# 配置ACI多站点部署

# 目录

<u>简介</u> <u>先决条件</u> <u>要求</u> 使用的组件 背景信息 配置 逻辑网络图 配置 <u>IPN交换机配置</u> <u>从APIC进行所需配置</u> <u>验证</u> <u>故障排除</u> <u>相关信息</u>

# 简介

本文档介绍设置和配置以应用为中心的基础设施(ACI)多站点交换矩阵的步骤。

版本3.0中引入的ACI多站点功能允许您互连单独的思科ACI应用策略基础设施控制器(APIC)集群域 (交换矩阵)。 每个站点代表不同的可用区域。这有助于确保跨站点的多租户第2层和第3层网络连 接,并且还跨交换矩阵端到端扩展策略域。您可以在多站点GUI中创建策略,并将其推送到所有集 成站点或所选站点。或者,您可以从单个站点导入租户及其策略,并将其部署在其他站点。

# 先决条件

### 要求

Cisco推荐您:

- •请完成《思科ACI多<u>站点协调器安装和升级指</u>南》中的说明以设置多站点控制器(MSC)。
- •确保已在两个或多个站点中完全发现ACI交换矩阵。
- •确保部署在不同站点的APIC集群具有与MSC节点的带外(OOB)管理连接。

### 使用的组件

本文档中的信息基于以下软件和硬件版本:

#### 站点 A

硬件设备	逻辑名称
N9K-C9504,带	anina 100
N9K-X9732C-EX	spine roa

N9K-C93180YC- EX	leaf101
N9K-C93180YC- EX	leaf102
N9K-C9372PX-E	leaf103
APIC-SERVER- M2	apic1
站点 B	
站点 B 硬件设备	逻辑名称
<b>站点 B</b> <b>硬件设备</b> N9K-C9504,带 N9K-X9732C-EX	<b>逻辑名称</b> spine209
<b>站点 B</b> <b>硬件设备</b> N9K-C9504,带 N9K-X9732C-EX N9K-C93180YC- EX	<b>逻辑名称</b> spine209 leaf201

EX leaf202 N9K-C9372PX-E leaf203

APIC-SERVER-M2 APIC2

IP网络(IPN) N9K-C93180YC-EX

Hardw	version
are	
APIC	版本3.1(2m)
MSC	版本:1.2(2b)
	NXOS:版本
IFIN	7.0(3)l4(8a)

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。

# 背景信息

**注意:**跨站点命名空间规范化由连接的主干交换机执行。这要求第2代或更高版本的Cisco Nexus 9000系列交换机在产品名称末尾带有"EX"或"FX"。或者,ACI多站点版本1.1(x)及更高 版本支持Nexus 9364C。

有关硬件要求和兼容性信息的更多详细信息,请参阅《ACI多站点硬件要求指南》。

## 配置

逻辑网络图



# 配置

本文档主要介绍用于多站点部署的ACI和MSC端配置。IPN交换机配置详细信息未完全涵盖。但是 ,IPN交换机中列出了一些重要配置,供参考。

#### IPN交换机配置

这些配置用于连接到ACI主干的IPN设备。

vrf context intersite description VRF for Multi-Site lab

feature ospf
router ospf intersite
 vrf intersite

### //在站点A中朝向主干109

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

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

### //在站点B中朝向主干209

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

**注意:**多协议边界网关协议(MP-BGP)以太网虚拟专用网(EVPN)控制平面通信的最大传输单元 (MTU) — 不同站点中的主干节点之间的通信 — 默认情况下,主干节点生成9000字节数据包 以交换终端路由信息。如果未修改该默认值,站点间网络(ISN)必须支持至少9100字节的 MTU大小。要调整默认值,请修改每个APIC域中的相应系统设置。

本示例在主干节点上使用默认控制平面MTU大小(9000字节)。

#### 从APIC进行所需配置

 从APIC GUI为每个站点配置iBGP AS和路由反射器。 登录站点的APIC并为每个站点的 APIC集群配置内部边界网关协议(iBGP)自治系统编号和路由反射器节点。选择APIC GUI > System > System Settings > BGP Route Reflector。这是将用于交换矩阵Pod配置文件的默认 BGP路由路由反射器策略。

