# 使用GLC-T聯結器在交換矩陣互聯中配置乙太網 流量監控

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# 簡介

本文檔介紹如何在UCS上配置乙太網流量監控會話。流量監控功能會複製來自一個或多個來源的流 量,並將所複製的流量傳送到專用目的地連線埠,以供網路分析器進行分析。此功能也稱為交換式 連線埠分析器(SPAN)。

作者: Vignesh Kumar、Avinash Shukla思科TAC工程師。

## 必要條件

### 需求

思科建議您瞭解、

- 交換矩陣互聯上的Cisco UCS和不同型別的埠。
- 網路捕獲工具(示例 Wireshark)

### 採用元件

本檔案中的資訊是根據以下硬體和軟體元件:

- Cisco UCS光纖互連(任何軟體版本)
- UCS B系列或C系列伺服器
- GLC-T(1-Gigabit收發器)
- 5類電纜
- 安裝了1 GB乙太網埠和網路捕獲工具(wireshark)的筆記型電腦/PC

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。如果您的網路正在作用,請確保您已瞭解任何變更或設定可能造成的影響。

### 網路圖表

#### 組態

## 設定

### 建立乙太網流量監控會話

步驟1。在「導航」窗格中,按一下LAN頁籤。

步驟2.導覽至Traffic Monitoring Sessions > Fabric\_Interconnect\_Name

步驟3.按一下右鍵Fabric\_Interconnect\_Name,然後選擇Create Traffic Monitoring Session(圖1)

#### 圖1



步驟4.在Create Traffic Monitoring Session對話方塊中,為監控會話指定名稱,選擇Admin state至 Enabled,選擇Destination port(本例中為25),然後選擇Admin speed至1Gbps(圖2)

A Create Traffic Monitoring Session	×
Create Traffic Monitoring Session	0
Newser	
Name: TAC-TEST	
Admin State. Chabled Obsabled	
Destination: Port 25	
Admin Speed:      1 Gbps     10 Gbps	
	OK Cancel

步驟5.按一下**OK**。

步驟6.流量監控會話詳細資訊將顯示在右窗格中(圖3)

圖3

Traffic Monitoring Sessions	
4 Filter  ⇔ Export   😓 Print	
Name	Destination
TAC-TEST	sys/switch-A/slot-1/switch-ether/port-25

步驟7.按兩下TAC-TEST會話將給出如下屬性(圖4)

Equipment Servers LAN SAN VM Admin Storage	General Faults Events			
Filter: Traffic Monitoring Sessions	Actions 	Properties Name: TAC-TEST Admin State:		
		Uplink Ethernet Ports O Uplink FCoE Ports O Port Channels O		
		FCoE Port Channels 0 VLANs 0 VIICS 0		
		VHURLS 0 VHBAs 0 FCoE Storage Ports 0 Appliance Ports 0		

操作狀態為down,這是因為未配置任何源(以紅色突出顯示)

### 將流量源新增到監控會話

步驟1.在Sources區域中,展開要新增的流量源型別的部分,在此情況下該部分將是Uplink Etherner Ports(圖5)

步驟2.要檢視可用於監控的元件,請按一下表右邊緣的+按鈕以開啟「新增監控會話源」對話方塊。 步驟3.選擇我們感興趣的上行鏈路介面,本例中為ethernet 1/9。 步驟4.根據要求選擇方向,此處選項表示兩端均已選擇以監控流量。 步驟5.按一下OK

Actions	Properties
-I Set Destination	Name: TAC-TEST
- 😓 Clear Destinatic	Admin State:  Control Enabled  Control Disabled
1 Delete	Destination: sys/switch-A/slot-1/switch-ether/port-25
	Admin Speed:      1 Gbps      10 Gbps
	Operational State: Down
	Operational State Reason: No Sources Configured
	Configuration Success: Yes
	Configuration Failure Reason.
	Sources 1
	Uplink Ethernet Ports 🔹 🚖
Adda	Instituting Section Source
Add Mor	Direction
Addition	A A A A A A A A A A A A A A A A A A A
	2
Select So	surce: Port 9
Dire	ction: E m Fabric Interconnect A (primary
	Gancel 0 -
	Select Source: Port 9
	Direction: Receive Transmit Both
	OK Cancel
	5

