配置ACI多站點部署

目錄

簡介

本文檔介紹設定和配置以應用為中心的基礎設施(ACI)多站點交換矩陣的步驟。

3.0版中引入的ACI多站點功能允許您互連單獨的思科ACI應用策略基礎設施控制器(APIC)群集域 (結構)。每個站點代表不同的可用區。這有助於確保跨站點的多租戶第2層和第3層網路連線,並 且還將策略域端到端擴展到交換矩陣。您可以在多站點GUI中建立策略並將其推送到所有整合站點 或選定站點。或者,您可以從單個站點匯入租戶及其策略,並將其部署到其他站點。

必要條件

需求

思科建議您:

- 完成<u>Cisco ACI Multi-Site Orchestrator安裝和升級指南</u>中的說明,以設定多站點控制器(MSC)。
- 確保已在兩個或多個站點中完全發現ACI交換矩陣。
- 確保在單獨站點部署的APIC集群具有到MSC節點的帶外(OOB)管理連線。

採用元件

本文中的資訊係根據以下軟體和硬體版本:

站點A

硬體裝置	邏輯名稱
N9K-C9504,帶	
N9K-X9732C-EX	百 轩 109

N9K-C93180YC- EX	leaf101
N9K-C93180YC- EX	leaf102
N9K-C9372PX-E	leaf103
APIC-SERVER- M2	apic1

站點B

硬體裝置

邏輯名稱

N9K-C9504,帶	骨幹209
N9K-X9732C-EX N9K-C93180YC-	
EX	leal201
EX	leaf202
N9K-C9372PX-E	leaf203
APIC-SERVER- M2	apic2
· ·	

IP網路(IPN) N9K-C93180YC-EX

便體	成个
APIC	版本3.1(2m)
MSC	版本:1.2(2b)
	NXOS:版本
	7.0(3)l4(8a)

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。

背景資訊

附註:跨站點名稱空間規範化由連線的脊柱交換機執行。這要求第二代或更高版本的Cisco Nexus 9000系列交換機在產品名稱末尾帶有「EX」或「FX」。或者,ACI多站點版本 1.1(x)及更高版本支援Nexus 9364C。

有關硬體要求和相容性的詳細資訊,請參閱<u>ACI多站點硬體要求指南</u>。

設定

邏輯網路圖



組態

本文檔主要介紹用於多站點部署的ACI和MSC端配置。未完全涵蓋IPN交換機配置詳細資訊。但是 ,列出了IPN交換機的一些重要配置以供參考。

IPN交換器組態

這些配置用於連線到ACI主幹的IPN裝置。

vrf context intersite description VRF for Multi-Site lab

feature ospf router ospf intersite vrf intersite

//指向Site-A中的Spine109

interface Ethernet1/49
speed 100000
mtu 9216
no negotiate auto
no shutdown

interface Ethernet1/49.4
 mtu 9150
 encapsulation dot1q 4
 vrf member intersite

//指向Site-B中的Spine209

interface Ethernet1/50
speed 100000
mtu 9216
no negotiate auto
no shutdown

interface Ethernet1/50.4
mtu 9150
encapsulation dot1q 4
vrf member intersite

```
ip address 172.16.1.34/27
ip ospf network point-to-point
ip router ospf intersite area 0.0.0.1
no shutdown
```

ip address 172.16.2.34/27
ip ospf network point-to-point
ip router ospf intersite area 0.0.0.1
no shutdown

附註:多協定邊界網關協定(MP-BGP)乙太網虛擬專用網路(EVPN)控制平面在不同站點的脊柱 節點之間通訊的最大傳輸單元(MTU) — 預設情況下,脊柱節點生成9000位元組的資料包以交 換端點路由資訊。如果未修改預設值,則站點間網路(ISN)必須支援至少9100位元組MTU大小 。為了調整預設值,請在每個APIC域中修改相應的系統設定。

此範例在骨幹節點上使用預設控制平面MTU大小(9000位元組)。

APIC所需的配置

 從APIC GUI為每個站點配置iBGP AS和路由反射器。 登入站點的APIC,為每個站點的 APIC群集配置內部邊界網關協定(iBGP)自治系統編號和路由反射器節點。選擇APIC GUI > System > System Settings > BGP Route Reflector。這是將用於交換矩陣Pod配置檔案的預設 BGP路由路由反射器策略。

