

The configuration of BGP4+ Federation In MSR Series

Keywords: MSR;IPv6;BGP4+;Federation

I Requirement for the diagram

Devide AS100 to 3 AS: 1001,1002,1003; Config EBGP and IBGP, make AS mutual r eachable.

II Network topology

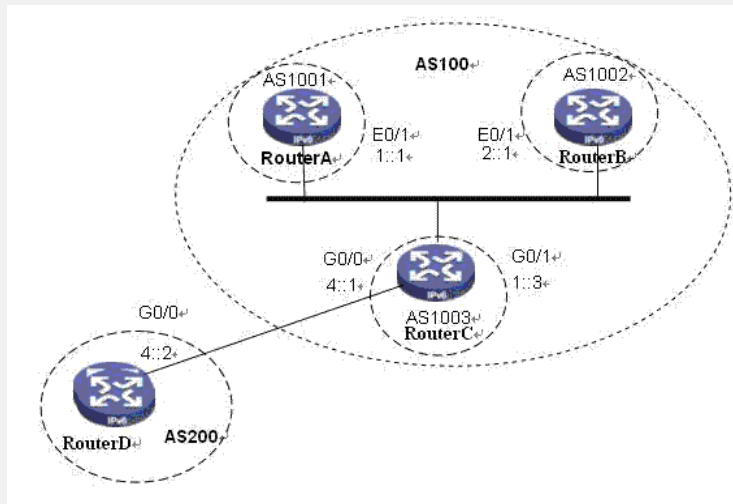


Figure 1 BGP Federation

III Steps of configuration

1. RouterA configuration:

Note: only list the command that related with this case

```

<RouterA-2021>dis cu
#
ipv6
#
interface Ethernet0/1
port link-mode route
ipv6 address 1::1/64
#
interface NULL0
#
interface LoopBack0
ipv6 address 1:1:1::1/128
#
bgp 1001
//set federation id
confederation id 100
//set the peer of federation
confederation peer-as 1002 1003
undo synchronization
#
ipv6-family
network 1:1:1::1 128
undo synchronization
peer 1::2 as-number 1002
peer 1::3 as-number 1003
#
return

```

2. RouterB configuration:

```

<RouterB-2020>dis cu

```

```
#
ipv6
#
vlan 1
#
interface Ethernet0/0
port link-mode route
#
interface Ethernet0/1
port link-mode route
ipv6 address 1::2/64
ipv6 address 2::2/64
#
interface LoopBack0
ipv6 address 2:2:2::2/128
#
bgp 1002
confederation id 100
confederation peer-as 1001 1003
undo synchronization
#
ipv6-family
network 2:2:2::2 128
undo synchronization
peer 1::1 as-number 1001
peer 1::3 as-number 1003
#
return
```

3. RouterC configuration :

```
<RouterC-3020>dis cu
#
ipv6
#
interface LoopBack0
ipv6 address 3:3:3::3/128
#
interface GigabitEthernet0/0
port link-mode route
ipv6 address 4::1/64
#
interface GigabitEthernet0/1
port link-mode route
ipv6 address 1::3/64
#
bgp 1003
confederation id 100
confederation peer-as 1001 1002
import-route direct
undo synchronization
#
ipv6-family
network 1::1 128
network 1::2 128
//import direct routing
import-route direct
undo synchronization
peer 1::1 as-number 1001
peer 1::2 as-number 1002
peer 4::2 as-number 200
#
return
```

4. RouterD configuration :

```
<RouterD-3020>dis cu
#
ipv6
#
interface LoopBack0
ipv6 address 4:4:4::4/128
#
interface GigabitEthernet0/0
port link-mode route
ipv6 address 4::2/64
ip address 4.0.0.2 255.255.255.0
#
bgp 200
undo synchronization
#
ipv6-family
network 4:4:4::4 128
undo synchronization
peer 4::1 as-number 100
#
return
```

IV Key notes in the configuration

- 1) In this case, Router A, B, C use the same IPv6 prefix, this is unnecessary. We can use other prefix if need.
- 2) Must import direct route, otherwise, RouterA,B could not ping loopback address of RouterD, because RouterC only advertise the routing info of itself.