# 驗證

## UCS CLI

在nx-os模式下,執行

步驟1. Show running interface eth 1/25

CLUSTER-112-A(nxos) # sh run interface ethernet 1/25

!Command: show running-config interface Ethernet1/25

interface Ethernet1/25
 description M: MonitorDestination
 switchport mode trunk
 switchport monitor
 speed 1000
 no shutdown

步驟2. Show interface eth 1/25

```
CLUSTER-112-A(nxos)# clear counters
CLUSTER-112-A (nxos) 🕯
CLUSTER-112-A (nxos) #
CLUSTER-112-A(nxos) # sh interface ethernet 1/25
Ethernet1/25 is up
Dedicated Interface
 Hardware: 1000/10000 Ethernet, address: 002a.6a10.56a0 (bia 002a.6a10.5
Description: M: MonitorDestination
 MTO 1500 bytes, BW 1000000 Kbit, DLY 10 usec
reliability 255/255, txload 1/255, rxload 1/255
 Encapsulation ARPA
 Port mode is trunk
 full-duplex, 1000 Mb/s, media type is 10G
 Beacon is turned off
 Input flow-control is off, output flow-control is off
 Rate mode is dedicated
 Switchport monitor is on
 EtherType 13 0x8100
 Last link flapped 00:55:33
 Last clearing of "show interface" counters never
 30 seconds input rate 24 bits/sec, 3 bytes/sec, 0 packets/sec
 30 seconds output rate 53384 bits/sec, 6673 bytes/sec, 39 packets/sec
Load-Interval #2: 5 minute (300 seconds)
   input rate 200 bps, 0 pps; output rate 83.82 Kbps, 38 pps
 RX
   0 unicast packets 0 multicast packets 0 broadcast packets
   0 input packets 0 bytes
   0 jumbo packets 0 storm suppression bytes
   0 runts 0 giants 0 CRC 0 no buffer
   0 input error 0 short frame 0 overrun 0 underrun 0 ignored
0 watchdog 0 bad etype drop 0 bad proto drop 0 if down drop
   0 input with dribble 0 input discard
   0 Rx pause
 TΧ
   0 unicast packets 0 multicast packets 0 broadcast packets
   0 output packets 0 bytes
   0 jumbo packets
   0 output errors 0 collision 0 deferred 0 late collision
   0 lost carrier 0 no carrier 0 babble 0 output discard
   0 Tx pause
 0 interface resets
```

#### 步驟3. Show interface eth 1/25收發器

```
CLUSTER-112-A(nxos) # sh interface ethernet 1/25 transceiver
Ethernet1/25
transceiver is present
type is SFP-1000BASE-T
name is CISCO-METHODE
part number is SP7041_Rev_F
revision is F
serial number is 00000MTC163707TP
nominal bitrate is 1300 MBit/sec
Link length supported for copper is 100 m
cisco id is --
cisco extended id number is 4
```

#### UCS GUI

步驟1。在導航窗格的Equipment**頁籖> Fabric\_Interconnect\_Name**下,突出顯示為目標配置的埠 (圖6)

#### 圖6



步驟2. 在導航窗格中,按一下LAN頁籤,然後按一下篩選器:Traffic Monitoring Sessions > Fabric\_Interconnect\_Name > Monitor session(圖7)

Fault Summary			
	New Vortions	😵 🖲 🖾 Pending Activities 🔟 Exit	
	>> 📈 Traffic Monitoring S	essions 🕴 🚥 Fabric A 🕴 🚦 Monitor Session TAC-TEST	
Equipment Servers LAN SAN VM Admin Storage	General Faults Events		
Filter: Traffic Monitoring Sessions	Actions	Properties	
± =	- Set Destination	Name: TAC-TEST	
Traffic Monitoring Sessions	- Clear Destinatic	Admin State: <ul> <li>Enabled</li> <li>Disabled</li> </ul>	
	🗇 Delete	Destination: sys/switch-A/slot-1/switch-ether/port-25	
H I Fadric B		Admin Speed: O 1 Gbps 0 10 Gbps	
		Operational State: Up	
		Operational State Reason: Active	
		Configuration Success: Yes	
		Configuration Failure Reason:	
		Sources	
		Uplink Ethernet Ports	
		4 Filter ⇒ Export ⊗ Print	
		Object Slot Port Direction	
		sys/switch-A/sl 1 9 Both	
			E