← → C ▲ Not Secure https://10.66.93.16/#a:d	lluni/fabric/bgpInstP-default				\$
CISCO APIC System Tenants	Fabric Virtual Networking L4	4-L7 Services Admin	Operations	Apps	admin
QuickStart Dashboard Controllers System S	Settings Faults Config Zones Even				
System Settings	BGP Route Reflector	r Policy – BGP Rout	e Reflector		
APIC Connectivity Preferences	8 👽 🛆 🕦				
Contol Plane MTU	Properties	er defeuit			
Endpoint Controls	Descriptio	e: derauit n: optional			
Fabric Wide Setting					
BGP Route Reflector	Autonomous System Numbe	er: 100 🗘 <			
COOP Group	Route Reflector Node	s: 🔶			
E Load Balancer		Node ID	Node Name	Description	
Precision Time Protocol		109	spine109		

為每個站點的APIC群集配置交換矩陣莢配置檔案。選擇APIC GUI > Fabric > Fabric Policies > Pod Policies > Policy Groups。按一下預設的Pod策略組。在「BGP Route Reflector Policy」 下拉式清單中選擇default。

cisco APIC sys	stem Tr	enants	Fabric	Virtual Networking	L4-L7 Services	Admin	Operat	ions Apps				admin	٩	0	2		٢
		y I Fal	bric Policies														
Policies Quick Start Duices Duick Start Duices Duices Duices Duices Duices Duices Duices Duices Duices				Pod Policy Gro © ©	Oup - default Name: defa Description: Opti	ult		BGP Route Reflector	r Policy - E	3GP Route R	eflector				Policy	Faults Faults	Histor Histor
> Date and Time					Date Time Policy: defa	ult	v 10	Autonomous System Number:	100	0							
> SNMP				Resolved	Date Time Policy: defa	it.		Route Reflector Nodes:									+
> Management Access					ISIS Policy: defa	ult	~ @		Node ID	Node Name	Description						
ISIS Policy default				Res	solved ISIS Policy: defai	it.			109	spine109							
Policy Groups				co	OP Group Policy: defa	ult	~ 🗳										
Denaux				Resolved CO	OP Group Policy: defai	it.											
Protes Profile default				BGP Route	a Reflector Policy: defa	ult	~ ピ										
default				Resolved BGP Route	a Reflector Policy: defau	uit											
> Global Policies				Resolved Manageme	Int Access Policy: deta	uit 	~ 6	External Route Reflector Nodes:									- +
> Monitoring Policies				Resolved Managemen	SNMP Policy: defa	ult	V 12		Node ID	Node Name	Description						-
> Troubleshoot Policies				Resol	ved SNMP Policy: defa	alt.					All have been						
> Geolocation Policies					MACsec Policy: defa	ult	~ 🖉				Select Actions to c	reate a new	item.				
> MACsec Policies				Resolver	d MACsec Policy: defai	.it											
> Analytics Policies																	
> Tags																	
Tenant Quota																	
> DWDM								External Intersite Route Reflector	Node ID	Node Name	Description						
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												Sh	ow Usaç	je	Close		Submit
												Sho	v Usace		Reset	5	Submit
																	- All

2. 從APIC GUI配置主幹訪問策略,以包含每個站點的外部路由域。使用訪問實體配置檔案 (AEP)和第3層路由域(APIC GUI >交換矩陣>訪問策略)為到IPN交換機的脊柱上行鏈路配置脊 柱訪問策略。建立交換器設定檔。

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>	Policies									
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建立骨幹接入埠策略組。從連線的實體配置檔案下拉選單中,選擇msite。

- Chorne	Virtual Networking	L4-L7 Services	Admin (Operations	Apps	
abric Policies	Access Policies					
) (j	Spine Profile - :	spine109				
建立主 Spino	Create Spine A Specify the Policy Gro Name: Description: Link Level Policy: CDP Policy: MACsec Policy: Attached Entity Profile: 幹介面配置檔案。	CCESS Port Polic up identity spine109-ipn-port optional select a value CDP-ENABLE select a value msite	cy Group ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓	一 上一步中建	皇立的介面策略	2⊗
Create						
oroute	e Spine Interface Pi	rofile			@ &	
Specify t	he profile Identity	ofile			08	

附註:就目前而言,不需要在APIC GUI的infra租戶下設定L3Out of Open Shortest Path First(OSPF)。這將通過MSC進行配置,配置稍後將推送到每個站點。

3. 從APIC GUI為每個站點配置外部資料平面隧道端點(TEP)。選擇APIC GUI > Infra > Policies > Protocol > Fabric Ext Connection Policies。然後建立站點內/站點間配置檔案。

