过传输网P2P无法建立ospf邻居

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组网及说明

组网如上

问题描述

问题描述：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

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 XX.4.250.130
Neighbor Brief Information

Area: 0.0.0.11

Router ID	Address	Pri	Dead-Time	State	Interface
XX.230.255.XX	XX.4.250.133	1	40	Init/ -	GE0/1

//这里显示故障（主）SR88的接口地址是XX.4.250.133

XX.4.255.177	XX.4.248.129	1	31	Full/ -	Vlan30

在SR88上查看MSR36状态如下：

XX.4.250.130	XX.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XX.4.250.129，与上面的地址不符。

Interface: XX.4.250.129 (GigabitEthernet7/0/3.2071) --> XX.4.250.130
Cost: 1 State: P-2-P Type: PTP MTU: 1500
Timers: Hello XX, Dead 40, Poll 40, Retransmit 5, Transmit Delay 1
FRR backup: Enabled
Enabled by network configuration
interface GigabitEthernet7/0/3.2071
description To_****
ip address XX.4.250.129 255.255.255.252
ospf network-type p2p
vlan-type dot1q vid 2071
而这个XX.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XX.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 147XX: %@14677%Jan 19 02:06:30:386 2023 OSPF/6/OSPF_LAST_NBR_DOWN: OSPF 1 Last neighbor down event: Router ID: XX.230.255.XX Local address: XX.4.250.130 Remote address: XX.4.250.133 Reason: Ospf_ifachange.
Line 147XX: %@14677%Jan 19 02:06:30:386 2023 OSPF/6/OSPF_LAST_NBR_DOWN: OSPF 1 Last neighbor down event: Router ID: XX.230.255.XX Local address: XX.4.250.130 Remote address: XX.4.250.133 Reason: Ospf_ifachange.
Line 14711: %@14678%Jan 19 02:06:30:389 2023 OSPF/5/OSPF_NBR_CHG: OSPF 1 Neighbor XX.4.250.133(GigabitEthernet0/1) changed from INIT to DOWN.
Line 14711: %@14678%Jan 19 02:06:30:389 2023 OSPF/5/OSPF_NBR_CHG: OSPF 1 Neighbor XX.4.250.133(GigabitEthernet0/1) changed from INIT to DOWN.

SR88的日志里面提示：

Line 27553: %Jan 19 XX:07:09:268 2023 QHRC-A-NT-WAN-WRT01 OSPF/6/OSPF_LAST_NBR_DOWN: OSPF XX0 Last neighbor down event: Router ID: XX.4.250.130 Local address: XX.4.250.129 Remote address: XX.4.250.130 Reason: DeadInterval timer expired.
Line 27554: %Jan 19 XX:07:09:269 2023 QHRC-A-NT-WAN-WRT01 OSPF/5/OSPF_NBR_CHG: OSPF XX0 Neighbor XX.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: %Jan 18 08:16:26:063 2023 SHELL/6/SHELL_CMD: -Line=vty0-IPAddr=XX.4.250.129-User=admin; Command is ping -s 1800 -a XX.4.250.130 XX.4.250.129
Line 3097: %Jan 18 08:16:27:084 2023 PING/6/PING_STATISTICS: Ping statistics for XX.4.250.129: 5 packets transmitted, 5 packets received, 0.0% packet loss, round-trip min/avg/max/std-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 2023 OSPF/7/DEBUG:

OSPF: Recv packet from unknown non-shamlink/vlink nbr XX.4.250.129.

*Mar 19 02:11:02:426 2023 OSPF/7/DEBUG:

OSPF: Recv packet from unknown non-shamlink/vlink nbr XX.4.254.XX9.

*Mar 19 02:11:02:427 2023 OSPF/7/DEBUG:

OSPF: Recv packet from unknown non-shamlink/vlink nbr XX.4.254.XX3.

*Mar 19 02:11:02:427 2023 OSPF/7/DEBUG:

OSPF: Recv packet from unknown non-shamlink/vlink nbr XX.4.254.237.

*Mar 19 02:11:02:428 2023 OSPF/7/DEBUG:

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

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。