NSD NETWORK DAY04

1 案例1：配置静态NAT

1.1 问题

按照图-4拓扑图所示，在R1上配置静态NAT使192.168.2.1转换为100.0.0.2,192.168.2.2转换为100.0.0.3，实现外部网络访问

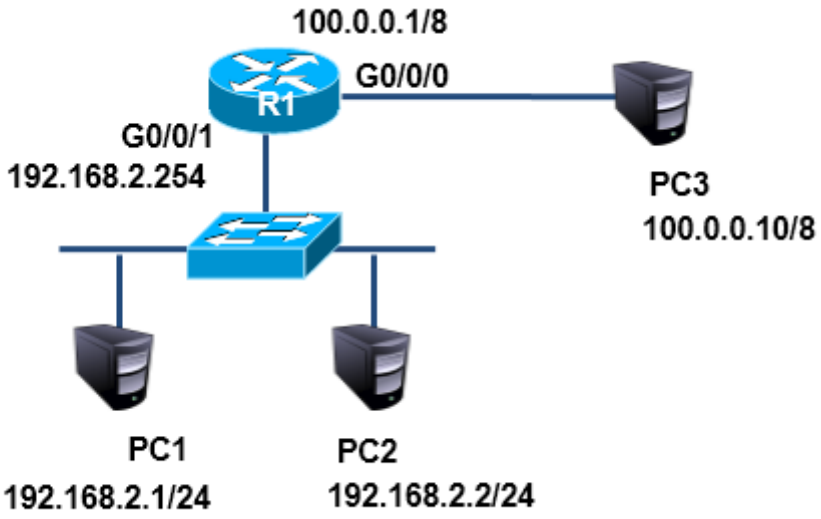

图-5

1.2 步骤

1，首先配置路由器的接口地址

```
[Huawei]interface GigabitEthernet 0/0/0
[Huawei-GigabitEthernet0/0/0] ip address  100.0.0.1 8
[Huawei-GigabitEthernet0/0/0]nat static global 100.0.0.2 inside 192.168.2.1
[Huawei-GigabitEthernet0/0/0]nat static global 100.0.0.3 inside 192.168.2.2
```

pc3无需配置网关

2 案例2：Easy IP

2.1 问题

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按照图-6所示的拓扑结构，在R1上配置Easy IP使企业内网192.168.2.0/24利用g0/0/0端口的ip，实现外部网络的访问

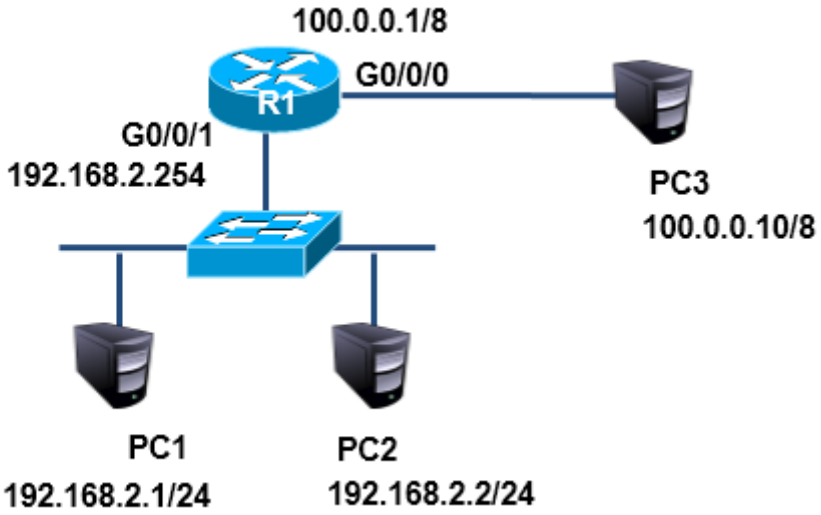

图-6

2.2 步骤

注：以下命令需要在路由器配置好ip的基础上完成

```
01.  [Huawei]acl 2000
02.  [Huawei-acl-basic-2000]rule permit source any     //使用acl定义任何内部地址
03.  [Huawei]interface g0/0/0
04.  [Huawei-GigabitEthernet0/0/0]nat outbound 2000    //可以利用g0/0/0的ip访问外网
```

