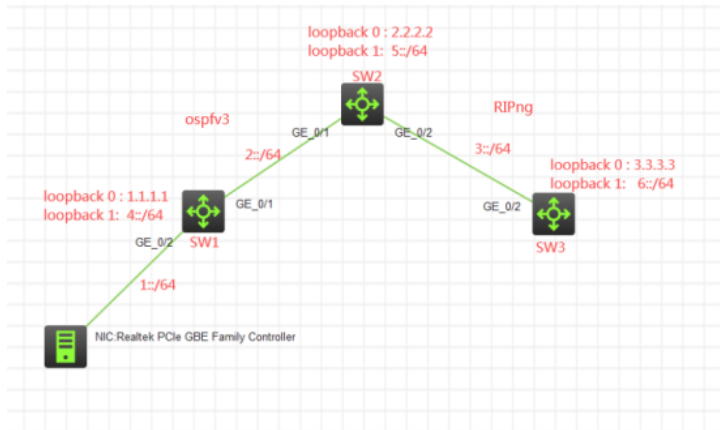


组网及说明



组网说明:

本案例采用H3C HCL模拟器的S5820来模拟IPv6 ospfv3与RIPng路由重分布的典型组网配置。SW1与SW2运行OSPFV3路由协议，SW2与SW3运行RIPng路由协议，为了实现物理机能够PING通SW3，因此需要在SW2配置OSPFV3与RIPng路由重分布。

配置步骤

- 1、按照网络拓扑图正确配置IP地址
- 2、SW1与SW2运行OSPFV3路由协议
- 3、SW2与SW3运行RIPng路由协议
- 4、SW2配置OSPFV3与RIPng路由重分布

配置关键点

SW1:

```
<H3C>sys
System View: return to User View with Ctrl+Z.
[H3C]sysname SW1
[SW1]int gi 1/0/2
[SW1-GigabitEthernet1/0/2]port link-mode route
[SW1-GigabitEthernet1/0/2]ipv6 address 1::1 64
[SW1-GigabitEthernet1/0/2]quit
[SW1]int gi 1/0/1
[SW1-GigabitEthernet1/0/1]port link-mode route
[SW1-GigabitEthernet1/0/1]description <connect to SW2>
[SW1-GigabitEthernet1/0/1]ipv6 address 2::1 64
[SW1-GigabitEthernet1/0/1]quit
[SW1]int loopback 0
[SW1-LoopBack0]ip address 1.1.1.1 32
[SW1-LoopBack0]quit
[SW1]int loopback 1
[SW1-LoopBack1]ipv6 address 4::1 64
[SW1-LoopBack1]quit
```

SW1 OSPFV3关键配置点:

```
[SW1]ospfv3 1
[SW1-ospfv3-1]import-route direct
[SW1-ospfv3-1]router-id 1.1.1.1
[SW1-ospfv3-1]quit
[SW1]int loopback 1
[SW1-LoopBack1]ospfv3 1 area 0
[SW1-LoopBack1]quit
[SW1]int gi 1/0/1
```

```
[SW1-GigabitEthernet1/0/1]ospfv3 1 area 0
[SW1-GigabitEthernet1/0/1]quit
[SW1]int gi 1/0/2
[SW1-GigabitEthernet1/0/2]ospfv3 1 area 0
[SW1-GigabitEthernet1/0/2]quit
```

SW2:

```
<H3C>sys
System View: return to User View with Ctrl+Z.
[H3C]sysname SW2
[SW2]int loopback 0
[SW2-LoopBack0]ip address 2.2.2.2 32
[SW2-LoopBack0]quit
[SW2]int loopback 1
[SW2-LoopBack1]ipv6 address 5::1 64
[SW2-LoopBack1]quit
[SW2]int gi 1/0/1
[SW2-GigabitEthernet1/0/1]port link-mode route
[SW2-GigabitEthernet1/0/1]des <connect to SW1>
[SW2-GigabitEthernet1/0/1]ipv6 address 2::2 64
[SW2-GigabitEthernet1/0/1]quit
[SW2]int gi 1/0/2
[SW2-GigabitEthernet1/0/2]port link-mode route
[SW2-GigabitEthernet1/0/2]des <connect to SW3>
[SW2-GigabitEthernet1/0/2]ipv6 address 3::2 64
[SW2-GigabitEthernet1/0/2]quit
```

SW2 OSPFV3与RIPng重分布关键配置点:

```
[SW2]ospfv3 1
[SW2-ospfv3-1]import-route direct
[SW2-ospfv3-1]import-route ripng 1
[SW2-ospfv3-1]router-id 2.2.2.2
[SW2-ospfv3-1]quit
[SW2]ripng 1
[SW2-ripng-1]import-route direct
[SW2-ripng-1]import-route ospfv3 1
[SW2-ripng-1]quit
[SW2]int loopback 1
[SW2-LoopBack1]ospfv3 1 area 0
[SW2-LoopBack1]quit
[SW2]int gi 1/0/2
[SW2-GigabitEthernet1/0/2]ripng 1 enable
[SW2-GigabitEthernet1/0/2]quit
[SW2]int gi 1/0/1
[SW2-GigabitEthernet1/0/1]ospfv3 1 area 0
[SW2-GigabitEthernet1/0/1]quit
```

