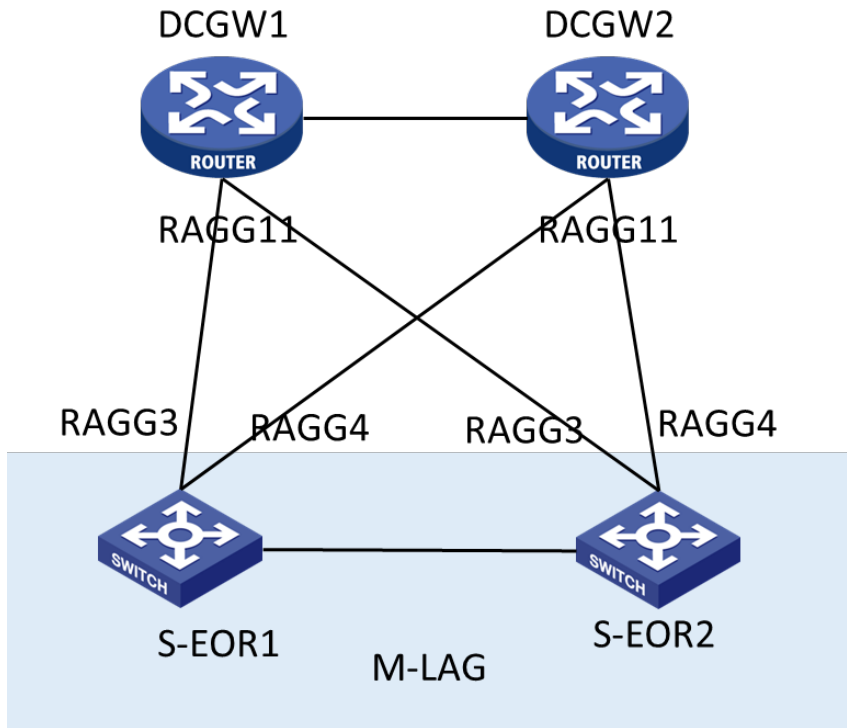


知 某局点 S12508F-AF对接CR16010H-FA聚合接口无法选中故障案例

二层链路聚合 单畅 2022-04-29 发表

组网及说明

组网如下:



## 问题描述

DCGW1和DCGW2分别以三层聚合与下方DRNI中的二层聚合互联，右侧DCGW2——S-EOR2的RAG G11——BAGG4中始终有三个接口是未选中的状态；将三个接口踢出聚合口能正常双up；

**EOR-2的HGE3/0/34、3/0/35、3/0/36，RT2的HGE 3/0/3、4/0/4、5/0/4**

接口down皆为

Current state: UP

Line protocol state: DOWN(LAGG)

左侧的DCGW1(RT1)——S-EOR1的链路聚合都是正常的。

```
*Apr 9 16:21:03:670 2022 NFV-D-HDNNBO-00A-3303-0G13-E-RT-02 LAGG/7/Fsm: -MDC=1-Slot=5  
; HundredGigE5/0/4 FSM.PTX
```

```
FAST_PERIODIC-->PERIODIC_TX, PeriodTimer_Expired
```

```
*Apr 9 16:21:03:670 2022 NFV-D-HDNNBO-00A-3303-0G13-E-RT-02 LAGG/7/Fsm: -MDC=1-Slot=5  
; HundredGigE5/0/4 FSM.PTX
```

```
PERIODIC_TX-->FAST_PERIODIC, Short_Timeout
```

Debug显示时间超时，怀疑配置了短超时导致报文交互没有来及处理。

## 过程分析

### 路由器侧分析:

\*Apr 9 16:21:03:501 2022 NFV-D-HDNNBO-00A-3303-0G13-E-RT-02 LAGG/7/Packet: -MDC=1-Slot=5; PACKET.HundredGigE5/0/4.send.

size=110, subtype=1, version=1

Actor: type=1, len=20, sys-pri=0x8000, sys-mac=4873-97f2-3800, key=0x9, pri=0x8000, port-index=0x18, state=0xf //0xf 路由器发的状态ABCD

Partner: type=2, len=20, sys-pri=0xa, sys-mac=0000-5e02-f001, key=0x9c44, pri=0x8000, port-index=0x8012, state=0x7

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

Terminator: type=0, len=0

Aggregate Interface: Route-Aggregation11

Aggregation Mode: Dynamic

Loadsharing Type: Shar

System ID: 0x8000, 4873-97f2-3800

Local:

Port	Status	Priority	Index	Oper-Key	Flag
HGE2/0/2	S	32768	15	9	{ABCDEF}
HGE2/0/3	S	32768	13	9	{ABCDEF}
HGE3/0/2	S	32768	32	9	{ABCDEF}
HGE3/0/3	U	32768	30	9	{ABCD}
HGE4/0/3	S	32768	22	9	{ABCDEF}
HGE4/0/4	U	32768	18	9	{ABCD}
HGE5/0/3	S	32768	25	9	{ABCDEF}
HGE5/0/4	U	32768	24	9	{ABCD}

Local:

Port	Status	Priority	Index	Oper-Key	Flag
HGE3/0/33(R)	S	32768	32783	40004	{ABCDEF}
HGE3/0/34	U	32768	32786	40004	{ABCD}
HGE3/0/35	U	32768	32810	40004	{ABCD}
HGE3/0/36	U	32768	32827	40004	{ABCD}

### 交换机侧分析:

交换机侧看remote路由器的状态时ABC:

