

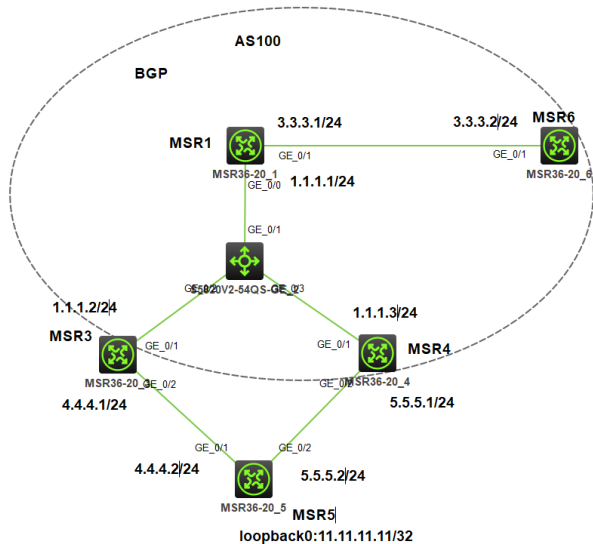
组网及说明

组网如下:

MSR1 MSR3 MSR4 MSR6建立IBGP邻居

MSR1从MSR3与MSR4学习到11.11.11.0的路由, 并且在MSR1的BGP视图下开启balance 2, 即BGP路由表中2条等价路由都加IP路由表, 默认情况下IP路由表中只有一条最优的路由

MSR1作为反射器, 将11.11.11.0的路由反射给MSR6



BGP关键配置:

MSR1

```
bgp 100
vpn-route cross multipath
peer 1.1.1.2 as-number 100
peer 1.1.1.2 ignore-originatorid
peer 1.1.1.3 as-number 100
peer 1.1.1.3 ignore-originatorid
peer 3.3.3.2 as-number 100
#
address-family ipv4 unicast
dampening
balance 4
import-route direct
peer 1.1.1.2 enable
peer 1.1.1.2 allow-as-loop 1
peer 1.1.1.2 reflect-client
peer 1.1.1.2 keep-all-routes
peer 1.1.1.3 enable
peer 1.1.1.3 allow-as-loop 1
peer 1.1.1.3 reflect-client
peer 1.1.1.3 keep-all-routes
peer 3.3.3.2 enable
peer 3.3.3.2 next-hop-local
peer 3.3.3.2 keep-all-routes
```

MSR3

```
bgp 100
peer 1.1.1.1 as-number 100
#
address-family ipv4 unicast
import-route static
```

```
peer 1.1.1.1 enable
```

```
MSR4
```

```
bgp 100
```

```
peer 1.1.1.1 as-number 100
```

```
#
```

```
问题现象:
```

```
address-family ipv4 unicast
```

```
在MSR6的BGP路由表中,11.11.11.0/24的路由只看到一条
```

```
import-route static
```

```
需要注意,要想11.11.11.0的路由加路由表,需要有下一跳1.1.1.2的路由,因为1.1.1.2非直连,需要
```

```
peer 1.1.1.1 enable
```

```
走路由迭代
```

```
[RT6]display bgp routing-table ipv4
```

```
MSR6
```

```
Total number of routes: 3
```

```
bgp 100
```

```
peer 3.3.3.1 as-number 100
```

```
BGP local router ID is 4.4.4.2
```

```
#
```

```
Status codes: * - valid, > - best, d - dampened, h - history,
```

```
address-family ipv4 unicast
```

```
s - suppressed, S - stale, i - internal, e - external
```

```
import-route static
```

```
Origin: i - IGP, e - EGP, ? - incomplete
```

```
peer 3.3.3.1 enable
```

Network	NextHop	MED	LocPrf	PrefVal	Path/Ogn
* >i 1.1.1.0/24	3.3.3.1	0	100	0	?
* >i 3.3.3.0/24	3.3.3.1	0	100	0	?
* >i <b>11.11.0/24</b>	<b>1.1.1.2</b>	<b>0</b>	<b>100</b>	<b>0</b>	<b>?11.</b>

## 过程分析

问题分析:

经确认, MSR6只学习到一条11.11.11.0的BGP路由是正常现象, 因为MSR1的BGP路由表中如果存在多条等价路由, 向外发布的时候只会选择一条最优的发布, 而且无论如何, MSR6到11.11.11.0/24都要先经过1.1.1.2到达MSR1, 而MSR1上是有两台11.11.11.0/24的等价路由的

MSR1的路由表如下:

Destinations : 14    Routes : 15

Destination/Mask	Proto	Pre	Cost	NextHop	Interface
0.0.0.0/32	Direct	0	0	127.0.0.1	InLoop0
1.1.1.0/24	Direct	0	0	1.1.1.1	GE0/0
1.1.1.1/32	Direct	0	0	127.0.0.1	InLoop0
1.1.1.255/32	Direct	0	0	1.1.1.1	GE0/0
3.3.3.0/24	Direct	0	0	3.3.3.1	GE0/1
3.3.3.1/32	Direct	0	0	127.0.0.1	InLoop0
3.3.3.255/32	Direct	0	0	3.3.3.1	GE0/1
<b>11.11.11.0/24</b>	<b>BGP</b>	<b>255</b>	<b>0</b>	<b>1.1.1.2</b>	<b>GE0/0</b>
	<b>BGP</b>	<b>255</b>	<b>0</b>	<b>1.1.1.3</b>	<b>GE0/0</b>

在MSR6上可以ping通11.11.11.11

[RT6]ping 11.11.11.11

Ping 11.11.11.11 (11.11.11.11): 56 data bytes, press CTRL+C to break

56 bytes from 11.11.11.11: icmp\_seq=0 ttl=253 time=2.000 ms

56 bytes from 11.11.11.11: icmp\_seq=1 ttl=253 time=1.000 ms

56 bytes from 11.11.11.11: icmp\_seq=2 ttl=253 time=2.000 ms

56 bytes from 11.11.11.11: icmp\_seq=3 ttl=253 time=2.000 ms

56 bytes from 11.11.11.11: icmp\_seq=4 ttl=253 time=6.000 ms

## 解决方法

解决方案:

现场属于正常现象, 无需关注