← → C ▲ Not Secure   https://10.66.93.16/#a:d uni/fabr	→ C A Not Secure   https://10.66.93.16/#a:d]uni/fabric/bgpInstP-default						
cisco APIC System Tenants Fabr	ic Virtual Networking L4-L7 Se	rvices Admin	Operations	Apps	admin		
QuickStart   Dashboard   Controllers   System Settings							
System Settings 🕞 🖲 🚳	BGP Route Reflector Poli	cy – BGP Rou	te Reflector	r			
APIC Connectivity Preferences      BD Enforced Exception List	8 👽 🛆 🕦						
Contol Plane MTU Controls Fabric Wide Setting	Properties Name: defaul Description: option	al					
System Global GIPo	Autonomous System Number: 100	\$	←				
COOP Group	Route Reflector Nodes:  Node	ID	Node Name	Description			
Precision Time Protocol	109		spine109				

为每个站点的APIC集群配置交换矩阵Pod配置文件。选择**APIC GUI > Fabric > Fabric Policies** > **Pod Policies > Policy Groups**。点击默认Pod策略组。从BGP Route Reflector Policy下拉列 表中,选择**default**。

CISCO APIC System Tenants Fabric	Virtual Networking L4-L7 Servi	ces Admin Operat	tions Apps			admin		0	•	٢
Inventory   Fabric Policies	I Access Policies									
Policies	Pod Policy Group - defa	ult						Policy	Faults	Histor
Switch Policies     Module Policies	8 V 4 0		BGP Route Reflector	Policy - B	GP Route R	eflector		Dellas	Eaud	00
> 📄 Interface Policies	Properties Name: Description:	default	8 👽 🛆 🕥					Policy	Ó	± %
Policies     Date and Time     Shurp	Date Time Policy:	default 🗸 🖉	Properties Autonomous System Number:	100	٢					
SINNP     Management Access     ISIS Policy default	Resolved Date Time Policy: ISIS Policy:	default 🗸 🗸	Route Reflector Nodes:	Node ID	Node Name	Description				+
Policy Groups     default	Resolved ISIS Policy: COOP Group Policy:	default		109	spine109					
✓ Im Profiles ✓ Pod Profile default	Resolved COOP Group Policy: BGP Route Reflector Policy: Resolved BGP Route Reflector Policy:	default v 🗗	)							
<ul> <li>default</li> <li>Global Policies</li> </ul>	Management Access Policy: Resolved Management Access Policy:	default v 🖓	External Route Reflector Nodes:							+
Monitoring Policies     Im Troubleshoot Policies	SNMP Policy: Resolved SNMP Policy:	default 🗸 🖓		Node ID	Node Name	Description No items have been found.				
Geolocation Policies     MACsec Policies	MACsec Policy: Resolved MACsec Policy:	default 🗸 🚰								
Anaytics Poicies     Tags     Tenant Quota										
> 📰 DWDM			External Intersite Route Reflector Nodes:	Node ID	Node Name	Description				
				109	spine109					
						Show	Usage	Close		Submit
						Show U	Isage	Reset		Submit

2. 配置主干访问策略以包括APIC GUI中每个站点的外部路由域。使用接入实体配置文件 (AEP)和第3层路由域(APIC GUI >交换矩阵>访问策略)配置主干上行链路到IPN交换机的主 干访问策略。创建交换机配置文件。

