使用Nexus 1000V跟踪UCS中的MAC地址

目录

<u>简介</u> <u>先决条件</u> <u>要求</u> <u>使用的组件</u> 配置 <u>网络拓扑</u> <u>跟踪不同网段的MAC地址</u> <u>验证</u> 故障排除

简介

本文档介绍如何在以下网络级别跟踪虚拟机(VM)和VMkernel(VMK)接口的MAC地址:

- Cisco Nexus 5000 系列交换机
- •思科统一计算系统(UCS)6248交换矩阵互联(FI)
- VMware ESXi主机
- Cisco Nexus 1000V交换机

了解VM或VMK接口在故障排除和设计方面用于通信的上行链路非常重要。

先决条件

要求

Cisco 建议您了解以下主题:

- •思科NX-OS中的vPC功能
- 思科统一计算系统
- VMware ESXi
- Cisco Nexus 1000V交换机

使用的组件

本文档中的信息基于以下软件和硬件版本:

- 思科Nexus 5020交换机版本5.0(3)N2(2a)
- 思科统一计算系统版本2.1(1d)
- 思科统一计算系统B200 M3刀片服务器,带思科虚拟接口卡(VIC)1240(Palo)CNAvSphere 5.1(ESXi和vCenter)
- 思科Nexus 1000V交换机版本4.2(1)SV2(1.1a)

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。如果您使用的是真实网络,请确保您已经了解所有命令的潜在影响。

配置

网络拓扑

在本示例设置中,VM和VMK接口位于同一主机(IP地址172.16.18.236)和同一VLAN 18(子网 172.16.18.0/24)上。

在Nexus 1000V中,主机表示为虚拟以太网模块(VEM)#5。

在UCS中,主机安装在机箱1的刀片1上。



跟踪不同网段的MAC地址

1. 在vCenter中,查找要跟踪的VM的MAC地址。在本示例中,VM(ciscolive-vm)的MAC地址为 0050:568f:63cc:



 在ESXi外壳上输入esxcfg-vmknic -I命令,以便从主机查找VMK接口的MAC地址。在本例中, VMK(vmk0)是管理接口,其MAC地址为0050:56:67:8e:b9:

mc-vsm#	show mac address-	table in	8eb9			
18	0050.5667.8eb9	static	0	Veth19	!	5
18	0050.5667.8eb9	dynamic	0	Po4		6
mc-vsm#	show mac address-	table in	63cc			
18	0050.568f.63cc	dynamic	93	Po1	:	3
18	0050.568f.63cc	dynamic	93	Po2	_	4
18	0050.568f.63cc	static	0	Veth56		5
18	0050.568f.63cc	dynamic	93	Po4		6
mc-vsm#						

3. 确认VM(ciscolive-vm)和VMK接口(vmk0)的MAC地址是在ESXi主机(VEM)和Nexus 1000V上获 取的。

在VEM级别,输入vemcmd show I2 18命令以确认两个MAC地址都已获知:

~ # vemcmd sh	low 12 18				
Bridge domain	7 brtmax 4096,	brtcnt	82, timeou	ıt 300	
VLAN 18, swbd	l 18, ""				
Flags: P - P	VLAN S - Secure D	- Drop			
Туре	MAC Address	LTL	timeout	Flags	PVLAN
Static	00:50:56:8f:61:8b	75	0		
Static	00:50:56:8f:a4:a5	67	0		
Dynamic	00:50:56:5f:e9:a8	52	1		
Static	00:50:56:8f:51:97	78	0		
Dynamic	00:0c:29:15:fa:c6	305	27		
Dynamic	00:50:56:5f:88:58	60	1		
Static	00:50:56:8f:63:cc	68	0		
Dynamic	00:50:56:5f:7c:bd	59	1		
Dynamic	00:50:56:a2:14:f2	57	1		
Static	00:50:56:8f:11:3a	50	0		
Static	00:50:56:8f:f5:53	65	0		
Dynamic	00:50:56:a2:46:25	54	1		
Dynamic	00:50:56:8f:62:56	305	2		
Static	00:50:56:8f:21:35	54	0		
Dynamic	00:50:56:8f:86:19	305	192		
Static	00:50:56:8f:d5:fd	58	0		
Dynamic	00:02:3d:40:dd:03	305	4		
Dynamic	00:50:56:b7:70:37	305	1		
Dynamic	00:50:56:8f:c5:07	305	1		
Dynamic	00:50:56:8f:81:09	305	230		
Dynamic	00:0c:29:8b:01:22	305	73		
Dynamic	00:50:56:8f:54:48	305	6		
Dynamic	00:50:56:63:8f:4d	59	1		
Dynamic	00:50:56:8f:17:20	305	0		
Dynamic	00:50:56:8f:90:5b	305	60		
Static	00:50:56:8f:a1:3a	66	0		
Static	00:50:56:8f:45:0b	64	0		
Dynamic	00:50:56:a2:32:6f	63	2		
Dynamic	00:50:56:5f:19:5c	63	1		
Static	00:50:56:8f:90:a4	51	0		
Static	00:50:56:67:8e:b9	49	0		
Dynamic	00:25:b5:10:10:4f	305	306		