SW3:

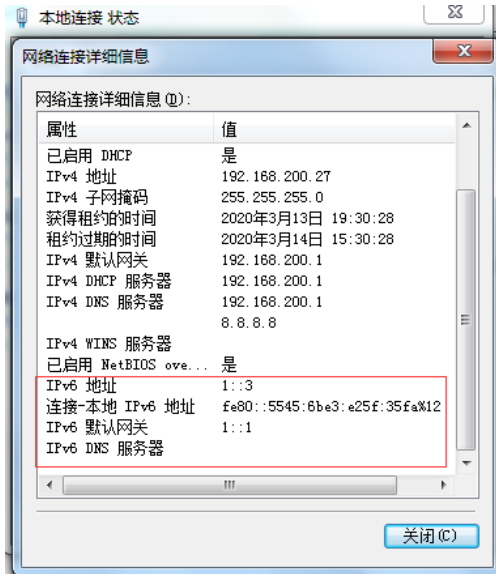
```
<H3C>sys
System View: return to User View with Ctrl+Z.
[H3C]sysname SW3
[SW3]int loopback 0
[SW3-LoopBack0]ip address 3.3.3.3 32
[SW3-LoopBack0]quit
[SW3]int loopback 1
[SW3-LoopBack1]ipv6 address 6::1 64
[SW3-LoopBack1]quit
[SW3]int gi 1/0/2
[SW3-GigabitEthernet1/0/2]port link-mode route
[SW3-GigabitEthernet1/0/2]des <connect to SW2>
[SW3-GigabitEthernet1/0/2]ipv6 address 3::1 64
[SW3-GigabitEthernet1/0/2]quit
```

SW3 RIPng关键配置点：

```
[SW3]ripng 1
[SW3-ripng-1]import-route direct
[SW3-ripng-1]quit
[SW3]int loopback 1
[SW3-LoopBack1]ripng 1 enable
[SW3-LoopBack1]quit
[SW3]int gi 1/0/2
[SW3-GigabitEthernet1/0/2]ripng 1 enable
[SW3-GigabitEthernet1/0/2]quit
```

测试：

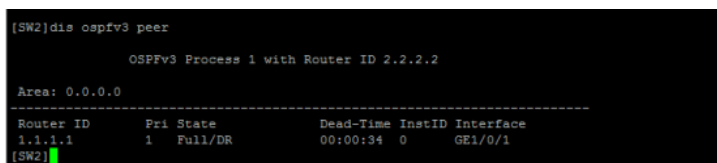
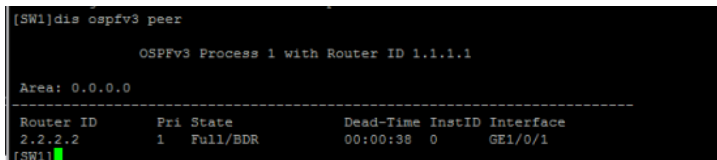
物理机填写IPv6地址：



物理机能PING通SW3的loopback 1:



分别查看SW1、SW2的OSPFV3邻居信息:



分别查看SW1、SW2、SW3的IPv6路由表:

[SW1]dis ipv6 routing-table

Destinations : 13 Routes : 13

```

Destination: ::1/128          Protocol : Direct
NextHop   : ::1              Preference: 0
Interface : InLoop0          Cost     : 0

Destination: 1::/64          Protocol : Direct
NextHop   : ::              Preference: 0
Interface : GE1/0/2          Cost     : 0

Destination: 1::1/128        Protocol : Direct
NextHop   : ::1             Preference: 0
Interface : InLoop0          Cost     : 0

Destination: 2::/64          Protocol : Direct
NextHop   : ::              Preference: 0
Interface : GE1/0/1          Cost     : 0

Destination: 2::1/128        Protocol : Direct
NextHop   : ::1             Preference: 0
Interface : InLoop0          Cost     : 0

Destination: 3::/64          Protocol : O_ASE2
NextHop   : FE80::52DB:69FF:FE05:206 Preference: 150
Interface : GE1/0/1          Cost     : 1

Destination: 4::/64          Protocol : Direct
NextHop   : ::              Preference: 0
Interface : Loop1            Cost     : 0

Destination: 4::1/128        Protocol : Direct
NextHop   : ::1             Preference: 0
Interface : InLoop0          Cost     : 0

Destination: 5::/64          Protocol : O_ASE2
NextHop   : FE80::52DB:69FF:FE05:206 Preference: 150
Interface : GE1/0/1          Cost     : 1

Destination: 5::1/128        Protocol : O_INTRA
NextHop   : FE80::52DB:69FF:FE05:206 Preference: 10
Interface : GE1/0/1          Cost     : 1

Destination: 6::/64          Protocol : O_ASE2
NextHop   : FE80::52DB:69FF:FE05:206 Preference: 150
Interface : GE1/0/1          Cost     : 1

Destination: FE80::/10       Protocol : Direct
NextHop   : ::              Preference: 0
Interface : InLoop0          Cost     : 0

Destination: FF00::/8        Protocol : Direct
NextHop   : ::              Preference: 0
Interface : NULL0            Cost     : 0

