# 排除ACI故障代碼F199144、F93337、 F381328、F93241、F450296:TCA故障

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# 簡介

本文檔介紹ACI故障代碼的修復步驟:F199144、F93337、F381328、F93241、F450296

# 背景

如果您有與Intersight連線的ACI交換矩陣,則會代表您生成一個服務請求,以指明在Intersight連線的ACI交換矩陣中發現此故障的例項。

作為主動ACI專案的一部分,此項<u>正在積極進行監控</u>。

本文檔介紹修復以下故障的後續步驟:

# 故障:F199144

"Code" : "F199144",
"Description" : "TCA: External Subnet (v4 and v6) prefix entries usage current value(eqptcapacityPrefix
"Dn" : "topology/pod-1/node-132/sys/eqptcapacity/fault-F199144"

當外部子網字首的當前使用率超過99%時,將引發此特定故障。這表示這些交換器處理的路由存在 硬體限制。

快速入門解決故障:F199144

1.命令「show platform internal hal I3 routingthresholds」

module-1# show platform internal hal l3 routingthresholds
Executing Custom Handler function

OBJECT 0:	
trie debug threshold	: 0
tcam debug threshold	: 3072
Supported UC lpm entries	: 14848
Supported UC 1pm Tcam entries	: 5632
Current v4 UC 1pm Routes	: 19526
Current v6 UC 1pm Routes	: 0
Current v4 UC 1pm Tcam Routes	: 404
Current v6 UC 1pm Tcam Routes	: 115
Current v6 wide UC 1pm Tcam Routes	: 24
Maximum HW Resources for LPM	: 20480 < Maximum hardware resour
Current LPM Usage in Hardware	: 20390 <current hw<="" in="" td="" usage=""></current>
Number of times limit crossed	: 5198 < Number of times
Last time limit crossed	: 2020-07-07 12:34:15.947 < Last oc

2.命令「show platform internal hal health-stats」

L3 stats:

<pre>13_v4_local_ep_entries</pre>	:	40	
<pre>max_13_v4_local_ep_entries</pre>	:	12288	
13_v4_local_ep_entries_norm	:	0	
13_v6_local_ep_entries	:	0	
max_13_v6_local_ep_entries	:	8192	
13 v6 local ep entries norm	:	0	
13 v4 total ep entries	:	221	
max 13 v4 total ep entries	:	24576	
13 v4 total ep entries norm	:	0	
13 v6 total en entries		0 0	
max 13 v6 total en entries	:	12288	
13 v6 total en entries norm	:	0	
max 13 v4 32  entries	:	49152	
total 13 v4 32 entries	:	6294	
$13 \sqrt{4}$ total en entries	:	221	
13 v4 host up entries	:	6073	
$13_{\rm V4}$ host mc ontrios	2	0075	
$13_{4}$ 105 $10_{10}$ entries	:	12	
$m_{2} = 12$ v6 128 ontrios	:	1228	
$11ax_{13}v_{0}120$ entries	:	17	
$12 \times 6$ total on optrios	2	0	
13_v6 bost up ontrios	:	17	
13_v6 host mc ontrios	:	0	
total 12 v6 128 entries norm	:	0	
max 12 lpm ontrios	:	20480	Mavimum
liax_15_1pm_entries	2	20400	< Maximum
12 v4 lpm optrice	2	10520	< Current LS LPM entries
13_v4_ipm_entries	:	19528	
13_V6_Ipm_entries	-	0	
13_1pm_entries_norm	:	99	
max_13_1pm_tcam_entries	:	5632	
max_13_v6_w1de_1pm_tcam_entrie	s:	1000	
I3_Ipm_tcam_entries	:	864	
13_v4_1pm_tcam_entries	•	404	
13_v6_1pm_tcam_entries	:	460	
13_v6_wide_lpm_tcam_entries	:	24	
13_1pm_tcam_entries_norm	:	15	
13_v6_lpm_tcam_entries_norm	:	2	
13_host_uc_entries	:	6090	
13_v4_host_uc_entries	:	6073	
13_v6_host_uc_entries	:	17	
max_uc_ecmp_entries	:	32768	
uc_ecmp_entries	:	250	
uc_ecmp_entries_norm	:	0	
max_uc_adj_entries	:	8192	
uc_adj_entries	:	261	
uc_adj_entries_norm	:	3	
vrts	:	150	
infra_vrfs	:	0	
tenant_vrfs	:	148	
rtd_ifs	:	2	
sub_ifs	:	2	
svi_ifs	:	185	

