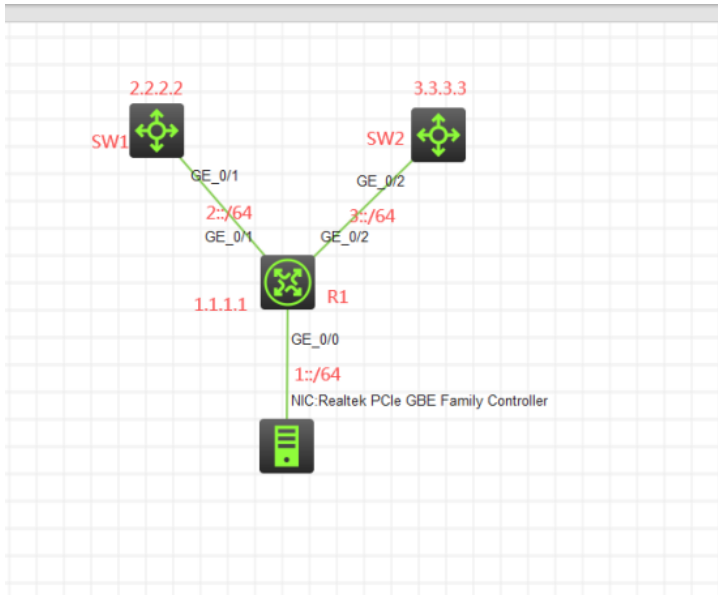


组网及说明



组网说明:

本案例采用H3C HCL模拟器来模拟器高级IPv6 ACL典型组网配置。要求1::/64网段能PING通SW1，无法PING通SW2。另外R1、SW1、SW2之间运行OSPFV3路由协议。

配置步骤

- 1、按照网络拓扑图正确配置IP地址
- 2、R1、SW1、SW2之间运行OSPFV3路由协议
- 3、R1配置高级IPv6 ACL，实现1::/64网段能PING通SW1，无法PING通SW2。

配置关键点

第一阶段调试（基础网络配置）：

SW1:

```
sys
System View: return to User View with Ctrl+Z.
[H3C]sysname SW1
[SW1]int loopback 0
[SW1-LoopBack0]ip address 2.2.2.2 32
[SW1-LoopBack0]quit
[SW1]ospfv3 1
[SW1-ospfv3-1]import-route direct
[SW1-ospfv3-1]router-id 2.2.2.2
[SW1-ospfv3-1]quit
[SW1]int gi 1/0/1
[SW1-GigabitEthernet1/0/1]port link-mode route
[SW1-GigabitEthernet1/0/1]des
[SW1-GigabitEthernet1/0/1]ipv6 address 2::2 64
[SW1-GigabitEthernet1/0/1]ospfv3 1 area 0
[SW1-GigabitEthernet1/0/1]quit
```

SW2:

```
sys
System View: return to User View with Ctrl+Z.
[H3C]sysname SW2
[SW2]int loopback 0
[SW2-LoopBack0]ip address 3.3.3.3 32
```

```
[SW2-LoopBack0]quit
[SW2]ospfv3 1
[SW2-ospfv3-1]router-id 3.3.3.3
[SW2-ospfv3-1]import-route direct
[SW2-ospfv3-1]quit
[SW2]int gi 1/0/2
[SW2-GigabitEthernet1/0/2]port link-mode route
[SW2-GigabitEthernet1/0/2]des
[SW2-GigabitEthernet1/0/2]ipv6 address 3::2 64
[SW2-GigabitEthernet1/0/2]ospfv3 1 area 0
[SW2-GigabitEthernet1/0/2]quit
```

R1:

sys

System View: return to User View with Ctrl+Z.

```
[H3C]sysname R1
[R1]int loopback 0
[R1-LoopBack0]ip address 1.1.1.1 32
[R1-LoopBack0]quit
[R1]ospfv3 1
[R1-ospfv3-1]import-route direct
[R1-ospfv3-1]router-id 1.1.1.1
[R1-ospfv3-1]quit
[R1]int gi 0/1
[R1-GigabitEthernet0/1]des
[R1-GigabitEthernet0/1]ipv6 address 2::1 64
[R1-GigabitEthernet0/1]ospfv3 1 area 0
[R1-GigabitEthernet0/1]quit
[R1]int gi 0/2
[R1-GigabitEthernet0/2]des
[R1-GigabitEthernet0/2]ipv6 address 3::1 64
[R1-GigabitEthernet0/2]ospfv3 1 area 0
[R1-GigabitEthernet0/2]quit
[R1]int gi 0/0
[R1-GigabitEthernet0/0]ipv6 address 1::1 64
[R1-GigabitEthernet0/0]ospfv3 1 area 0
[R1-GigabitEthernet0/0]quit
```

第一阶段测试:

分别查看R1、SW1、SW2的OSPF邻居信息:

```
[R1]dis ospfv3 peer

          OSPFv3 Process 1 with Router ID 1.1.1.1
Area: 0.0.0.0
-----
Router ID   Pri State           Dead-Time InstID Interface
-----
2.2.2.2     1 Full/DR           00:00:38  0    GE0/1
3.3.3.3     1 Full/DR           00:00:32  0    GE0/2
[R1]
```