在Nexus 1000V级别,输入**show mac address-table命令**,以确认VEM # 5上的VLAN 18上是 否同时获取了两个MAC地址:

mc-vsm#	show mac address-	table in	8eb9		
18	0050.5667.8eb9	static	0	Veth19	Ę
18	0050.5667.8eb9	dynamic	0	Po4	
mc-vsm#	show mac address-	table in	63cc		
18	0050.568f.63cc	dynamic	93	Po1	3
18	0050.568f.63cc	dynamic	93	Po2	4
18	0050.568f.63cc	static	0	Veth56	Ę
18	0050.568f.63cc	dynamic	93	Po4	(
mc-vsm#					

为VEM # 5输入show port-channel summary命令,以查看端口通道和成员端口:

mc-vsm	#							
mc-vsm	# show port	-channel :	summary					
Flags:	D - Down	P ·	- Up in pos	rt-channel (m	embers)			
I - Individual H - Hot-standby (LACP only)								
s - Suspended r - Module-removed								
	S - Switcl	hed R	- Routed					
	U - Up (pe	ort-channe	el)					
Group	Port-	Туре	Protocol	Member Ports				
	Channel							
1	Po1 (SU)	Eth	NONE	Eth3/1(P)	Eth3/2(P)	Eth3/9(r)		
				Eth3/10(r)				
2	Po2 (SU)	Eth	NONE	Eth4/1(P)	Eth4/2(P)	Eth4/9(P)		
				Eth4/10(P)				
3	Po3 (SU)	Eth	NONE	Eth5/1(P)	Eth5/2(P)	Eth5/9(r)		
				Eth5/10(r)				
4	Po4 (SU)	Eth	NONE	Eth6/1(P)	Eth6/2(P)	Eth6/11(P)		
_				Eth6/12(P)				

- 4. 从Nexus 1000V收集更多详细信息。
 - 输入**show interface vethernet 56**命令,以查看Veth56与VM(ciscolive-vm)对应:

mc-vsm# show interface vethernet 56
Vethernet56 is up
Port description is ciscolive-vm, Network Adapter 1
Hardware: Virtual, address: 0050.568f.63cc (bia 0050.568f.63cc)
Owner is VM "ciscolive-vm", adapter is Network Adapter 1
Active on module 5
VMware DVS port 3033
Port-Profile is vApp-Network
Port mode is access
5 minute input rate 80 bits/second, 0 packets/second
5 minute output rate 12552 bits/second, 8 packets/second
Rx
23795 Input Packets 7293075158593488853 Unicast Packets
203449390 Multicast Packets 4294967761 Broadcast Packets
2333878 Bytes
Tx
1350625 Output Packets 4768 Unicast Packets
519692101807 Multicast Packets 4321524090 Broadcast Packets 1345857 Flood Packets
254466737 Bytes
0 Input Packet Drops 0 Output Packet Drops