1.減少每台交換機必須處理的路由數量,以便符合為硬體模型定義的可擴充性。請在此處檢視可擴 充性指南<u>https://www.cisco.com/c/en/us/td/docs/switches/datacenter/aci/apic/sw/4-x/verifiedscalability/Cisco-ACI-Verified-Scalability-Guide-412.html</u>

#### 2.考慮根據規模更改轉發規模配置檔案。

https://www.cisco.com/c/en/us/td/docs/switches/datacenter/aci/apic/sw/all/forwarding-scale-profiles/cisco-apic-forwarding-scale-profiles/m-overview-and-guidelines.html

3.刪除L3Out中的0.0.0/0子網並僅配置所需的子網

4.如果您使用第1代,請將硬體從第1代升級到第2代,因為第2代交換機允許20,000多條外部v4路由。

# 故障:F93337

"Code" : "F93337",

"Description" : "TCA: memory usage current value(compHostStats15min:memUsageLast) value 100% raised abo "Dn" : "comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/fault-F93337"

當VM主機消耗的記憶體大於閾值時,將引發此特定故障。APIC通過VCenter監視這些主機。 Comp:HostStats15min是一個類,表示主機在15分鐘的取樣間隔內的最新統計資訊。此類每5分鐘 更新一次。

### 快速開始解決故障:F93337

1.命令「moquery -d 'comp/prov-VMware/ctrlr-[<DVS>]-<VCenter>/vm-vm-<來自故障的DN的VM ID>」

此命令提供有關受影響虛擬機器的資訊

# comp.Vm	
oid	: ∨m-1071
cfgdOs	: Ubuntu Linux (64-bit)
childAction	:
descr	:
dn	: comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071
ftRole	: unset
guid	: 501030b8-028a-be5c-6794-0b7bee827557
id	: 0
issues	:
1cOwn	: local
modTs	: 2022-04-21T17:16:06.572+05:30
monPolDn	: uni/tn-692673613-VSPAN/monepg-test
name	: VM3
nameAlias	:
os	:
rn	: ∨m-∨m-1071
state	: poweredOn

status : template : no type : virt uuid : 4210b04b-32f3-b4e3-25b4-fe73cd3be0ca

2.命令「moquery -c compRsHv | grep 'vm-1071'」

此命令提供有關託管VM的主機的資訊。在此示例中,VM位於host-347上

```
apic2# moquery -c compRsHv | grep vm-1071
dn : comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-
```

3.命令"moquery -c compHv -f 'comp.Hv.oid=="host-1068"""

apic2# moquery -c compHv -f 'comp.Hv.oid=="host-1068"'

## 此命令提供主機的詳細資訊

Total Objects shown:	1	
# comp.H∨		
oid	:	host-1068
availAdminSt	:	gray
avai10perSt	:	gray
childAction	:	
countUplink	:	0
descr	:	
dn	:	<pre>comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/hv-host-1068</pre>
enteringMaintenance	:	no
guid	:	b1e21bc1-9070-3846-b41f-c7a8c1212b35
id	:	0
issues	:	
lcOwn	:	local
modTs	:	2022-04-21T14:23:26.654+05:30
monPolDn	:	uni/infra/moninfra-default
name	:	myhost
nameAlias	:	
operIssues	:	
os	:	
rn	:	hv-host-1068
state	:	poweredOn
status	:	
type	:	hv
uuid	:	

