某局点SR6608 bgp和ospf路由引入异常的经验案例

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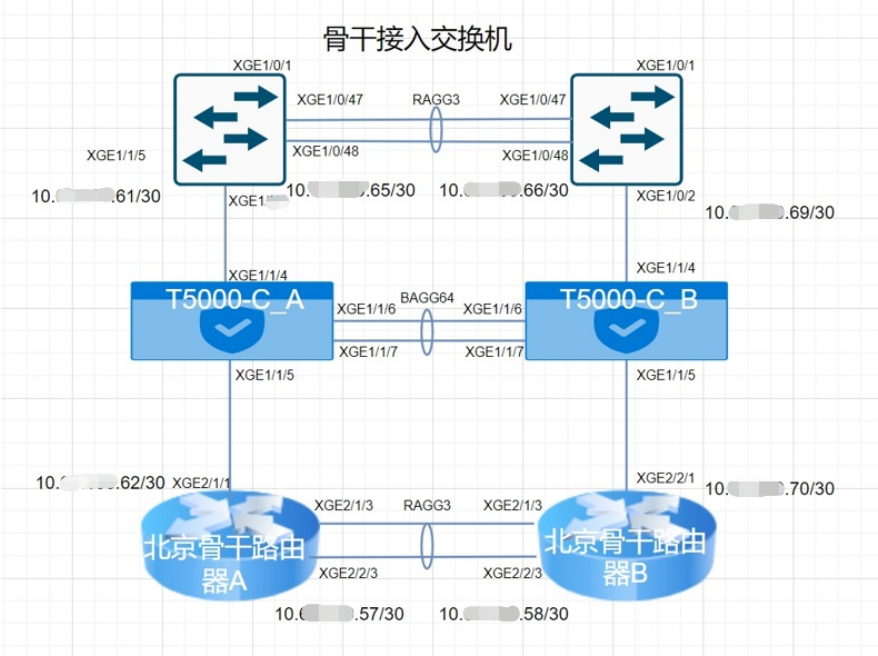
问题描述

现场2台路由器互联是跑的bgp，路由器上联交换机都是跑的ospf area 2。传递的路由都在YW-VPN的vpn实例里面。（T5000是RBM二层部署，可忽略），路由器A和B通过mpibgp建立邻居关系，骨干接入交换机引入了一条外部路由1.1.1.0，现在需要在路由器上路由互引，目前在路由器A上bgp区域引入了ospf路由，在路由器B上将BGP路由引入ospf，ospf路由引入到了bgp区域

SR6608B要实现从bgp邻居SR6608A学习到这条路由引入的路由1.1.1.0，但现场情况是路由器B通过上行直连交换机10.X.X.69学习到了这条路由：



过程分析

1，查看主要配置如下：

路由器A：

```
ospf 1 router-id 10.X.X.233 vpn-instance YW-VPN
 import-route static type 1
 import-route bgp 100 route-policy YW-BGP-TO-OSPF
 preference 195
 preference ase 195
 vpn-instance-capability simple
 area 0.0.0.2
   network 10.X.Y.0 0.0.0.7
   network 10.X.Y.0 0.0.0.7
#
 address-family l2vpn
#
 address-family l2vpn evpn
   peer rr enable
   peer rr reflect-client
   peer rr advertise encap-type srv6
   peer FD00:X:X:X::Y enable
   peer FD00:X:X:X::Y advertise encap-type srv6
#
 ip vpn-instance MGT-VPN
#
  address-family ipv4 unicast
    default local-preference 200
    segment-routing ipv6 best-effort evpn
    segment-routing ipv6 locator MGT evpn
    import-route static
#
 address-family ipv6 unicast
  default local-preference 200
  segment-routing ipv6 best-effort evpn
  segment-routing ipv6 locator MGT-ipv6 evpn
  import-route static
#
ip vpn-instance YW-VPN
#
 address-family ipv4 unicast
   default local-preference 200
   preference 20 200 200
   segment-routing ipv6 best-effort evpn
   segment-routing ipv6 locator YW evpn
   import-route ospf 1 route-policy YW-OSPF-TO-BGP-TAG
 #
 address-family ipv6 unicast
    default local-preference 200
    segment-routing ipv6 best-effort evpn
    segment-routing ipv6 locator YW-ipv6 evpn
```