← → C 🔺 Not Secure https://10.66.93.16/#bTenants:infra uni/tn-infra fvFabricExtConnPolicies,fvRoutingPolicies,fvPolicies										
CISCO APIC System Tenants Fabri	c Virtu	al Networking	L4-L7 Services	Admin	Operations	Apps				
ALL TENANTS Add Tenant Tenant Search: Enter name, alias	descr I									
ALL TENANTS I Add Tenant I Tenant Search: Enter name, alias Tenant infra Networking Contracts Policies Policies BFD BFD BFD BGP BGP BGP BGP BGP BGP BGP BG	Fabric Pabric C C Si	common I infra Ext Connect Create Intrasit Greate Fabric Ext C Fabric I Nam Communi ite/Pod Peering Prof Peering Typ Passwoi Confirm Passwoi Pod Connectiv	I mgmt ion Policies te/Intersite P onnection Policy ID: 1 ne: SiteA ty: extended:as2-nn4: ile be: Full Mesh Ro rd:	rofile :2:22 5:16 ute Reflector		2 C	▶			
> End Point Retention	F	Pod ID			Dataplane TEP					
> DHCP	L	1		~	172.16.1.4/32					
> ND Interface				Update	Cancel					
> ND RA Prefix										
> L4-L7 Policy Based Redirect	_									
> L4-L7 Redirect Health Groups	F	abric Externa	al Routing Pro	ofile						
> 🔚 Data Plane Policing		N			Cubact	+				
Fabric Ext Connection Policies	r	Name			Subnet					
> HSRP						Cancel Submit				

4. 重複上述步驟,完成SiteB ACI交換矩陣的APIC端配置。

多站點控制器配置

1. 在MSC GUI中逐個新增每個站點。 連線並登入到MSC GUI。

		cisco	V	
		ACI Multi-Site [™]		
		Version: 1.2(2b)		
	USER	NAME		
	PASS	WORD		
	DOMA	un rai		
100		μαι	~	
		LOGIN		
	And Diversion of the local diversion of the l	/		2
	/			

按一下ADD SITE以在MSC中逐個註冊站點。您還可以在視窗右上角看到集群狀態。

	ACI Multi-Site
\bigcirc	
*	SITE STATUS
<u>.</u>	
1	
\$	
	Welcome to Multi-Site Controller Your single pane of glass to monitor your sites and manage policies across sites

使用APIC的一個IP地址並為每個站點分配一個唯一的站點ID。有效範圍為1-127。

🕘 Add Site	Sites		🛑 Add Site	
	Site SiteA has been successfully conn	ected. IMPORT TENANTS FROM THIS SITE		
Connection Settings	Site SiteB has been successfully connected	ected. IMPORT TENANTS FROM THIS SITE	Connection Settings	
* NAME	Q		* NAME	
SiteA			SiteB	
LABELS	SITE NAME/LABEL	APIC CONTROLLER URLS	LABELS	
Select or Create a Label.	96 SiteA	https://10.66.93.16	Select or Create a Label.	~
* APIC CONTROLLER URL	97 SiteB	https://10.66.93.17	* APIC CONTROLLER URL	
https://10.66.93.16			https://10.66.93.17	
APIC CONTROLLER URL			APIC CONTROLLER URL	
* USERNAME			* USERNAME	
admin			admin	
* PASSWORD			* PASSWORD	
•••••	۲			۲
SPECIFY LOGIN DOMAIN FOR SITE Off * APIC SITE ID			SPECIFY LOGIN DOMAIN FOR SITE Off * APIC SITE ID 2	

2. 在MSC中為每個站點配置基礎設施策略。 登入到MSC GUI。從左窗格中選擇**Sites**,然後按一下**CONFIGURE INFRA**。

ACI Multi-Site		Cluster Status 3/3
Sites a		C CONFIGURE INFRA
SITE NAME/LABEL	APIC CONTROLLER URLS	ACTIONS
96 SiteA	https://10.66.93.16	
97 SiteB	https://10.66.93.17	Actions v

配置Fabric Infra General設定。在「BGP Peering Type」下拉式清單中選擇**full-mesh**(full mesh - EBGP /route reflector - IBGP)。

۲	Fabric Connectivity	Infra
---	---------------------	-------

SETTINGS	Control Plane BGP
General Settings	BGP PEERING TYPE full-mesh
SITES	KEEPALIVE INTERVAL (SECONDS)
• SiteB ENABLED	HOLD INTERVAL (SECONDS) 180
• SiteA ENABLED	STALE INTERVAL (SECONDS)
	0
	BGP TTL BETWEEN PEERS 16

