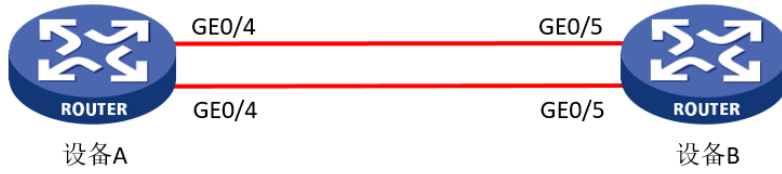


知 某局点MSR3600-51 二层动态链路聚合建立失败

二层链路聚合 王姑娘 2021-11-22 发表

组网及说明

1.拓扑图如下:



2.两台MSR3600做二层动态链路聚合，两端聚合端口为GE0/4口与GE0/5口。

问题描述

原来两台路由器软件版本都为Release 0615P13，二层动态链路聚合可以建立成功。目前A设备暂时还不能升级,B设备软件版本升级为了Release 0821P15，然后动态链路聚合建立失败,只有A的GE0/4口处于selected状态，其余3个端口都处于unselected状态。

过程分析

1.两设备聚合组下配置:

```
interface Bridge-Aggregation1
port link-type trunk
undo port trunk permit vlan 1
port trunk permit vlan 10
link-aggregation mode dynamic
```

2.换成静态聚合后四个端口都处于selected状态,业务可以正常通信.

3.通过以上测试,目前就是动态聚合建立不起来,然后在故障时收集了debugging link-aggregation lacp fsm all和debugging link-aggregation lacp packet all,发现A设备的两个端口只有send报文,B设备既有send又有receive.

```
<OA>*Oct 11 17:26:16:131 2021 OA LAGG/7/Fsm: GigabitEthernet0/4 FSM.PTX
SLOW_PERIODIC-->PERIODIC_TX, PeriodTimer_Expired
*Oct 11 17:26:16:131 2021 OA LAGG/7/Fsm: GigabitEthernet0/4 FSM.PTX
PERIODIC_TX-->SLOW_PERIODIC, Long_Timeout
*Oct 11 17:26:16:131 2021 OA LAGG/7/Packet: PACKET.GigabitEthernet0/4.send.
size=110, subtype=1, version=1
Actor: type=1, len=20, sys-pri=0x8000, sys-mac=0868-8d3c-98e6, key=0x1, pri=0x8000, port-index=0x6, state=0x7d
Partner: type=2, len=20, sys-pri=0x8000, sys-mac=0000-0000-0000, key=0x0, pri=0x8000, port-index=0x0, state=0x38
Collector: type=3, len=16, col-max-delay=0x0
Terminator: type=0, len=0
*Oct 11 17:26:16:132 2021 OA LAGG/7/Fsm: GigabitEthernet0/5 FSM.PTX
SLOW_PERIODIC-->PERIODIC_TX, PeriodTimer_Expired
*Oct 11 17:26:16:132 2021 OA LAGG/7/Fsm: GigabitEthernet0/5 FSM.PTX
PERIODIC_TX-->SLOW_PERIODIC, Long_Timeout
*Oct 11 17:26:16:132 2021 OA LAGG/7/Packet: PACKET.GigabitEthernet0/5.send.
size=110, subtype=1, version=1
Actor: type=1, len=20, sys-pri=0x8000, sys-mac=0868-8d3c-98e6, key=0x1, pri=0x8000, port-index=0x7, state=0x45
Partner: type=2, len=20, sys-pri=0x8000, sys-mac=0000-0000-0000, key=0x0, pri=0x8000, port-index=0x0, state=0x38
Collector: type=3, len=16, col-max-delay=0x0
Terminator: type=0, len=0

<OB>*Oct 11 17:28:46:134 2021 OB LAGG/7/Packet: PACKET.GigabitEthernet0/4.receive.
size=110, subtype=1, version=1
Actor: type=1, len=20, sys-pri=0x8000, sys-mac=0868-8d3c-98e6, key=0x1, pri=0x8000, port-index=0x6, state=0x7d
Partner: type=2, len=20, sys-pri=0x8000, sys-mac=0000-0000-0000, key=0x0, pri=0x8000, port-index=0x0, state=0x38
Collector: type=3, len=16, col-max-delay=0x0
Terminator: type=0, len=0
*Oct 11 17:28:46:135 2021 OB LAGG/7/Packet: PACKET.GigabitEthernet0/4.send.
size=110, subtype=1, version=1
Actor: type=1, len=20, sys-pri=0x8000, sys-mac=0868-8d3c-95f2, key=0x1, pri=0x8000, port-index=0x6, state=0xd
Partner: type=2, len=20, sys-pri=0x8000, sys-mac=0868-8d3c-98e6, key=0x1, pri=0x8000, port-index=0x0x6, state=0x75
Collector: type=3, len=16, col-max-delay=0x0
Terminator: type=0, len=0
*Oct 11 17:28:46:135 2021 OB LAGG/7/Packet: PACKET.GigabitEthernet0/5.receive.
size=110, subtype=1, version=1
Actor: type=1, len=20, sys-pri=0x8000, sys-mac=0868-8d3c-98e6, key=0x1, pri=0x8000, port-index=0x7, state=0x45
Partner: type=2, len=20, sys-pri=0x8000, sys-mac=0000-0000-0000, key=0x0, pri=0x8000, port-index=0x0, state=0x38
Collector: type=3, len=16, col-max-delay=0x0
Terminator: type=0, len=0
*Oct 11 17:28:46:136 2021 OB LAGG/7/Packet: PACKET.GigabitEthernet0/5.send.
```

size=110, subtype=1, version=1

Actor: type=1, len=20, sys-pri=0x8000, sys-mac=0868-8d3c-95f2, key=0x1, pri=0x8000, port-index=0x7, state=0xd\

解决方法
Partner: type=2, len=20, sys-pri=0x8000, sys-mac=0868-8d3c-98e6, key=0x1, pri=0x8000, port-index=0x7, state=0xd\

把vlan1放通,使lacp报文正常收发。

Collector: type=3, len=16, col-max-delay=0x0

Terminator: type=0, len=0

4. 综上,是lacp报文的收发出了问题,导致动态链路聚合建立不起来。重新检查配置发现接口下除了配置为trunk端口允许相应vlan通过之后还将vlan1删除了,把vlan1运允许通过后,lacp报文可以正常收发,动态链路聚合建立成功。

就新版本的现象进行讨论,老版本实现和新版本在pvid检查上不太一样。新版本中,pvid是必须放通的,这也是符合协议的规范,lacp侧会进行严格检查。所以vlan1需要放通,该端口才能转发缺省VLAN的报文。

