

## 组网及说明

### 1 配置需求或说明

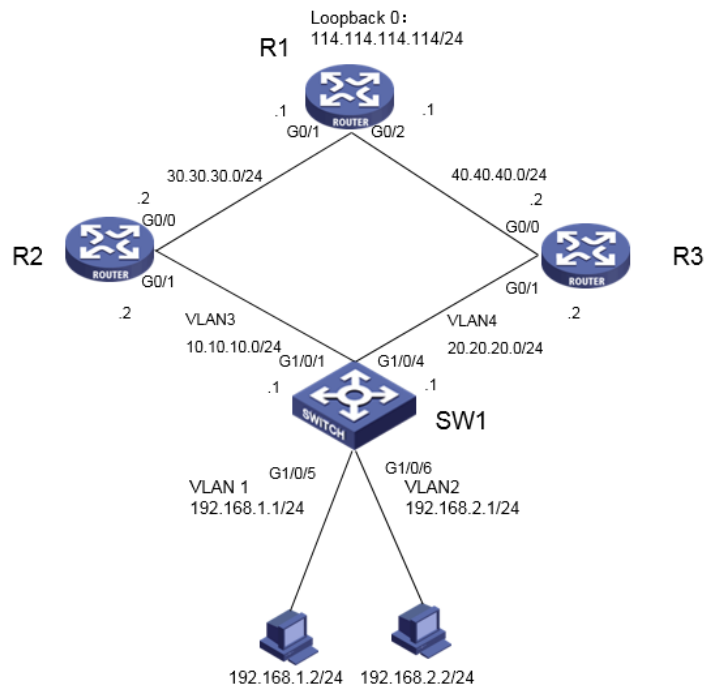
#### 1.1 适用产品系列

本案例适用于如S5024PV3-EI-HPWR、S5048PV3-EI、S5120V2-52P-LI、S5120V2-28P-SI、S5130-52S-EI、S5130S-28S-EI、S5150X-16ST-EI等S5000PV3、S5120V2、S5130、S5150系列的交换机。

#### 1.2 配置需求及实现的效果

交换机SW1上配置静态路由，使终端访问114.114.114.114的时候通过R2转发，192.168.2.0网段终端14.114.114.114匹配策略路由由从R3转发。

### 2 组网图



## 配置步骤

### 3 配置步骤

#### 3.1 路由器配置

#在R1上进图系统视图

```
<H3C>system-view
```

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

#创建环回接口LoopBack 0用来模拟主机，地址是114.114.114.114/24

```
[H3C]interface LoopBack 0
```

```
[H3C-LoopBack0]ip address 114.114.114.114 255.255.255.0
```

```
[H3C-LoopBack0]quit
```

#为路由器1口和2口分别配置IP地址。

```
[H3C]int GigabitEthernet 0/1
```

```
[H3C-GigabitEthernet0/1] ip address 30.30.30.1 255.255.255.0
```

```
[H3C]int GigabitEthernet 0/2
```

```
[H3C-GigabitEthernet0/2] ip address 40.40.40.1 255.255.255.0
```

```
[H3C-GigabitEthernet0/2]quit
```

