

## 知 某局点使用BGP的graceful-restart功能切换丢包1秒钟

GRE VPN 孔德飞 2022-01-12 发表

### 组网及说明

在BGP视图下执行graceful-restart会导致BGP重新协商，然后BGP会中断1秒左右

组网：

Loopback10: 192.168.114.1)F1070(G1/0/9 10.11.10.10)-----三层设备----- (G1/0/910.11.10.100) F5020 (loopback10 192.168.110.1)

基本配置：

F1070

```
interface LoopBack10
```

```
ip binding vpn-instance 123
```

```
ip address 192.168.114.1 255.255.255.0
```

```
interface GigabitEthernet1/0/9
```

```
port link-mode route
```

```
ip binding vpn-instance 123
```

```
ip address 10.11.10.10 255.255.255.0
```

```
#
```

```
ip vpn-instance 123
```

```
route-distinguisher 10:11 (必须配置)
```

```
vpn-target 10:10 import-extcommunity
```

```
vpn-target 10:10 export-extcommunity
```

```
bgp 100
```

```
graceful-restart
```

```
#
```

```
ip vpn-instance 123
```

```
router-id 111.111.111.111
```

```
peer 10.11.10.100 as-number 200
```

```
#
```

```
address-family ipv4 unicast
```

```
preference 10 10 10 (必须配置，否则BGP不会加入IP路由表，因为缺省优先级是255)
```

```
import-route direct
```

```
network 192.168.114.1 255.255.255.255
```

```
peer 10.11.10.100 enable
```

```
#
```

**策略：不要忘记接口加入安全域，并且策略下要配置VRF**

```
security-policy ip
```

```
rule 9999 name 9999
```

```
action pass
```

```
vrf 123
```

```
#
```

F5020

```
interface LoopBack10
```

```
ip binding vpn-instance 123
```

```
ip address 192.168.110.1 255.255.255.0
```

```
#
```

```
interface GigabitEthernet1/0/9
```

```
port link-mode route
```

```
ip binding vpn-instance 123
```

```
ip address 10.11.10.100 255.255.255.0
```

```
ip vpn-instance 123
```

```
route-distinguisher 10:11
```

```

vpn-target 10:10 import-extcommunity
vpn-target 10:10 export-extcommunity
#

```

### 问题描述

```

#
配置完成之后分别在F1070与F5020上查看BGP邻居与BGP路由表
in vpn-instance 123
F1070
router-id 222.222.222.222
[F1070-bgp-default]dis bgp peer ipv4 vpn-instance 123
peer 10.11.10.10 as-number 100

#
BGP local router ID: 111.111.111.111
address-family ipv4 unicast
Local AS number: 100
preference 10 10
Total number of peers: 1      Peers in established state: 1
import-route direct

network 192.168.110.1 255.255.255.255
* - Dynamically created peer
peer 10.11.10.10 enable
Peer          AS  MsgRcvd  MsgSent  OutQ  PrefRcv  Up/Down  State
#

```

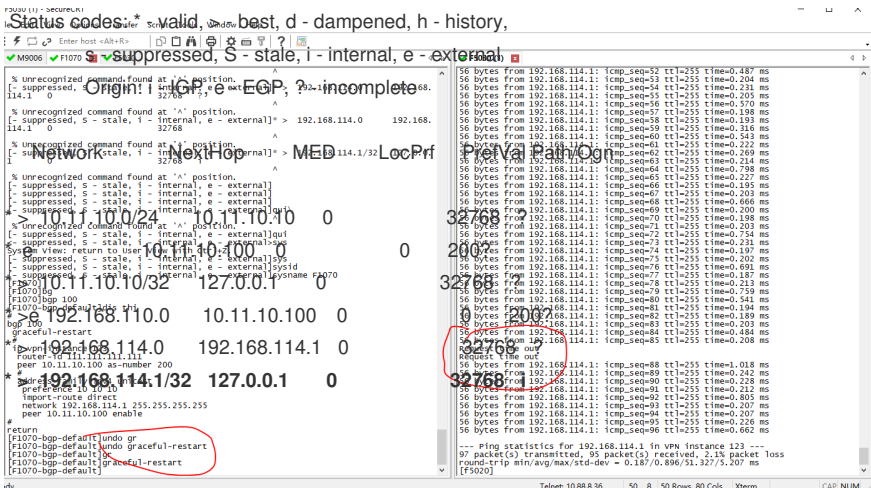
```

策略：不要忘记接口加入安全域，并且策略下要配置VRF
10.11.10.100 200 23 18 0 2 00:13:36 Established
security-policy ip
rule 9999 name 9999
[F1070-bgp-default]dis bgp routing-table ipv4 vpn-instance 123
action pass

vrf 123
Total number of routes: 6

```

BGP local router ID is 111.111.111.111



F5020

```
[F5020_IRF-bgp-default]dis bgp peer ipv4 vpn-instance 123
```

BGP local router ID: 222.222.222.222

Local AS number: 200

Total number of peers: 1 Peers in established state: 1

\* - Dynamically created peer

```

Peer          AS  MsgRcvd  MsgSent  OutQ  PrefRcv  Up/Down  State
10.11.10.10  100  18      20      0     2 00:12:58 Established

```

```
[F5020_IRF]dis bgp routing-table ipv4 vpn-instance 123
```

Total number of routes: 6

BGP local router ID is 222.222.222.222

```

Status codes: * - valid, > - best, d - dampened, h - history,
s - suppressed, S - stale, i - internal, e - external
Origin: i - IGP, e - EGP, ? - incomplete

```

Network	NextHop	MED	LocPrf	PrefVal	Path/Ogn
* > 10.11.10.0/24	10.11.10.100	0		32768	?
* e 10.11.10.10	0		0	100?	
* > 10.11.10.100/32	127.0.0.1	0		32768	?

```
* > 192.168.110.0 192.168.110.1 0 32768 ?  
* > 192.168.110.1/32 127.0.0.1 0 32768 i  
* >e 192.168.114.0 10.11.10.10 0 0 100?
```

过程分析

该现象属于正常现象，无需关注

在F5020上长ping1000个包，在F1070 BGP视图下执行undo graceful-restart并且重新配置graceful-restart,F5020上ping包会中断2个将近1秒钟

解决方法

不涉及

