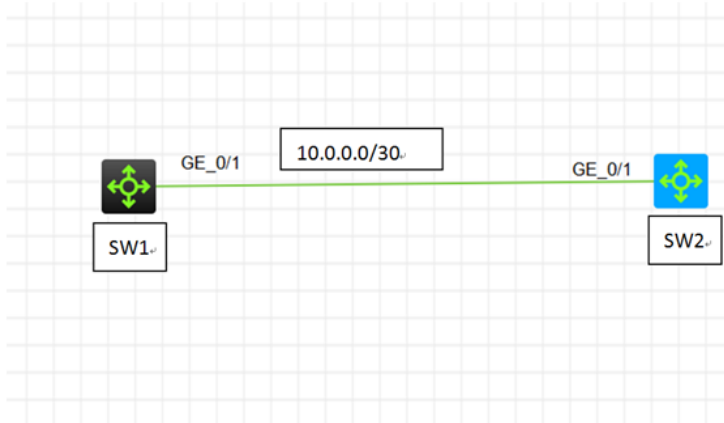


知 某局点OSPF邻居无法建立的解决办法6-HELLO: Hello-time mismatch (第二种现象)

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组网及说明

本案例为OSPF HELLO: Hello-time mismatch的故障复现，网络拓扑图如下：



问题描述

通过dis ospf statistics error查看，具体反馈如下：

```
[SW1]dis ospf statistics error

OSPF Process 1 with Router ID 1.1.1.1
OSPF Packet Error Statistics

0      : Router ID confusion      0      : Bad packet
0      : Bad version              0      : Bad checksum
0      : Bad area ID             0      : Drop on unnumbered link
0      : Bad virtual link        0      : Bad authentication type
0      : Bad authentication key  0      : Packet too small
0      : Neighbor state low      0      : Transmit error
0      : Interface down          0      : Unknown neighbor
0      : HELLO: Netmask mismatch 11     : HELLO: Hello-time mismatch
0      : HELLO: Dead-time mismatch 0     : HELLO: Ebit option mismatch
0      : DD: MTU option mismatch  0     : DD: Unknown LSA type
0      : DD: Ebit option mismatch 0     : ACK: Bad ack
0      : ACK: Unknown LSA type    0     : REQ: Empty request
0      : REQ: Bad request         0     : UPD: LSA checksum bad
0      : UPD: Unknown LSA type    0     : UPD: Less recent LSA

[SW1]
```

```
[SW2]dis ospf statistics error

OSPF Process 1 with Router ID 2.2.2.2
OSPF Packet Error Statistics

0      : Router ID confusion      0      : Bad packet
0      : Bad version              0      : Bad checksum
0      : Bad area ID             0      : Drop on unnumbered link
0      : Bad virtual link        0      : Bad authentication type
0      : Bad authentication key  0      : Packet too small
0      : Neighbor state low      0      : Transmit error
0      : Interface down          0      : Unknown neighbor
0      : HELLO: Netmask mismatch 32     : HELLO: Hello-time mismatch
0      : HELLO: Dead-time mismatch 0     : HELLO: Ebit option mismatch
0      : DD: MTU option mismatch  0     : DD: Unknown LSA type
0      : DD: Ebit option mismatch 0     : ACK: Bad ack
0      : ACK: Unknown LSA type    0     : REQ: Empty request
0      : REQ: Bad request         0     : UPD: LSA checksum bad
0      : UPD: Unknown LSA type    0     : UPD: Less recent LSA

[SW2]
```

过程分析

根据反馈，发现SW1与SW2在HELLO: Hello-time mismatch的错误数量都有增长，可能是SW1与SW2的hello计时器不一致，也有可能是ospf网络类型不一致导致的，需要查看具体的配置：

SW1:

```
ospf 1 router-id 1.1.1.1
area 0.0.0.0
network 1.1.1.1 0.0.0.0
network 10.0.0.1 0.0.0.0
#
interface LoopBack0
ip address 1.1.1.1 255.255.255.255
#
```

```
interface GigabitEthernet1/0/1
port link-mode route
combo enable fiber
ip address 10.0.0.1 255.255.255.252
ospf network-type p2p
#
```

SW2:

```
ospf 1 router-id 2.2.2.2
area 0.0.0.0
network 2.2.2.2 0.0.0.0
network 10.0.0.2 0.0.0.0
#
interface LoopBack0
ip address 2.2.2.2 255.255.255.255
#
interface GigabitEthernet1/0/1
port link-mode route
combo enable fiber
ip address 10.0.0.2 255.255.255.252
ospf network-type p2mp
#
```

根据SW1、SW2的配置反馈，SW1的OSPF网络类型是P2P，SW2的OSPF网络类型是P2MP，两种类型不一致是不可以建立OSPF邻居关系的。

解决方法

因此需要将SW1、SW2的OSPF网络类型修改到一致即可，在此修改SW2的OSPF网络类型为P2P，具体配置如下：

```
[SW2]int gi 1/0/1
[SW2-GigabitEthernet1/0/1]undo ospf network-type
[SW2-GigabitEthernet1/0/1]ospf network-type p2p
[SW2-GigabitEthernet1/0/1]quit
[SW2]
```

修改完成后即可正常建立OSPF邻居关系：

```
[SW2]dis ospf peer

      OSPF Process 1 with Router ID 2.2.2.2
      Neighbor Brief Information

Area: 0.0.0.0
Router ID   Address      Pri Dead-Time  State      Interface
1.1.1.1     10.0.0.1    1   39          Full/ -    GE1/0/1
[SW2]
```

```
[SW1]dis ospf peer

      OSPF Process 1 with Router ID 1.1.1.1
      Neighbor Brief Information

Area: 0.0.0.0
Router ID   Address      Pri Dead-Time  State      Interface
2.2.2.2     10.0.0.2    1   35          Full/ -    GE1/0/1
[SW1]
```