# 实验1：vlan跨三层交换机访问

**3SW1(config)#interface range f0/1 - 2 //进入f0/1到f0/2的接口**

**3SW1(config-if-range)#switchport trunk encapsulation dot1q //交换机端口中继链路封装成802.1q**

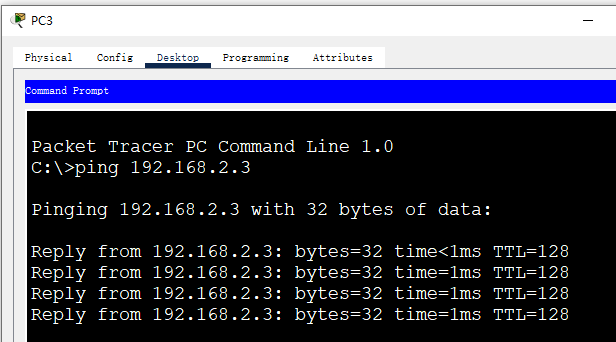
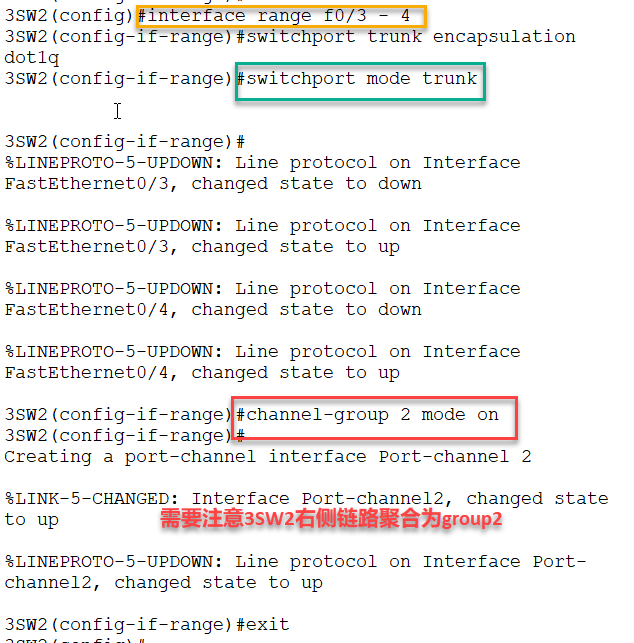
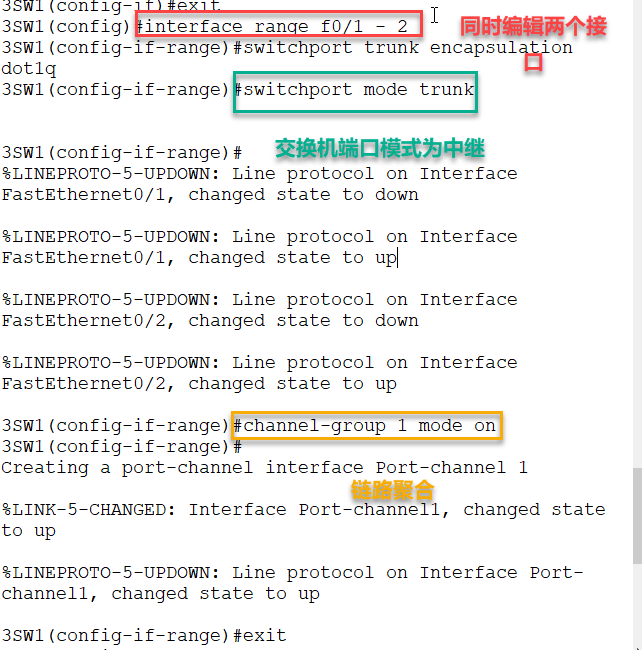
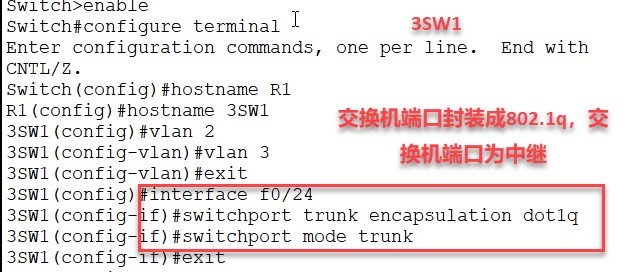