完成後,從左側窗格中選擇一個站點。然後,您將在中間窗格中看到站點資訊。有三種不同的 配置級別。您可以選擇「站點」級別、「Pod」級別或「骨幹」級別。它將允許在配置面板 (右窗格)上進行不同的設定。

Fabric Connectivi	ity Infra	
SETTINGS	Site level)
General Settings	96 SiteA	ð
SITES	Pop pod-1 • Pod level	\neg
O SiteA DISABLED	• Spine level spine109	
• SiteB DISABLED	BGP PEERING ON	

按一下站點區域後,站點級別配置(多站點啟用(開)、資料平面組播TEP、BGP ASN、 BGP社群(例如,extended:as2-nn4:2:22)、OSPF區域ID、OSPF區域型別(末節阻止測試 池通告)、外部路由域等)將顯示在右窗格中。您可以在此處配置或修改: 資料平面組播 TEP(每個站點一個環回),用於頭端複製(HREP)邊界閘道通訊協定(BGP)自治系統(AS)(與 APIC中設定的站台中的AS相符)OSPF區域ID、OSPF區域型別和OSPF介面策略(用於指向

IPN的主幹介面)外部路由域在大多數情況下,屬性值已經從APIC自動檢索到MSC。

Fabric Connectivit	r Infra	(DEPLOY) Q	×
SETTINGS		SITEA SETTINGS	Q
General Settings	SiteA	0 0 1 1 1	0
SITES	100 pod-1 •	SITE IS ACI MULTI-SITE ENABLED	
o SiteA ENABLED		APIC SITE ID	
•	BGP PEERING ON	- DATA PLANE MULTICAST TEP	
SiteB DISABLED		172.16.1.2 BGP AUTONOMOUS SYSTEM NUMBER	_
		100	
		BGP PASSWORD	
		OSPF AREA ID	
		0.0.0.1	
		OSPF AREA TYPE	
		regular	~
		EXTERNAL ROUTED DOMAIN	
		msite	*

按一下Pod區域並轉到POD級別的特定策略。輸入資料平面單播TEP。

0 1 4 1 1 1
DATA PLANE UNICAST TEP () 172.16.1.1

按一下「骨幹」區域並轉至骨幹特定的基本設定。對於從主幹到IPN交換機的每個介面:

設定IP地址和掩碼 BGP對等 — 開啟 控制平面TEP — 輸入路由器IP地址 骨幹是路由反射器 — 開啟

96 SiteA	Ŏ	98 SPINE109 ← 0 3 1 1
poc pod-1 • spine109 BGP PEERING ON		PORTS ID IP ADDRESS/SUBNET MTU 1/32 172.16.1.33/27 inherit ADD PORT BGP PEERING On CONTROL PLANE TEP 172.16.1.3 SPINE IS ROUTE REFLECTOR On

對其他站點重複這些步驟,並在MSC中完成基礎設施配置。按一下「DEPLOY」。這將儲存 基礎設施,並將基礎設施配置推送到兩個站點的APIC。

	(DEPLOY) 🖉 🗙
_	98 SPINE109
96 SiteA	
pop pod-1 •	ID IP ADDRESS/SUBNET MTU
© spine109 BGP PEERING ON	ADD PORT BCP PEERING On
	CONTROL PLANE TEP 172.16.1.3 SPINE IS ROUTE REFLECTOR On

APIC集群與MSC之間的初始整合已經完成,可以隨時使用。

您應該能夠為MSC上的租戶為不同的ACI站點配置擴展策略。

驗證

使用本節內容,確認您的組態是否正常運作。

 從每個APIC群集上的APIC GUI驗證基礎設施配置。 驗證每個APIC群集上的infra租戶下是否 配置了Intransite/Intersite配置檔案。驗證每個APIC集群(APIC GUI)上配置了基礎設施 L3Out(站點間)、OSPF和BGP。登入站點的APIC並在Tenant infra>Policies > Protocol > Fabric Ext Connection Policies下驗證站點內/站點間配置檔案。當站點完全由MSC配置/管理 時,站點間配置檔案將如下所示。

