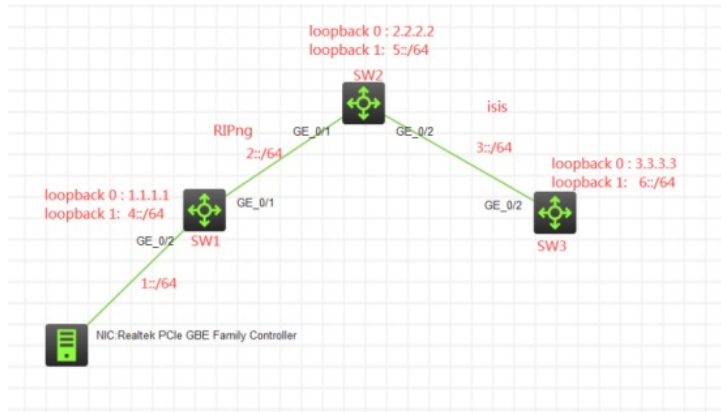


组网及说明



组网说明:

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

```
[SW1]ripng 1
[SW1-ripng-1]import-route direct
[SW1-ripng-1]quit
[SW1]int loopback 1
[SW1-LoopBack1]ripng 1 enable
[SW1-LoopBack1]quit
[SW1]int gi 1/0/2
[SW1-GigabitEthernet1/0/2]ripng 1 enable
[SW1-GigabitEthernet1/0/2]quit
[SW1]int gi 1/0/1
[SW1-GigabitEthernet1/0/1]ripng 1 enable
```

```
[SW1-GigabitEthernet1/0/1]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 RIPng与ISIS重分布关键配置点:

```
[SW2]ripng 1
```

```
[SW2-ripng-1]import-route direct
```

```
[SW2-ripng-1]import-route isisv6 1 allow-direct
```

```
[SW2-ripng-1]quit
```

```
[SW2]isis 1
```

```
[SW2-isis-1]is-level level-1
```

```
[SW2-isis-1]network-entity 10.0000.0000.0001.00
```

```
[SW2-isis-1]address-family ipv6 unicast
```

```
[SW2-isis-1-ipv6]import-route direct
```

```
[SW2-isis-1-ipv6]import-route ripng 1 level-1
```

```
[SW2-isis-1-ipv6]quit
```

```
[SW2-isis-1]quit
```

```
[SW2]int gi 1/0/1
```

```
[SW2-GigabitEthernet1/0/1]ripng 1 enable
```

```
[SW2-GigabitEthernet1/0/1]quit
```

```
[SW2]int gi 1/0/2
```

```
[SW2-GigabitEthernet1/0/2]isis ipv6 enable 1
```

```
[SW2-GigabitEthernet1/0/2]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 ISIS关键配置点:

```
[SW3]isis 1
```

```
[SW3-isis-1]is-level level-1
```

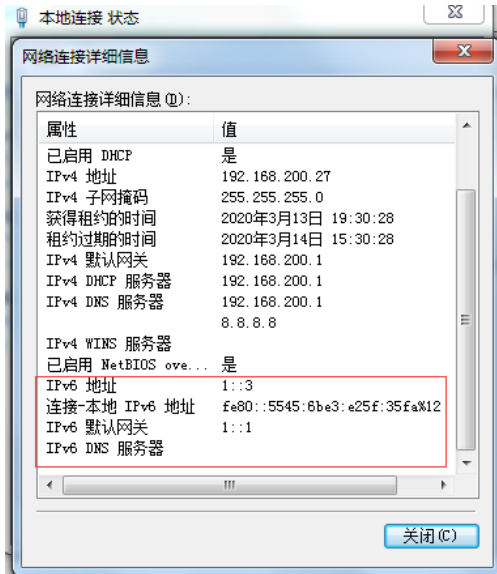
```
[SW3-isis-1]network-entity 10.0000.0000.0002.00
```

```
[SW3-isis-1]address-family ipv6 unicast
```

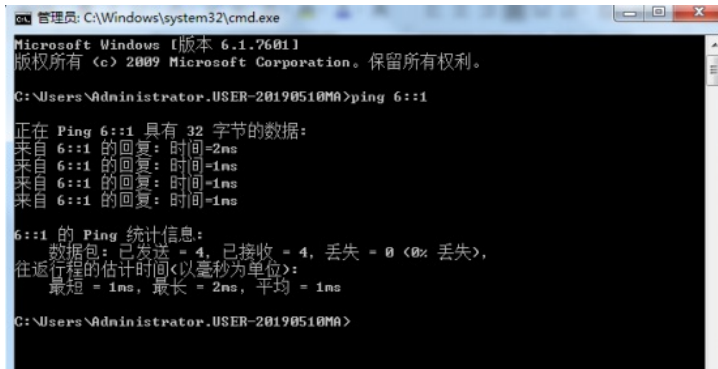
```
[SW3-isis-1-ipv6]import-route direct
[SW3-isis-1-ipv6]quit
[SW3-isis-1]quit
[SW3]int LoopBack 1
[SW3-LoopBack1]isis ipv6 enable 1
[SW3-LoopBack1]quit
[SW3]int gi 1/0/2
[SW3-GigabitEthernet1/0/2]isis ipv6 enable 1
[SW3-GigabitEthernet1/0/2]quit
```

测试:

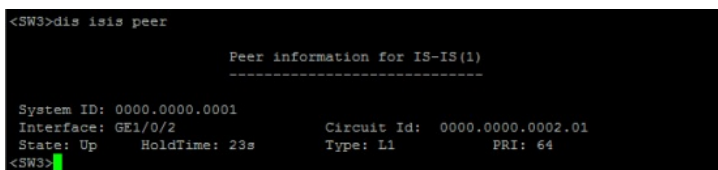
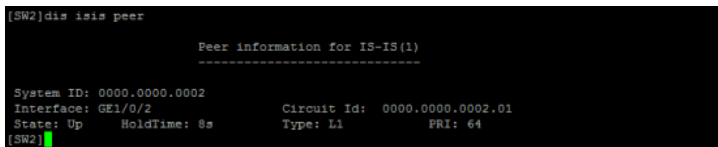
物理机填写IPV6地址:



物理机能PING通SW3的loopback 1:



分别查看SW2、SW3的ISIS邻居信息:



分别查看SW1、SW2、SW3的IPV6路由表:

[SW1]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 : 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 : RIPng
NextHop   : FE80::50BB:ADFF:FE4E:206 Preference: 100
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 : RIPng
NextHop   : FE80::50BB:ADFF:FE4E:206 Preference: 100
Interface : GE1/0/1          Cost     : 1

Destination: 6::/64          Protocol : RIPng
NextHop   : FE80::50BB:ADFF:FE4E:206 Preference: 100
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 : 12 Routes : 12

```

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

Destination: 1::/64          Protocol : RIPng
NextHop   : FE80::50BB:A5FF:FE92:106 Preference: 100
Interface : GE1/0/1          Cost     : 1

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 : RIPng
NextHop : FE80::50BB:A5FF:FE92:106 Preference: 100
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 : IS_L1
NextHop : FE80::50BB:B1FF:FED0:307 Preference: 15
Interface : GE1/0/2        Cost : 10

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 : 9 Routes : 9

```

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

Destination: 1::/64        Protocol : IS_L1
NextHop : FE80::50BB:ADFF:FE4E:207 Preference: 15
Interface : GE1/0/2        Cost : 10

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 : IS_L1
NextHop : FE80::50BB:ADFF:FE4E:207 Preference: 15
Interface : GE1/0/2        Cost : 10

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 RIPng与ISIS路由重分布典型组网配置案例已完成！