

Configure an Ethernet traffic monitoring in Fabric Interconnect using GLC-T connector

Contents

[Introduction](#)

[Prerequisites](#)

[Requirements](#)

[Components Used](#)

[Network Diagram](#)

[Configurations](#)

[Configure](#)

[Creating an Ethernet Traffic Monitoring Session](#)

[Adding Traffic Sources to a Monitoring Session](#)

[Verify](#)

[Troubleshoot](#)

Introduction

This document describes how to configure an Ethernet traffic monitoring session on UCS. Traffic monitoring copies traffic from one or more sources and sends the copied traffic to a dedicated destination port for analysis by a network analyzer. This feature is also known as Switched Port Analyzer (SPAN).

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Prerequisites

Requirements

Cisco Recommends you to have a knowledge of ,

- Cisco UCS and different types of ports on Fabric Interconnect.
- Network capture tools (example -Wireshark)

Components Used

The information in this document is based on these hardware & software components:

- Cisco UCS Fabric Interconnect (any software version)
- UCS B-series or C-series server
- GLC-T (1-Gigabit Transceiver)
- CAT 5 cable
- Laptop/PC with 1 GB ethernet port & network capture tool (wireshark) installed

The information in this document was created from the devices in a specific lab environment. All of

the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any changes or configurations.

Network Diagram

Configurations

Configure

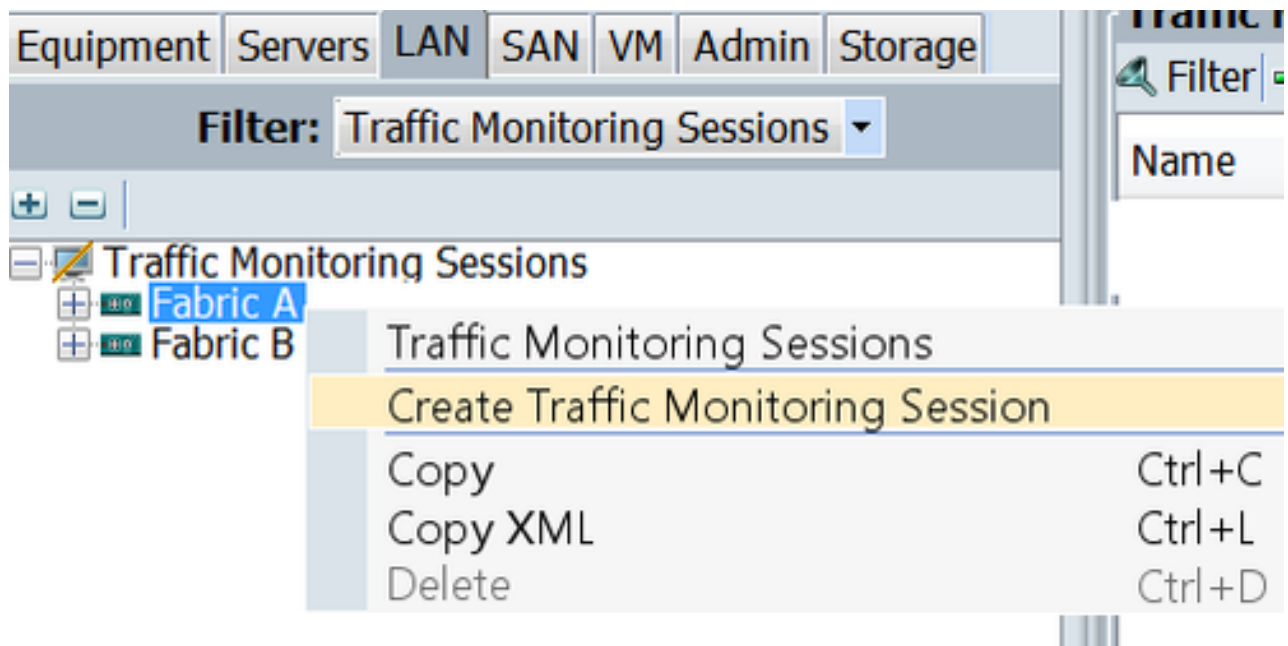
Creating an Ethernet Traffic Monitoring Session

Step 1. In the Navigation pane, click the **LAN** tab.