```

[SW1]

[SW2]dis ipv6 routing-table

Destinations : 13 Routes : 13

```

Destination: ::1/128          Protocol : Direct
NextHop   : ::1              Preference: 0
Interface : InLoop0          Cost     : 0

Destination: 1::/64          Protocol : O_INTRA
NextHop   : FE80::52DB:61FF:FE71:106 Preference: 10

```

```

Interface : GE1/0/1          Cost : 2

Destination: 2::/64          Protocol : Direct
NextHop : ::                Preference: 0
Interface : GE1/0/1          Cost : 0

Destination: 2::2/128        Protocol : Direct
NextHop : ::1               Preference: 0
Interface : InLoop0          Cost : 0

Destination: 3::/64          Protocol : Direct
NextHop : ::                Preference: 0
Interface : GE1/0/2          Cost : 0

Destination: 3::2/128        Protocol : Direct
NextHop : ::1               Preference: 0
Interface : InLoop0          Cost : 0

Destination: 4::/64          Protocol : O_ASE2
NextHop : FE80::52DB:61FF:FE71:106 Preference: 150
Interface : GE1/0/1          Cost : 1

Destination: 4::1/128        Protocol : O_INTRA
NextHop : FE80::52DB:61FF:FE71:106 Preference: 10
Interface : GE1/0/1          Cost : 1

Destination: 5::/64          Protocol : Direct
NextHop : ::                Preference: 0
Interface : Loop1            Cost : 0

Destination: 5::1/128        Protocol : Direct
NextHop : ::1               Preference: 0
Interface : InLoop0          Cost : 0

Destination: 6::/64          Protocol : RIPng
NextHop : FE80::52DB:6EFF:FEDF:307 Preference: 100
Interface : GE1/0/2          Cost : 1

Destination: FE80::/10       Protocol : Direct
NextHop : ::                Preference: 0
Interface : InLoop0          Cost : 0

Destination: FF00::/8        Protocol : Direct
NextHop : ::                Preference: 0
Interface : NULL0            Cost : 0
[SW2]

```

[SW3]dis ipv6 routing-table

Destinations : 12 Routes : 12

```

Destination: ::1/128          Protocol : Direct
NextHop : ::1                Preference: 0
Interface : InLoop0          Cost : 0

Destination: 1::/64          Protocol : RIPng
NextHop : FE80::52DB:69FF:FE05:207 Preference: 100
Interface : GE1/0/2          Cost : 1

Destination: 2::/64          Protocol : RIPng
NextHop : FE80::52DB:69FF:FE05:207 Preference: 100
Interface : GE1/0/2          Cost : 1

```

```
Destination: 3::/64          Protocol : Direct
NextHop   : ::              Preference: 0
Interface : GE1/0/2        Cost    : 0

Destination: 3::1/128       Protocol : Direct
NextHop   : ::1            Preference: 0
Interface : InLoop0        Cost    : 0

Destination: 4::/64          Protocol : RIPng
NextHop   : FE80::52DB:69FF:FE05:207 Preference: 100
Interface : GE1/0/2        Cost    : 1

Destination: 4::1/128       Protocol : RIPng
NextHop   : FE80::52DB:69FF:FE05:207 Preference: 100
Interface : GE1/0/2        Cost    : 1

Destination: 5::/64          Protocol : RIPng
NextHop   : FE80::52DB:69FF:FE05:207 Preference: 100
Interface : GE1/0/2        Cost    : 1

Destination: 6::/64          Protocol : Direct
NextHop   : ::              Preference: 0
Interface : Loop1          Cost    : 0

Destination: 6::1/128       Protocol : Direct
NextHop   : ::1            Preference: 0
Interface : InLoop0        Cost    : 0

Destination: FE80::/10       Protocol : Direct
NextHop   : ::              Preference: 0
Interface : InLoop0        Cost    : 0

Destination: FF00::/8        Protocol : Direct
NextHop   : ::              Preference: 0
Interface : NULL0          Cost    : 0
[SW3]
```

至此，S5820 IPV6 OSPFV3与RIPng路由重分布典型组网配置案例已完成！