

思科 N9K-C92160YC-X 使用 100G SR4 无法建立链接

问题描述

某客户从我司购买 100G-SR4 光模块后，使用在思科 N9K-C92160YC-X 交换机上，本地测试无法点亮对应的端口，客户认为模块有问题，要求我们配合处理。

解决方案

1. 首先在交换机控制界面查看该端口的信息。

```
switch#
switch# show interface ethernet 1/51
Ethernet1/51 is down (Link not connected)
admin state is up, Dedicated Interface
Hardware: 40000 Ethernet, address: 0476.b0d0.d685 (bia 0476.b0d0.d6bb)
MTU 1500 bytes, BW 40000000 kbit , DLY 10 usec
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, medium is broadcast
auto-duplex, auto-speed, media type is 100G
Beacon is turned off
Auto-Negotiation is turned on FEC mode is Auto
Input flow-control is off, output flow-control is off
Auto-mdix is turned off
Rate mode is dedicated
Switchport monitor is off
EtherType is 0x8100
EEE (efficient-ethernet) : n/a
admin fec state is auto, oper fec state is auto
Last link flapped never
Last clearing of "show interface" counters never
0 interface resets
Load-Interval #1: 30 seconds
 30 seconds input rate 0 bits/sec, 0 packets/sec
 30 seconds output rate 0 bits/sec, 0 packets/sec
input rate 0 bps, 0 pps; output rate 0 bps, 0 pps
Load-Interval #2: 5 minute (300 seconds)
 300 seconds input rate 0 bits/sec, 0 packets/sec
 300 seconds output rate 0 bits/sec, 0 packets/sec
input rate 0 bps, 0 pps; output rate 0 bps, 0 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 error 0 collision 0 deferred 0 late collision
0 lost carrier 0 no carrier 0 babble 0 output discard
0 Tx pause
switch#
```

可以看到，该端口对应的 HW 即硬件接口为 40000M，意即 40G，而该端口所插的模块类型即 media type 是 100G，思科高端交换机的端口并不能向上兼容，即 40G 的端口并不能使用 100G 的光模块。



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2. 在现场指导客户将 100G 模块插到第 50 口上后，查看该端口信息，可以发现，该端口支持 100M~100G 的端口速率：

```
switch(config-if)# show interface ethernet 1/50
Ethernet1/50 is up
admin state is up, Dedicated Interface
Hardware: 1000/10000/25000/40000/50000/100000 Ethernet, address: 0476.b0d0.d68
5 (0/a 0476.b0d0.d68)
MTU 1500 bytes, BW 100000000 kbit , DLY 10 usec
reliability 255/255, txload 1/255, rxload 1/255
Encapsulation ARPA, medium is broadcast
full-duplex, 100 Gb/s, media type is 100G
Beacon is turned off
Auto-Negotiation is turned off FEC mode is Auto
Input flow-control is off, output flow-control is off
Auto-mdix is turned off
Rate mode is dedicated
Switchport monitor is off
EtherType is 0x8100
EEE (efficient-ethernet) : n/a
admin fec state is auto, oper fec state is Rs-fec
Last link flapped 00:02:28
Last clearing of "show interface" counters never
1 interface resets
Load-Interval #1: 30 seconds
30 seconds input rate 112 bits/sec, 0 packets/sec
30 seconds output rate 112 bits/sec, 0 packets/sec
input rate 112 bps, 0 pps; output rate 112 bps, 0 pps
Load-Interval #2: 5 minute (300 seconds)
300 seconds input rate 16 bits/sec, 0 packets/sec
300 seconds output rate 16 bits/sec, 0 packets/sec
input rate 16 bps, 0 pps; output rate 16 bps, 0 pps
RX
0 unicast packets 5 multicast packets 0 broadcast packets
5 input packets 1140 bytes
0 jumbo packets 0 storm suppression bytes
0 runs 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 5 multicast packets 0 broadcast packets
5 output packets 1140 bytes
0 jumbo packets
0 output error 0 collision 0 deferred 0 late collision
0 lost carrier 0 no carrier 0 babble 0 output discard
0 Tx pause
switch(config-if)#
```