Step 2. Navigate to **Traffic Monitoring Sessions > Fabric_Interconnect_Name**

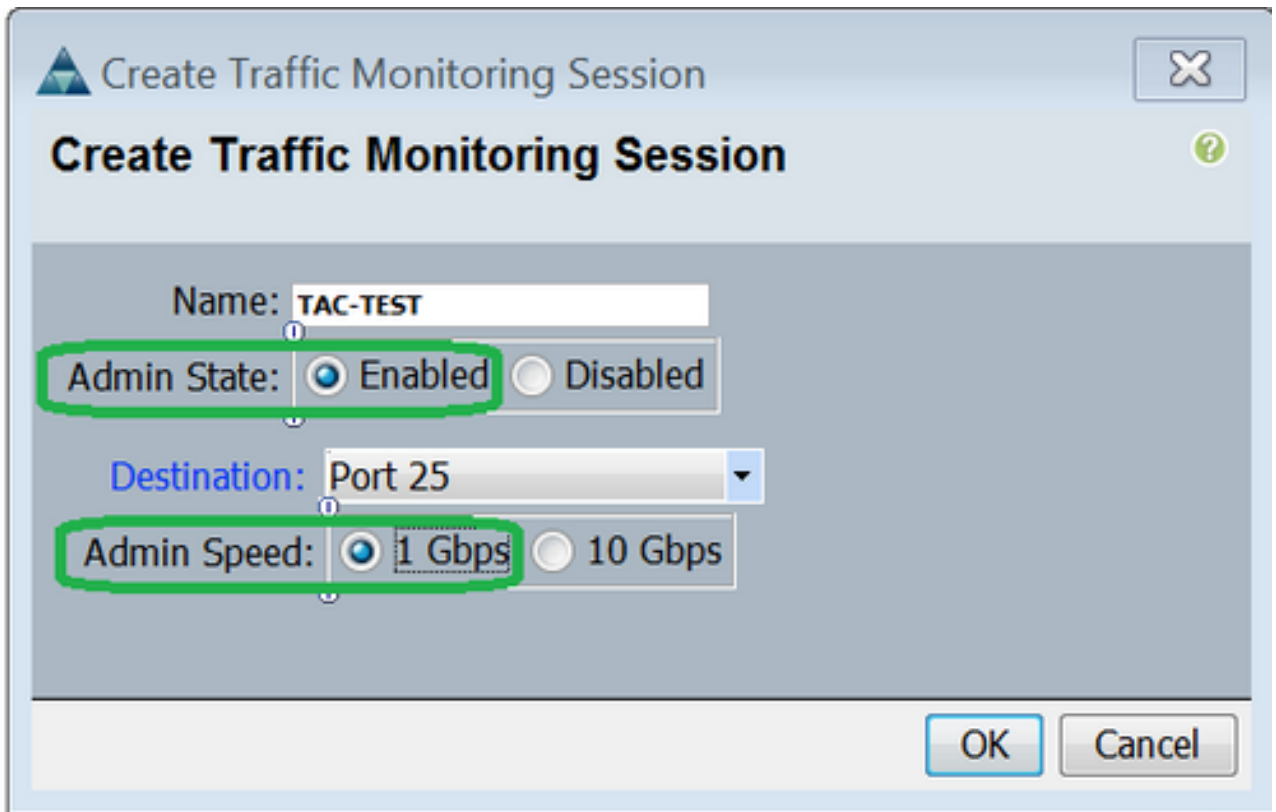
Step 3. Right-click **Fabric_Interconnect_Name** and choose **Create Traffic Monitoring Session** (Fig 1)

Fig 1



Step 4. In the Create Traffic Monitoring Session dialog box, give a Name to the monitoring session, select the **Admin state** to **Enabled**, **Destination port** (in this case it is 25) and **Admin speed** to 1Gbps (Fig 2)

Fig 2



Step 5. Click **OK**.