後續步驟故障:F93337

1.更改主機上為VM分配的記憶體。

2.如果希望獲得記憶體,您可以通過建立狀態收集策略來更改閾值,從而抑制故障。

a.在VM的租戶下,建立新的監視策略。



### b.在「監視」策略下,選擇統計資訊收集策略。

	Stats Collection Policies			00
Orick Start     Electronic Start     Electronic Start	Monitoring ALL	Stats ALL		Ó
> 🔤 Application Profiles	Unpert	i ype.		+
> 🔜 Networking	Granularity	Admin State	History Retention Period	1
> 🚞 Contracts	5 Minute	enabled	15 Minutes	
V 🔤 Policies	15 Minute	politica	1.0av	
> 🚞 Protocol			- 209	
> E Troubleshooting	1 Hour	enabled	1 Week	
v 🔛 Monitoring	1 Day	enabled	10 Days	
Itest	1 Week	enabled	none	
E Stats Collection Policies	1 Month	enabled	none	
Stats Export Policies	1 Quarter	enabled	none	
Calhome/Smart Calhome/SNMP/Syslog	1 Year	enabled	none	

c.點選Monitoring object下拉選單旁的edit icon,並將虛擬機器(comp.Vm)作為監控對象進行檢查。 提交後,從監視對象下拉選單中選擇compVm對象。

UUG	Stats Collection I	Policies			00
> O Quick Start	Monitoring	State			
~ 🕎 692673613-VSPAN	Object: ALL	Type: ALL			0
> 🚞 Application Profiles	Add/Delete	Monitoring Object	0 0		+
> 🔤 Networking	710070-01010	inomiconing object	••	History Retention Period	
> 🚞 Contracts				15 Minutes	
v 🚞 Policies				1.Day	
> 🚞 Protocol			0	1.009	
> 🚍 Troubleshooting	Select	Monitoring Object		1 Week	
- 🖬 Monitoring		VM Virtual Interface (comp.VNc) Virtual Machine (comp.Vm)		10 Days	
🗸 📴 seat		Access Client EPg (intra.CEPg)		none	
Stats Collection Policies		Access Function Provider (Infra.PEPg)		none	
		Host Protection Domain Policy (hostprot.Pol)			

## d.按一下「統計型別」旁的「編輯」圖示,然後檢查「CPU使用情況」。

	Stats Collection Policies				00
> Or Quick Start					
~ 🗒 692673613-VSPAN	Monitoring Object Virtual Machine (o	omp.Vm)	V / Stats Host	v /	0
> 🔤 Application Profiles					+
> 🧮 Networking	Granularity		Admin State	History Retention Period	Config Thresholds
> 🧮 Contracts		Edit State	Turne	•	
Policies		Edit Stats	туре	8	
> 🧰 Protocol		Select or Un	select Stats Type		
> 🧰 Troubleshooting					
Monitoring				0	
V 🖬 test		Select	Stats Type		
Stats Collection Policies		10	CPU usage received rate		
Stats Export Policies			received dropped packets		
Californe/Smart Californe/SNAP/Susion		13	received packets		
E Court Courts - Antinement Datates			transmitted rate		
Event severity Assignment Porcies			transmitted dropped packets		
Fault Severity Assignment Policies			transmitted packets		
Fault Lifecycle Policies					

e.從統計資訊型別「下拉選單」中,按一下「選擇主機」,按一下「+號」並輸入粒度、管理狀 態和歷史記錄保留期,然後按一下「更新」。



# f.按一下config threshold下的+號,然後將「memory usage maximum value」新增為屬性。



# g.將正常值更改為您希望使用的閾值。

UUU	Stats Collectio	n Policies						00
> O• Oviek Start ~ ∰ 692673613-VSPW	Monitoring Vir Object	ual Machine (comp.Vm)	V I Stats H	ul.		1		0
	Create St	ats Threshold				6	c	+ Config Thresholds
Contracts     Employee     Protocol	memory us	age maximum value					0	
> 🛅 Troubleshooting		Normal Value:	0					
✓ Image Monitoring ✓ Image to set	Rising	Threshold Direction:	Roing Falling				10 H	
Stats Collection Policies		Cre	cal.				reshold	
Stats Export Policies  Cathorner/Smart Cathorner/SMAP/Systog  Exert Soverby Assignment Policies  Fault Lifecycle Policies  Fault Lifecycle Policies  State Host Potection	Faller	Thresholds to Config: (>) (() War Criss May May War						
> 🧰 NetFlow	Rising			Falling	( and the second s			
		Set	Reset		Reset	541		
> E Services	Critical			Warning				
	Major			Minor				
	Minor			Major				
	Warning			Critical				

h.對EPG應用監控策略



I.要確認策略是否應用於VM,請運行「moquery -c compVm -f 'comp.Vm.oid = "vm-<vm-id>"」

apic1# moquery -c compVm -f 'comp.Vm.oid == "vm-1071"' | grep monPolDn monPolDn : uni/tn-692673613-VSPAN/monepg-test <== Monitoring Policy test has been applied</pre>

