAN也在vNIC上允许。如果首选仅允 许VLAN的子集,则需要创建单独的策略并允许vNIC上的首选VLAN。 导航到策略 > 创建策略 > 以太网网络组。

创建名称,然后单击下一步。

	Step 1 General Add a name, description and tag for the pol	icy.
Organization * default		· · · · · · · · · · · · · · · · · · ·
Name * MGMT-VNIC-167		
Set Tags		
Description		<u></u>
		<= 1024
Ę	Step 2 Policy Details Add policy details	

为另一个DMZ VLAN创建另一个以太网网络组。

	Step 1 General Add a name, de	escription and tag for the policy.	
	Organization *		
	default	~	
	Name *		
	<u></u>		
	Set Tags		
	Description	<u>~</u> <= 1024	
	Step 2 Policy Deta Add policy detail	ails Is	
VLAN Settings			
Allowed VLANs 20		Native VLAN 1	Ĵ © 1 - 4093

第四步:创建或修改端口策略

创建端口策略或修改已经存在的端口策略,然后将其分配到以太网网络组和适当的上行链路。

导航到策略(Policies)选项卡>创建策略(Create Policy)>选择端口(Port)>创建名称(Create a Name)>下一步(Next)。

选择Port或Port-channel,然后单击Configure。

E Progress		Port Roles Port Channels			
General Justified Port		Configure Selected Ports Port 15 Clear Selection			
Purt Roles					
			Ethenet Splink Ethenet Uplink Furt Channel Member e Server	e Unconfigured	
			Ethernet	Unconfigured	
			Ethernet	Unconfigured	
			Ethernet	Unconfigured	
				Unconfigured	
			Ethernet	Unconfigured	
				Unconfigured	
				Unconfigured	
			Ethernet	Unconfigured	
				Unconfigured	
			Ethernet	Unconfigured	
			Ethemet	Unconfigured	
			Ethernet	Unconfigured	
	Port Roles			Unconfigured	
			Ethemet	Unconfigured	

分配步骤2中创建的以太网网络组。

		c کې	configure Port			
Configuration						
Selected Port Port 15						
Role						
Ethernet Uplink						
Admin Speed		FEC				
Auto	× 0	Auto		<u>~ 0</u>		
Ethernet Network Group Selected Policy DMZ-vlans Flow Control Select Policy	@ X					

对另一个上行链路重复相同的过程。

∈ Progress		Configure port through a unifi	roles to define the traffic type carried id port connection.	
Conversal (2) Woulfied Plant	Port Roles Port Channels			
🔶 Put Bales				
		Ethemet	Unconfigured	
		Ethernet	Unconfigured	
		Ethernet	Unconfigured	
		Ethernet	Unconfigured	
			Unconfigured	
			Unconfigured	
		Ethemet	Unconfigured	
		Ethernet	Unconfigured	
		Ethernet	Unconfigured	
		Ethernet	Unconfigured	
			Unconfigured	
		Ethemet	Unconfigured	
		Ethemet	Unconfigured	
		Ethernet	Unconfigured	
		Ethemet	Ethernet Uplink	
	Port 16	Ethemet	Ethernet Uplink	

	50	<u>َ</u> م	Configure Port		
	7~6	<u></u>			
Configuration					
Selected Port Po	ort 16				
Role					
Ethernet Uplink					
Admin Speed		FEC			
A	v @	Auto			
Auto					
<u>Auto</u>		_			
Ethernet Network Grou	ۍ رو س	_			
Ethernet Network Grou	up O rod-vlans © X	_			
Ethernet Network Grou	up⊙ rod-vlans ⊚ X				
Ethernet Network Grou	up () rod-vlans () X				
Ethernet Network Grou	upo rod-vlans ⊚ X				
Ethernet Network Grou	up⊙ rod-vlans ⊚ X				
Ethernet Network Grou	up⊙ rod-vlans ⊚ X				

第五步:将VLAN策略和端口策略分配到域配置文件

导航到Profiles > UCS Domain Profiles 并选择适当的Domain Profile。

导航到端口配置部分。



将步骤4.中创建的端口策略分配给交换矩阵互联A和B,然后进入摘要部分。

 Progress General 2 UCS Domain Assignment 	Step 4 Ports Configuration Create or select a port policy for the fabric interconnect pair.	
3 VLAN & VSAN Configuration Ports Configuration	Configure ports by creating or selecting a policy. Ethics Interconnect A Configured	Â
5 UCS Domain Configuration	Ports Configuration $ imes + mill + F340-24-21-IMM-1-Ports @$	
e summary	Port Channels Not Not	

