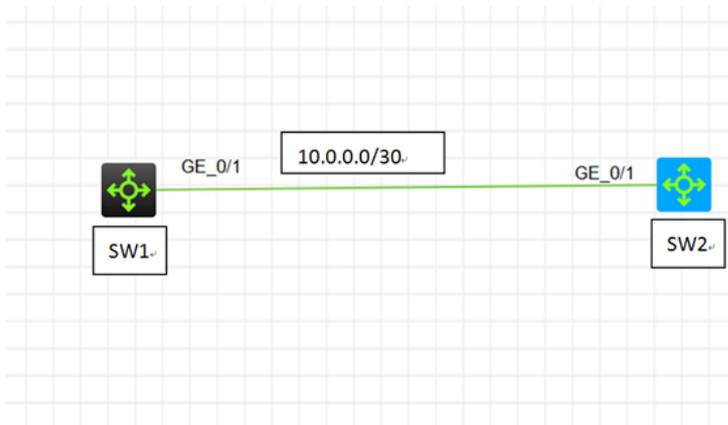


知 某局点OSPF邻居无法建立的解决办法4-HELLO: Hello-time mismatch

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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

SW1与SW2为S5820交换机，在配置OSPF后无法建立OSPF邻居关系。

过程分析

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 22     : 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  5     : 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]
```

根据SW1与SW2的OSPF错误反馈，看到HELLO: Hello-time mismatch的错误数量在增长，说明可能是因为SW1、SW2 hello计时器不一致而导致OSPF邻居无法建立。

查看SW1、SW2的配置：

```
SW1:
router id 1.1.1.1
#
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 timer hello 50
#

```

SW2:

```

router id 2.2.2.2
#
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
#

```

根据SW1、SW2的配置反馈，发现SW1配置了hello的计时器为50秒，从而与SW2的hello的计时器不一致引发了OSPF无法正常建立。

解决方法

需要将SW1、SW2的hello计时器的间隔配置一致，可将SW1的hello计时器的配置去掉，也可配置SW2的hello计时器的配置为50秒，与SW1的一致。

在这里就配置SW2的hello计时器的配置为50秒，配置如下：

```

[SW2]int gi 1/0/1
[SW2-GigabitEthernet1/0/1]ospf timer hello 50
[SW2-GigabitEthernet1/0/1]quit

```

配置完成后，OSPF的邻居即可正常建立：

```

[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   37           Full/DR    GE1/0/1
[SW1]

```

```

[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   34           Full/BDR    GE1/0/1
[SW2]

```