# 故障:F93241

"Code" : "F93241", "Description" : "TCA: CPU usage average value(compHostStats15min:cpuUsageAvg) value 100% raised above t "Dn" : "comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/fault-F93241"

當VM主機消耗的CPU超過閾值時,將引發此特定故障。APIC通過VCenter監視這些主機。 Comp:HostStats15min是一個類,表示主機在15分鐘的取樣間隔內的最新統計資訊。此類每5分鐘 更新一次。

快速開始解決故障:F93241

1.命令「moquery -d 'comp/prov-VMware/ctrlr-[<DVS>]-<VCenter>/vm-vm-<來自故障的DN的VM ID>」

此命令提供有關受影響虛擬機器的資訊

# comp.Vm oid : ∨m-1071 : Ubuntu Linux (64-bit) cfgd0s childAction : descr 1 : comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071 dn ftRole : unset guid : 501030b8-028a-be5c-6794-0b7bee827557 id : 0

issues	:	
1cOwn	:	local
modTs	:	2022-04-21T17:16:06.572+05:30
monPolDn	:	uni/tn-692673613-VSPAN/monepg-test
name	:	VM3
nameAlias	:	
os	:	
rn	:	vm-vm-1071
state	:	poweredOn
status	:	
template	:	no
type	:	virt
uuid	:	4210b04b-32f3-b4e3-25b4-fe73cd3be0ca

2.命令「moquery -c compRsHv | grep 'vm-1071'」

此命令提供有關託管VM的主機的資訊。在此示例中,VM位於host-347上

```
apic2# moquery -c compRsHv | grep vm-1071
dn : comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/vm-vm-1071/rshv-[comp/prov-VMware/ctrlr-[FAB4-
```

3.命令"moquery -c compHv -f 'comp.Hv.oid=="host-1068"""

# 此命令提供主機的詳細資訊

apic2# moquery -c co	mpl	Hv -f 'comp.Hv.oid=="host-1068"'
Total Objects shown:	1	
# comp.H∨		
oid	:	host-1068
availAdminSt	:	gray
avail0perSt	:	gray
childAction	:	
countUplink	:	0
descr	:	
dn	:	<pre>comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/hv-host-1068</pre>
enteringMaintenance	:	no
guid	:	b1e21bc1-9070-3846-b41f-c7a8c1212b35
id	:	0
issues	:	
lcOwn	:	local
modTs	:	2022-04-21T14:23:26.654+05:30
monPolDn	:	uni/infra/moninfra-default
name	:	myhost
nameAlias	:	
operIssues	:	
os	:	
rn	:	hv-host-1068
state	:	poweredOn
status	:	
type	:	hv

uuid

後續步驟故障:F93241

1.升級主機上為虛擬機器分配的CPU。

2.如果預計CPU,您可以通過建立狀態收集策略來更改閾值,從而抑制故障。

a.在VM的租戶下,建立新的監視策略。

:



b.在「監視」策略下,選擇統計資訊收集策略。

	Stats Collection Policies			00
Or Quick Start				
~ 🗮 692673613-VSPAN	Object ALL	V / Stats ALL		0
> E Application Profiles				+
> 🔤 Networking	Granularity	Admin State	History Retention Period	
> 🔤 Contracts	5 Minute	enabled	15 Minutes	
V 🚍 Policies	15 Minute	enabled	1 Day	
> 🔛 Protocol	1 Marca		1.00	
> 🧮 Troubleshooting	1 Hour	enabled	1 wypex	
Monitoring	1 Day	erabled	10 Days	
V 📴 test	1 Week	enabled	none	
E Stats Collection Policies	1 Month	enabled	none	
Stats Export Policies	1 Quarter	enabled	none	
Calhome/Smart Calhome/SNMP/Syslog	1 Year	enabled	none	

c.點選Monitoring object下拉選單旁的edit icon,並將虛擬機器(comp.Vm)作為監控對象進行檢查。 提交後,從監視對象下拉選單中選擇compVm對象。