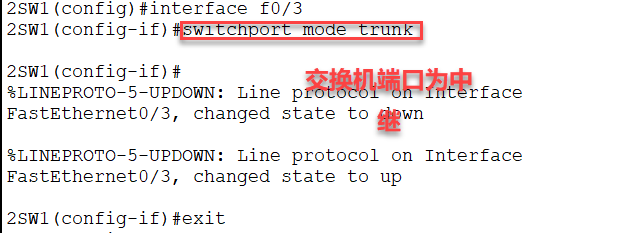
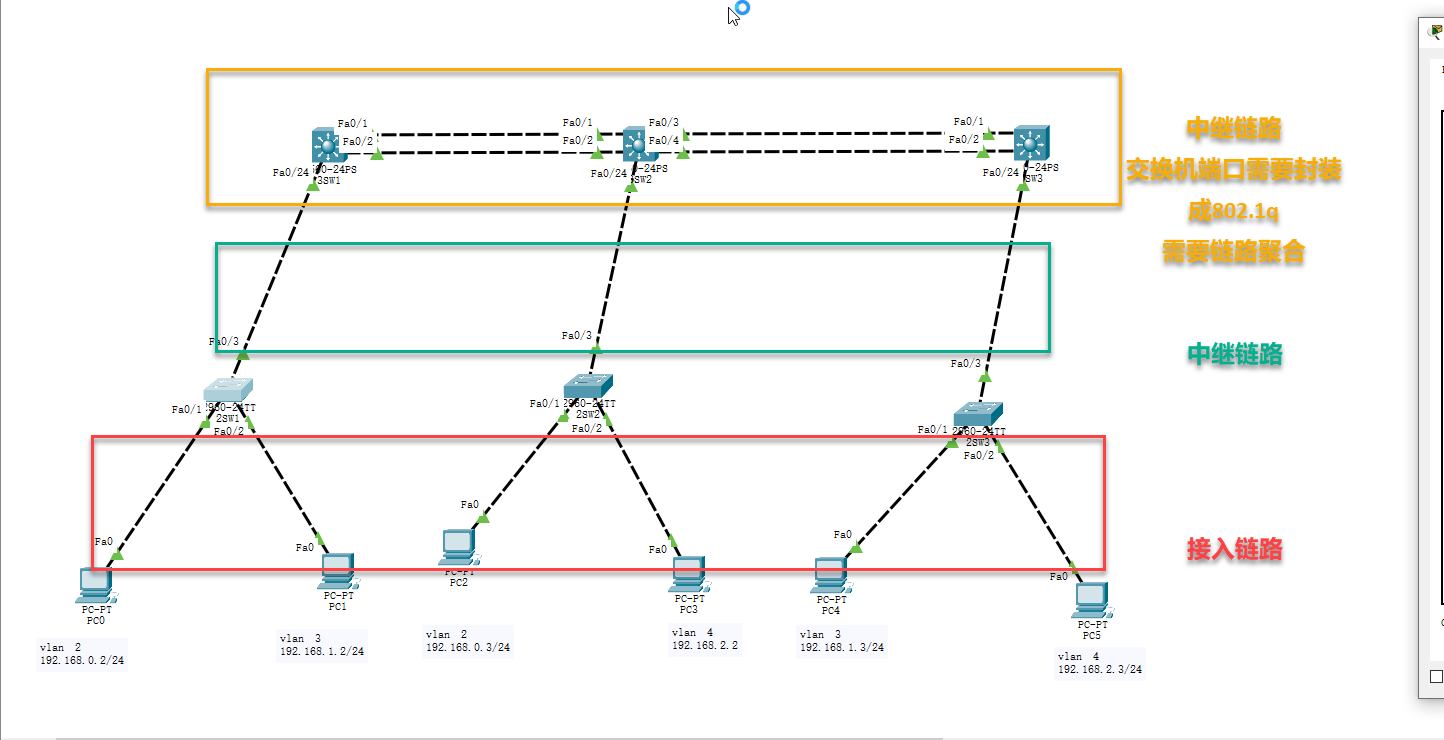
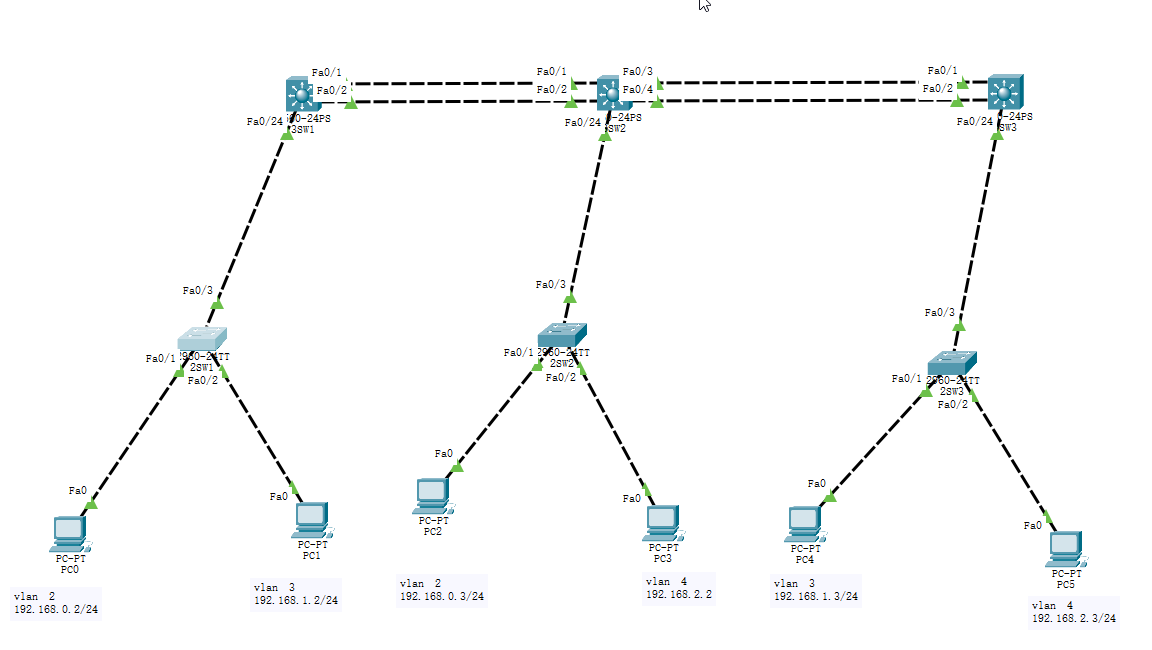
**3SW1(config-if-range)#switchport mode trunk //交换机端口模式为中继链路**