3 案例3：三层交换配置VRRP

3.1 问题

按照图-4所示拓扑结构，在三层交换机配置热备份路由协议使组内两个出口设备共享一个虚拟ip地址192.168.1.254为内网主机的网关

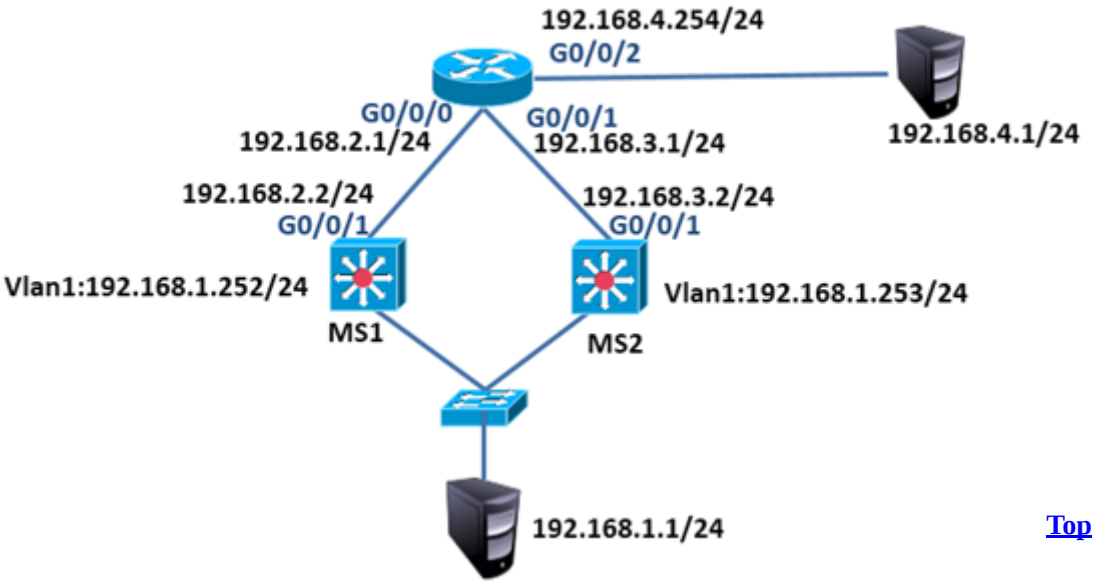

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图-4

3.2 步骤

本实验暂不考虑NAT问题。

1，为所有pc设备配置ip与网关，192.168.1.0网段的网关为192.168.1.254

192.168.4．0网段的网关为192.168.4.254

2，路由器

```
<Huawei>system-view
[Huawei]interface GigabitEthernet 0/0/0
[Huawei-GigabitEthernet0/0/0]ip address 192.168.2.1 24
[Huawei]interface GigabitEthernet 0/0/1
[Huawei-GigabitEthernet0/0/1]ip address 192.168.3.1 24
[Huawei]interface GigabitEthernet 0/0/2
[Huawei-GigabitEthernet0/0/2]ip address 192.168.4.254 24

[Huawei]ospf
[Huawei-ospf-1]area 0
[Huawei-ospf-1-area-0.0.0.0]network 192.168.2.0 0.0.0.255
[Huawei-ospf-1-area-0.0.0.0]network 192.168.3.0 0.0.0.255
[Huawei-ospf-1-area-0.0.0.0]network 192.168.4.0 0.0.0.255
```

MS1

```
<Huawei>system-view
[Huawei]interface Vlanif 1
[Huawei-Vlanif1]ip add 192.168.1.252 24
[Huawei]vlan 2
[Huawei-vlan2]quit
[Huawei]interface Vlanif 2
[Huawei-Vlanif2]ip address 192.168.2.2 24
[Huawei-Vlanif2]quit
[Huawei]interface GigabitEthernet 0/0/2
[Huawei-GigabitEthernet0/0/2]port link-type access
[Huawei-GigabitEthernet0/0/2]port default vlan 2

[Huawei]ospf
[Huawei-ospf-1]area 0
[Huawei-ospf-1-area-0.0.0.0]network 192.168.1.0 0.0.0.255
[Huawei-ospf-1-area-0.0.0.0]network 192.168.2.0 0.0.0.255

```

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```
[Huawei]interface Vlanif 1
[Huawei-Vlanif1]vrrp vrid 1 virtual-ip 192.168.1.254
```

MS2