	0.00	Stats Collection P	olicies				00
Oulck Start							
~ 🧮 692673613-VSPAN		Object ALL	V / 1	Stats ALL Type:			Ó
> 🚞 Application Profiles		Add/Delete	Monitoring Object		00		+
> 🔤 Networking		740070501010	monitoring object		00	History Retention Period	
> 🔤 Contracts						15 Minutes	
Polcies						1.Day	
> 🚞 Protocol					Ó		
> 🧮 Troubleshooting		Select	Monitoring Object			1 Week	
Monitoring			VM Virtual Interface (comp.VNic) Virtual Machine (comp.Vm)			10 Days	
wet			Access Client EPg (infra.CEPg)			none	
Stats Collection Policies		8	Access Function Provider (Infra.PEF	Pal		none	
			Host Protection Domain Policy (host	(tprot.Pol)			

d.按一下「統計型別」旁的「編輯」圖示,然後檢查「CPU使用情況」。



e.從統計資訊型別「下拉選單」中,按一下「選擇主機」,按一下「+號」並輸入粒度、管理狀 態和歷史記錄保留期,然後按一下「更新」。

Correction to the C	യയ	Stats Collection Policies					00
Or Quick Start							
~ 🛄 692673613-VSPAN		Object: Virtual Machine (comp.Vm)	× / I	Stats Type: Host		· /	0
> 🔤 Application Profiles							☆ +
> 🖿 Networking		Granularity		Admin State		History Retention Period	Config Thresholds
> 🔤 Contracts		15 Minutes	~	inherited		inherited	
Policies							 u
> 🚞 Protocol					Update Carcel		
> 🚞 Troubleshooting							
🗸 🚞 Montoring							
🗸 🖻 test							
Stats Collection Policies							

f.按一下config threshold下的+號,然後將「CPU使用率最大值」新增為屬性。

	Stats Collection Po	olicies			00
Or Quick Start	Manhadan				
~ 🐺 692673613-VSPAN	Object: Vrtual N	Aachine (comp.Vin) V Starts Host	~ /		Ó
> E Application Profiles		Thresholds for Collection 15 Minute		0	
> EN Networking	Granularity			Confi	g Thresholds
> 🚍 Contracts	15 Minute	Config Thresholds			
Policies				+ Choose a Property	
> 🖿 Protocol		Property	Edit Threshold	memory usage current value	
> 🚞 Troubleshooting		No items have been found.			
Monitoring		Select Actions to create a new item.		memory usage minimum value	
✓ 2 test				memory usage maximum value	
Stats Collection Policies				memory usage average value	
Stats Export Policies				memory usage trend	
Californe/Smart Californe/SNMP/Syslog				CPU usage current value	
Event Severity Assignment Policies				CPU usage minimum value	
E Fault Severity Assignment Policies				Children and second at	
Fault Lifecycle Policies				Cro usage maximum value	
> 🚞 Host Protection				CPU usage average value	
> 🚞 NetFlow				CPU usage trend	

g.將正常值更改為您希望使用的閾值。

0.00	Stats Collection Policies						0 0
> 💽 Quick Start ~ 🛄 602673613-VSPAN	Monitoring Object: Virtual Machine (co	mp.Vim) 🗸 🖌	Stats Type: Host		v /		Ó
> En Application Profiles	Create S	ats Threshold				e	
> 🚍 Networking	Granularity						Config Thresholds
> 🧰 Contracts	15 Minute						
Policies	CPU usag	maximum value					
> 🚍 Protocol		Normal Value:	0				
> 🧮 Troubleshooting		Threshold Direction:	Raina Falina				
~ 🚍 Monitoring	Diala	Thresholds to Confer Q					
V 🛛 test			iii Gil				
Stats Collection Policies		Maj	or				
Stats Export Policies		Min War	or mina				
Calhome/Smart Calhome/SNMP/Syslog	Faling Thresholds to Config.						
Event Severity Assignment Policies							
Fault Severity Assignment Policies							
Fault Lifecycle Policies		U War	ning				
> E Host Protection	Rsing			Falling			
> 🔤 NetFlow		Set	Reset		Reset	Set	
	Critical			Warning			
> E Services							
	Major			Minor			
	Minor			Major			
	Warning			Critical			

