ACI故障代码F199144、F93337、F381328、 F93241、F450296故障排除:TCA

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简介

本文档介绍ACI故障代码:F199144、F93337、F381328、F93241、F450296

背景

如果您有与Intersight连接的ACI交换矩阵,则会代表您生成服务请求,以指明在Intersight-Connected ACI交换矩阵中发现此故障的实例。 作为主动ACI活动的一部<u>分,正在积极监控</u>。

本文档介绍修复以下故障的后续步骤:

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"

当外部子网前缀的当前使用率超过99%时,会引发此特定故障。这表明这些交换机处理的路由存在 硬件限制。

解决故障的快速入门: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 1pm entries	: 14848
Supported UC 1pm Tcam entries	: 5632
Current v4 UC lpm 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	
<pre>13_v4_local_ep_entries_norm</pre>	:	0	
13_v6_local_ep_entries	:	0	
<pre>max_13_v6_local_ep_entries</pre>	:	8192	
13_v6_local_ep_entries_norm	:	0	
13_v4_total_ep_entries	:	221	
<pre>max_13_v4_total_ep_entries</pre>	:	24576	
13_v4_total_ep_entries_norm	:	0	
13_v6_total_ep_entries	:	0	
<pre>max_13_v6_total_ep_entries</pre>	:	12288	
13_v6_total_ep_entries_norm	:	0	
max_13_v4_32_entries	:	49152	
total_13_v4_32_entries	:	6294	
<pre>13_v4_total_ep_entries</pre>	:	221	
13_v4_host_uc_entries	:	6073	
<pre>13_v4_host_mc_entries</pre>	:	0	
total_13_v4_32_entries_norm	:	12	
max_13_v6_128_entries	:	12288	
total_13_v6_128_entries	:	17	
<pre>13_v6_total_ep_entries</pre>	:	0	
13_v6_host_uc_entries	:	17	
13_v6_host_mc_entries	:	0	
total_13_v6_128_entries_norm	:	0	
max_13_1pm_entries	:	20480	< Maximum
13_1pm_entries	:	19528	< Current L3 LPM entries
13_v4_1pm_entries	:	19528	
13_v6_1pm_entries	:	0	
13_1pm_entries_norm	:	99	
max_13_1pm_tcam_entries	:	5632	
max_13_v6_wide_1pm_tcam_entries	s:	1000	
13_1pm_tcam_entries	:	864	
13_v4_1pm_tcam_entries	:	404	
13_v6_1pm_tcam_entries	:	460	
13_v6_wide_1pm_tcam_entries	:	24	
13_1pm_tcam_entries_norm	:	15	
13_v6_lpm_tcam_entries_norm	:	2	
13_host_uc_entries	:	6090	
<pre>13_v4_host_uc_entries</pre>	:	6073	
13_v6_host_uc_entries	:	17	
<pre>max_uc_ecmp_entries</pre>	:	32768	
uc_ecmp_entries	:	250	
uc_ecmp_entries_norm	:	0	
max_uc_adj_entries	:	8192	
uc_adj_entries	:	261	
uc_adj_entries_norm	:	3	
vrfs	:	150	
infra_vrfs	:	0	
tenant_vrfs	:	148	
rtd_ifs	:	2	
sub_ifs	:	2	
svi_ifs	:	185	

1.减少每台交换机必须处理的路由数量,以便符合为硬件模型定义的可扩展性。请点击此处查看可 扩展性指<u>南https://www.cisco.com/c/en/us/td/docs/switches/datacenter/aci/apic/sw/4-x/verified-scalability/Cisco-ACI-Verified-Scalability-Guide-412.html</u>

2.考虑根据规模更改转发规模配置文件。

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.删除L3Out中的0.0.0/0子网并仅配置所需的子网

4.如果使用第1代,请将硬件从第1代升级到第2代,因为第2代交换机允许20,000多条外部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"

当VM主机消耗的内存超过阈值时,会引发此特定故障。APIC通过VCenter监控这些主机。 Comp:HostStats15min是一个类,表示主机在15分钟的采样间隔内的最新统计信息。此类每5分钟 更新一次。

解决故障的快速入门:F93337

1.命令"moquery -d 'comp/prov-VMware/ctrlr-[<DVS>]-<VCenter>/vm-vm-<来自故障的DN的VM id>"