#配置到192.168.1.0网段的静态路由

```
[H3C]ip route-static 192.168.1.0 24 30.30.30.2
```

#配置到114.114.114.0网段的静态路由

```
[H3C]ip route-static 192.168.2.0 24 40.40.40.2
```

#开启设备的ICMP目的不可达报文的发送功能

```
[H3C]ip unreachable enable
```

#开启ICMP超时报文发送功能

```
[H3C]ip ttl-expires enable
```

[H3C]save force

#在R2上进图系统视图

<H3C>system-view

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

#为路由器1口和2口分别配置IP地址。

[H3C]int GigabitEthernet 0/0

[H3C-GigabitEthernet0/0] ip address 30.30.30.2 255.255.255.0

[H3C]int GigabitEthernet 0/1

[H3C-GigabitEthernet0/1] ip address 10.10.10.2 255.255.255.0

#配置到114.114.114.0网段的静态路由

[H3C] ip route-static 114.114.114.0 24 30.30.30.1

#配置到192.168.1.0网段的静态路由

[H3C] ip route-static 192.168.1.0 24 10.10.10.1

#配置到114.114.114.0网段的静态路由

[H3C] ip route-static 192.168.2.0 24 10.10.10.1

#开启设备的ICMP目的不可达报文的发送功能

[H3C]ip unreachable enable

#开启ICMP超时报文发送功能

[H3C]ip ttl-expires enable

[H3C]save force

#在R3上进图系统视图

<H3C>system-view

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

#为路由器1口和2口分别配置IP地址。