输入**show interface vethernet 19**命令,以查看Veth19与主机的VMK接口(vmk0)对应:

mc-vsm# show interface vethernet 19
Vethernet19 is up
Port description is VMware V <u>Mkernel, vmk0</u>
Hardware: Virtual, address: 0050.5667.8eb9 (bia 0050.5667.8eb9)
Owner is VMware VMkernel, adapter is vmk0
Active on module 5
VMware DVS port 2110
Port-Profile is 13
Port mode is access
5 minute input rate 12904 bits/second, 1 packets/second
5 minute output rate 13384 bits/second, 8 packets/second
Rx
12200 Input Packets 7310589476873731518 Unicast Packets
7310589476867241067 Multicast Packets 873444753044241742 Broadcast Packets
16040625 Bytes
Tx
65549 Output Packets 3731 Unicast Packets
141938759046 Multicast Packets 137454132371 Broadcast Packets 59221 Flood Packets
12416427 Bytes
8227343645136678255 Input Packet Drops 210453427045 Output Packet Drops

5. 检查从VM(ciscolive-vm)和VMK接口(vmk0)到主机的上游接口的流量的固定。

m	c-vsm#	module ve	m 5 exe	cute	vemcmd	show por	t vsm		
	LTL	VSM Port	Admin	Link	State	PC-LTL	SGID	Vem Port	туре
	6	Internal	DOWN	UP	FWD	0		vns	
	8	Internal	UP	UP	FWD	0			
	9	Internal	DOWN	DOWN	FWD	0			
	10	Internal	DOWN	DOWN	FWD	0	0		
	11	Internal	DOWN	DOWN	FWD	0			
	12	Internal	DOWN	DOWN	FWD	0	0		
	14	Internal	DOWN	DOWN	FWD	0			
	15	Internal	DOWN	DOWN	FWD	0			
	16	Internal	DOWN	DOWN	FWD	0		ar	
	17	Eth5/1	UP	UP	FWD	305	0	vmnic0	
	18	Eth5/2	UP	UP	FWD	305	1	vmnic1	
	49	Veth19	UP	UP	FWD	0		vmk0]
	50	Veth23	UP	UP	FWD	0	1	tinian-sa	n.eth0
	51	Veth38	UP	UP	F/B*	• 0	0	tinian-es	xi-1.eth3
	52	Veth37	UP	UP	F/B*	• 0	0	tinian-es	xi-1.eth2
	53	Veth22	UP	UP	F/B*	• 0	1	tinian-es	xi-1.eth1
	54	Veth21	UP	UP	F/B*	• 0	0	tinian-es	xi-1.eth0
	55	Veth36	UP	UP	F/B*	• 0	1	tinian-es	xi-2.eth3
	56	Veth35	UP	UP	F/B*	• 0	0	tinian-es	xi-2.eth2
	57	Veth25	UP	UP	F/B*	• 0	1	tinian-es	xi-2.eth1
	58	Veth24	UP	UP	F/B*	• 0	0	tinian-es	xi-2.eth0
	59	Veth43	UP	UP	F/B*	• 0	1	tinian-es	xi-3.eth3
	60	Veth44	UP	UP	F/B*	• 0	0	tinian-es	xi-3.eth2
	61	Veth45	UP	UP	F/B*	• 0	1	tinian-es	xi-3.eth1
	62	Veth46	UP	UP	F/B*	• 0	0	tinian-es	xi-3.eth0
	63	Veth47	UP	UP	F/B*	• 0	1	tinian-es	xi-4.eth3
	64	Veth48	UP	UP	F/B*	• 0	0	tinian-es	xi-4.eth2
	65	Veth49	UP	UP	F/B*	· 0	1	tinian-es	xi-4.eth1
	66	Veth50	UP	UP	F/B*	• 0	0	tinian-es	xi-4.eth0
	67	Veth26	UP	UP	FWD	0	1	tinian-vo	e.eth0
	68	Veth56	UP	UP	FWD	0	0	ciscolive	-vm.eth0
	69	Veth31	UP	UP	FWD	0	1	maug-vc.e	th0
	75	Veth59	UP	UP	FWD	0	0	mc-ucsc.e	th0
	78	Veth72	UP	UP	FWD	0	1	mc-dc-2.e	th0
	305	Po3	UP	UP	FWD	0			