CISCO APIC System Tenants Fabric	Virtual Networking L4-L7 Services Admin	Operations Apps	admin (Q)	0		٢
ALL TENANTS Add Tenant Tenant Search: Enter name, alias, des	cr I common I infra I mgmt					
Tenant infra	Intrasite/Intersite Profile - Fabric Ext (Connection Policy SiteA				0
O Quick Start				Polic	y Fault	ts Histor
V 🧱 Tenant infra	0000			_	-	1 44
> Application Profiles					0	· **
> E Networking	Properties					
> Contracts	Name: SiteA					
V Policies	Community: extended:as2-nn4:2:22					
V Protocol	Ex: extended:as2-nn4:5:16					
> 🔛 Route Maps	Site ID: 1					
> 🖬 BFD	Intersite Multicast IP: 172.16.1.2/32					
> 🛅 BGP	Pod Peering Profile					
> CSPF	Peering Type: Full Mesh Route Reflector					
> EIGRP	Password:					
> GMP Snoop	Confirm Password:					
> GMP Interface	Pod Connection Profile					
> Custom QOS						+
> End Point Retention	Pod ID	MultiPod Dataplane TEP	Intersite Dataplane TEP			
> DHCP	1	172.16.1.4/32	172.16.1.1/32			
> ND Interface						
> IIII ND RA Prefix						
> IIII Route Tag						
> L4-L7 Policy Based Redirect	Oite Descise Desfie					
> L4-L7 Redirect Health Groups	Site Peering Profile					
> IIII Data Plane Policing	Peering Type: Full Mesh					
Imit Fabric Ext Connection Policies	Remote Sites					
Fabric Ext Connection Policy SiteA	 Site ID 	Intersite Dataplane TEP IP	Intersite Multicast IP			
> HSHY	2	172.16.2.1/32	172.16.2.2/32			

選擇APIC GUI > Tenant Infra > Networking > External Routed Networks。在此,應在兩個站 點的租戶基礎設施下自動建立站點間L3Out配置檔案。



此外,請確保在VLAN 4中正確設定了L3Out邏輯節點和介面配置檔案配置。

Logical Node Profile - node-109-profile

8 👽 📣 🕔									Ŏ
Properties									
Name:	node-109-profile								
Description:	optional								
Alias:									
Target DSCP:	Unspecified ~								
Nodes:									
	▲ Node ID	Router ID	Static Routes			Loopback Address			
	topology/pod-1/node-109	172.16.1.3							
BGP Infra Peer									
Connectivity:	Peer IP Address			Time To Live					
	172.16.2.3			16					
e el el leterfe e e	Duefile interfece	100 1 00 0005							•
ogical interface	Profile - Interface-	109-1-32-pron	le						
							Policy	Faults	Histo
					General	Routed Sub-Interfaces	Routed	d Interfaces	S
							•		0
									0
Properties Routed Sub-Inte	erfaces:								
	Path	IP Address	Secondary IP Address	MAC Address		MTU (bytes)	Encap		1
	Ded 1/blode 100/	120 170 10 1 20107	occontrasty in Platicus	00.00.00.00.00.00		inhe (b) (b)	oup		
	Pod=1/Node=109/eth1	/32 1/2.10.1.33/2/		00:22:8D:F8:19:FF		Innent	vian-4		

Policy Faults

2. 從每個APIC群集上的主幹CLI檢驗OSPF/BGP會話。 檢驗OSPF是否位於主幹上並且從 IPN(主幹CLI)獲取路由。驗證BGP會話是否啟動到遠端站點(主幹CLI)。登入到主幹 CLI,驗證每個主幹上的BGP L2VPN EVPN和OSPF是否啟動。此外,請確認BGP的節點角色 為msite-speaker。 spine109# show ip ospf neighbors vrf overlay-1

OSPF Process ID default VRF overlay-1 Total number of neighbors: 1

Neighbor ID Pri State 172.16.1.34 1 **FULL**/ -Up Time Address Interface 04:13:07 172.16.1.34 Eth1/32.32 spine109# spine109# show bgp 12vpn evpn summary vrf overlay-1 BGP summary information for VRF overlay-1, address family L2VPN EVPN BGP router identifier 172.16.1.3, local AS number 100 BGP table version is 235, L2VPN EVPN config peers 1, capable peers 1 0 network entries and 0 paths using 0 bytes of memory BGP attribute entries [0/0], BGP AS path entries [0/0] BGP community entries [0/0], BGP clusterlist entries [0/0] Neighbor V AS MsgRcvd MsgSent TblVer InQ OutQ Up/Down State/PfxRcd 172.16.2.3 4 200 259 259 235 0 0 04:15:39 0 spine109# spine109# vsh -c 'show bgp internal node-role' Node role : : MSITE_SPEAKER spine209# show ip ospf neighbors vrf overlay-1 OSPF Process ID default VRF overlay-1 Total number of neighbors: 1 Up Time Address Interface 04:20:36 172.16.2.34 Eth1/32.32
 Neighbor ID
 Pri State

