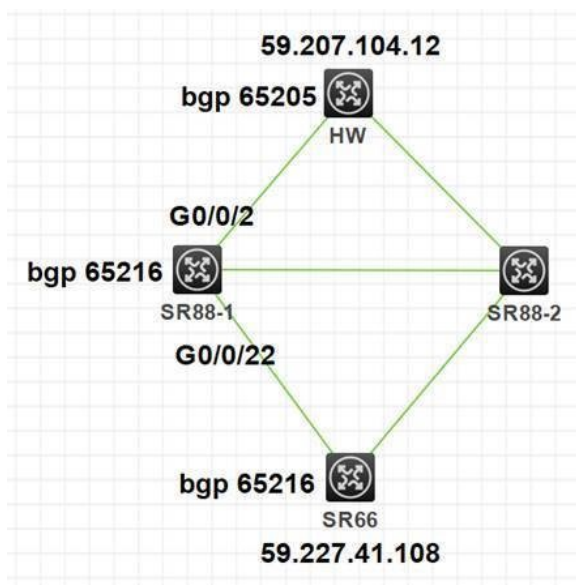


组网及说明

组网如下:



问题描述

组网大致如上图, SR88X和SR66是MP IBGP, SR88X和上方华为是B类跨域。SR88X的0槽位是SPC-GP24LA1。

SR66私网地址59.227.41.108到HW设备私网地址59.207.104.12不通, 如果将SR66私网地址换到SR88-1上, 到HW能通。

过程分析

查看SR88-1、SR66的私网路由、标签, 都是对的。

在SR66、SR88-1做流量统计, 可以看到SR66发出了报文, SR88-1接口G0/0/22没有将报文发出给HW。SR88-1接口G0/0/22入方向流统计不支持匹配mpls-exp, 因此无法统计, 经了解SR66和SR88-1是光纤直连, 这段丢包问可能性较小。初步判断是SR88-1收到报文后没有正常转发给HW。

```
[SR6604]ping -vpn-instance _2001 -c 3 -a 59.227.41.108 -tos
```

```
160 59.207.104.12
```

```
Ping 59.207.104.12 (59.207.104.12) from 59.227.41.108: 56 data bytes, press CTRL_C to break
```

```
Request time out
```

```
Request time out
```

```
Request time out
```

```
[SR6604]dis qos poli int g 3/0/0
```

```
Interface: GigabitEthernet3/0/0
```

```
Direction: Outbound
```

```
Policy: 1
```

```
Classifier: 1
```

```
Matched : 3 (Packets) 306 (Bytes)
```

```
5-minute statistics:
```

```
Forwarded: 0/0 (pps/bps)
```

```
Dropped : 0/0 (pps/bps)
```

```
Operator: AND
```

```
Rule(s) :
```

```
If-match mpls-exp 5
```

```
Behavior: 1
```

```
Filter enable: Permit
```

```
[SR8808]dis qos poli int g 0/0/2
```

```
Interface: GigabitEthernet0/0/2
```

```
Direction: Outbound
```

```
Policy: 1
```

```
Classifier: 1
```

Operator: AND
Rule(s) :
If-match mpls-exp 5
Behavior: 1
Accounting enable:
0 (Packets)

SR88-1设备slot 0板卡SPC-GP24LA1标签规格比较小, 仅6k, 现网私网路由超过了该规格, 导致部分私网不通。从dis mpls lsp statistics的情况看, 现网lsp数量在6k上下, 所以会出现开局时能通、增加部分路由后部分不通的现象。

```
[SR8808]dis mpls lsp statistics
LSP Type   Ingress/Transit/Egress Active
Static LSP 0/0/0          0/0/0
Static CRLSP 0/0/0        0/0/0
LDP LSP    12/12/1          12/12/1
RSVP CRLSP 0/0/0          0/0/0
BGP LSP   1/5907/9        1/5907/9
Local LSP   7/0/0           7/0/0
-----
Total      20/5919/10      20/5919/10
```

之后查看入标签7075的mpls转发表项, 发现该表项没有下发到板卡, 验证了上述规则不足的推测。其中7075为SR66设备display fib vpn-instance XXX X.X.X.X、display mpls forwarding nh XXX查到的外层标签, SR88-1收到该标签报文, 板卡要查询下述表项进行转发。没有该表项则无法正常转发出去。

```
[SR8808-probe]debug mpls-drv display ilm 7075 slot 0
```

```
-----
MPLS ILM HARDWARE INFO:
-----
```

```
-- UNIT = 0 --
```

```
--The LABEL 7075 IS NOT FOUND --
-----
```

之后现网将SR66和SR88-1的BGP邻居断开, 令SR66访问HW的流量走向变为SR66aSR88-1aSR88-2, SR66所有私网发到SR88-1的外层标签都是相同的ldp公网标签, 规避了SR88-1 0槽位资源不足的现象。

解决方法

后续建议将0槽位mpls业务相关接口都更换至6槽位SPC-XP24LAX, 6槽位板卡标签规格比0槽位板卡大很多, 能够解决现网问题。