```
<Huawei>system-view
[Huawei]interface Vlanif 1
[Huawei-Vlanif1]ip add 192.168.1.253 24
[Huawei]vlan 3
[Huawei-vlan3]quit
[Huawei]interface Vlanif 3
[Huawei-Vlanif3]ip address 192.168.3.2 24
[Huawei-Vlanif3]quit
[Huawei]interface GigabitEthernet 0/0/2
[Huawei-GigabitEthernet0/0/2]port link-type access
[Huawei-GigabitEthernet0/0/2]port default vlan 3

[Huawei]ospf
[Huawei-ospf-1]area 0
[Huawei-ospf-1-area-0.0.0.0]network 192.168.1.0 0.0.0.255
[Huawei-ospf-1-area-0.0.0.0]network 192.168.3.0 0.0.0.255

[Huawei]interface Vlanif 1
[Huawei-Vlanif1]vrrp vrid 1 virtual-ip 192.168.1.254
```

HSRP配置好后将服务器的网关设置为192.168.1.254，检测网络状态。

4 案例4：网络负载均衡

4.1 问题

按照图-5所示拓扑结构，配置MS1为vlan10的主路由器、vlan20的备份路由器，MS2为vlan10的备份路由器、vlan20的主路由器，实现负载均衡的效果

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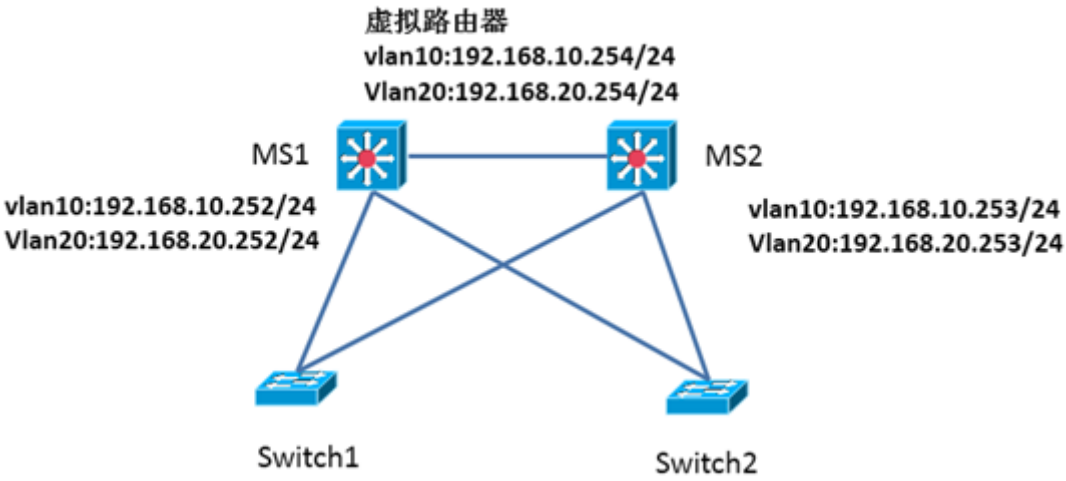

图-5

4.2 步骤

1，先配置两台三层交换机的ip地址

MS1

```
[Huawei]interface Vlanif 10
[Huawei-Vlanif10]ip address 192.168.10.252 24
[Huawei-Vlanif10]vrrp vrid 1 virtual-ip 192.168.10.254
[Huawei-Vlanif10]vrrp vrid 1 priority 110

[Huawei]interface Vlanif 20
[Huawei-Vlanif20]ip address 192.168.20.252 24
[Huawei-Vlanif20]vrrp vrid 2 virtual-ip 192.168.20.254
```

MS2

```
[Huawei]interface Vlanif 10
[Huawei-Vlanif10]ip address 192.168.10.253 24
[Huawei-Vlanif10]vrrp vrid 1 virtual-ip 192.168.10.254

[Huawei]interface Vlanif 20
[Huawei-Vlanif20]ip address 192.168.20.253 24
[Huawei-Vlanif20]vrrp vrid 2 virtual-ip 192.168.20.254
[Huawei-Vlanif20]vrrp vrid 2 priority 110
```

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*最后如果测试效果则不要忘记将最下面两台交换机对应的设备接口加入相应的vlan