[H3C]int GigabitEthernet 0/0

[H3C-GigabitEthernet0/0] ip address 40.40.40.2 255.255.255.0

[H3C]int GigabitEthernet 0/1

[H3C-GigabitEthernet0/1] ip address 20.20.20.2 255.255.255.0

#配置到114.114.114.0网段的静态路由

[H3C] ip route-static 114.114.114.0 24 40.40.40.1

#配置到192.168.1.0网段的静态路由

[H3C] ip route-static 192.168.1.0 24 10.10.10.2

#配置到114.114.114.0网段的静态路由

[H3C] ip route-static 192.168.2.0 24 10.10.10.1

#开启设备的ICMP目的不可达报文的发送功能

[H3C]ip unreachable enable

#开启ICMP超时报文发送功能

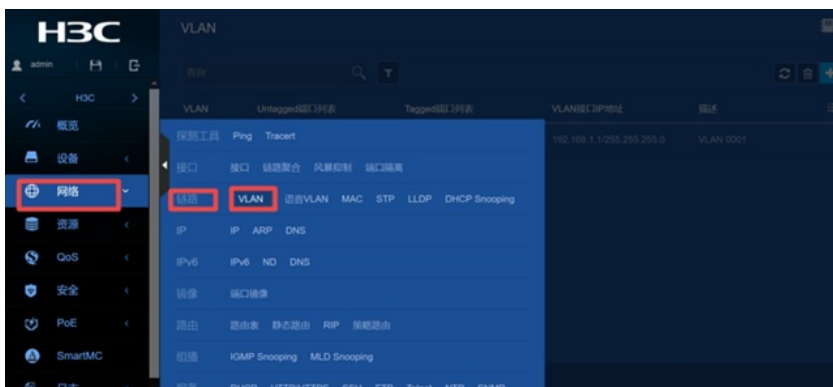
[H3C]ip ttl-expires enable

[H3C]save force

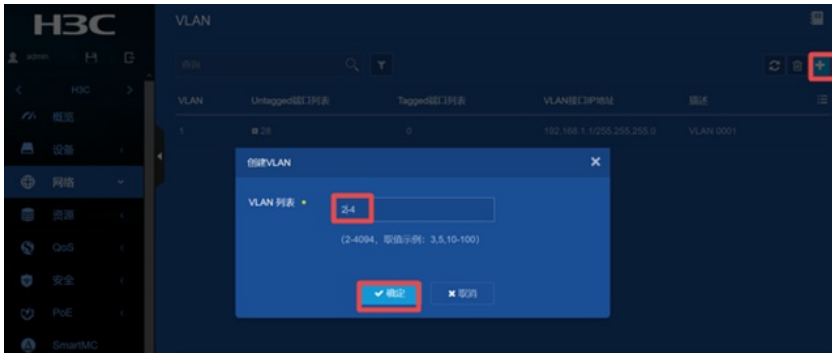
## 3.2 交换机配置

### 3.2.1 创建VLAN

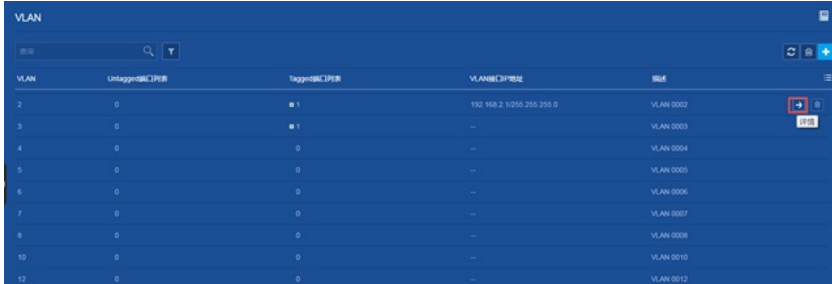
1) 导航栏：网络>链路>VLAN



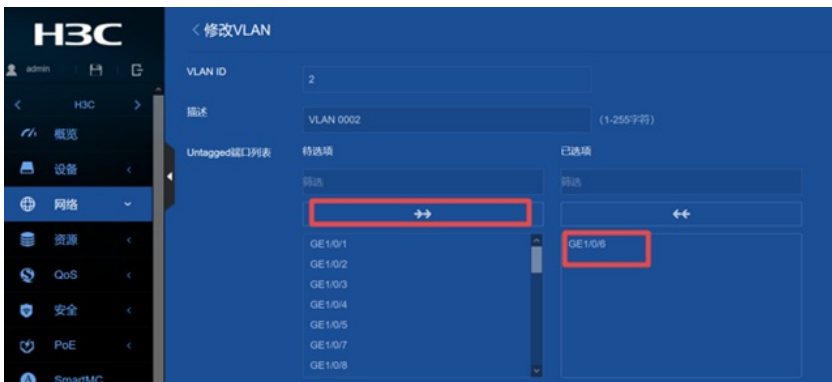
2) 点击“+”新增VLAN，输入要新增的VLAN2,VLAN3,VLAN4



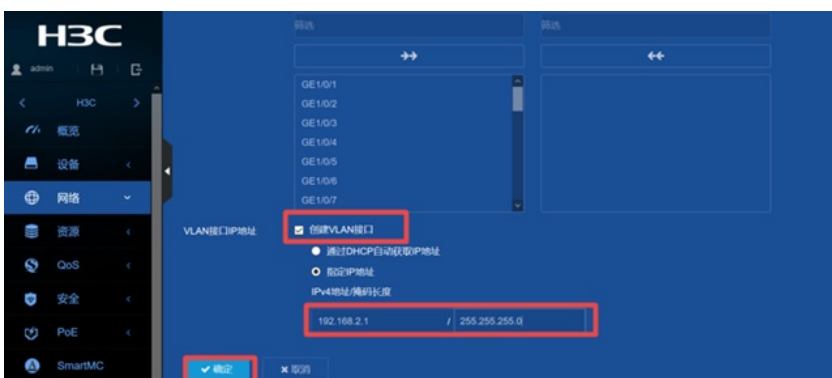
3) 新增VLAN之后在VLAN2显示界面点击详情进行编辑



4) 在修改VLAN设置界面选中并点击GE1/0/6，点击右移的箭头，将此接口加如VLAN2，下面是添加接口成功的示意图



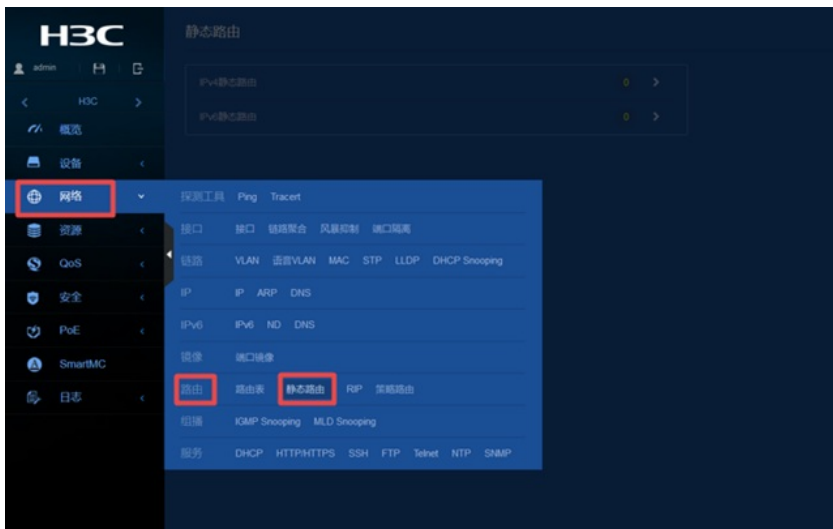
5) 在“VLAN接口IP地址”选项这里选择“指定IP地址”，并配置好VLAN接口地址192.168.2.1，掩码为255.255.255.0，点击“确定”