* F/B: Port is BLOCKED on some of the vlans. One or more vlans are either not created or not in the list of allowed vlans for this port. Please run "vemcmd show port vlans" to see the details. mc-vsm#

此输出显示VM(ciscolive-vm)和VMK接口(vmk0)到其相应VM网络接口控制器(VMNIC)的用户组 ID(SGID)映射。 映射显示了哪些VMNIC用于通信:

• VM(ciscolive-vm)的SGID 0与vmnic0的SGID 0匹配。

• VMK接口(vmk0)的SGID 1与vmnic1的SGID 1匹配。

6. 从vCenter或ESXi命令行界面(CLI)获取VMNIC的MAC地址。

在vCenter中,导航至Configuration标记:

E 🚱 mc-vesa	172.16.18.236 VMware ESXi, 5.1.0, 799	0733				
B mc·dc B mc·dc	Summary Virtual Machines Performan	ce Configuration Tasks & E	vents Alarms Permissi	ons Maps Sto	rage Views Ha	rdware Status
172.16.18.232	Hardware	Network Adapters				
172.16.18.233		Device	Speed	Configured	Switch	MACAddress
172.16.18.234	Processors	Cisco Systems Inc Cisco	VIC Ethernet NIC			
anatahan-by-1	Memory	wmnic9	20000 Full	Negotiate	vyattavds	00:25:b5:00:00:4d
anatahan-hv-2	Storage	vmnic8	20000 Full	Negotiate	vSwitch0	00:25:b5:00:00:5d
ciscolive-vm	Networking	vmnic7	20000 Full	Negotiate	mc-vds	00:25:b5:00:00:2d
👸 maug-vc	Storage Adapters	vmnic6	20000 Full	Negotiate	mc-vds	00:25:b5:00:00:3d
🍈 mc-dc-1	 Network Adapters 	vmnic5	20000 Full	Negotiate	mc-vds	00:25:b5:00:00:0d
mc-dc-2	Advanced Settings	vmnic4	20000 Full	Negotiate	mc-vds	00:25:b5:00:00:1d
mc-router	Power Management	vmnic3	20000 Full	Negotiate	mc-vds	00:25:b5:00:00:4c
mc-ucsc		vmnic2	20000 Full	Negotiate	mc-vds	00:25:b5:00:00:5c
me-vesa	Software	vmnic1	20000 Full	Negotiate	mc-vsm	00:25:b5:00:00:4F
mc-vsm-2	Licensed Features	vmnic0	20000 Full	Negotiate	mc-vsm	00:25:b5:00:00:5f
rota-esxi-1	Time Configuration			-		
👸 rota-esxi-2	DNS and Routing					
👘 rota-san	Authoritzation Convices					
🍈 rota-vc	Paula Management					
saipan-esxi-1	Power Management					
saipan-esxi-2	Virtual Machine Startup/Shutdown					
saipan-san	Virtual Machine Swapfile Location					
sapan-vc	Security Profile					

在ESXi CLI上,输入**esxcfg-nics -1命**令:

Name	per	Deimer	Link	Ground	Dumler	MBC Address	NOTE OF	Description					
IN OLD OF	FOI	DIIVEI	DUIK	abeen	pubter	MAG AGGLEBS	MI O	Description					
vmnic0	0000:06:00.00	enic	Up	20000Mbps	Full	00:25:b5:00:00:5f	1500	Cisco Systems	Inc	Cisco	VIC	Ethernet	NIC
vmnic1	0000:07:00.00	enic	Up	20000Mbps	Full	00:25:b5:00:00:4f	1500	Cisco Systems	Inc	Cisco	VIC	Ethernet	NIC
vmnic2	0000:08:00.00	enic	Up	20000Mbps	Full	00:25:b5:00:00:5c	9000	Cisco Systems	Inc	Cisco	VIC	Ethernet	NIC
vmnic3	0000:09:00.00	enic	Up	20000Mbps	Full	00:25:b5:00:00:4c	9000	Cisco Systems	Inc	Cisco	VIC	Ethernet	NIC
vmnic4	0000:0a:00.00	enic	Up	20000Mbps	Full	00:25:b5:00:00:1d	9000	Cisco Systems	Inc	Cisco	VIC	Ethernet	NIC
vmnic5	0000:0b:00.00	enic	Up	20000Mbps	Full	00:25:b5:00:00:0d	9000	Cisco Systems	Inc	Cisco	VIC	Ethernet	NIC
vmnic6	0000:00:00.00	enic	Up	20000Mbps	Full	00:25:b5:00:00:3d	9000	Cisco Systems	Inc	Cisco	VIC	Ethernet	NIC
vmnic7	0000:0d:00.00	enic	Up	20000Mbps	Full	00:25:b5:00:00:2d	9000	Cisco Systems	Inc	Cisco	VIC	Ethernet	NIC
vmnic8	0000:0e:00.00	enic	Up	20000Mbps	Full	00:25:b5:00:00:5d	9000	Cisco Systems	Inc	Cisco	VIC	Ethernet	NIC
vmnic9	0000:0f:00.00	enic	Up	20000Mbps	Full	00:25:b5:00:00:4d	9000	Cisco Systems	Inc	Cisco	VIC	Ethernet	NIC