Aggregate Interface: Bridge-Aggregation4

Creation Mode: Manual

Aggregation Mode: Dynamic

Loadsharing Type: Shar

Management VLANs: None

System ID: 0xa, 0000-5e02-f001

Local:

Port	Status	Priority	Index	Oper-Key	Flag
HGE3/0/33(R)	S	32768	32783	40004	{ABCDEF}
HGE3/0/34	U	32768	32786	40004	{ABCD}
HGE3/0/35	U	32768	32810	40004	{ABCD}
HGE3/0/36	U	32768	32827	40004	{ABCD}

Remote:

Actor	Priority	Index	Oper-Key	SystemID	Flag
HGE3/0/33	32768	13	9	0x8000, 4873-97f2-3800	{ABCDEF}
HGE3/0/34	32768	30	9	0x8000, 4873-97f2-3800	{ABC}
HGE3/0/35	32768	18	9	0x8000, 4873-97f2-3800	{ABC}
HGE3/0/36	32768	24	9	0x8000, 4873-97f2-3800	{ABC}

交换机诊断中看到有如下BDPU保护日志, 看聚合口4配置, 配置了stp edged-port, 且为边缘端口, 同时查看设备stp 发现已开启BPDU-Protection功能, 同时本设备为根桥设备, 网络拓扑稳定的情况下, 根桥设备是不会收到网桥设备发过来的TC BPDU报文, 如果根桥设备持续收到TC BPDU报文, 说明网络拓扑一直处于不稳定状态, 即根桥的边缘端口收到BPDU报文后, 引起的端口持续震荡和网络拓扑不收敛。

%Apr 7 11:18:04:661 2022 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 STP/4/STP\_BPDU\_PROTECTION: BPDU-Protection port Bridge-Aggregation4 received BPDUs.

### 解决方法

1. EOR-2设备底层端口被block了，原因是聚合口使能了BC聚合成员有选中变化，导致聚合成员有block或者link的操作，导致物理层接口会操作端口的block状态，BPDU通过shutdown/undo\_shutdown端口恢复。聚合口震荡时间和底层block记录一致。

```
%Apr 7 11:20:22:000 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 IFNET/3/PHY_UPDOWN: Physical state on the interface HundredGigE3/0/36 changed to down.
%Apr 7 11:20:22:000 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 IFNET/5/LINK_UPDOWN: Physical state on the interface Bridge-Aggregation4 changed to down.
%Apr 7 11:20:22:000 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 IFNET/3/PHY_UPDOWN: Physical state on the interface HundredGigE3/0/36 changed to down.
```

```
%Apr 7 11:20:22:000 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 IFNET/3/PHY_UPDOWN: Physical state on the interface HundredGigE3/0/36 changed to up.
```

```
%Apr 7 11:20:22:000 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 IFNET/3/PHY_UPDOWN: Physical state on the interface HundredGigE3/0/36 changed to down.
```

```
%Apr 7 11:20:22:000 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 IFNET/3/PHY_UPDOWN: Physical state on the interface HundredGigE3/0/36 changed to up.
```

```
%Apr 7 11:20:22:000 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 IFNET/3/PHY_UPDOWN: Physical state on the interface HundredGigE3/0/36 changed to down.
```

```
%Apr 7 11:20:22:000 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 IFNET/3/PHY_UPDOWN: Physical state on the interface HundredGigE3/0/36 changed to up.
```

```
%Apr 7 11:20:22:000 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 IFNET/3/PHY_UPDOWN: Physical state on the interface HundredGigE3/0/36 changed to down.
```

```
%Apr 7 11:20:22:000 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 IFNET/3/PHY_UPDOWN: Physical state on the interface HundredGigE3/0/36 changed to up.
```

```
%Apr 7 11:20:22:000 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 IFNET/3/PHY_UPDOWN: Physical state on the interface HundredGigE3/0/36 changed to down.
```

```
%Apr 6 14:16:46:367 2022 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 IFNET/3/PHY_UPDOWN: Physical state on the interface HundredGigE3/0/36 changed to up.
```

```
%Apr 6 14:16:50:136 2022 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 IFNET/3/PHY_UPDOWN: Physical state on the interface HundredGigE3/0/36 changed to down.
```

```
%Apr 6 14:16:53:771 2022 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 IFNET/3/PHY_UPDOWN: Physical state on the interface HundredGigE3/0/36 changed to up.
```

```
%Apr 6 14:16:57:041 2022 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 IFNET/3/PHY_UPDOWN: Physical state on the interface HundredGigE3/0/36 changed to down.
```

```
%Apr 6 14:17:00:653 2022 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 IFNET/3/PHY_UPDOWN: Physical state on the interface HundredGigE3/0/36 changed to up.
```

```
%Apr 6 14:17:04:190 2022 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 IFNET/3/PHY_UPDOWN: Physical state on the interface HundredGigE3/0/36 changed to down.
```

```
%Apr 6 14:17:07:823 2022 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 IFNET/3/PHY_UPDOWN: Physical state on the interface HundredGigE3/0/36 changed to up.
```

```
%Apr 6 14:17:10:940 2022 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 IFNET/3/PHY_UPDOWN: Physical state on the interface HundredGigE3/0/36 changed to down.
```

```
%Apr 6 14:17:14:599 2022 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 IFNET/3/PHY_UPDOWN: Physical state on the interface HundredGigE3/0/36 changed to up.
```

```
%Apr 6 14:17:17:538 2022 NFV-D-HDNNBO-00A-3303-0G10-S-EOR-02 IFNET/3/PHY_UPDOWN: Physical state on the interface HundredGigE3/0/34 changed to up.
```

