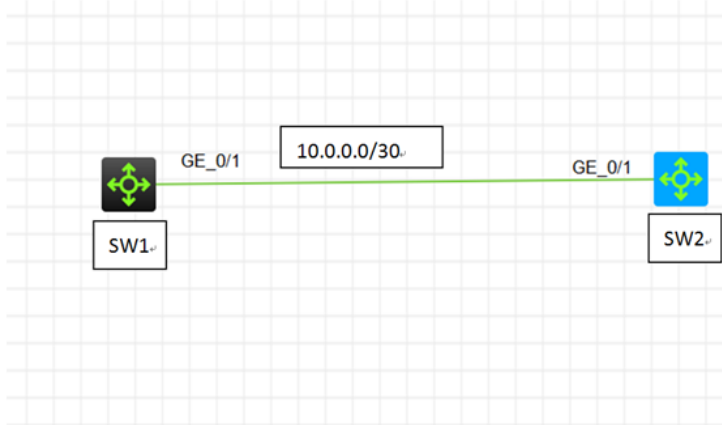


知 某局点OSPF邻居无法建立的解决办法9-HELLO: Ebit option mismatch (第二种现象)

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组网及说明

本案例为OSPF HELLO: Ebit option 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 0      : HELLO: Hello-time mismatch
0      : HELLO: Dead-time mismatch 20     : 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 0      : HELLO: Hello-time mismatch
0      : HELLO: Dead-time mismatch 21     : 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，SW1与SW2的HELLO: Ebit option mismatch的数量一直在增长，可能是由于OSPF区域的属性不一致而引起的，需要查看SW1、SW2的配置来进一步定位：

```
SW1:
ospf 1 router-id 1.1.1.1
area 0.0.0.1
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 0.0.0.1
network 2.2.2.2 0.0.0.0
network 10.0.0.2 0.0.0.0
nssa
#
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 p2p
#
```

根据SW1与SW2的配置反馈，发现SW2的area 0.0.0.1已经配置为nssa区域，而SW1的area 0.0.0.1配置为stub区域，区域属性不一致因此无法建立OSPF邻居关系。

解决方法

需要将SW1的area 0.0.0.1配置为nssa区域，或者将SW2的nssa修改为stub，在这里就将SW1的area 0.0.0.1配置为nssa区域，具体配置过程如下：

```
[SW1]ospf 1
[SW1-ospf-1]area 0.0.0.1
[SW1-ospf-1-area-0.0.0.1]undo stub
[SW1-ospf-1-area-0.0.0.1]nssa
[SW1-ospf-1-area-0.0.0.1]quit
[SW1-ospf-1]quit
[SW1]
```

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]
```