此命令提供有关受影响虚拟机的信息

# 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	: 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'"

此命令提供有关托管VM的主机的信息。在本示例中,VM位于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-/
```

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

此命令提供有关主机的详细信息

apic2# moquery -c compHv -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-106</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	
05	
rn	hv-host-1068
state	poweredOn
status	
type	hv
uuid	

后续步骤故障:F93337

1.更改主机上为VM分配的内存。

2.如果希望获得内存,您可以通过创建统计信息收集策略来更改阈值,从而抑制故障。

a.在VM的租户下,创建新的监控策略。



b.在监控策略下,选择统计信息收集策略。

	Stats Collection Policies			00
> O- Quick Start	Monitoring	Stats		
 == 402673613-VSPAN == Acceleration Particles 	Object	Type: ALL		0
> Providence in the second sec	Granularity	Admin State	History Retention Period	+
> 🚞 Contracts	5 Minute	enabled	15 Minutes	
V 🔤 Policies	15 Minute	enabled	1 Day	
> Protocol	1 Hour	enabled	1 Week	
- Monitoring	1 Day	enabled	10 Days	
v 📴 test	1 Week	enabled	none	
Stats Collection Policies	1 Month	enabled	none	
Stats Export Policies	1 Quarter	enabled	none	
Calhome/Smart Calhome/SNMP/Syslog	* 1 Year	enabled	none	

c.点击Monitoring object下拉菜单旁边的edit图标,并将虚拟机(comp.Vm)作为监控对象进行检查。 提交后,从监控对象下拉列表中选择compVm对象。

U	Stats Collection F	olicies			00
> C Quick Start	Monitoring ALL	Stats ALL			0
Application Profiles	Object	Туре:	0.0		
> Networking	Add/Delete	Monitoring Object	9 Q	Miston Detection Decise	+
> Contracts				History Hetenson Penod	
v 🖬 Policies				15 Minutes	
> E Protocol			0	1 Day	
> 🧱 Troubleshooting	Select	Monitoring Object		1 Week	
- 🚍 Monitoring	2 C	VM Virtual Interface (comp.VNic) Virtual Machine (comp.Vm)		10 Days	
v 🖬 test		Access Client EPg (Infra.CEPg)		none	
E Stats Collection Policies		Access Function Provider (Infra.PEPg)		none	
		Hose Production Lonian Policy (Rosphol.Pol)			

d.点击Stats type旁边的编辑图标,然后检查CPU Usage。

	Stats Collection Policies				00
> Ouck Start					
~ 🌉 692673613-VSPAN	Monitoring Object: Virtual Machine	(comp.Vm)	U Z Stats Type: Host	v /	0
> 🔤 Application Profiles					+
> 🧮 Networking	Granularity		Admin State	History Retention Period	Config Thresholds
> 🧰 Contracts		Edit State	Turno		
Policies		Euli Stats	rype	•	
> 🚞 Protocol		Select or Un	select Stats Type		
> 🧰 Troubleshooting					
Monitoring				0	
v 🖪 test		Select	Stats Type		
Stats Collection Policies		10	received rate		
Stats Export Policies			received dropped packets		
Californe/Smart Californe/SNMP/Syslop			received packets		
E Const County Assistants Deleter			transmitted rate		
Evers seversy Assignment Policies			transmitted dropped packets		
Fault Severity Assignment Policies			transmitted packets		
Fault Lifecycle Policies					

e.从统计信息类型下拉列表中,点击选择主机,点击+号并输入粒度、管理状态和历史记录保留 期,然后点击更新。



f.点击config threshold下的+号并将"memory usage maximum value"添加为属性。



g.将正常值更改为所需的阈值。

	Stats Collectio	n Policies						00
> C Quek Start ~ 🗒 692673613-VSPAN	Monitoring Object	ual Machine (comp.Vm)	V / Stats Ho	al.		1		0
> Provide the second se	Create St	ats Threshold					۵	Config Thresholds
	memory us	age maximum value					0	
) Troubleshooting		Normal Value:	0				-	
✓ Im Monitoring ✓ If set	Rising	Threshold Direction:	Rising Falling				10 H	
Stats Collection Policies			cal				ineshold	
Stats Export Policies Stats Export Policies Stats Exert Savetty Assignment Policies Full Severity Assignment Policies Full Severity Assignment Policies Full Lifectie Policies State Full Report	Falling	May Min Min War Thresholds to Config: Cris Cris Min Min War War	x ming cal x ming					
> 🔛 NetFlow	Rising			Falling				
S 🔤 VMI		Set	Reset		Reset	Set		
> 🖬 Senices	Critical			Warning				
	Major			Minor				
	Minor			Major				
	Warning			Critical				

h.在EPG上应用监控策略



I.要确认策略是否应用于VM,请运行"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"

当VM主机消耗的CPU超过阈值时,会引发此特定故障。APIC通过VCenter监控这些主机。 Comp:HostStats15min是一个类,表示主机在15分钟的采样间隔内的最新统计信息。此类每5分钟 更新一次。

解决故障的快速入门:F93241

1.命令"moquery -d 'comp/prov-VMware/ctrlr-[<DVS>]-<VCenter>/vm-vm-<来自故障的DN的VM id>"

此命令提供有关受影响虚拟机的信息

