

# 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 zhiliao\_mpse 2022-06-09 发表

## 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

ARP TIMEOUT.1200S					
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-bcbej_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 bcbej_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	mqmgt	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  
过程分析  
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-Aggregation1/18  
rule 0 permit ip vpn-instance 5GC_MGMN source 192.168.106.126 0 destination 192.168.106.125 0  
description To CX600X8A-SM-E069 5G_MGMN  
rule 1 permit ip vpn-instance 5GC_MGMN source 192.168.106.125 0 destination 192.168.106.126 0  
in binding vpn-instance 5GC_MGMN  
rule 10 permit ip source 192.168.106.125 0 destination 192.168.106.126 0  
in address 192.168.106.125 255.255.255.252  
rule 19 permit ip source 192.168.106.126 0 destination 192.168.106.125 0  
#  
interface Route-Aggregation45/1/01  
interface Ten-GigabitEthernet1/0/43  
description 5GC_MGMN-IPMP-mgmt  
port link-mode route  
in binding vpn-instance 5GC_MGMN  
description To TJBC-BeiCang-3F-CX600X8A-SM-E069 1/0/22  
do 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 TJBC-BeiCang-3F-CX600X8A-SM-E069 1/0/23  
qos apply policy a inbound  
qos apply policy a outbound  
port link-aggregation gro
```

## 解决方法

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	<b>system-view</b>	-
进入以太网子接口视图	<b>interface interface-type interface-number subnumber</b>	-
开启以太网子接口的报文统计功能	<b>traffic-statistic enable</b>	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"><li>• <b>display interface</b></li><li>• <b>display counters</b></li></ul>	通过 <b>display interface</b> 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