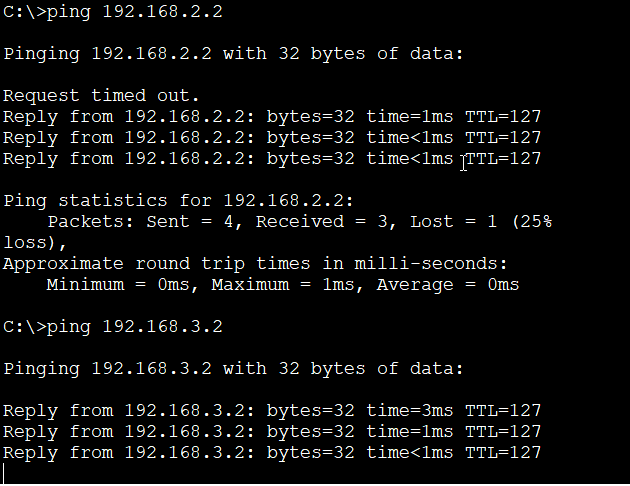
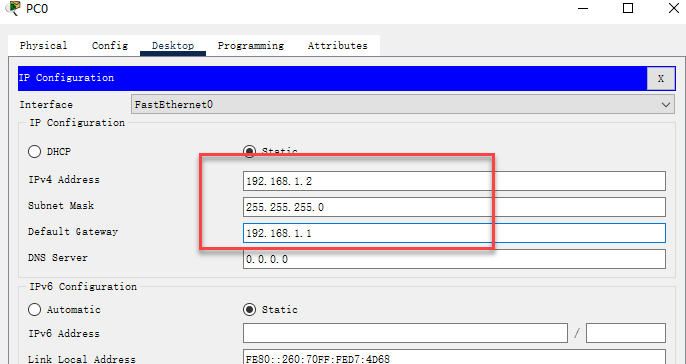
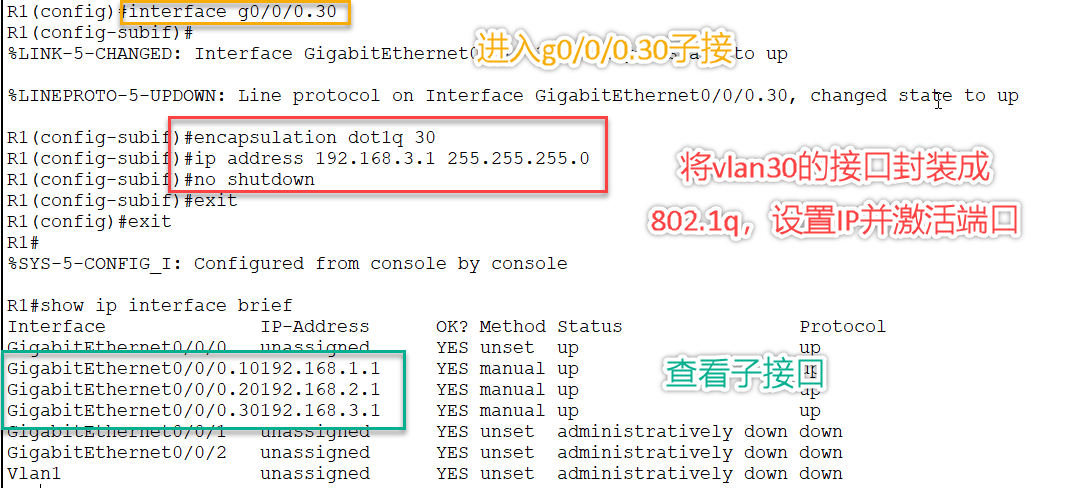
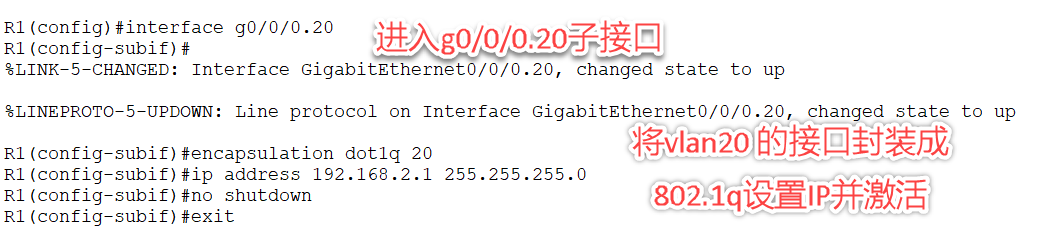
