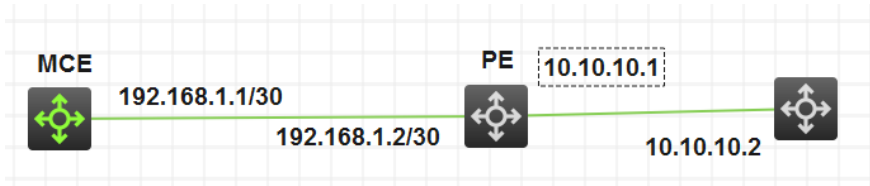


## 知 OSPF路由中多实例环路问题处理

OSPF VPN实例 郑标 2021-09-29 发表

### 组网及说明



- 1、MCE和PE运行OSPF协议。PE将静态路由ip route-static 8.8.8.8 255.255.255.255 10.10.10.2引入OSPF中
- 2、MCE的Gi0/0/1在vpn-instance 1中，且与PE建立OSPF邻居

## 配置步骤

1、通过命令查看引入的外部路由的tag 字段为1 //不同设备的默认tag不一致

```
MCE]dis ospf lsdb ase
      OSPF Process 1 with Router ID 192.168.1.1
      Link State Database
```

```

Type      : External
LS ID     : 8.8.8.8
Adv Rtr   : 10.10.10.10
LS Age    : 1597
Len       : 36
Options   : E
Seq#      : 80000002
Checksum  : 0x5e29
Net Mask  : 255.255.255.255
TOS 0 Metric: 1
E Type    : 2
Forwarding Address : 0.0.0.0
```

```
Tag       : 1
```

2、通过route-tag 0 命令标记本地引入的ospf tag字段为0

```
MCE-ospf-1]dis this
```

```
#
```

```
ospf 1 vpn-instance 1
```

```
route-tag 0
```

```
area 0.0.0.0
```

```
network 192.168.1.0 0.0.0.
```

查看路由表，引入的路由学到

```
[MCE-ospf-1]dis ip routing-table vpn-instance 1
```

```
Routing Tables: 1
```

```
Destinations : 5    Routes : 5
```

Destination/Mask	Proto	Pre	Cost	NextHop	Interface
8.8.8.8/32	O_ASE	150	1	192.168.1.2	Vlan10
127.0.0.0/8	Direct	0	0	127.0.0.1	InLoop0
127.0.0.1/32	Direct	0	0	127.0.0.1	InLoop0
192.168.1.0/30	Direct	0	0	192.168.1.1	Vlan10
192.168.1.1/32	Direct	0	0	127.0.0.1	InLoop0

3、手工修改标记本地ospf 引入路由的tag字段和pe侧发送过来的外部lsa tag字段相同，同为1，此时是默认开启undo vpn-instance-capability simple，及本地比较tag字段，结果路与表无路由

```
[MCE-ospf-1]route-tag 1
```

```
[MCE-ospf-1]quit
```

```
[MCE]dis ip routing-table vpn-instance 1
```

```
Routing Tables: 1
```

```
Destinations : 4    Routes : 4
```

Destination/Mask	Proto	Pre	Cost	NextHop	Interface
127.0.0.0/8	Direct	0	0	127.0.0.1	InLoop0
127.0.0.1/32	Direct	0	0	127.0.0.1	InLoop0
192.168.1.0/30	Direct	0	0	192.168.1.1	Vlan10
192.168.1.1/32	Direct	0	0	127.0.0.1	InLoop0

4、通过命令vpn-instance-capability simple，关闭tag检测，及关闭ospf实例环路自检功能，即使tag相同冲突，引入的路由同样加入ospf实例路由表中

```
[MCE-ospf-1]vpn-instance-capability simple
```

```
[MCE-ospf-1]dis this
```

```
#
```

```
ospf 1 vpn-instance 1
```

```
vpn-instance-capability simple
```

```
route-tag 1
```

```
area 0.0.0.0
```

```
network 192.168.1.0 0.0.0.3
```

```
#
```

return

[MCE]dis ip routing-table vpn-instance 1

Routing Tables: 1

Destinations : 5      Routes : 5

Destination/Mask	Proto	Pre	Cost	NextHop	Interface
8.8.8.8/32	O_ASE	150	1	192.168.1.2	Vlan10