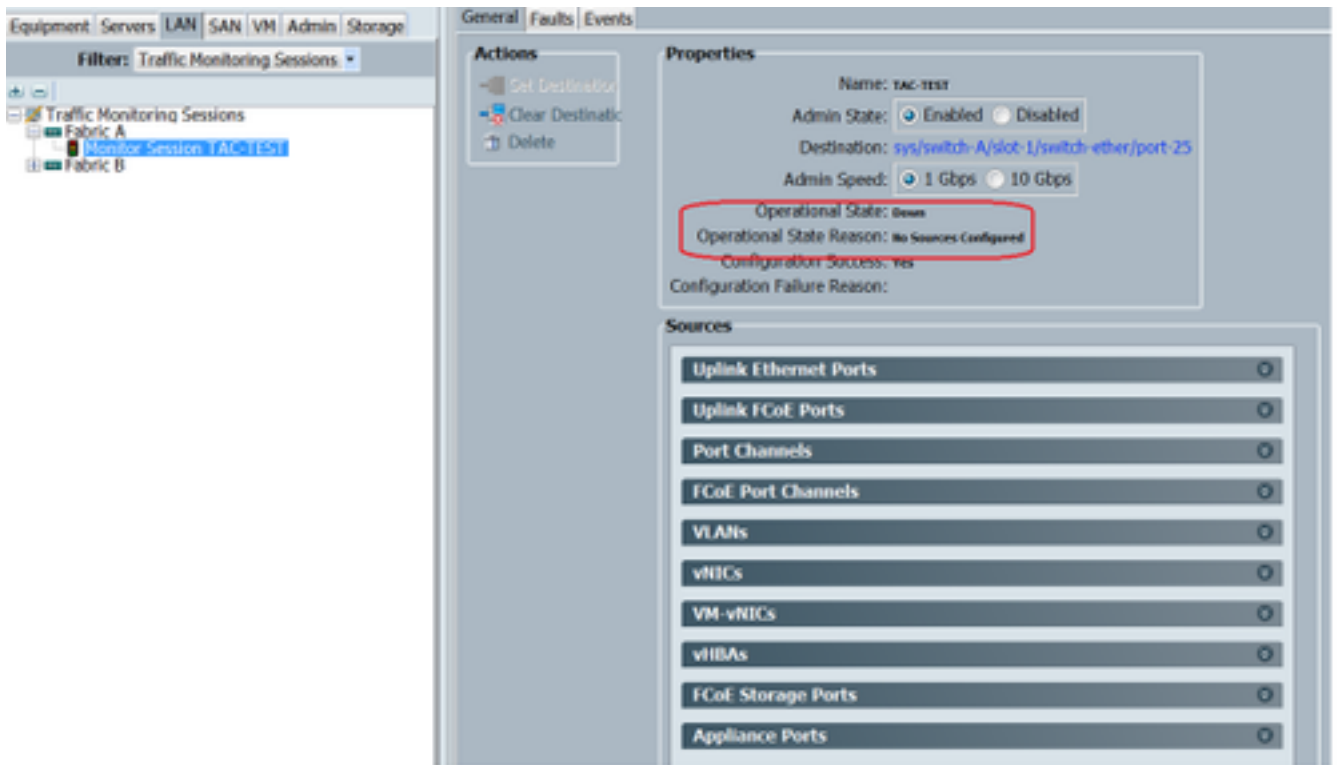
Step 6. Traffic monitoring session details will appear in the right pane (Fig 3)

Fig 3

Traffic Monitoring Sessions	
Name	Destination
TAC-TEST	sys/switch-A/slot-1/switch-ether/port-25

Step 7. Double clicking the TAC-TEST session will give the properties as below (Fig 4)

Fig 4



The operational status is down and that is because no source is configured (highlighted in red)

Adding Traffic Sources to a Monitoring Session

Step1. In the Sources area, expand the section for the type of traffic source that you want to add, in this case it would be Uplink Ethernet Ports (Fig 5)