查看应用于域配置文件的配置,然后单击Deploy。

🚈 Progress			Step 6			
1 General			Review the UC configuration	S domain profile details, resolve errors and deploy the profile.		
2 UCS Domain Assignment						
3 VLAN & VSAN Configuration		General				
Ports Configuration		Name	F340-24-21-IMM-1	Status	0 OK	
5 UCS Domain Configuration		Organization	default			
5 Summary		Fabric Interconnect 0	Model	Serial	Requires Reboot	
			UCS-FI-6454	FD022110230	No	
			UCS-FI-6454	FD022110232	No	
	Ports Configuration VLAN & VSAN Configuration UCS Domain Configuration Errors / Warnings					
		Fabric Interconnect A				
		VLAN Configuration IMM-Domain-Vlans				
		Fabric Interconnect B				
		VLAN Configuration			IMM-Domain-Vlans 🗐	
						Deploy

第六步:将以太网组策略分配给LAN连接策略

您可以使用现有的LAN连接策略,也可以创建新策略。

导航到Policies > Create Policy > Select LAN Connectivity。

Select Policy Type						
Filters	Q Search					
PLATFORM TYPE	Adapter Configuration	LAN Connectivity				
	O BIOS	⊖ LDAP				
UCS Server	O Boot Order	🔘 Local User				
O UCS Domain	Certificate Management	Network Connectivity				
UCS Chassis	Device Connector					
HyperFlex Cluster	Ethernet Adapter	Persistent Memory				
C Kubernetes Cluster	C Ethernet Network	O Power				
	Ethernet Network Control	SAN Connectivity				
	C Ethernet Network Group	O SD Card				

输入名称,然后单击下一步。

	Step 1 General Add a name, description and tag for the policy	<i>I</i> .
Organization *		
default		~
Name *		
Target Platform ^① 〇 UCS Server (Sta	ndalone) 🧿 UCS Server (Fl-Attached)	
Set Tags		
Description		<u>~</u> = 1024

使用所需的设置配置vNIC,并包括在步骤3中创建的以太网网络组。或者,您可以重复使用步骤2中 创建的组。

⊆ Progress ① General				Step 2 Policy Det Add policy det	tails ^{ails}				
Policy Details	•	Enable Azure Stack H	ost QoS 💿						
	IQN	IQN							
		None	Pool	Static					
		This option ensures the	e IQN name is not ass	ociated with the policy	1				
	vNI	C Configuration							
Manual vNICs Placement Auto vNICs Placement									
For manual placement option you need to specify placement for each option you need to specify placement for each option.						at Help Center			
	•	Add vNIC					Graphic vNICs	Editor	
		1 / 0							
		Na	Slot ID	Switch ID	PCI Link	PCI Order	Failover		
		vnic0	MLOM				Disabled		
	(vnic3	MLOM	A	0	3	Disabled		

Selected Pool IMM-MAC-P00L	
Placement	
Slot ID *	PCI Link
MLOM	<u>o</u> <u>0</u> <u>() o</u>
Switch ID *	
<u>A</u> ~	<u> </u>
PCI Order	
0	
Consistent Device Naming (CDN)	
Source	
vNIC Name ~	<u>o</u>
Failover	
Ethernet Network Group Policy * 0	
Selected Policy MGMT-VNIC-167 ③ ×	
Ethernet Network Control Policy * 0	
Selected Policy IMM-Netcontrol	

Ethernet QoS *

MAC Address Pool * Selected Pool IMM-MAC-POOL I ×					
Placement					
Slot ID * MLOM		PCI Link 0	<u>()</u> o		
Switch ID *	<u>~ 0</u>		0-1		
PCI Order 3) 0				
Consistent Device Naming (CDN)					
Source vNIC Name	<u>~ 0</u>				
Failover					
Enabled O					
Ethernet Network Group Policy * Selected Policy DMZ-VNIC-20					
Ethernet Network Control Policy * 이 ਿ Selected Policy IMM-Netcontrol ④ ×					

将LAN连接策略分配到服务配置文件并进行部署。

验证

使用本部分可确认配置能否正常运行。

部署域配置文件后,您可以检验VLAN是否分配到适当的上行链路

默认(所有上行链路上自动允许)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

将DMZ VLAN分配到端口1/15并将生产Vlan分配到端口1/16后:

<#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

相关信息

- Intersight中的域配置文件
- Intersight中的服务器策略
- Intersight中的域策略
- 使用API Explorer和NXOS排除UCS域上的IMM网络故障
- <u>技术支持和文档 Cisco Systems</u>

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