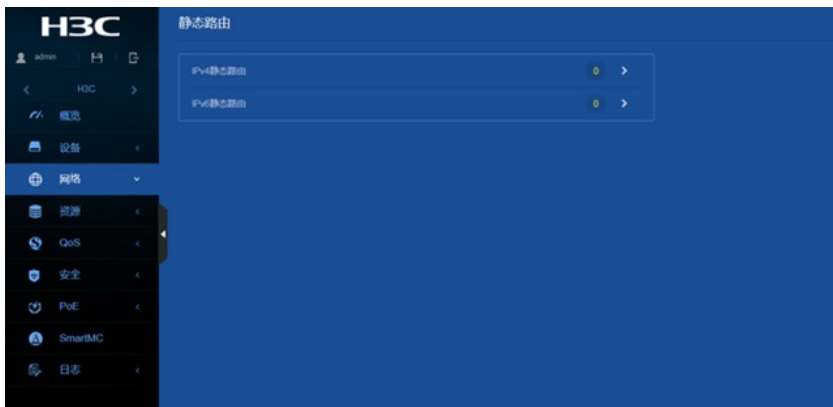
VLAN 1 /3/ 4是相同的设置方法，此处不再赘述

### 3.2.2 静态路由配置

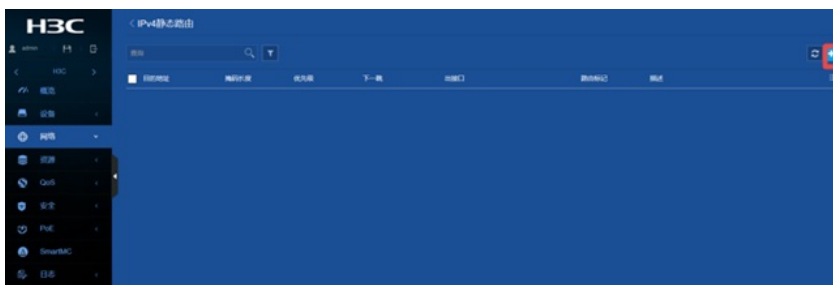
1) 导航栏：网络>路由>静态路由



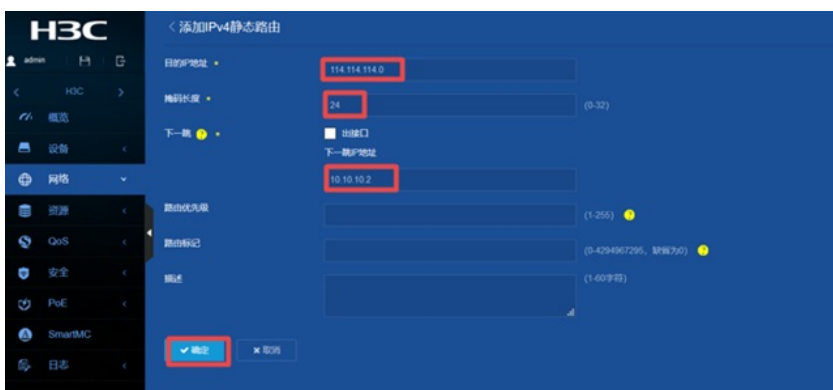
2) 在静态路由界面点击IPv4静态路由



3) 进入到IPv4静态路由界面，点击添加

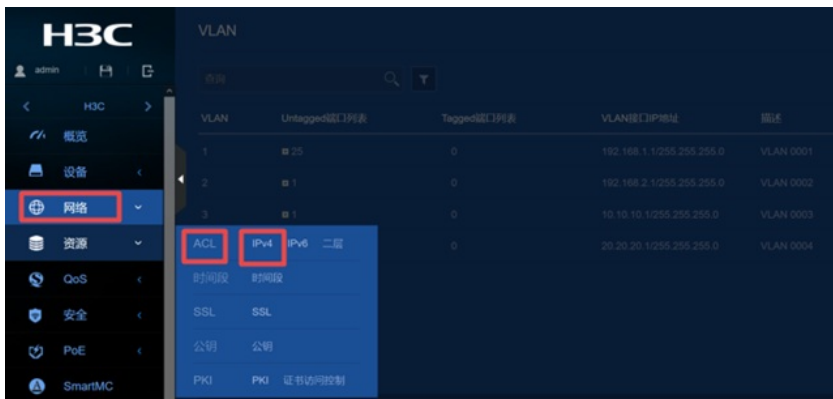


4) 配置到114.114.114.0/24的网段从10.10.10.0/24网段走，下一跳IP地址输入“10.10.10.2”