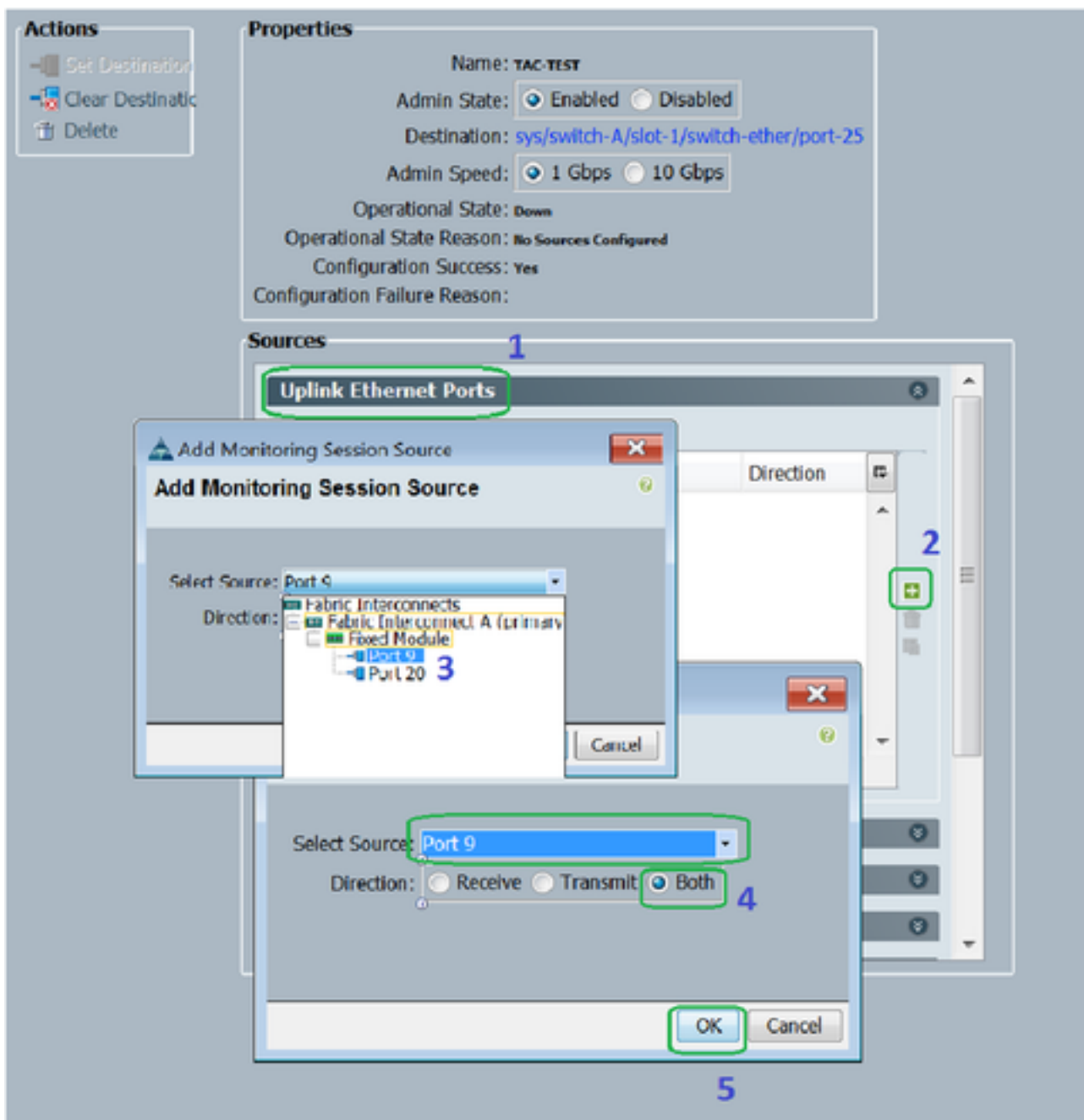
Step 2. To see the components that are available for monitoring, click the + button in the right-hand edge of the table to open the **Add Monitoring Session** Source dialog box.

Step 3. Select the uplink interface that we are interested in, in this case it would be ethernet 1/9.