## <u>筆記型電腦/PC</u>

步驟1.啟動wireshark工具之前(圖8)

圖8

💩 Local Area Connection Status	
General	
Connection	
IPv4 Connectivity:	No Internet access
IPv6 Connectivity:	No Internet access
Media State:	Enabled
Duration:	1 day 01:18:11
Speed:	1.0 Gbps
D <u>e</u> tails	
Activity	
Sent —	Received
Bytes: 1,02	8 0
Properties Disable	Diagnose
	Close

2.啟動wireshark工具後,收到的資料包計數增加(圖9)

Filter:	<ul> <li>Expression</li> </ul>	Clear	Apply	Save	
Time         Source           621 13.3241850/C1sCo_e1:6a:74         622 13.3243690/C1sCo_e1:6a:74           622 13.3245430/C1sco_e1:6a:74         623 13.3245430/C1sco_e1:6a:74           624 13.3247740/C1sco_e1:6a:74         624 13.3247740/C1sco_e1:6a:74           625 13.3624270/Vmware_ae:45:3         626 13.3983960/C1sco_70:64:00           627 13.3983960/C1sco_70:64:00         629 13.460990/C1sco_70:64:00           628 13.4469940/C1sco_70:64:00         629 13.460990/Vmware_be:11:4           630 13.4740820!54:a2:74:50:d1         631 13.5255420/Vmware_b0:e1:14           633 13.6039240/C1sco_a1:2e:65         634 13.6760230!54:a2:74:02:34           Frame 1: \$92 bytes on wire (47)         IEEE 802.3 Ethernet           Logical-Link Control         Data (\$70 bytes)	Destination PVST+ PVST+ PVST+ PVST+ PVST+ PVST+ PVST+ PVST+ POAdcast POACAST	Protoco STP STP STP LLC LLC LLC LLC LLC LLC LLC LLC LLC LL	Length Ir 64 R 64 R 64 R 64 R 64 R 592 U 76 U 289 U 289 U 289 U 289 U 289 U 592 I 60 Y 60 Y 60 Y 60 Y 60 Y	nto CST. Root = 24576/601/54:7 CST. Root = 24576/800/54:7 CST. Root = 24576/901/54:7 CST. Root = 24576/111/54: J, func=UI; SNAP, OUI 0x00 J, func=UI; SNAP, OUI 0x00 J, func=UI; SNAP, OUI 0x00 Local Area Connection Status Connection IPv4 Connectivity: IPv6 Connectivity: IPv6 Connectivity: Media State: Duration: Speed: Details	Tiee:el:6a:bc Cost f:ee:el:6a:bc Cost f:ee:el:6a:bc Cost Tf:ee:el:6a:bc Cost 000C (Cisco), PID 0x 000C (C
000 ff ff ff ff ff ff 00 50	56 90 ea 14 02 42 aa	àà	P V	Adivity Sent — Dytes: 1,028 Properties @Ckuble	Received 10,308

## 疑難排解

- 1. 如果目的地連線埠關閉,請檢查SFP、纜線。
- 2. 如果SFP/電纜沒有問題,請通過配置不同的源和目標對檢查狀態。
- 3. 如果問題仍然存在,請諮詢其他FI或裝置。
- 4. 檢查交換矩陣互連的型號。交換矩陣互聯6120僅在前8個埠上支援1 Gig介面。 <u>http://www.cisco.com/c/en/us/td/docs/unified\_computing/ucs/hw/switch/install/ucs6100\_install</u> <u>/overview...</u>