## h.對EPG應用監控策略

Or Quick Start	Summary Delay Descriptional State Mashh Eavilte Microsov
~ 🚍 692673613-VSPAN	Ourimary Porcy Operatorial Justa Presta Presta
Application Profiles	Topology General Subject Labels EPG Labels
~ 🗛 #	
Application EPGs	0 ± %
> 55 EPG2-VMM	Properties
~ \$\$ (PG-1	Label Match Criteria: AtleastOne
Comains (VMs and Bare-Metals)	Bridge Domain: (BD-1 🗸 🗸 🐼
> 🧮 (PG Members	Resolved Bridge Domain: 692673613-VSPAN/BD-1
> 🚍 Static Ports	Monitoring Policy: test 🗸 🗸
E Static Leafs	INS Trust Control Policy: select a value 🛩
> 🚍 Fibre Channel (Paths)	Shutdown EPG:
Contracts	EPG Contract Master
The Factor Factorian	Application (PGs

I.要確認策略是否應用於VM,請運行「moquery -c compVm -f 'comp.Vm.oid = "vm-<vm-id>"」

apic1# moquery -c compVm -f 'comp.Vm.oid == "vm-1071"' | grep monPolDn monPolDn : uni/tn-692673613-VSPAN/monepg-test <== Monitoring Policy test has been applied</pre>

# 故障:F381328

"Code" : "F381328", "Description" : "TCA: CRC Align Errors current value(eqptIngrErrPkts5min:crcLast) value 50% raised abov "Dn" : "topology/ 當介面上的CRC錯誤超過閾值時,會引發此特定故障。出現兩種常見的CRC錯誤—FCS錯誤和 CRC Stocked錯誤。由於直通交換路徑而傳播的CRC錯誤是初始FCS錯誤的結果。因為ACI在直通 交換之後,這些幀最終會穿越ACI交換矩陣,並且我們看到路徑中存在CRC錯誤,但這並不意味著 所有具有CRC錯誤的介面都是故障。建議識別CRC源並修復有問題的SFP/埠/光纖。

### 快速開始解決故障:F381328

1.在交換矩陣中轉儲具有CRC的最大數量介面

<pre>moquery -c rmonEtherStats -f 'rmon.EtherStats.cRCAlignErrors&gt;="1"</pre>	'   egrep "dn cRCAlignErrors"   egrep
topology/pod-1/node-103/sys/phys-[eth1/50]/dbgEtherStats	399158
topology/pod-1/node-101/sys/phys-[eth1/51]/dbgEtherStats	399158
topology/pod-1/node-1001/sys/phys-[eth2/24]/dbgEtherStats	399158

#### 2.轉儲交換矩陣中數量最多的FCS

moquery -c rmonDot3Stats -f 'rmon.Dot3Stats.fCSErrors>="1"' | egrep "dn|fCSErrors" | egrep -o "\S+\$" |

### 後續步驟故障:F381328

1.如果交換矩陣中存在FCS錯誤,則解決這些錯誤。這些錯誤通常表示第1層問題。

2.如果前面板埠上存在CRC堆疊錯誤,請檢查埠上連線的裝置並確定堆疊來自該裝置的原因。

#### 故障的Python指令碼:F381328

整個過程也可以使用python指令碼自動完成。請參閱 <u>https://www.cisco.com/c/en/us/support/docs/cloud-systems-management/application-policy-</u> <u>infrastructure-controller-apic/217577-how-to-use-fcs-and-crc-troubleshooting-s.html</u>

故障:F450296

"Code" : "F450296", "Description" : "TCA: Multicast usage current value(eqptcapacityMcastEntry5min:perLast) value 91% raise "Dn" : "sys/eqptcapacity/fault-F450296"