Step 4. Select the direction as per the requirement, here option both has selected to monitor traffic on both sides.

Step 5. Click **OK**

Fig 5



Verify

UCS CLI

From nx-os mode, execute

Step 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
```

Step 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.6a10.56a0)
Description: M: MonitorDestination
MTU 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 is 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
TX
  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

```

Step 3. Show interface eth 1/25 transceiver

```

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

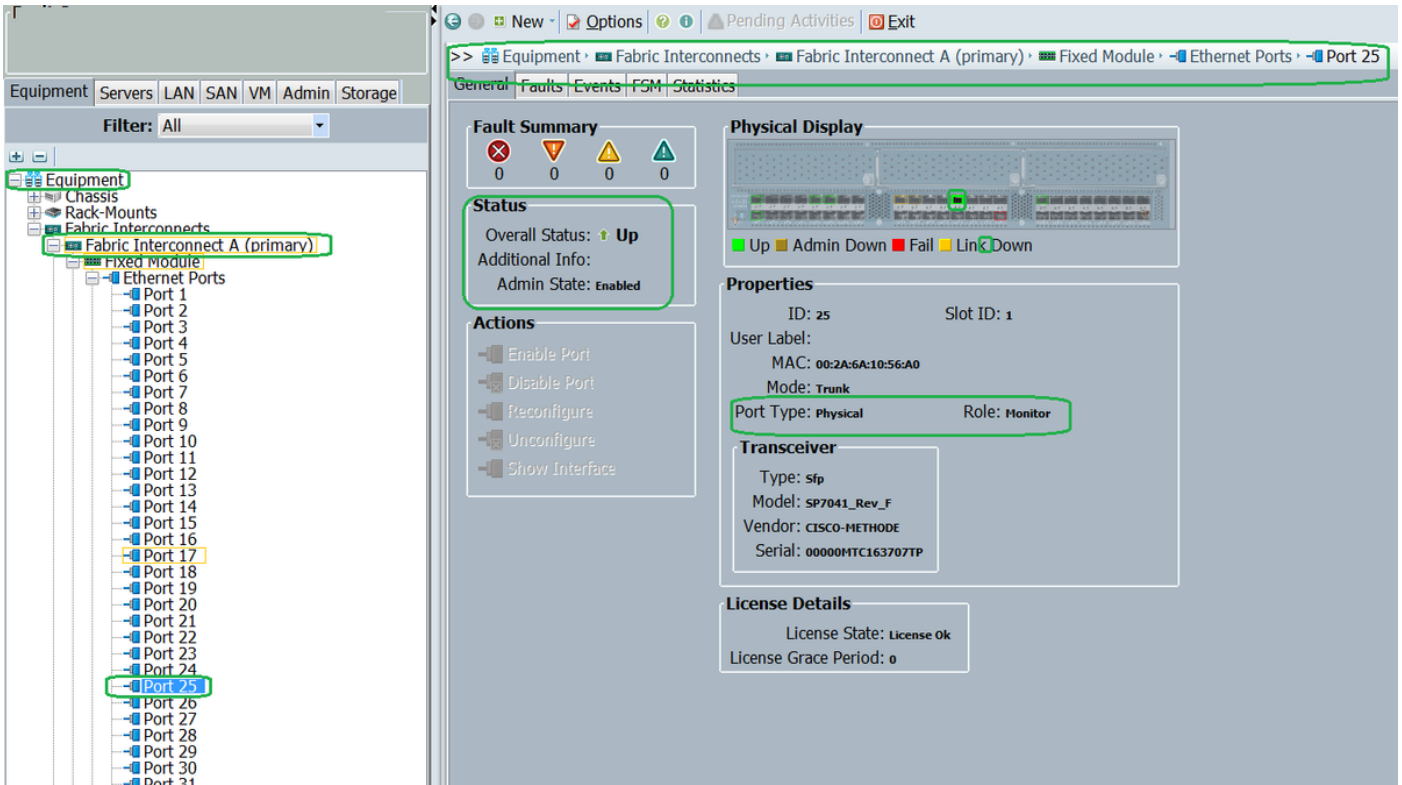
```