7. 在UCS Manager(UCSM)中,找到与VMNIC对应的UCS的虚拟网络接口控制器(vNIC):

Servers Law SAN VM Advin	Network /SH								
Filter: Al	Actions	NEC Convector Policy No	amic vHDC Connection Policy thing Selected						
ers Jervice hroffles ∭, mot	Prodfy #EC/#EA	Facement N	C/vHBA Placement Policy pecific vRIC/vHBA Placement P	where					
Image: Second to E			What Set. Setects Al Al Al Al	n hefornat S					
©		LAN Convectivity Policy and sets							
8: 3 Seve-1-3	WIICs								
and Sevent-7	d Fiter + Doort us P	nat.							
- JO, Sub-Organizations	Nane	NAC Address	Desired Order	Actual Order	Fabric ID	Desired Placement	Actual Pacement		
A not	-8 VAC VAC-0	00-25-85-00-00-9F		1	in a	Anv	1		
IP III Service Templete SearTest	* visc visc-s	00-25/05/00:00:4F	2	2		Anv	1		
- A. Sub-Organizations	- VAC VAC-2	00-25-85-00-00-5C	9	5	h.	Arv	1		
NAGES	- VAC VAC-3	00-25-05-00-00-40	4	A N		Anv	1		
A, root	- MC 44C-4	00-25#5-00.00 10	5	5		Ann			
a S Adapter Pakces	- MC MC-5	00-25#5-00.00-00				Anv	6		
IP 35 BIOS Defaults	- MC 4404	02-25-05-00-00-30	5	5	6	Ann	6		
IF 3) EXTERNOLS	- MC 480-7	00-25#5-00-00-20				Arv.	6		
 B Mit PROS E Mattinger and Butterer 	- AX AX A	01-25-05-00-00-90		-	6	and and a second se	-		
C. Mail Access Burdies	AV AV A	01-15-05-00-00-00	wh.	-	-	64w	6		
The second	100, 100, 1	And a state of the state of the	144	1.00	,		P		

vNIC-0的主FI是FI-A,vNIC-1的主FI是FI-B。您现在可以推断来自VM(ciscolive-vm)的流量通过FI-A,而来自VMK接口(vmk0)的流量通过FI-B。

8. 确认VM(ciscolive-vm)的MAC地址是在FI-A上获取的:

Mike-Cliff-Pod-16-A(nxos) # show mac address-table | in 63cc dynamic 0 * 18 0050.568f.63cc F F Veth882 Mike-Cliff-Pod-16-A(nxos)# Mike-Cliff-Pod-16-A(nxos) # show int vethernet 882 Vethernet882 is up Bound Interface is port-channel1288 Hardware: Virtual, address: 547f.eea2.5ac0 (bia 547f.eea2.5ac0) Description: server 1/1, VNIC vNIC-0 Encapsulation ARPA Port mode is trunk EtherType is 0x8100 Rx 38196726 unicast packets 130708 multicast packets 99167 broadcast packets 38426601 input packets 44470647026 bytes 0 input packet drops TX 18711011 unicast packets 552876 multicast packets 10560283 broadcast packets 29824170 output packets 9379742901 bytes 0 flood packets 0 output packet drops