### 3.2.3 策略路由配置

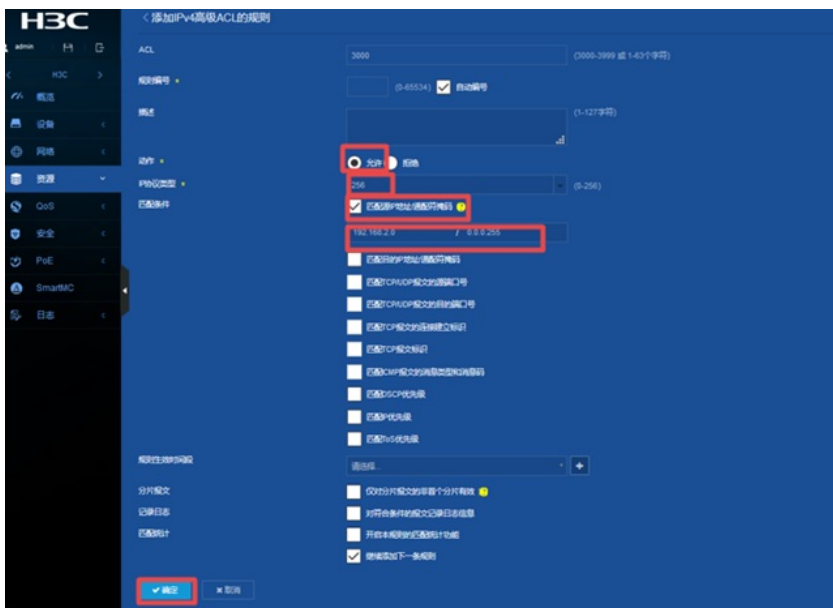
1) 导航栏：资源>ACL>IPv4



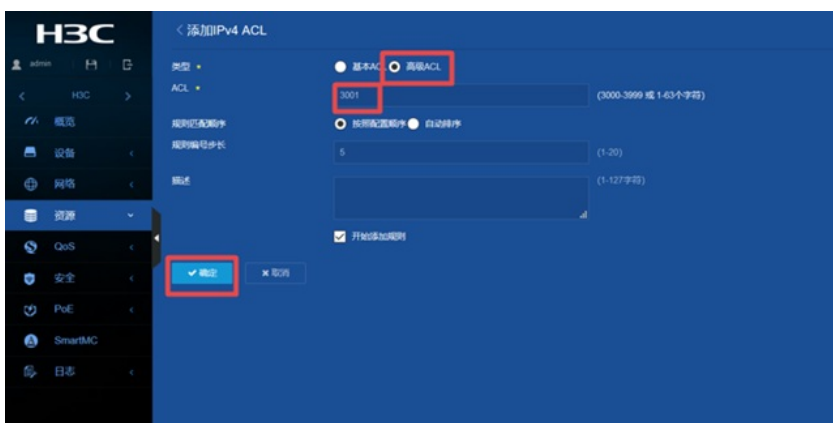
2) 添加IPv4 ACL>高级ACL>ACL，输入“3000”，点击“确定”



3) 添加IPv4高级ACL的规则，动作是“允许”，IP协议类型是“IP (256)”，勾选“匹配源IP地址/通配符掩码”，输入“192.168.2.0/0.0.0.255”，点击确定