← → C A Not Secure   https://10.66.93.16/#c:d root infr	aSpineNodePs,infraNodeP	s,intraNodePols				
CISCO APIC System Tenants Fabr	ic Virtual Networking	g L4-L7 Services	Admin Operations	Apps		
Inventory   Fabric Polici	es Access Policies					
Delision	Drafilas Crains	Droflee				
	Profiles - Spine	e Pronies				
Quick Start	Create Spine P	rofile			<b>?</b> ×	Deseries
> Policies				1 Profile	2 Associations	Descript
> Policy Groups	STEP 1 > Profile			1. Prome	2. Associations	
V III Profiles 4	Specify the profile Ide	ntity				
> 🔚 Leaf Profiles	Name:	spine109				
✓	Description:	optional				
efault	Spine Selectors					
> Overrides	Spille Selectors.	Name	Blocks	Policy Grou	• +	
> Module Policies		spine109	109	Policy Grou	þ	
Interface Policies						
> Policies						
> Policy groups	1					
> Leaf Profiles						
> Spine Profiles						
> Interface Overrides						
> 🔚 Global Policies						
> Monitoring Policies						
> 🔚 Troubleshoot Policies						
> Pools						
> 📰 Physical and External Domains				Previous Can	cel Next	
			(=, // , , , ).)			
创建可附加访问实体配置又件	<del>-</del> (AAEP)、第	3层路由域	和VLAN池。			
Create Attachable Access	Entity Profile	9 🔶				$\mathbf{?}$
Creative the name domains and infrast						
Specify the name, domains and infrast	ructure encaps					
Name: msite						
Description: optional						
Enable Infrast Create VLAN Poo					$? \times$	
Domains (VM						¥ +
External) To E Specify the Pool Identity						
Name: m	nsite					
Description: 0	ptional			7		
Allocation Mode:	Dynamic Allocation	Static Allocation				
	-,					
Create Ranges					$? \times$	
EPG Specificity France Division						
Specify the Encap Block Range						+
Ap Type: VLAN						
Range: VLAN ~	4 - 1	/LAN 🗸 4	Mu	st be vlan-4		
	Integer Value	Integer \	/alue			
Allocation Mode: Dynamic All	ocation Inherit all	ocMode from parent	Static Allocation			
		service from parent	Static Allocation			
Role: External or (	On the wire encapsula	ations Internal				
				Cancol	OK	
				Calicer	UK	

创建主干接入端口策略组。从Attached Entity Profile下拉列表中,选择**msite**。

Fabric	Virtual Networking	L4-L7 Service	s Admin	Operations	Apps	
abric Policies	Access Policies					
0 F	Spine Profile -	spine109				
	Create Spine A	ccess Port Po	licy Group	)		<b>?</b> ×
	Specify the Policy Gro	up identity				
	Name:	spine109-ipn-port				
	Description:	optional				
	Link Level Policy:	select a value		~		
	CDP Policy:	CDP-ENABLE		2		
	MACsec Policy:	select a value		~		
	Attached Entity Profile:	msite	[ [	<u> </u>		
创建主	干接口配置文件。	将面向IPN的主	E干接入端[	コ与上一步・	中创建的接口策	略组关联。
Spine	Profile - spine109					
Oreate	Cusing Interfece D	ua filo			0.0	
Create	e Spine Interrace P	rome			<b>WN</b>	
Specify t						
	Description: Optional					
	Create	Spine Access	Port Select	or		? ⊗
Inte	rface Selectors: Specify th	ne selector identity				
	Ν	Name: s	pine109-ipn-port			
		Description: to	owards IPN			
		Interface IDs: 1	/32			
		va 1/	lid values: All or Ranges. 13,1/15 or 1/22-1/24	For Example:		
		Interface Policy Group: s	pine109-ipn-port	~ 🗗		

**注意:**目前,无需在APIC GUI的infra租户下配置开放最短路径优先(OSPF)的L3Out。这将通 过MSC进行配置,并在以后将配置推送到每个站点。

3. 从APIC GUI为每个站点配置外部数据平面隧道终端(TEP)。选择APIC GUI > Infra > Policies > Protocol > Fabric Ext Connection Policies。然后创建站内/站间配置文件。

