

知 通过default-route-advertise 发布默认路由后，对端无法正常学习

OSPF 王科 2021-12-01 发表

组网及说明

联通(GE6/4) ---ospf--- (GE2/0/4)电信

问题描述

联通侧路由器与电信侧路由器建立OSPF，现场希望联通侧路由器能学习到电信侧通过ospf发布的默认路由

联通和电信已经是ospf邻居

电信：

```
=====display ospf peer=====
      OSPF Process 10 with Router ID 10.10.10.2
      Neighbor Brief Information
Area: 0.0.0.0
Router ID   Address      Pri Dead-Time State      Interface
10.10.10.10 10.16.126.29 1 34    Full/DR    GE2/0/1
10.10.10.1  10.16.126.242 1 34    Full/BDR    GE2/0/4
```

联通：

```
=====display ospf peer=====
      OSPF Process 10 with Router ID 10.10.10.1
      Neighbor Brief Information
Area: 0.0.0.0
Router ID   Address      Pri Dead-Time State      Interface
10.10.10.3  10.16.113.202 1 30    Full/BDR    GE6/3
10.10.10.2  10.16.126.241 1 38    Full/DR     GE6/4
```

电信：

```
ospf 10 router-id 10.10.10.2
default-route-advertise cost 10 type 2//发布默认路由
area 0.0.0.0
network 10.10.10.2 0.0.0.0
network 10.16.126.28 0.0.0.3
network 10.16.126.240 0.0.0.3
```

电信路由表：

```
=====display ip routing-table=====
Destinations : 136   Routes : 136
Destination/Mask Proto Pre Cost NextHop Interface
0.0.0.0/0      Static 60 0    218.76.54.193 GE2/0/0
0.0.0.0/32     Direct 0 0    127.0.0.1 InLoop0
```

联通没有电信通过ospf下发的默认路由，只有静态配置的路由表

```
=====display ip routing-table=====
Destinations : 123   Routes : 123
Destination/Mask Proto Pre Cost NextHop Interface
0.0.0.0/0      Static 254 0    110.53.163.193 GE0/2
0.0.0.0/32     Direct 0 0    127.0.0.1 InLoop0
1.1.1.1/32     O_INTRA 10 3    10.16.126.241 GE6/4
10.0.13.66/32  Static 60 0    10.16.126.29 GE6/4
10.0.13.67/32  Static 60 0    10.16.126.29 GE6/4
10.1.67.17/32  Static 60 0    10.16.112.2 GE6/4
10.1.67.18/32  Static 60 0    10.16.112.2 GE6/4
```

过程分析

联通路由器上收集display ospf lsdb

<bj_csxwr1>dis ospf lsdb

OSPF Process 10 with Router ID 10.10.10.1

Link State Database

Area: 0.0.0.0

Type	LinkState ID	AdvRouter	Age	Len	Sequence	Metric
Router	100.1.1.1	100.1.1.1	385	144	8000A374	0
Router	20.1.1.1	20.1.1.1	34	108	8000A5D1	0
Router	1.1.1.1	1.1.1.1	1667	132	8001065F	0
Router	10.10.10.10	10.10.10.10	1576	120	80010765	0
Router	10.10.10.3	10.10.10.3	78	84	80003201	0
Router	10.10.10.2	10.10.10.2	1574	60	80003200	0
Router	10.10.10.1	10.10.10.1	92	60	800031EA	0
Network	10.16.126.241	10.10.10.2	946	32	800031B7	0
Network	10.16.113.201	10.10.10.1	80	32	800000F7	0
Network	10.16.126.29	10.10.10.10	1568	32	80000078	0
Network	10.16.126.21	10.10.10.10	152	32	80000889	0

AS External Database

Type	LinkState ID	AdvRouter	Age	Len	Sequence	Metric
External	0.0.0.0	10.10.10.1	88	36	800004ED	1000
External	0.0.0.0	10.10.10.2	1044	36	80000002	10 //有电信发给联通的0.0.0.0

解决方法

当路由器产生并发布了一个描述缺省路由的Type-5 LSA时，默认情况下路由器不再计算来自其他路由器的缺省路由，**需要指定参数permit-calculate-other**，则路由器仍然会计算来自于其他路由器的缺省路由，现场在联通侧也有配置发布默认路由。

```
ospf 10 router-id 10.10.10.1
```

```
default-route-advertise permit-calculate-other cost 1000 type 2
```

```
area 0.0.0.0
```

```
network 10.10.10.1 0.0.0.0
```

```
network 10.16.113.200 0.0.0.3
```

```
network 10.16.126.240 0.0.0.3
```

```
[H3C]dis ip routing-table
```

```
Destinations : 14    Routes : 14
```

Destination/Mask	Proto	Pre	Cost	NextHop	Interface
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0.0.0.0/0	O_ASE2	150	10	10.16.126.241	GE0/0
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0.0.0.0/32	Direct	0	0	127.0.0.1	InLoop0
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