 172.16.1.34
 1 FULL/
 Up Time Address 1 **FULL**/ spine209# spine209# show bgp 12vpn evpn summary vrf overlay-1 BGP summary information for VRF overlay-1, address family L2VPN EVPN BGP router identifier 172.16.2.3, local AS number 200 BGP table version is 270, L2VPN EVPN config peers 1, capable peers 1 0 network entries and 0 paths using 0 bytes of memory BGP attribute entries [0/0], BGP AS path entries [0/0] BGP community entries [0/0], BGP clusterlist entries [0/0] V AS MsgRcvd MsgSent TblVer InQ OutQ Up/Down State/PfxRcd Neighbor 4 100 264 264 270 0 0 04:20:40 0 172.16.1.3 spine209# spine209# vsh -c 'show bgp internal node-role' : MSITE_SPEAKER Node role :

3. 從每個APIC群集上的主幹CLI檢驗Overlay-1介面。 登入到主幹CLI以檢查和驗證Overlay-1介 面。ETEP(多pod資料平面TEP)用於在單個ACI交換矩陣內的多個Pod之間路由流量的資料 平面隧道端點地址。DCI-UCAST(站點間資料平面單播ETEP(每個站點的任播))此任播資料 平面ETEP地址對於每個站點是唯一的。它分配給連線到IPN/ISN裝置的所有主幹,用於接收 L2/L3單播流量。DCI-MCAST-HREP(站點間資料平面 多點傳送TEP)此任播ETEP地址分配給 連線到IPN/ISN裝置的所有主幹,並用於接收L2 BUM(廣播、未知單播和多播)流量。

MSCP-ETEP(多站點控制平面ETEP)這是控制平面ETEP位址,也稱為BGP路由器ID,位於

每個主幹上,用於MP-BGP EVPN。

spine109# show ip int vrf overlay-1
<snip>
lo17, Interface status: protocol-up/link-up/admin-up, iod: 83, mode: etep
IP address: 172.16.1.4, IP subnet: 172.16.1.4/32
IP broadcast address: 255.255.255
IP primary address route-preference: 1, tag: 0
lo18, Interface status: protocol-up/link-up/admin-up, iod: 84, mode: dci-ucast

```
IP address: 172.16.1.1, IP subnet: 172.16.1.1/32
 IP broadcast address: 255.255.255.255
 IP primary address route-preference: 1, tag: 0
lo19, Interface status: protocol-up/link-up/admin-up, iod: 85, mode: dci-mcast-hrep
 IP address: 172.16.1.2, IP subnet: 172.16.1.2/32
 IP broadcast address: 255.255.255.255
 IP primary address route-preference: 1, tag: 0
1o20, Interface status: protocol-up/link-up/admin-up, iod: 87, mode: mscp-etep
 IP address: 172.16.1.3, IP subnet: 172.16.1.3/32
 IP broadcast address: 255.255.255.255
 IP primary address route-preference: 1, tag: 0
spine209# show ip int vrf overlay-1
<snip>
lo13, Interface status: protocol-up/link-up/admin-up, iod: 83, mode: etep
 IP address: 172.16.2.4, IP subnet: 172.16.2.4/32
 IP broadcast address: 255.255.255.255
 IP primary address route-preference: 1, taq: 0
lo14, Interface status: protocol-up/link-up/admin-up, iod: 84, mode: dci-ucast
 IP address: 172.16.2.1, IP subnet: 172.16.2.1/32
  IP broadcast address: 255.255.255.255
 IP primary address route-preference: 1, tag: 0
lo15, Interface status: protocol-up/link-up/admin-up, iod: 85, mode: dci-mcast-hrep
 IP address: 172.16.2.2, IP subnet: 172.16.2.2/32
 IP broadcast address: 255.255.255.255
 IP primary address route-preference: 1, tag: 0
lol6, Interface status: protocol-up/link-up/admin-up, iod: 87, mode: mscp-etep
 IP address: 172.16.2.3, IP subnet: 172.16.2.3/32
  IP broadcast address: 255.255.255.255
 IP primary address route-preference: 1, tag: 0
```

最後,確保MSC沒有出現故障。疑難排解目前尚無適用於此組態的具體疑難排解資訊。

相關資訊<u>Cisco ACI多站點架構白皮書技術支援與文件 - Cisco Systems</u>