Appic System Tenant Fabric Virtual Networking L4-L7 Services Admin Operations Apps   Aut TenAnts   Add Tenant Tenant infra Image: Second infra Image: Second infra Image: Second infra     Image: Second infra   Image: Second infra     Image: Second infra </th <th>← → C ▲ Not Secure</th> <th colspan="8">← → C 🔺 Not Secure   https://10.66.93.16/#bTenants:infra uni/tn-infra fvFabricExtConnPolicies,fvRoutingPolicies,fvPolicies</th>	← → C ▲ Not Secure	← → C 🔺 Not Secure   https://10.66.93.16/#bTenants:infra uni/tn-infra fvFabricExtConnPolicies,fvRoutingPolicies,fvPolicies								
ALL TERMATS   Add Tenadi   Tenant Search: Enter name, ellas, descr   common   tria   mont Tenant infra	cisco APIC	System Ter	nants Fa	abric \	/irtual Networking	L4-L7 Services	Admin	Operations	Apps	
Tenant infra <ul> <li>Networking</li> <li>Networking</li> <li>Networking</li> <li>Policies</li> <li>Polici</li></ul>	ALL TENANTS   Add Tenan	at   Tenant Search:	Enter name, a	alias, descr						
> HSRP Cancel Submit	Tenant infra	tention Based Redirect ect Health Groups olicing		) Fab	ric Ext Connect Create Intras Create Fabric Ext Fabri Commu Site/Pod Peering Pr Peering T Passw Confirm Passw Pod Connect Pod ID 1 Fabric Extern Name	Ction Policies site/Intersite P Connection Policy c ID: 1 ame: SiteA inity: extended:as2-nn4 ofile vord: tion Profile nal Routing Profile	Profile 4:2:22 :5:16 bute Reflector Update	Dataplane TEP 172.16.1.4/32 Cancel		
	> HSRP								Cancel	Submit

4. 重复上述步骤以完成SiteB ACI交换矩阵的APIC端配置。

# 多站点控制器配置

1. 在MSC GUI中逐个添加每个站点。 连接并登录MSC GUI。

4		R. C.	
	cisco ACI Multi Sito™		
	Version: 1.2(2b)		
	USERNAME		
	PASSWORD		
	DOMAIN		
	Local 🗸		
	LOGIN		

单击ADD SITE以在MSC中逐个注册站点。您还可以在窗口右上角看到集群状态。

	ACI Multi-Site
0	
*	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IP地址之一,并为每个站点分**配一个唯**一的站点ID。有效范围为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 conn	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			SPECIFY LOGIN DOMAIN FOR SITE	
Off			Off	
* APIC SITE ID			* ADIC SITE ID	
1				
			2	

2. 在MSC中按站点配置基础设施策略。 登录MSC GUI。从左窗格**中选**择"站点",然后单击"**配置** INFRA"。

ACI Multi-Site		Cluster Status 3/3	2 📀
Sites a		😋 🎄 CONFIGURE INFR	A ADD SITE
SITE NAME/LABEL	APIC CONTROLLER URLS	ACTIONS	•
96 SiteA	https://10.66.93.16		
97 SiteB	https://10.66.93.17	Actions	*

配置交换矩阵基础设施常规设置。从BGP对等类型(BGP Peering Type)下拉列表中,选**择全网 状**(全网状 — EBGP /路由反射器 — IBGP)。

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

SETTINGS	Control Plane BGP	
	BGP PEERING TYPE	
General Settings	full-mesh 🗸	
SITES	KEEPALIVE INTERVAL (SECONDS)	
	60	
• SiteB	HOLD INTERVAL (SECONDS)	
ENABLED	180	
•	STALE INTERVAL (SECONDS)	
SiteA	300	
ENABLED	GRACEFUL HELPER	
	On	
	MAXIMUM AS LIMIT	
	0	
	BGP TTL BETWEEN PEERS	
	16	

完成后,从左侧窗格中选择一个站点。然后,您将在中间窗格中看到站点信息。有三个不同的 配置级别。您可以选择站点级别、Pod级别或主干级别。它将允许在配置面板(右窗格)上进 行不同设置。

Fabric Connectivity	y Infra	
SETTINGS	fite level	)
General Settings	96 Site level	Ċ
SITES	Pod level	
O SiteA DISABLED	Spine level	
● SiteB DISABLED	BGP PEERING ON	

点击站点区域后,站点级配置(多站点启用(打开)、数据平面组播TEP、BGP ASN、BGP社区(例如,extended:as2-nn4:2:22)、OSPF区域ID、OSPF区域类型(存根阻止TEP池通告)、外部路由域等)将显示。在此,您可以配置或修改:数据平面组播TEP(每个站点一个环回),用于头端复制(HREP)边界网关协议(BGP)自治系统(AS)(匹配APIC中配置的站点的AS)OSPF区域ID、OSPF区域类型和OSPF接口策略(用于指向IPN的主干接口)外部路由域