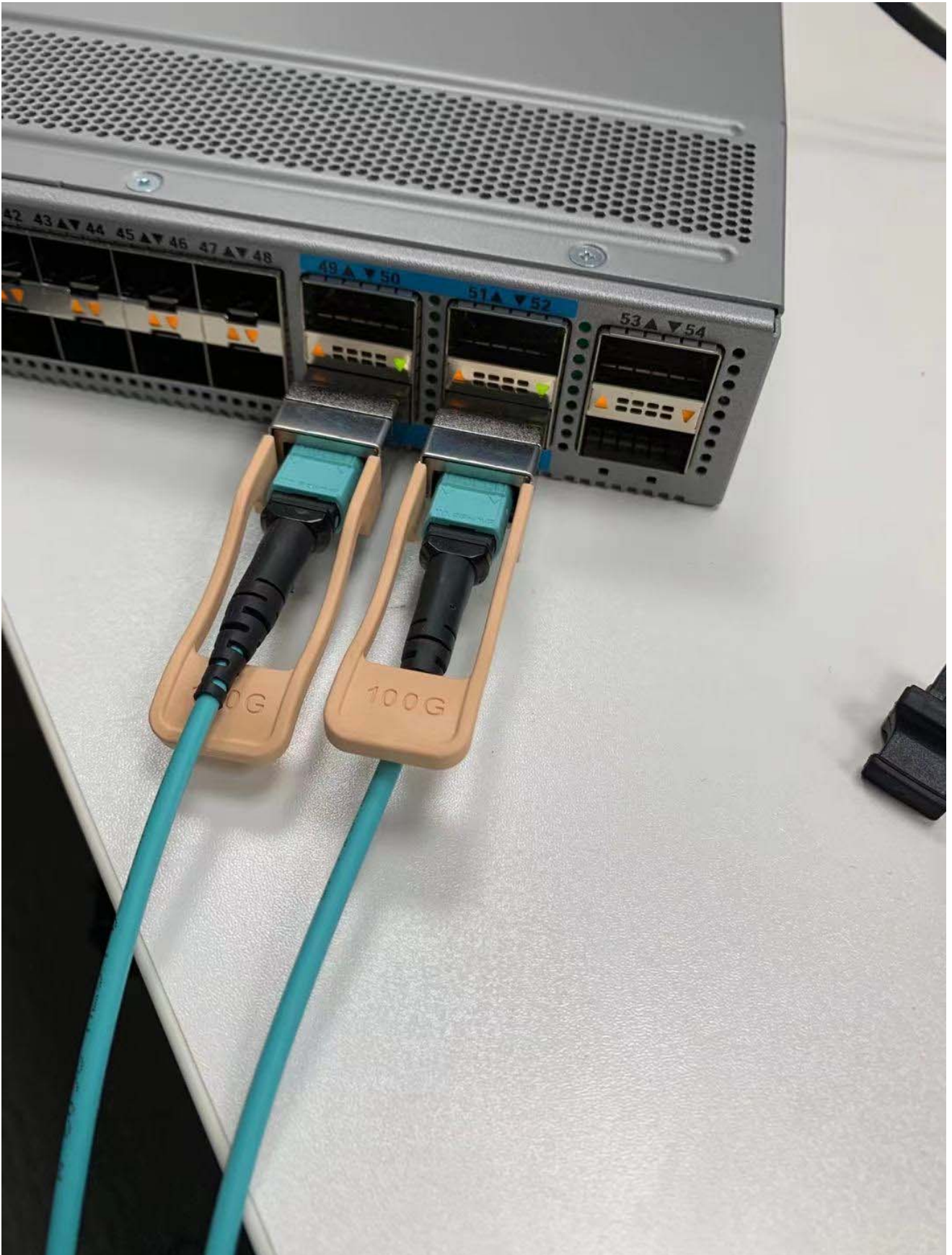
3. 经过端口更换后，客户交换机工作正常，可以正常通信：



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建议与总结

- 1、思科高端交换机的端口并不能向上兼容，即 40G 的端口并不能使用 100G 的光模块。