```
# comp.Vm
oid
             : ∨m-1071
             : Ubuntu Linux (64-bit)
cfgd0s
childAction
            - 1
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'''

此命令提供有关托管VM的主机的信息。在本示例中,VM位于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"""

此命令提供有关主机的详细信息

```
apic2# moquery -c compHv -f 'comp.Hv.oid=="host-1068"'
Total Objects shown: 1
# comp.H∨
oid
                     : host-1068
avai1AdminSt
                    : gray
avai10perSt
                    : gray
childAction
                     .
countUplink
                    : 0
descr
                     :
dn
                    : comp/prov-VMware/ctrlr-[FAB4-AVE]-vcenter/hv-host-1068
enteringMaintenance : no
                     : b1e21bc1-9070-3846-b41f-c7a8c1212b35
guid
id
                    : 0
issues
                    :
1cOwn
                    : local
                    : 2022-04-21T14:23:26.654+05:30
modTs
monPolDn
                    : uni/infra/moninfra-default
name
                    : myhost
nameAlias
                    . :
operIssues
                    :
os
                    : hv-host-1068
rn
                    : poweredOn
state
status
                    :
type
                    : hv
```

后续步骤故障:F93241

1.升级主机上虚拟机的已分配CPU。

2.如果预期CPU,您可以通过创建统计信息收集策略来更改阈值,从而抑制故障。

a.在VM的租户下,创建新的监控策略。

:



b.在监控策略下,选择统计信息收集策略。

	Stats Collection Policies			00
O Quick Start				
92692673613-V\$PAN	Object ALL	V I Stats ALL		Ó
> 🚞 Application Profiles				+
> 🔤 Networking	Granularity	Admin State	History Retention Period	
> 🚍 Contracts	5 Minute	enabled	15 Minutes	
Policies	15 Minute	enabled	1 Day	
> 🔤 Protocol	1 Mars	anitial	1 Minute	
> 🚞 Troubleshooting	1 Hour	enabled	1 week	
Monitoring	1 Day	enabled	10 Days	
V 🚺 test	1 Week	enabled	none	
Stats Collection Policies	1 Month	enabled	none	
Stats Export Policies	1 Quarter	enabled	none	
Calhome/Smart Calhome/SNMP/Syslog	1 Year	enabled	none	

c.点击Monitoring object下拉菜单旁边的edit图标,并将虚拟机(comp.Vm)作为监控对象进行检查。 提交后,从监控对象下拉列表中选择compVm对象。

U.G.	Stats Collection P	olicies			00
> O+ Quick Start	Market and State				
~ 🧮 692673613-VSPWN	Object: ALL	V / Stats ALL			Ó
> 🔤 Application Profiles	Add/Delete	Monitoring Object	0 A		+
> 🔤 Networking	1001001010	monitoring object	00	History Retention Period	
> 🚍 Contracts				15 Minutes	
V 🚍 Policies				1 Day	
> 🚞 Protocol			0		
> 🚞 Troubleshooting	Select	Monitoring Object		1 Week	
🗸 🚞 Monitoring	2 2	Virtual Machine (comp.Vm)		10 Days	
v 📴 test		Access Client EPg (infra.CEPg)		none	
Stats Collection Policies		Access Function Provider (Infra.PEPg)		none	
		Host Protection Domain Policy (hostprot.Pol)			