9. 确认VMK接口(vmk0)的MAC地址是在FI-B上获取的:

```
Mike-Cliff-Pod-16-B(nxos)# show mac address-table | in 8eb9
* 18
          0050.5667.8eb9
                            dynamic 0
                                                F
                                                     F (Veth883)
Mike-Cliff-Pod-16-B(nxos)#
Mike-Cliff-Pod-16-B(nxos) # show int vethernet 883
Vethernet883 is up
    Bound Interface is port-channel1287
 Hardware: Virtual, address: 547f.eea3.c7e0 (bia 547f.eea3.c7e0)
Description: server 1/1, VNIC vNIC-1
 Encapsulation ARPA
 Port mode is trunk
 EtherType is 0x8100
 Rx
   30553743 unicast packets 94871 multicast packets 1633080 broadcast packets
    32281694 input packets 32522468006 bytes
    0 input packet drops
 TX
   16919347 unicast packets 588794 multicast packets 8994408 broadcast packets
   26502549 output packets 8364051391 bytes
    0 flood packets
    0 output packet drops
```

10. 使用show circuit detail命令检查这些Veth到其上行链路的固定情况:

```
Mike-Cliff-Pod-16-B /org/service-profile # show circuit detail
Service Profile: Server-1-1
Server: 1/1
    Fabric ID: A
       VIF: 882
       vNIC: vNIC-0
        Link State: Up
        Oper State: Active
        State Reason:
        Admin Pin: 0/0
        Oper Pin: 0/88
        Encap: Virtual
        Transport: Ether
    Fabric ID: B
       VIF: 883
       vNIC: vNIC-1
       Link State: Up
       Oper State: Active
       State Reason:
       Admin Pin: 0/0
       Oper Pin: 0/89
       Encap: Virtual
       Transport: Ether
```

注意:输出类似信息的其他命令**是show pinning server-interfaces**、**show pinning border-interfaces**和**show pinning interface vethernet x**。您还可以检查UCSM中的钉扎:

Equipment, Servers LAV, SAX, VM, Admin	General Storage Netwo	ark ISCSE vhECs Boot Ord	er Writual Machines FC Jane	s Pakcies Server Details FSM	VSF Paths Faults Events			
Filter Al	ta a d, niw ⊨ t	opert 👸 Print						
*	Name	Adapter Part	PEX:Heat Part	PEX Network Part	PS Server Port	WEC	PEQAR	Link State
0 from	D - Path A/1	GPC-1288	km/PC-3025	k#/005	A/0/1025			
D Torne Police	- Witel Orbit	882				VNC-0	APC-88	Up
G-A rest	C Vital Cruit	884				vA6C-2	A/PC-88	Up
D- 🕾 farrar-1-1	C Vitual Circuit	806				VRC-4	A/PC-88	Up
6C12 (ABC)	@ Vitual Crout	868				VA0C-6	A/FC-88	Up
	- Virtual Circuit	890				9001	A/PC-88	Up
8-0400	D-PATING	6PC-1287	right/PC-1153	494/1153	8/0/1153			
0	-E Vituel Orbit	660				VMC-1	8.PC-89	Up
8 -	C Vital Cruit	885				V40C-0	8/PC-89	Up
8 - C VAC VAC-3	C Vitual Crout	887				VAC-5	8,PC-89	Up
8 -4 vNIC vHIC-4	C Vital Orbit	889				W8C-7	8/PC-89	Up
B - C VAC VAC-5	Virtual Crout	891				W8C-9	8/PC-89	Up

- 11. 收集有关端口通道的其他详细信息。在此配置中,每个FI使用三个端口通道。例如,FI-B有 三个关联的端口通道:
 - 端口通道89是FI-B和上游Nexus 5020之间的链路聚合控制协议(LACP)端口通道。
 - •端口通道1153是自动创建的,在FI-B和输入/输出模块(IOM)-B之间。
 - •端口通道1287是自动创建的,在IOM-B和Cisco VIC 1240(刀片)之间。
 - 1. 输入show port-channel summary命令以查看FI-B的端口通道配置:

