

知 OSPF建立多个邻居后无法正常学习路由问题

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问题描述

1、SWA设备起了3个OSPF进程，分别绑定了3个VPN，并分别配置了三个loopback地址引入OSPF发布给对端，如下：

```
ospf 1 vpn-instance 1
import-route direct
area 0.0.0.0
network 10.1.1.1 0.0.0.0
#
ospf 2 vpn-instance 2
import-route direct
area 0.0.0.0
network 20.1.1.1 0.0.0.0
#
ospf 3 vpn-instance 3
import-route direct
area 0.0.0.0
network 30.1.1.1 0.0.0.0
[SWA]display ip interface brief
```

Interface	Physical	Protocol	IP address	VPN instance	Description
Loop1	up	up(s)	192.168.1.1	1	--
Loop2	up	up(s)	192.168.2.1	2	--
Loop3	up	up(s)	192.168.3.1	3	--

2、SWB设备只启用1个OSPF进程，来学习对端的三个loopback接口的路由

```
ospf 1 router-id 4.4.4.4 vpn-instance 100
area 0.0.0.0
network 10.1.1.2 0.0.0.0
network 20.1.1.2 0.0.0.0
network 30.1.1.2 0.0.0.0
```

3、在SWB上查看发现，无法同时学习对面的三个地址段路由，时有时无

```
[SWB]dis ip routing-table vpn-instance 100
Destinations : 23      Routes : 23
Destination/Mask Proto Pre Cost      NextHop      Interface
192.168.2.0/24    O ASE2 150 1       10.1.1.1    Vlan10
192.168.3.0/24    O ASE2 150 1       10.1.1.1    Vlan10
```

过程分析

1、SWA上查看发现，一直上报如下router id冲突日志

%Nov 22 16:32:25:388 2022 H3C OSPF/6/OSPF_RTRID_CONFLICT_INTER: OSPF 2 Received newer self-originated ase-LSAs. Possible conflict of router ID 192.168.1.1.

%Nov 22 16:32:30:282 2022 H3C OSPF/6/OSPF_RTRID_CONFLICT_INTER: OSPF 3 Received newer self-originated ase-LSAs. Possible conflict of router ID 192.168.1.1.

%Nov 22 16:32:40:287 2022 H3C OSPF/6/OSPF_RTRID_CONFLICT_INTER: OSPF 1 Received newer self-originated ase-LSAs. Possible conflict of router ID 192.168.1.1.

2、经确认发现，SWA三个进程的router id都是默认未修改，全部都是192.168.1.1，导致冲突。

解决方法

修改SWA上三个OSPF进程的router id后恢复

```
ospf 1 router-id 1.1.1.1 vpn-instance 1
import-route direct
area 0.0.0.0
network 10.1.1.1 0.0.0.0
#
ospf 2 router-id 2.2.2.2 vpn-instance 2
import-route direct
area 0.0.0.0
network 20.1.1.1 0.0.0.0
#
ospf 3 router-id 3.3.3.3 vpn-instance 3
import-route direct
area 0.0.0.0
network 30.1.1.1 0.0.0.0
```

对端SWB上能够正常学习到3条路由如下

```
[SWB]display ip routing-table vpn-instance 100
Destinations : 24      Routes : 24
Destination/Mask Proto Pre Cost      NextHop      Interface
192.168.1.0/24    O ASE2 150 1      10.1.1.1    Vlan10
192.168.2.0/24    O ASE2 150 1      20.1.1.1    Vlan20
192.168.3.0/24    O ASE2 150 1      30.1.1.1    Vlan30
```