Note: SFP type here shows as SFP-1000BASE-T

UCS GUI

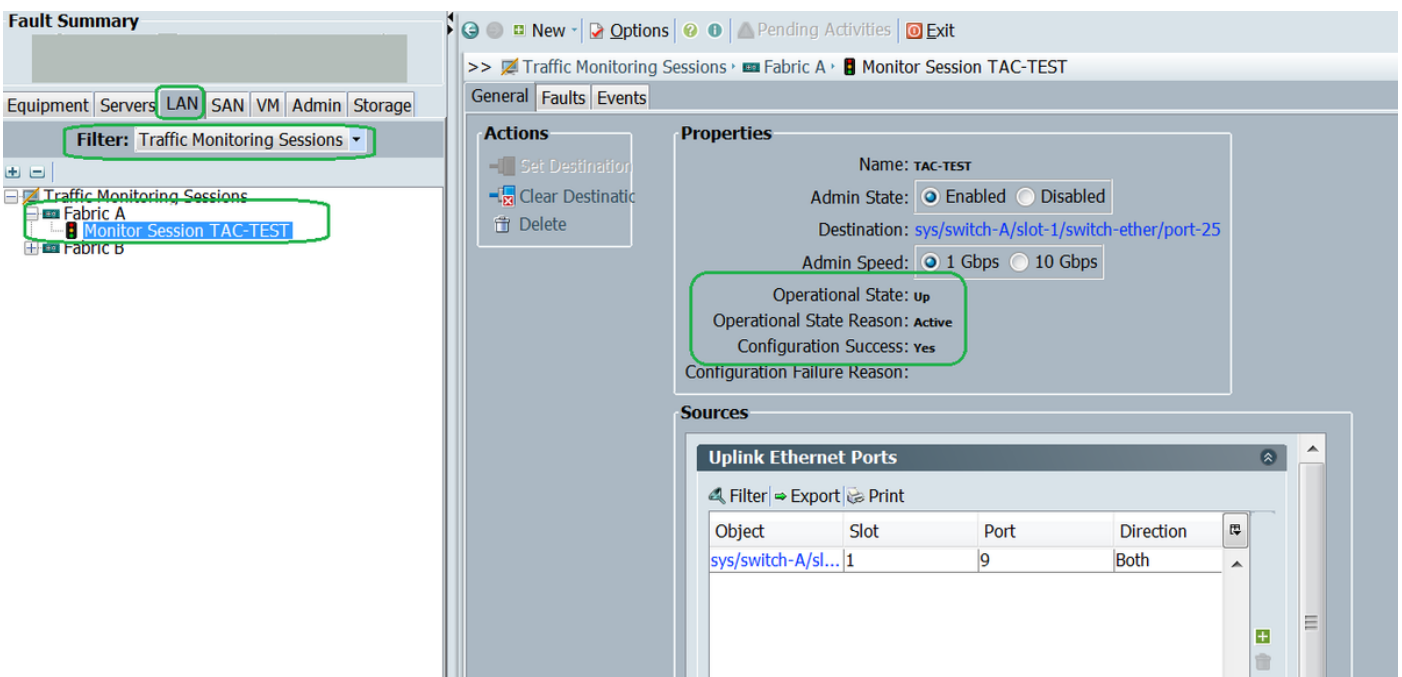
Step 1. In the navigation pane, under **Equipment tab > Fabric_Interconnect_Name** , highlight the port that is configured for destination (Fig 6)

Fig 6



Step 2. In the Navigation pane, click the **LAN tab**, click **Filter: Traffic Monitoring Sessions > Fabric_Interconnect_Name > Monitor session**(Fig 7)