2. 输入show cdp neighbors命令以发现和查看有关FI-B的其他信息:

```
Mike-Cliff-Pod-16-B(nxos) # show cdp neighbors

Capability Codes: R = Router, T = Trans-Bridge, B = Source-Route-Bridge

S = Switch, H = Host, I = IGMP, r = Repeater,

V = VoIP-Phone, D = Remotely-Managed-Device,

s = Supports-STP-Dispute

Device-ID Local Intrfce Hldtme Capability Platform Fort ID

SJ-SV-C4K-1 mgmt0 179 R S I WS-C4506 Gig5/40

N5K-Rack16-2(FLC12110027)Eth1/5 163 S I s N5K-C5020P-BA Eth1/22

N5K-Rack16-1(SSI1351055H)Eth1/6 157 S I s N5K-C5020P-BF Eth1/29

mc-vsm(1981308841355189719)Eth1/1/3 160 S I s Nexus1000V Eth5/2
```

3. 输入show port-channel summary命令以查看FI-A的端口通道配置:

Mike-Cliff-Pod-16-A(nxos)# show port-channel summary										
Flags:	D - Down	P -	Up in por	ct-channel (me	embers)					
	I - Indivi	idual H -	Hot-stand	Hot-standby (LACP only)						
	s - Susper	nded r-	Module-re	Module-removed						
	S - Switched R - Routed									
	U - Up (port-channel)									
Group	Port- Channel	Туре	Protocol	Member Ports						
38	Po88 (SU)	Eth	LACP	Eth1/5(P)	Eth1/6(P)					
1025	Po1025 (SU)	Eth	NONE	Eth1/1(P)						
1288	Po1288 (SU)	Eth	NONE	Eth1/1/1(P)	Eth1/1/3(P)					
Mike-Cliff-Pod-16-A(nxos)#										

4. 输入show cdp neighbors命令以发现和查看有关FI-A的其他信息:

Mike-Cliff-Pod-16-A(nxos)# show cdp neighbors Capability Codes: R - Router, T - Trans-Bridge, B - Source-Route-Bridge S - Switch, H - Host, I - IGMP, r - Repeater, V - VoIP-Phone, D - Remotely-Managed-Device, s - Supports-STP-Dispute Device-ID Local Intrfce Hldtme Capability Platform Port ID SJ-SV-C4K-1 mgmt0 142 RSI WS-C4506 Gig5/39 147 SIS N5K-Rack16-2(FLC12110027)Eth1/5 N5K-C5020P-BA Eth1/10 N5K-Rack16-1 (SSI1351055H) Eth1/6 SIS N5K-C5020P-BF Eth1/11 121 mc-vsm(1981308841355189719)Eth1/1/1 167 S I s Nexus1000V Eth5/1

12. 从端口通道确定成员接口的特定固定。

输入**show port-channel**命令,以查看FI-B - VMK接口(vmk0)MAC地址被固定到端口通道89的 Ethernet1/6:



输入**show port-channel**命令,以查看FI-A - VM(ciscolive-vm)MAC地址已固定到端口通道 88的Ethernet1/5:



13. 检查上游Nexus 5020上是否获取了MAC地址。

输入**show mac address-table命令**,以查看Nexus 5020-1上已获知VMK接口(vmk0)MAC地址 :

```
N5K-Rack16-1#
N5K-Rack16-1# show mac address-table | in 8eb9
* 18 0050.5667.8eb9 dynamic 10 F F <mark>Po89</mark>
N5K-Rack16-1#
```

输入show mac address-table命令,以查看Nexus 5020-2上已获取VM(ciscolive-vm)MAC地

址:

```
N5K-Rack16-2#
N5K-Rack16-2# show mac address-table | in 63cc
* 18 0050.568f.63cc dynamic 0 F F Po88
N5K-Rack16-2#
```

当您排除网络故障时,此示例可帮助您快速隔离和确定MAC地址的获取方式和位置以及网络流量的 预期路径。

验证

配置示例中包含验证过程。

故障排除

本配置示例旨在帮助进行网络故障排除。