#### 在大多数情况下,属性值已从APIC自动检索到MSC。

Fabric Connectivity	Infra		DEPLOY & X
TINGS		93 SITEA	SETTINGS
neral Settings	SiteA	0	1 1 1 0
ES	pop pod-1 •	SITE IS ACI MUL	TI-SITE ENABLED
A		APIC SITE ID	
	spine109	DATA PLANE M	ULTICAST TEP
B	BGP PEERING ON	172.16.1.2	
		BGP AUTONOM	OUS SYSTEM NUMBER
		100	
		BCP PASSWOR	2
		OSPF AREA ID	
		0.0.0.1	
		OSPF AREA TYP	Æ
		regular	*
		EXTERNAL ROL	ITED DOMAIN
		msite	~

点击Pod区域并转至POD级别特定策略。输入数据平面单播TEP。

96 SiteA		¢ 0	POD-1
POD pod-1 •	Pod level configuration		A PLANE UNICAST TEP ()
e spine109 BGP PEERING ON			

单击"主干"区域并转到主干特定的基础设施设置。对于从主干到IPN交换机的每个接口:

### 设置IP地址和掩码 BGP对等 — 打开 控制平面TEP — 输入路由器IP地址 主干是路由反射器 — 打开

96 SiteA	Ŏ	98 9	SPINE109	1	1
pop pod-1 •  spine109 BGP PEERING ON Spine level settings		PORTS ID 1/32 CONTRO 172.1	IP ADDRESS/SUBNET 172.16.1.33/27 PORT RING ON L PLANE TEP 6.1.3	MTU	0
		SPINE IS	ROUTE REFLECTOR		

对其他站点重复上述步骤,并在MSC中完成基础设施配置。单击**DEPLOY**。这将保存基础设施配置并将其推送到两个站点中的APIC。

	DEPLOY
_	98 SPINE109
SiteA	
Pop pod-1 •	ID IP ADDRESS/SUBNET MTU
spine109 BGP PEERING ON	1/32 172.16.1.33/27 inherit C ADD PORT BGP PEERING On
	CONTROL PLANE TEP 172.16.1.3
	SPINE IS ROUTE REFLECTOR

APIC集群与MSC之间的初始集成已完成并可使用。

您应该能够为MSC上不同ACI站点的租户配置扩展策略。

# 验证

ababa

使用本部分可确认配置能否正常运行。

1. 从每个APIC集群上的APIC GUI验证基础设施配置。 验证在每个APIC集群的infra租户下配置 了站内/站间配置文件。验证在每个APIC集群(APIC GUI)上配置了infra L3Out(站点间)、 OSPF和BGP。登录站点的APIC并验证租户基础设施>策略>协议>交换矩阵扩展连接策略下的 站内/站间配置文件。当站点由MSC完全配置/管理时,站点间配置文件将如下所示。

CISCO APIC System Tenants	Fabric Virtual Networking L4-L7 Services	Admin Operations Apps			•••
ALL TENANTS   Add Tenant   Tenant Search: Enter nam	e, alias, descr I common I infra I mgmt				
Tenant infra	Intrasite/Intersite Profile - Fab	ric Ext Connection Policy SiteA			0 (
				Policy	Faults Histor
Internant initia	8 👽 🛆 🕥				0 ± %,
> Application Promes	Properties				
> Contracts	Fabric ID: 1				
	Name: SiteA				
Protocol	Community: extended:as2-nn4:2:2	2			
> Route Maps	Site ID: 1				
> BFD	Intersite Multicast IP: 172.16.1.2/32				
> BGP	Pod Peering Profile				
> 🖾 OSPF	Peering Type: Fill Mesh Route	Reflector			
> EIGRP	Passward				
> 🔚 IGMP Snoop	Confirm Password:				
> 📰 IGMP Interface	Ded Connection Drofile				
> 📰 Custom QOS	Pod Connection Profile				
> End Point Retention	0.10		Laurente Destantere TED		+
> E DHCP	► Pod ID	MultiPod Dataplane TEP	Intersite Dataplane TEP		
> I ND Interface	1	172.16.1.4/32	172.16.1.1/32		
> 📰 ND RA Prefix					
> 🔚 Route Tag					
> L4-L7 Policy Based Redirect					
> L4-L7 Redirect Health Groups	Site Peering Profile				
> 🔚 Data Plane Policing	Peering Type: Full Mesh				
Fabric Ext Connection Policies	Remote Sites				
Fabric Ext Connection Policy SiteA	▲ Site ID	Intersite Dataplane TEP IP	Intersite Multicast IP		
> HSRP	2	172.16.2.1/32	172.16.2.2/32		
Einst Line Constitut					