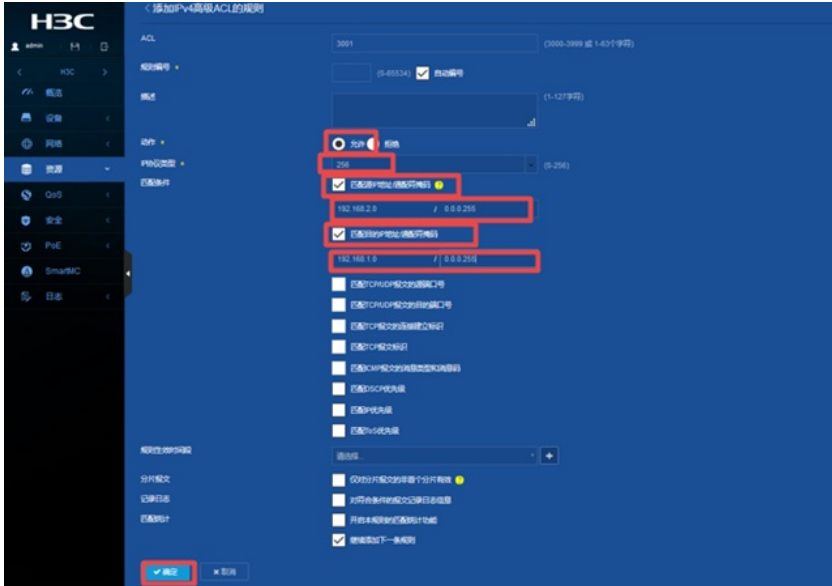


4) 添加IPv4 ACL>高级ACL>ACL，输入“3001”，点击“确定”



5) 添加IPv4高级ACL的规则，动作是“允许”，IP协议类型是“IP (256)”，勾选“匹配源IP地址/通配符掩码”，输入“192.168.2.0/0.0.0.255”，勾选“匹配目的IP地址/通配符掩码”，输

入“192.168.1.0/0.0.0.255”，点击“确定”



6) 导航栏：网络>路由>策略路由



7) 在策略路由界面点击IPv4策略路由

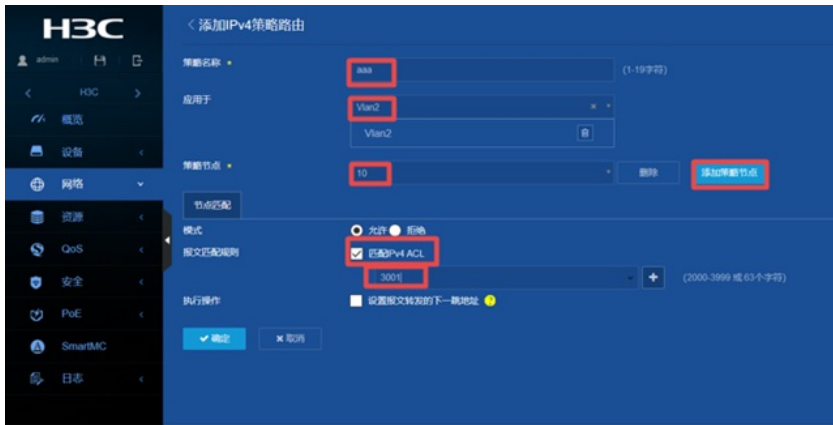


8) 进入到IPv4策略路由界面，点击添加

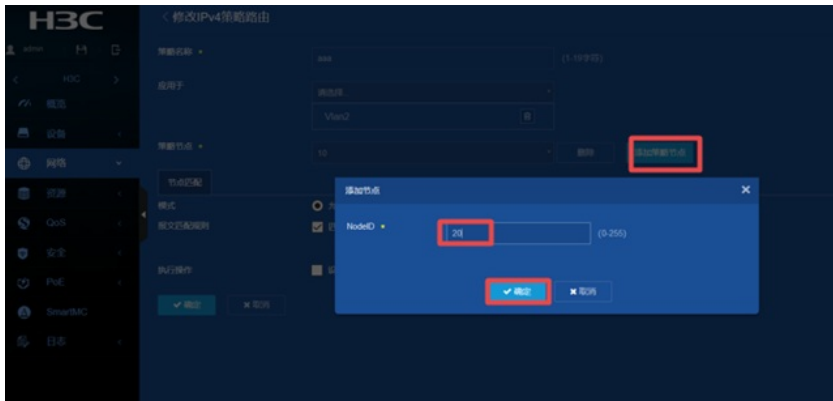


9) 添加IPv4策略路由，策略名称输入“aaa”，应用于“Vlan2”，添加策略节点“10”，勾选“匹配IPv4 ACL”

