

## 知 某局点 SR8808-X 无法与MSR36建ospf邻居问题

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### 组网及说明

组网介绍:

MSR3600(G0/1) (RID 10.4.250.130) —运营商传输设备— (RID 10.4.255.10) (G7/0/3.2071) SR88 (主) × (故障)

MSR3600 (VLAN30) —运营商传输设备—(RID 10.4.255.177)SR88 (备) ✓

### 问题描述

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现场MSR36与两个88建立ospf邻居, 网络类型是P2P, 与主88建立的ospf邻居建立不起来, 与备88成功建立邻居, 所以业务没受影响。

### 过程分析

(1) 在MSR36上查看SR88邻居状态如下:

```
=====display ospf peer=====
```

```
OSPF Process 1 with Router ID 10.4.250.130
```

```
Neighbor Brief Information
```

```
Area: 0.0.0.11
```

Router ID	Address	Pri	Dead-Time	State	Interface
10.230.255.10	10.4.250.133	1	40	Init/ -	GE0/1
10.4.255.177	10.4.248.129	1	31	Full/ -	Vlan30

//这里显示故障 (主) SR88的接口地址是10.4.250.133

在SR88上查看MSR36状态如下:

```
10.4.250.130 10.4.250.130 1 33 ExStart/ - GE7/0/3.2071
```

//这里显示故障 (主) SR88的出接口是GE7/0/3.2071, 地址是10.4.250.129, 与上面的地址不符。

```
Interface: 10.4.250.129 (GigabitEthernet7/0/3.2071) --> 10.4.250.130
```

```
Cost: 1 State: P-2-P Type: PTP MTU: 1500
```

```
Timers: Hello 10, Dead 40, Poll 40, Retransmit 5, Transmit Delay 1
```

```
FRR backup: Enabled
```

```
Enabled by network configuration
```

```
interface GigabitEthernet7/0/3.2071
```

```
description To_化隆联社扎巴信用社
```

```
ip address 10.4.250.129 255.255.255.252
```

```
ospf network-type p2p
```

```
vlan-type dot1q vid 2071
```

而这个10.4.250.133是故障88上的一个地址, 这个地址与另一个网点的迈普设备能正常建立ospf邻居。

且现场将MSR36的G0/1口人为shutdown, 再undo shutdown, 后, 在MSR上查看邻居peer, 发现故障88的接口地址又变为10.4.250.121:

(2) 检查两端的ospf配置, 没有什么异常, 两端ospf的hello、dead时间都是默认值, 一致。

(3) MSR36的日志里面提示ospf状态变为down:

```
Line 14710: %@14677%Mar 19 02:06:30:386 2020 OSPF/6/OSPF_LAST_NBR_DOWN: OSPF 1 Last neighbor down event: Router ID: 10.230.255.10 Local address: 10.4.250.130 Remote address: 10.4.250.133 Reason: Ospf_ifachange.
```

```
Line 14710: %@14677%Mar 19 02:06:30:386 2020 OSPF/6/OSPF_LAST_NBR_DOWN: OSPF 1 Last neighbor down event: Router ID: 10.230.255.10 Local address: 10.4.250.130 Remote address: 10.4.250.133 Reason: Ospf_ifachange.
```

```
Line 14711: %@14678%Mar 19 02:06:30:389 2020 OSPF/5/OSPF_NBR_CHG: OSPF 1 Neighbor 10.4.250.133(GigabitEthernet0/1) changed from INIT to DOWN.
```

```
Line 14711: %@14678%Mar 19 02:06:30:389 2020 OSPF/5/OSPF_NBR_CHG: OSPF 1 Neighbor 10.4.250.133(GigabitEthernet0/1) changed from INIT to DOWN.
```

SR88的日志里面提示:

```
Line 27553: %Mar 19 10:07:09:268 2020 QHRC-A-NT-WAN-WRT01 OSPF/6/OSPF_LAST_NBR_DOWN: OSPF 100 Last neighbor down event: Router ID: 10.4.250.130 Local address: 10.4.250.129 R
```

emote address: 10.4.250.130 Reason: DeadInterval timer expired.

Line 27554: %Mar 19 10:07:09:269 2020 QHRC-A-NT-WAN-WRT01 OSPF/5/OSPF\_NBR\_CHG: OS  
PF 100 Neighbor 10.4.250.130(GigabitEthernet7/0/3.2071) changed from EXSTART to DOWN.

查看两个设备有路由，且在MSR36上pingSR88，是通的，且不丢包：

Line 3096: %Mar 18 08:16:26:063 2020 SHELL/6/SHELL\_CMD: -Line=vty0-IPAddr=10.4.250.129-U  
ser=admin; Command is ping -s 1800 -a 10.4.250.130 10.4.250.129

Line 3097: %Mar 18 08:16:27:084 2020 PING/6/PING\_STATISTICS: Ping statistics for  
10.4.250.129: 5 packets transmitted, 5 packets received, 0.0% packet loss, round-trip min/avg/max/st  
d-dev = 31.964/37.473/48.604/6.475 ms.

(4) 在MSR36这一端收集debug ospf event，显示如下：

怀疑是对端88的地址有问题

\*Mar 19 02:11:02:305 2020 OSPF/7/DEBUG:

OSPF: Recv packet from unknown non-shamlink/vlink nbr 10.4.250.129.

\*Mar 19 02:11:02:426 2020 OSPF/7/DEBUG:

OSPF: Recv packet from unknown non-shamlink/vlink nbr 10.4.254.109.

\*Mar 19 02:11:02:427 2020 OSPF/7/DEBUG:

OSPF: Recv packet from unknown non-shamlink/vlink nbr 10.4.254.113.

\*Mar 19 02:11:02:427 2020 OSPF/7/DEBUG:

OSPF: Recv packet from unknown non-shamlink/vlink nbr 10.4.254.237.

\*Mar 19 02:11:02:428 2020 OSPF/7/DEBUG:

OSPF: Recv packet from unknown non-shamlink/vlink nbr 10.4.250.121.

\*Mar 19 02:11:02:429 2020 OSPF/7/DEBUG:

OSPF: Recv packet from unknown non-shamlink/vlink nbr 10.4.250.125.

#### 解决方法

因为是ospf p2p配置，不检查网段，只跟其相连的建立邻居，中间交换网是有问题的，MSR那边应该能收到88这边多个网段的ospf hello组播报文，先收到谁就以谁来建邻居了，两端都配置一下 peer-address-check 进行一下网段检查。

```
ospf network-type p2p [ peer-address-check ]
```

peer-address-check：配置建立邻接关系必须在同一网段的检查功能，即在接收Hello报文时，对端的IP地址与当前接口必须在同一网段。

因此这里通过检查网段信息，可以在两端设备上规避掉这个中间交换网有问题的现象。