选择APIC GUI > Tenant Infra > Networking > External Routed Networks。此处,站点间 L3Out配置文件应在两个站点的租户基础设施下自动创建。



#### 此外,确保VLAN 4中正确设置了L3Out逻辑节点和接口配置文件配置。

Logical Node Profile - node-109-profile

								roncy	1 44
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Properties									
Name:	node-109-profile								
Description:	optional								
Alias									
Allas.	Unancelfed								
Target DSCP:	Unspecified V								
Nodes:	- Nodo ID	Poutor ID	Statia Boutaa			Loopbook Addroso			
	<ul> <li>Node ID</li> </ul>	Router ID	Static Routes			LOOPDACK 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					
	172.10.2.5			10					
ogical Interface	Profile - interface-	109-1-32-profile	¢.						•
							Policy	Faults	Histo
					General	Routed Sub-Interfaces	Routed	Interfaces	S
8 👽 🛆 🕔									0
🖲 👽 🛆 🕔 Properties									0
	erfaces:								0
Routed Sub-Inte	erfaces:	IP Address	Secondary IP Address	MAC Address		MTU (bytes)	Encap	i	0

Policy Faults

2. 从每个APIC集群上的主干CLI检验OSPF/BGP会话。 验证OSPF在主干上,并从IPN(主干CLI)获取路由。验证BGP会话是否处于远程站点(主干CLI)。登录主干CLI,验证BGP L2VPN EVPN和OSPF在每个主干上是否已启用。另外,验证BGP的节点角色是站点扬声器。 spine109# show ip ospf neighbors vrf overlay-1

OSPF Process ID default VRF overlay-1

Total number of	neighbors: 1		
Neighbor ID	Pri State	Up Time Address	Interface
172.16.1.34	1 <b>FULL</b> / -	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 
 Address
 Interface

 04:20:36
 172.16.2.34
 Eth1/32.31
 Neighbor ID Pri State 172.16.1.34 1 FULL/ -Eth1/32.32 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] Neighbor V AS MsgRcvd MsgSent TblVer InQ OutQ Up/Down State/PfxRcd 172.16.1.3 4 100 264 264 270 0 0 04:20:40 0 spine209# spine209# vsh -c 'show bgp internal node-role' : MSITE SPEAKER Node role :

3. 从每个APIC集群的主干CLI验证Overlay-1接口。登录主干CLI以检查并验证Overlay-1接口。 ETEP(多Pod数据平面TEP)用于在单个ACI交换矩阵内多个Pod之间路由流量的数据平面隧道终端地址。DCI-UCAST(站点间数据平面单播ETEP(每个站点任播))此任播数据平面 ETEP地址是每个站点唯一的。它被分配给连接到IPN/ISN设备的所有主干,用于接收L2/L3单 播流量。DCI-MCAST-HREP(站点间数据平面组播TEP)此任播ETEP地址分配给连接到 IPN/ISN设备的所有主干,用于接收L2 BUM(广播、未知单播和组播)流量。MSCP-ETEP(多站点控制平面ETEP)这是控制平面ETEP地址,也称为MP-BGP EVPN的每个主干

#### 上的BGP路由器ID。

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

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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
lo20, 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, tag: 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
lo16, 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
```

最后,确保未从MSC发现故障。故障排除目前没有针对此配置的故障排除信息。相关 信息思科ACI多站点架构白皮书技术支持和文档 - Cisco Systems