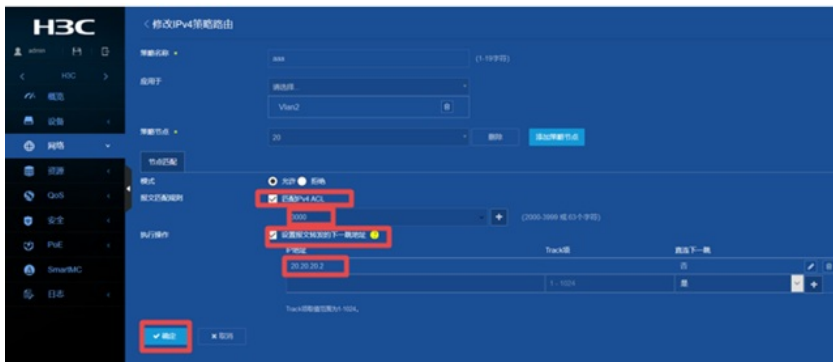
, 选择之前创建的“3001”



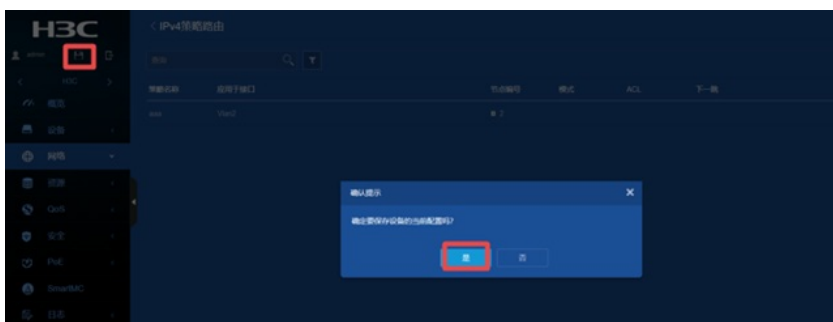
10) 点击“添加策略节点”，输入“20”，点击确定



11) 勾选“匹配IPv4 ACL”，选择之前创建的“3000”，勾选“设置报文转发的下一跳地址”，输入IP地址为“20.20.20.2”，然后需要点击右边的“+”才能添加成功，最后点击“确定”



### 3.2.4 保存配置



## 4 验证配置

# 交换机上没有配置策略路由的情况下，两台终端tracert路径的结果如下：

192.168.1.2:

```
[H3C]tracert 114.114.114.114
traceroute to 114.114.114.114 (114.114.114.114), 30 hops at most, 40 bytes each packet, press CTRL_C to break
 1 192.168.1.1 (192.168.1.1)  7.000 ms  2.000 ms  1.000 ms
 2 10.10.10.2 (10.10.10.2)  3.000 ms  4.000 ms  4.000 ms
 3 30.30.30.1 (30.30.30.1)  6.000 ms  7.000 ms  5.000 ms
```

192.168.2.2:

```
[H3C]tracert 114.114.114.114
traceroute to 114.114.114.114 (114.114.114.114), 30 hops at most, 40 bytes each packet, press CTRL_C to break
 1 192.168.2.1 (192.168.2.1) 1.000 ms 1.000 ms 1.000 ms
 2 10.10.10.2 (10.10.10.2) 1.000 ms 1.000 ms 2.000 ms
 3 30.30.30.1 (30.30.30.1) 2.000 ms 1.000 ms 2.000 ms
```

# 配置了策略路由后，两台终端tracert路径的结果如下：

192.168.1.2:

```
[H3C]tracert 114.114.114.114
traceroute to 114.114.114.114 (114.114.114.114), 30 hops at most, 40 bytes each packet, press CTRL_C to break
 1 192.168.1.1 (192.168.1.1) 7.000 ms 2.000 ms 1.000 ms
 2 10.10.10.2 (10.10.10.2) 3.000 ms 4.000 ms 4.000 ms
 3 30.30.30.1 (30.30.30.1) 6.000 ms 7.000 ms 5.000 ms
```

192.168.2.2:

```
[H3C]tracert 114.114.114.114
traceroute to 114.114.114.114 (114.114.114.114), 30 hops at most, 40 bytes each packet, press CTRL_C to break
 1 192.168.2.1 (192.168.2.1) 2.000 ms 2.000 ms 2.000 ms
 2 20.20.20.2 (20.20.20.2) 4.000 ms 4.000 ms 8.000 ms
 3 40.40.40.1 (40.40.40.1) 11.000 ms 4.000 ms 5.000 ms
```

配置关键点