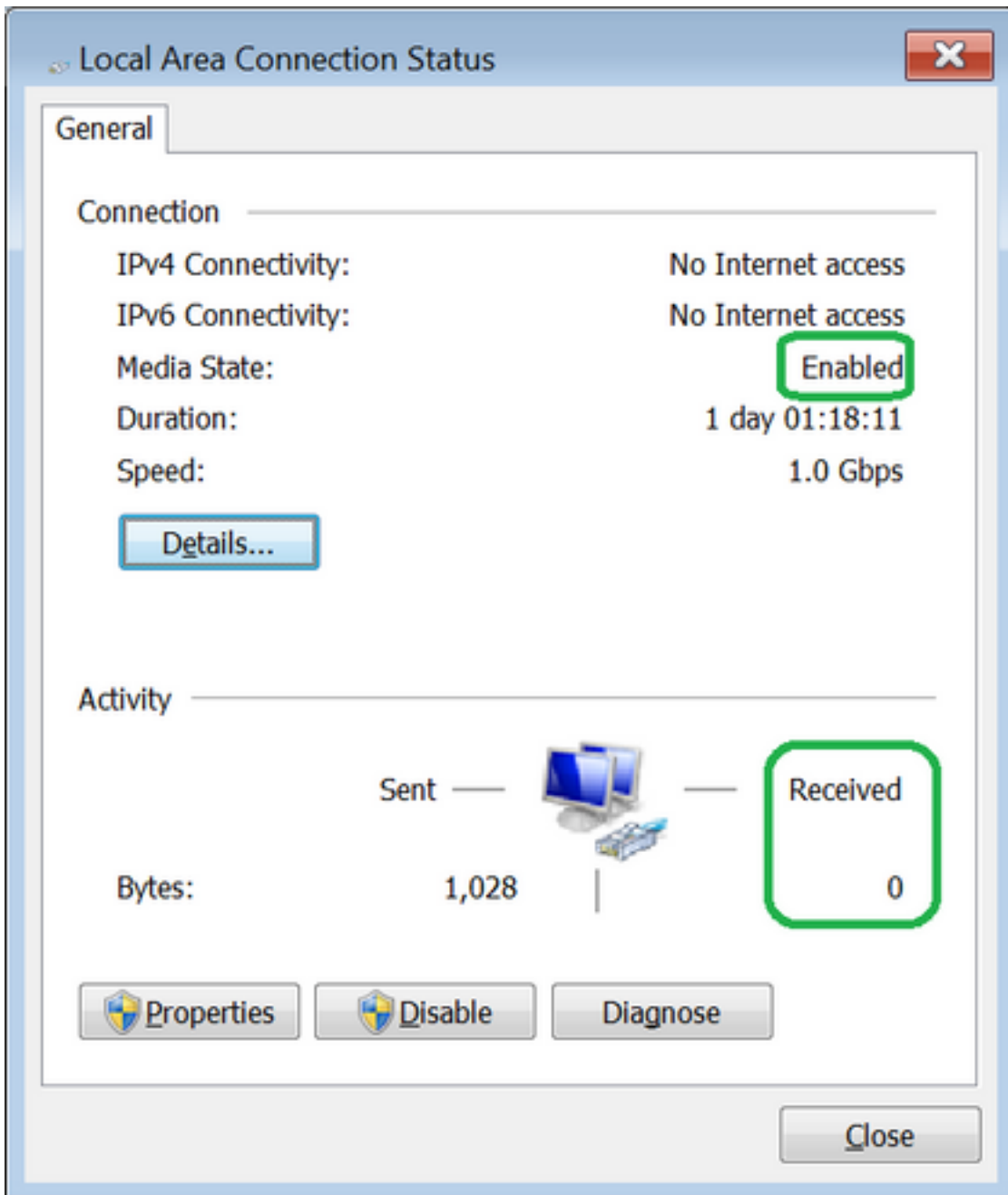
Fig 7



Laptop/PC

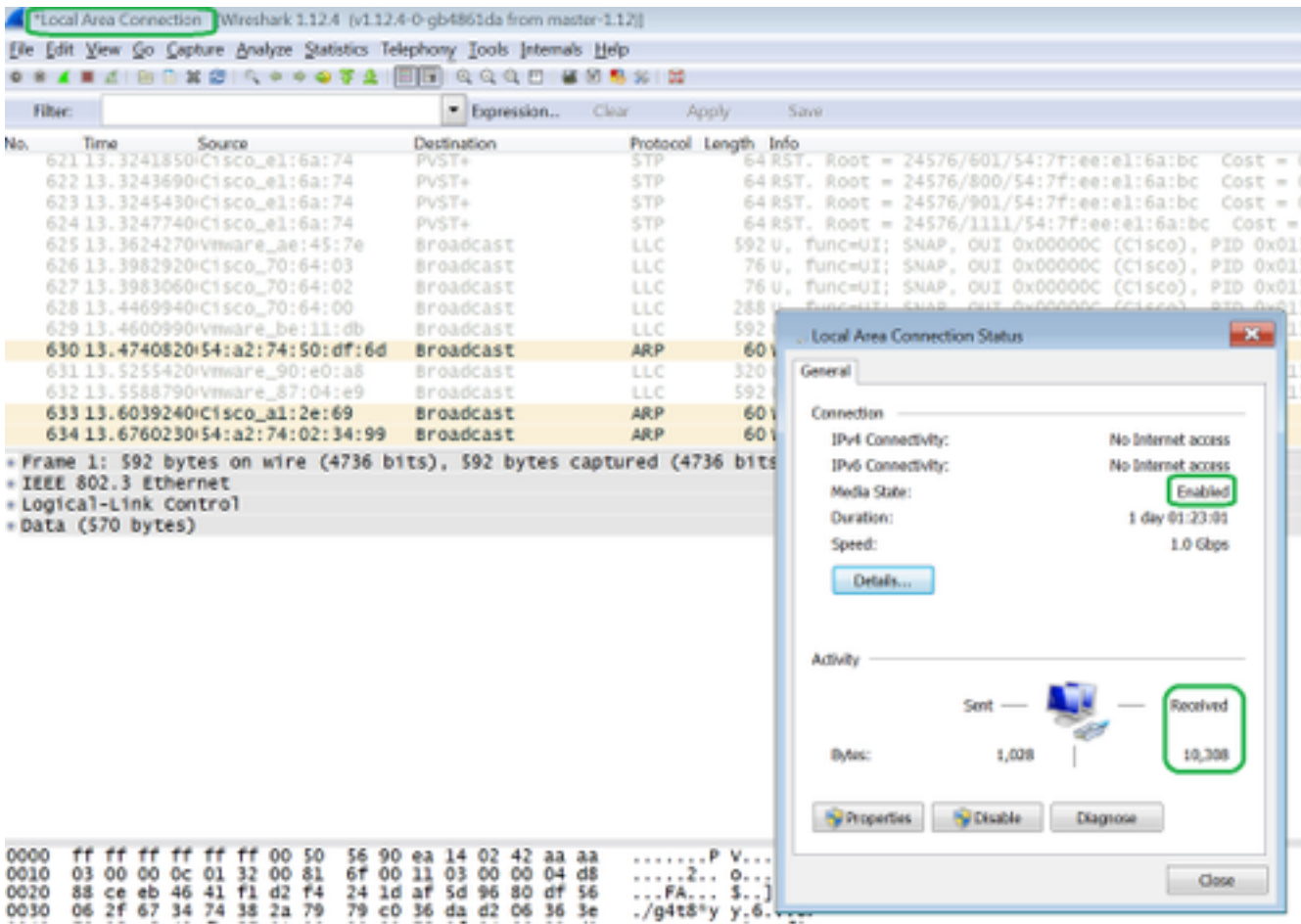
Step 1. Before initiating the wireshark tool (Fig 8)

Fig 8



2. After initiating the wireshark tool, the received packet count has increased (Fig 9)

Fig 9



Troubleshoot

1. If the destination port is down, check the SFP, cable.
2. If problem is not with SFP / cable, kindly check the status by configuring different source and destination pair.
3. If problem is still there, kindly check with other FI or device.
4. Check the model of Fabric Interconnect. Fabric Interconnect 6120 supports 1 Gig interfaces only on the first 8 ports.

http://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/hw/switch/install/ucs6100_install/overvie...