路由器B：

```
ospf 1 router-id 10.X.X.234 vpn-instance YW-VPN
 import-route static type 1
 import-route bgp route-policy YW-BGP-TO-OSPF
 silent-interface Ten-GigabitEthernet2/3/0
 silent-interface Ten-GigabitEthernet2/3/1
 preference 215
 preference ase 220
 vpn-instance-capability simple
 area 0.0.0.2
```

```
address-family l2vpn evpn
 peer rr enable
 peer rr reflect-client
 peer rr advertise encap-type srv6
 peer FD00:X:X:X::1 enable
 peer FD00:X:X:X::1 advertise encap-type srv6
```

解决方法

经确认，设备实现就是这样的，因为路由器B的bgp里也引入了ospf路由，所以在bgp路由表里，从路由器A学到的路由与本地路由相比，优选了本地路由；然后bgp路由和ospf路由相比，因为ospf是原始路由，无论怎么调整优先级，派生路由都不会取代原始路由，所以B这台的路由肯定是从ospf学到的

```
ip vpn-instance YW-VPN
 #
 address-family ipv4 unicast
  preference 20 200 205
  segment-routing ipv6 best-effort evpn
  segment-routing ipv6 locator YW evpn
  import-route ospf 1 route-policy YW-OSPF-TO-BGP-TAG
  network 10.X.X.X 255.255.255.248
  network 10.X.X.Y 255.255.255.248
 #
 address-family ipv6 unicast
  segment-routing ipv6 best-effort evpn
  segment-routing ipv6 locator YW-ipv6 evpn
```

2，查看两个设备上有效的bgp路由信息没有引入的这条路由：

```
<BJBJ-GGRT-SR6608_A>     dis ip routing-table vpn-instance YW-VPN protocol bgp inactive

BGP Routing table status : <Inactive>
Summary count : 4

Destination/Mask    Proto   Pre Cost        NextHop         Interface
10.[redacted].0/29      BGP     200 5           FD[redacted]::  RAGG3
10.[redacted]0/29       BGP     200 0           FD[redacted]::  RAGG3
10.[redacted].60/30     BGP     200 4           FD[redacted]::  RAGG3
10.[redacted]0/25       BGP     200 5           FD[redacted]::  RAGG3

[END] 2023/3/17 15:11:41
```

```
<BJBJ-GGRT-SR6608_B>dis ip routing-table vpn-instance YW-VPN protocol bgp inactive

BGP Routing table status : <Inactive>
Summary count : 1

Destination/Mask    Proto   Pre Cost        NextHop         Interface
10.[redacted].68/30     BGP     200 103         FD[redacted]::  RAGG3
```

3，后来建议现场直接network发布路由，还是没有1.1.1.0的路由：

```
[BJBJ-GGRT-SR6608_A]bgp 100
[BJBJ-GGRT-SR6608_A-bgp-default]ip vpn-instance YW-VPN
[BJBJ-GGRT-SR6608_A-bgp-default-YW-VPN]add ipv4
[BJBJ-GGRT-SR6608_A-bgp-default-ipv4-YW-VPN]network 1.1.1.1 30
```

```
<BJBJ-GGRT-SR6608_A>  dis ip routing-table vpn-instance YW-VPN protocol bgp inactive
BGP Routing table status : <Inactive>
Summary count : 4
Destination/Mask   Proto   Pre Cost        NextHop         Interface
10.X.X.0/29      BGP     200 5           FDXX:X:X:X:5::  RAGG3
10.X.Y.0/29      BGP     200 0           FDXX:X:X:X:5::  RAGG3
10.X.Y.60/30     BGP     200 4           FDXX:X:X:X:5::  RAGG3
10.X.Y.0/25      BGP     200 5           FDXX:X:X:X:5::  RAGG3
<BJBJ-GGRT-SR6608_B>dis ip routing-table vpn-instance YW-VPN protocol bgp inactive
BGP Routing table status : <Inactive>
Summary count : 1
Destination/Mask   Proto   Pre Cost        NextHop         Interface
10.X.X.68/30     BGP     200 103         FDXX:X:X:X:1::  RAGG3
```

发现即使发布路由在生效路由中也不存在