

MSR路由器
OSPFv3双进程路由互通功能的配置

关键字: MSR;IPv6;OSPFv3

一、组网需求

利用OSPFv3协议传递路由信息,使RTA、RTC上的loopBack地址可以互通。

试验设备: RTA (MSR20-21), RTB (MSR20-20), RTC (MSR30-20)

二、组网图

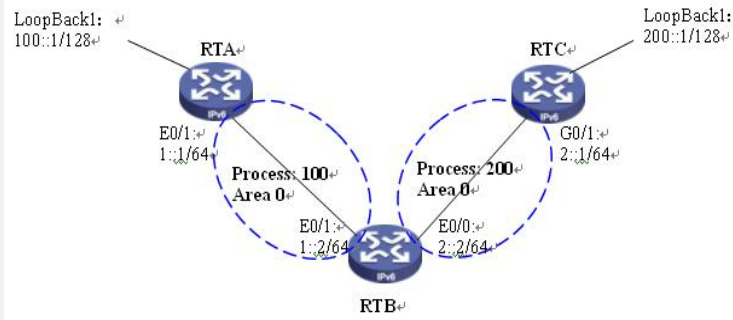


图1 OSPFv3双协议组网图

IP地址列表:

设备	接口	Ipv6地址
RTA	LoopBack1	100::1/128
	E0/1	1::1/64
	Ospf3 router id	1.1.1.1
RTB	E0/0	2::2/64
	E0/1	1::2/64
	Ospf3 router id	2.2.2.2
RTC	LoopBack1	200::1/128
	G0/1	2::1/64
	Ospf3 router id	3.3.3.3

三、配置步骤

```

RTA配置
#
ipv6
#
//配置接口E0/1的IP地址,
//并将地址加入到ospfv3的进程100, 区域0中
#
interface Ethernet0/1
port link-mode route
ipv6 address 1::1/64
ospfv3 100 area 0.0.0.0
//配置接口LoopBack1的IP地址,
//并将地址加入到ospfv3的进程100, 区域0中
#
interface LoopBack1
ipv6 address 100::1/128
ospfv3 100 area 0.0.0.0
//建立进程号为100的进程, 建立区域0.0.0.0
#
ospfv3 100
router-id 1.1.1.1
area 0.0.0.0

RTB配置
    
```

```

#
ipv6
//配置接口E0/0的IP地址,
//并将地址加入到ospfv3的进程200, 区域0中
#
interface Ethernet0/0
port link-mode route
ipv6 address 2::2/64
ospfv3 200 area 0.0.0.0
//配置接口E0/1的IP地址,
//并将地址加入到ospfv3的进程100, 区域0中
#
interface Ethernet0/1
port link-mode route
ipv6 address 1::2/64
ospfv3 100 area 0.0.0.0

//建立进程号为100的ospfv3进程, 建立区域0.0.0.0
#
ospfv3 100
router-id 21.21.21.21
//引入直连路由
import-route direct
//引入ospfv3进程号为200的路由
import-route ospfv3 200
area 0.0.0.0
//建立进程号为200的ospfv3进程, 建立区域0.0.0.0
#
ospfv3 200
router-id 22.22.22.22
//引入直连路由
import-route direct
//引入ospfv3进程号为100的路由
import-route ospfv3 100
area 0.0.0.0
#
return

```

RTC配置

```

#
ipv6
#
interface NULL0
//配置接口LoopBack1的IP地址,
//并将地址加入到ospfv3的进程100, 区域0中
#
interface LoopBack1
ipv6 address 200::1/128
ospfv3 200 area 0.0.0.0
#
interface GigabitEthernet0/0
port link-mode route
//配置接口E0/1的IP地址,
//并将地址加入到ospfv3的进程200, 区域0中
#
interface GigabitEthernet0/1
port link-mode route
ipv6 address 2::1/64
ospfv3 200 area 0.0.0.0
//建立进程号为200的进程, 建立区域0.0.0.0
#
ospfv3 200
router-id 3.3.3.3
area 0.0.0.0

```

四、试验分析

完成以上配置后, RTC与RTA各地址之间可以互通:

```
[RTA-2021]ping ipv6 200::1
```

```

PING 200::1 : 56 data bytes, press CTRL_C to break
  Reply from 200::1:
    bytes=56 Sequence=1 hop limit=63 time = 2 ms
  Reply from 200::1:
    bytes=56 Sequence=2 hop limit=63 time = 2 ms
  Reply from 200::1:
    bytes=56 Sequence=3 hop limit=63 time = 2 ms
  Reply from 200::1:
    bytes=56 Sequence=4 hop limit=63 time = 2 ms
  Reply from 200::1:
    bytes=56 Sequence=5 hop limit=63 time = 2 ms

```

```

--- 200::1 ping statistics ---
 5 packet(s) transmitted

```

5 packet(s) received
0.00% packet loss
round-trip min/avg/max = 2/2/2 ms

RTB的ospfv3路由表如下:

<RTB-2020>display ospfv routing

E1 - Type 1 external route, IA - Inter area route, I - Intra area route
E2 - Type 2 external route, * - Selected route

OSPFv3 Router with ID (21.21.21.21) (Process 100)

*Destination: 1::/64
Type : I Cost : 1
NextHop : directly-connected Interface: Eth0/1

*Destination: 100::1/128
Type : I Cost : 1
NextHop : FE80::20F:E2FF:FE3A:FF54 Interface: Eth0/1

OSPFv3 Router with ID (22.22.22.22) (Process 200)

*Destination: 2::/64
Type : I Cost : 1
NextHop : directly-connected Interface: Eth0/0

*Destination: 200::1/128
Type : I Cost : 1
NextHop : FE80::20F:E2FF:FE3A:FE8C Interface: Eth0/0