d.点击Stats type旁边的编辑图标,然后检查CPU Usage。



e.从统计信息类型下拉列表中,点击选择主机,点击+号并输入粒度、管理状态和历史记录保留 期,然后点击更新。

	Stats Collection Policies			0.0
Ouck Start				
~ 🛄 692673613-VSPAN	Object Virtual Machine (comp.)	Vm) V I Stats Host	v /	0
> 🔛 Application Profiles				
> E Networking	Granularity	Admin State	History Retention Period	Config Thresholds
> 🔛 Contracts	15 Minutes	 Inherited 	□ inherited	
Policies				
> 📰 Protocol		Updar	e Caron	
> 🚞 Troubleshooting				
Monitoring				
🛩 🖻 test				
E Stats Collection Policies				

f.点击config threshold下的+号并将"CPU使用率最大值"添加为属性。

	Stats Collection Po	licies			00
Or Quick Start					
~ 🐺 692673613-VSPAN	Object: Virtual M	achine (comp.Vm) V Statts Host	V /		0
> E Application Profiles		Thresholds for Collection 15 Minute		0	± +
> 🔤 Networking	Granularity			Config	Thresholds
> 🚍 Contracts	15 Minute	Config Thresholds			
Policies			T +	Choose a Property	
> 🚍 Protocol		Property	Edit Threshold	memory usage current value	
> 📰 Troubleshooting		No items have been found.		menory unique content mate	
Monitoring		Select Actions to create a new item.		memory usage minimum value	
V 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				Philippine maximum value	
Fault Lifecycle Policies				Cho osage maximum value	
> 🚞 Host Protection				CPU usage average value	
> 🧱 NetFlow				CPU usage trend	

g.将正常值更改为所需的阈值。

0.00	Stats Collection Policies						00
> C+ Guick Start ~ 🛄 692673613-VSPAN	Monitoring Object: Virtual Machine (cor	np.Vim) 🗸 🖌	Stats Type: Host		× /		0
> Application Profiles	Create St	ats Threshold				8	□ +
> To Networking	Granularity	Granularity					Config Thresholds
) 🔤 Contracts	15 Minute	and an and a second					
Policies	CPO usage	maximum value					
> 🚍 Protocol		Normal Value:	0				
> 🧱 Troubleshooting		Thesehold Direction	Raina Ealina				
Monitoring		The state of the state of the					
V P test	Rising	Thresholds to Config:	9				
Stats Collection Policies		Maj	or .				
E Stats Export Policies		Min	04				
Californe/Smart Californe/SNMP/Syslog	Ealler	Thresholds to Confer (2)	ning				
Event Severity Assignment Policies			U) Cal				
E Fault Severity Assignment Policies		Maj	or				
E Fault Lifecycle Policies		Min	or ning				
> 🧱 Host Protection	Deing			Estina			
> 🚍 NetFlow	roong	Set	Reast	(uning	Reset	Set	
> 🚍 VMM							
> 🔤 Services	Critical			Warning			
	Major			Minor			
	Minor			Major			
	Warning			Critical			

h.在EPG上应用监控策略

Or Quick Start	Summary Belley Operation	al State	Health Faults History
~ 🗮 692673613-VSPAN		en Uneroa	Figure Figure Figure
Application Profiles	Topology	General	Subject Labels EPG Labels
~ 🗛 #	0.000		
Application EPGs			0 ± %*
> 💱 EPG2-VMM	Properties		
~ \$\$ EPG-1	Label Match Criteria: AdeastOne		
Domains (Ms and Bare-Metals)	Bridge Domain: (BD-1		
> 🔛 EPG Members	Resolved Bridge Domain: 692673613-VSPAN/8D-1		
> 🚍 Static Ports	Monitoring Policy: test		
Static Leafs	FHS Trust Control Policy: pelect a value		
> 🚍 Fibre Channel (Paths)	Shutdown EPG:		
Contracts	EPG Contract Master:		≘ +
The Castle Designation	Application EPGs		

