

知 S6860+华为路由器+三层聚合子接口+vpn实例直连不通

VPN实例

三层链路聚合

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组网及说明

华为路由器与我司S6860交换机进行三层子接口对接，使用的是聚合接口1，子接口是1.18

告警信息

无

问题描述

1、有正常学到ARP，第一个图是华为自己的接口和学到华三的arp，第二个图是我们学习到的arp

```
RRR TimeOut:1200s
RRR
北表
IP ADDRESS      MAC ADDRESS      EXPIRE (M)  TYPE      INTERFACE      VPN-INSTANCE
                VLAN/CEVLAN PVC
-----
192.168.106.125 5413-102a-1a60   I -         Eth-Trunk102.18 5GC_MGMN
192.168.106.126 642f-c759-2666 6           D-0         Eth-Trunk102.18 5GC_MGMN
                18/-
-----
Total:2          Dynamic:1        Static:0     Interface:1     Remote:0
Redirect:0
```

```
SSH 10.14.64.1
RAGG2           up      up      --      --      TJBC-BC-3F...
RAGG2.17       up      up      1.10.4.6  5G_MEC    To CX600X8...
RAGG2.18       up      up      192.168.106.130 5GC_MGMN  To CX600X8...
RAGG3           up      up      --      --      To-bcbcj_R...
RAGG3.18       up      up      1.10.0.166  MP2      To UPF-MP2
RAGG3.19       up      up      192.168.120.122 N6_Local  To UPF-N6_...
RAGG4           up      up      --      --      To bcbcj_R...
RAGG4.18       up      up      1.10.0.170  MP2      To UPF-MP2
RAGG4.19       up      up      192.168.120.126 N6_Local  To UPF-N6_...
RAGG5           up      up      --      --      To-TJBC_Be...
RAGG5.100      up      up      10.255.253.1 mgmt      To-FW1-Mgmt
RAGG5.1100     up      up      192.168.120.161 MEP_VPC01... MEP_VPC01-...
RAGG5.1200     up      up      192.168.120.165 MEP_VPC01... MEP_VPC01-...
RAGG6           up      up      --      --      To-TJBC_Be...
[TJ_BC_BeiCang_mslf]ping -v
[TJ_BC_BeiCang_mslf]ping -vpn-instance 5G
[TJ_BC_BeiCang_mslf]ping -vpn-instance 5GC_MGMN 192.168.106.125
Ping 192.168.106.125 (192.168.106.125): 56 data bytes, press CTRL_C to break
Request time out

--- Ping statistics for 192.168.106.125 in VPN instance 5GC_MGMN ---
2 packet(s) transmitted, 0 packet(s) received, 100.0% packet loss
[TJ_BC_BeiCang_mslf]dis arp 192.168.106.125
Type: S-Static D-Dynamic O-Openflow R-Rule M-Multiport I-Invalid
IP address      MAC address      VLAN/VSI      Interface/Link ID  Aging Type
192.168.106.125 5413-102a-1a60 --              RAGG1.18          313 D
[TJ_BC_BeiCang_mslf]
```

2、将接口下的vpn实例去掉之后直连就可以ping通
VPN实例摘掉就通。。。。

```
ipsec          IP Security module
ipv6           Specify IPv6 configuration
isis          Configure interface parameters for IS-IS
local-proxy-arp Specify local proxy ARP function for same interface
local-proxy-nd Local ND proxy function
[TJ_BC_BeiCang_mslf-Route-Aggregation1.18]dis this
#
interface Route-Aggregation1.18
description To CX600X8A-SM-E069 5G_MGMN
ip address 192.168.106.126 255.255.255.252
#
return
[TJ_BC_BeiCang_mslf-Route-Aggregation1.18]ping 192.168.106.125
Ping 192.168.106.125 (192.168.106.125): 56 data bytes, press CTRL_C to break
56 bytes from 192.168.106.125: icmp_seq=0 ttl=255 time=1.579 ms
56 bytes from 192.168.106.125: icmp_seq=1 ttl=255 time=1.338 ms
56 bytes from 192.168.106.125: icmp_seq=2 ttl=255 time=1.955 ms
56 bytes from 192.168.106.125: icmp_seq=3 ttl=255 time=1.297 ms

--- Ping statistics for 192.168.106.125 ---
4 packet(s) transmitted, 4 packet(s) received, 0.0% packet loss
round-trip min/avg/max/std-dev = 1.297/1.542/1.955/0.262 ms
[TJ_BC_BeiCang_mslf-Route-Aggregation1.18]
```

3、现场在设备上配置qos流统也统计不到流量

```
traffic classifier a operator and
if-match acl 3000
#
traffic behavior a
accounting packet
```

#

qos policy a

classifier a behavior a

现场绑定的vpn是vpn-instance 5GC_MGMN，并且出现了同一vpn，绑定在不同的子接口编号下

#acl advanced 3000

interface Route-Aggregation118

description To TJC-BeiCang-3F-CX600X8A-SM-E069 5GC_MGMN

rule 10 permit ip vpn-instance 5GC_MGMN source 192.168.106.125 0 destination 192.168.106.126 0

ip binding vpn-instance 5GC_MGMN

rule 15 permit ip source 192.168.106.255 255 255 255 destination 192.168.106.125 0

#

interface Route-Aggregation45/0/1

interface Ten-GigabitEthernet1/0/43

port link-mode route

description To TJC-BeiCang-3F-CX600X8A-SM-E069 1/0/22

ip address 1.88.96.1 255.255.255.240

qos apply policy a inbound

qos apply policy a outbound

port link-aggregation group 1

#

interface Ten-GigabitEthernet1/0/44

port link-mode route

description To TJC-BeiCang-3F-CX600X8A-SM-E069 1/0/23

qos apply policy a inbound

qos apply policy a outbound

port link-aggregation gro

触发此问题的条件:

- 1、绑定同一个vpn，子接口编号不一致
- 2、绑定同一个vpn，子接口编号一致，但是设备上存在相同编号的vlan接口

解决方案:

配置三层以太网子接口与指定VPN实例关联时，至少需要满足以下条件之一:

- 相同子接口编号的三层聚合子接口和VLAN接口均与该VPN实例关联。
- 在三层以太网子接口下开启以太网子接口的报文统计功能。

1.6.3 配置以太网子接口的报文统计功能

配置本功能后，在EVPN组网中，三层以太网子接口不能作为VXLAN隧道的出接口。

表1-29 开启以太网子接口的报文统计功能

操作	命令	说明
进入系统视图	system-view	-
进入以太网子接口视图	interface interface-type interface-number.subnumber	-
开启以太网子接口的报文统计功能	traffic-statistic enable	缺省情况下，以太网子接口的报文统计功能处于关闭状态
(可选) 查看以太网子接口的统计信息	<ul style="list-style-type: none"> • display interface • display counters 	通过 display interface 命令的Input和Output字段查看以太网子接口的统计信息

此案例中最终是在以太网子接口下开启报文统计的功能