當組播條目數超過閾值時,會引發此特定故障。

快速開始解決故障:F450296

1.命令「show platform internal hal health-stats asic-unit all」

module-1# show platform internal hal health-stats asic-unit all |Sandbox\_ID: 0 Asic Bitmap: 0x0 |-----L2 stats: ========= bds: : 1979 max\_bds: : 3500 external\_bds: : 0 : 0 vsan\_bds: : 0 legacy\_bds: regular\_bds: : 0 control\_bds: : 0 : 1976 fds max\_fds : 3500 fd\_vlans : 0 fd\_vxlans : 0 : 3955 vlans max vlans : 3960 vlan\_xlates : 6739 max vlan\_xlates : 32768 : 52 ports : 47 pcs hifs : 0 : 0 nif\_pcs 11\_pcs. 012\_local\_host\_entries: 1979max\_12\_local\_host\_entries: 32768 12\_local\_host\_entries\_norm : 6 l2\_total\_host\_entries : 1979
max\_l2\_total\_host\_entries : 65536 12\_total\_host\_entries\_norm : 3 L3 stats: \_\_\_\_\_ 13\_v4\_local\_ep\_entries : 3953 max\_13\_v4\_local\_ep\_entries : 32768 13\_v4\_local\_ep\_entries\_norm : 12 13\_v6\_local\_ep\_entries : 1976
max\_l3\_v6\_local\_ep\_entries : 24576 13\_v6\_local\_ep\_entries\_norm : 8 13\_v4\_total\_ep\_entries : 3953
max\_13\_v4\_total\_ep\_entries : 65536 13\_v4\_total\_ep\_entries\_norm : 6 13\_v6\_total\_ep\_entries : 1976
max\_13\_v6\_total\_ep\_entries : 49152 : 49152 13\_v6\_total\_ep\_entries\_norm : 4

<pre>max_13_v4_32_entries</pre>	:	98304	
total 13 v4 32 entries	:	35590	
13 v4 total ep entries	:	3953	
13_v4_host_uc_entries	:	37	
13_v4_host_mc_entries	:	31600	
total_13_v4_32_entries_norm	:	36	
max 13 v6 128 entries	:	49152	
total 13 v6 128 entries	:	3952	
13 v6 total ep entries	:	1976	
13 v6 host uc entries	:	1976	
13 v6 host mc entries	:	0	
total 13 v6 128 entries norm	:	8	
max 13 1pm entries	:	38912	
13 lpm entries	:	9384	
13 v4 lpm entries	:	3940	
13 v6 lpm entries	:	5444	
13 lpm entries norm	:	31	
max_13_1pm_tcam_entries	:	4096	
<pre>max_13_v6_wide_1pm_tcam_entrie</pre>	S	: 1000	
13_1pm_tcam_entries	:	2689	
13 v4 lpm tcam entries	:	2557	
13 v6 1pm tcam entries	:	132	
13 v6 wide 1pm tcam entries	:	0	
13 lpm tcam entries norm	:	65	
13 v6 lpm tcam entries norm	:	0	
13 host uc entries	:	2013	
13 v4 host uc entries	:	37	
13 v6 host uc entries	:	1976	
max uc ecmp entries	:	32768	
uc ecmp entries		1	
uc ecmp entries norm		0	
max uc adi entries		8192	
uc adi entries		1033	
uc_adj_entries_norm	÷	12	
vrfs		1806	
infra vrfs		0	
tenant vrfs		1804	
rtd ifs		2	
sub ifs	:	2	
svi ifs		- 1978	
5.12115	•	1010	
Mcast stats:			
==========			
mcast count	:	31616 <	
max meast count		32768	
	•	0_100	
Policy stats:			
nolicy count		127116	
max policy count	:	121072	
max_poincy_count	:	2020	
porrey_occam_count	•	. 0102	
max_poincy_occam_count		. 0192	
max policy label count		. 0	
max_poincy_tabet_count		: 0	
Dci Stats:			
vlan_xlate_entries	:	0	
vlan_xlate_entries_tcam	:	0	
<pre>max_vlan_xlate_entries</pre>	:	0	
sclass_xlate_entries	:	0	
sclass_xlate_entries_tcam	:	0	

# 後續步驟故障:F450296

1.考慮將部分組播流量移至其他枝葉。

2.探索各種轉發規模配置檔案以提高組播規模。請參閱連結

https://www.cisco.com/c/en/us/td/docs/switches/datacenter/aci/apic/sw/all/forwarding-scale-profiles/cisco-apic-forwarding-scale-profiles/m-forwarding-scale-profiles-523.html

### 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)。