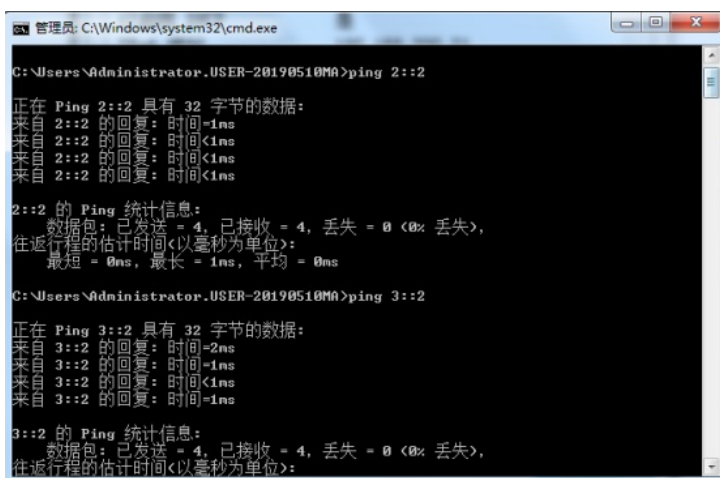
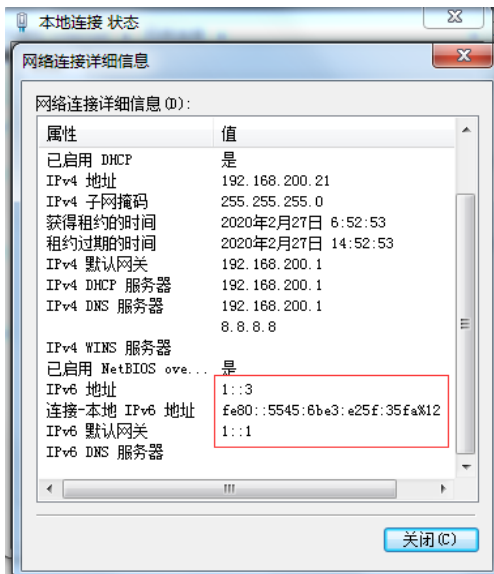
```
[SW1]dis ospfv3 peer

          OSPFv3 Process 1 with Router ID 2.2.2.2
Area: 0.0.0.0
-----
Router ID   Pri State           Dead-Time InstID Interface
-----
1.1.1.1     1 Full/BDR         00:00:38  0    GE1/0/1
[SW1]
```

```
[SW2]dis ospfv3 peer

          OSPFv3 Process 1 with Router ID 3.3.3.3
Area: 0.0.0.0
-----
Router ID   Pri State           Dead-Time InstID Interface
-----
1.1.1.1     1 Full/BDR         00:00:40  0    GE1/0/2
[SW2]
```

物理机填写IPv6地址, 且能PING通SW1、SW2:



第二阶段调试（高级IPv6 ACL关键配置点）：

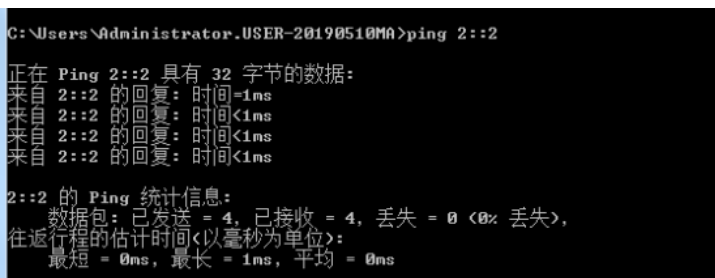
```

[R1]acl ipv6 advanced 3000
[R1-acl-ipv6-adv-3000]rule 0 permit ipv6 source 1::/64 destination 2::2 128
[R1-acl-ipv6-adv-3000]rule 1 deny ipv6 source 1::/64 destination 3::2 128
[R1-acl-ipv6-adv-3000]quit
[R1]int gi 0/0
[R1-GigabitEthernet0/0]packet-filter ipv6 3000 inbound
[R1-GigabitEthernet0/0]quit

```

第二阶段测试：

物理机能PING通SW1：



物理机无法PING通SW2：

```
C:\Users\Administrator.USER-20190510MA>ping 3::2
正在 Ping 3::2 具有 32 字节的数据:
请求超时。
请求超时。
请求超时。
请求超时。
3::2 的 Ping 统计信息:
    数据包: 已发送 = 4, 已接收 = 0, 丢失 = 4 (100% 丢失),
C:\Users\Administrator.USER-20190510MA>
```

查看ACL的匹配情况:

```
[R1]dis acl ipv6 3000
Advanced IPv6 ACL 3000, 2 rules,
ACL's step is 5
 rule 0 permit ipv6 source 1::/64 destination 2::2/128 (1 times matched)
 rule 1 deny ipv6 source 1::/64 destination 3::2/128 (7 times matched)
[R1]
```

至此，高级IPV6 ACL典型组网配置案例已完成！