I.要确认策略是否应用于VM,请运行"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/ 当接口上的CRC错误超过阈值时,会引发此特定故障。出现两种常见的CRC错误—FCS错误和 CRC Stopped错误。CRC错误由于直通交换路径而传播,并且是初始FCS错误的结果。由于ACI遵 循直通交换,这些帧最终会穿越ACI交换矩阵,并且我们看到沿途存在堆积CRC错误,这并不意味 着所有带CRC错误的接口都是故障。建议识别CRC来源并解决有问题的SFP/端口/光纤。

解决故障的快速入门:F381328

1.转储交换矩阵中具有CRC的最大数量接口

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

2.转储交换矩阵中数量最多的FCS

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

后续步骤故障:F381328

1.如果交换矩阵中存在FCS错误,则解决这些错误。这些错误通常表明存在第1层问题。

2.如果前面板端口上存在CRC堆栈错误,请检查端口上连接的设备,并确定堆栈来自该设备的原因 。

故障的Python脚本:F381328

整个过程也可以使用python脚本自动完成。请参阅 https://www.cisco.com/c/en/us/support/docs/cloud-systems-management/application-policyinfrastructure-controller-apic/217577-how-to-use-fcs-and-crc-troubleshooting-s.html

故障:F450296

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

当组播条目数超过阈值时,会引发此特定故障。

解决故障的快速入门: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: _____ : 1979 bds: max_bds: : 3500 external_bds: : 0 : 0 vsan_bds: : 0 legacy_bds: : 0 regular_bds: control_bds: : 0 fds : 1976 : 3500 max_fds fd_vlans : 0 fd_vxlans : 0 : 3955 vlans max vlans vlan_xlates : 3960 : 6739 max vlan_xlates : 32768 : 52 ports : 47 pcs hifs : 0 : 0 nif_pcs 12_local_host_entries: 1979max_l2_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 13 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: 1976max_13_v6_local_ep_entries: 2457613_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

13_v6_tota1_ep_entries_norm	:	4
max_13_v4_32_entries	:	98304
total_13_v4_32_entries	:	35590
13 v4 total en entries		3953
$13_{\rm V}$ host up ontrios	:	27
15_v4_nost_uc_entries	•	57
13_V4_nost_mc_entries	:	31000
total_13_v4_32_entries_norm	:	36
max_13_v6_128_entries	:	49152
total 13 v6 128 entries		3952
13×6 total on ontrios	:	1076
15_vo_coca1_ep_enci ies	•	1970
13_V6_nost_uc_entries	:	1976
l3_v6_host_mc_entries	:	0
total_13_v6_128_entries_norm	:	8
max 13 lpm entries	:	38912
13 lpm entries		9384
12 v4 lpm ontrioc	2	2040
15_v4_1pm_entries	•	5940
13_v6_1pm_entries	:	5444
13_1pm_entries_norm	:	31
<pre>max_13_1pm_tcam_entries</pre>	:	4096
max 13 v6 wide lpm tcam entrie	S	1000
12 lpm tcom ontrios		2680
	•	2009
13_V4_1pm_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
12 heat we entries	2	0
I3_nost_uc_entries	÷	2013
13_v4_host_uc_entries	:	37
13_v6_host_uc_entries	:	1976
<pre>max_uc_ecmp_entries</pre>	:	32768
uc ecmp entries	:	1
uc ecmp entries norm		0
max us adi entries	:	0100
max_uc_auj_entries	•	0192
uc_adj_entries	:	1033
uc_adj_entries_norm	:	12
vrfs	:	1806
infra vrfs	:	0
tenant vrfs		1804
ntd ifc	:	2004
	•	2
sub_1Ts	:	2
svi_ifs	:	1978
Mcast stats:		
meast count		21616
	•	31010 <<<<<<
max_mcast_count	:	32768
Policy stats:		
===========		
policy count		127116
max policy count	2	121072
max_poincy_count	•	151072
policy_otcam_count	:	2920
max_policy_otcam_count		: 8192
policy_label_count		: 0
max policy label count		: 0
Dei State		
DUT STALS:		
vlan_xlate_entries	:	0
vlan_xlate_entries_tcam	:	0
max_vlan_xlate entries	:	0
sclass xlate entries		0
JEIUSS_AIUCE_CIILIICS	•	•

sclass_xlate_entries_tcam : 0
max_sclass_xlate_entries : 0

后续步骤故障:F450296

1.考虑将部分组播流量移至其他枝叶。

2.探索各种转发规模配置文件以增加组播规模。请参阅链接

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

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