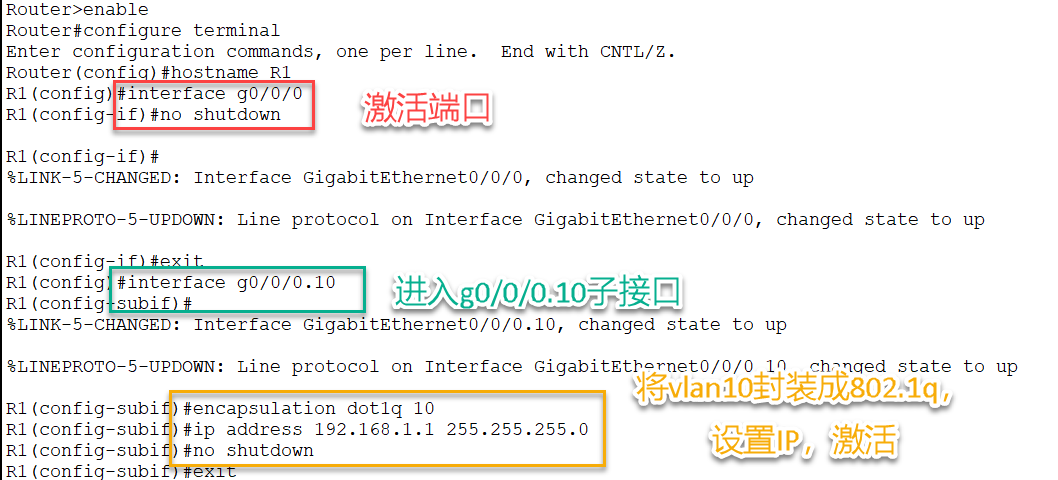
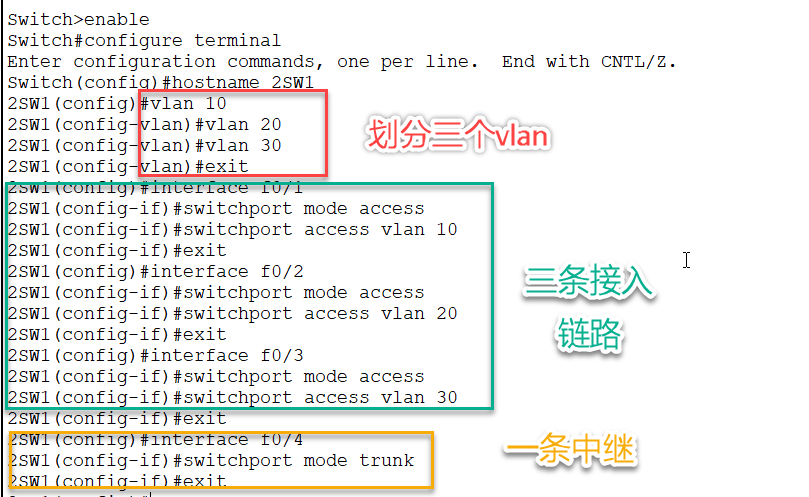
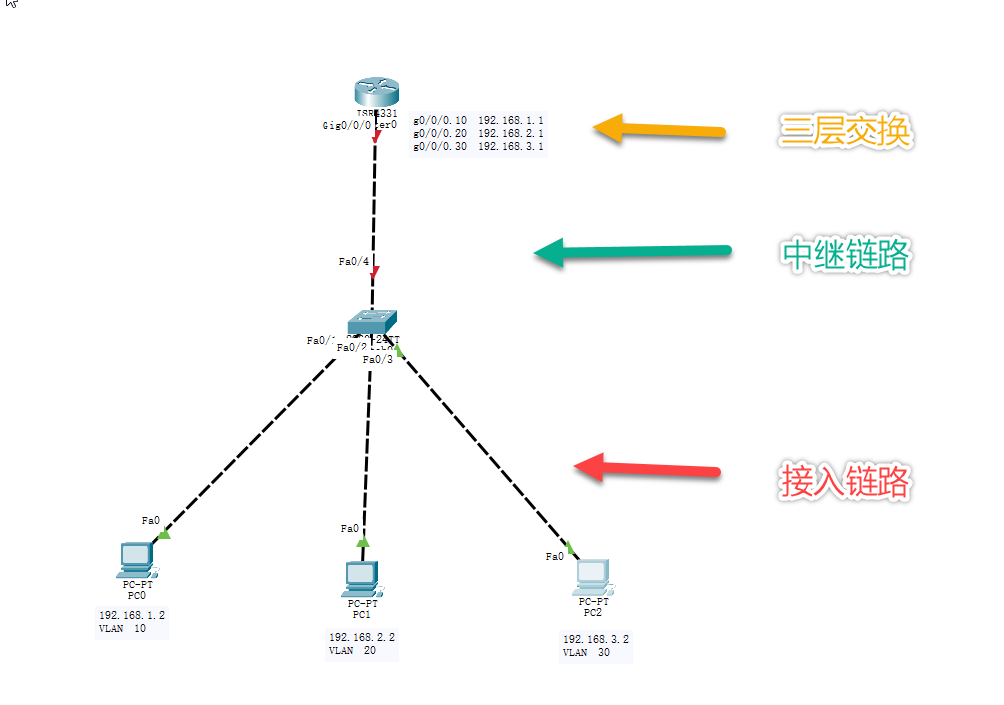
**3SW1(config-if-range)#channel-group 1 mode on //链路聚合**

链路聚合的作用：

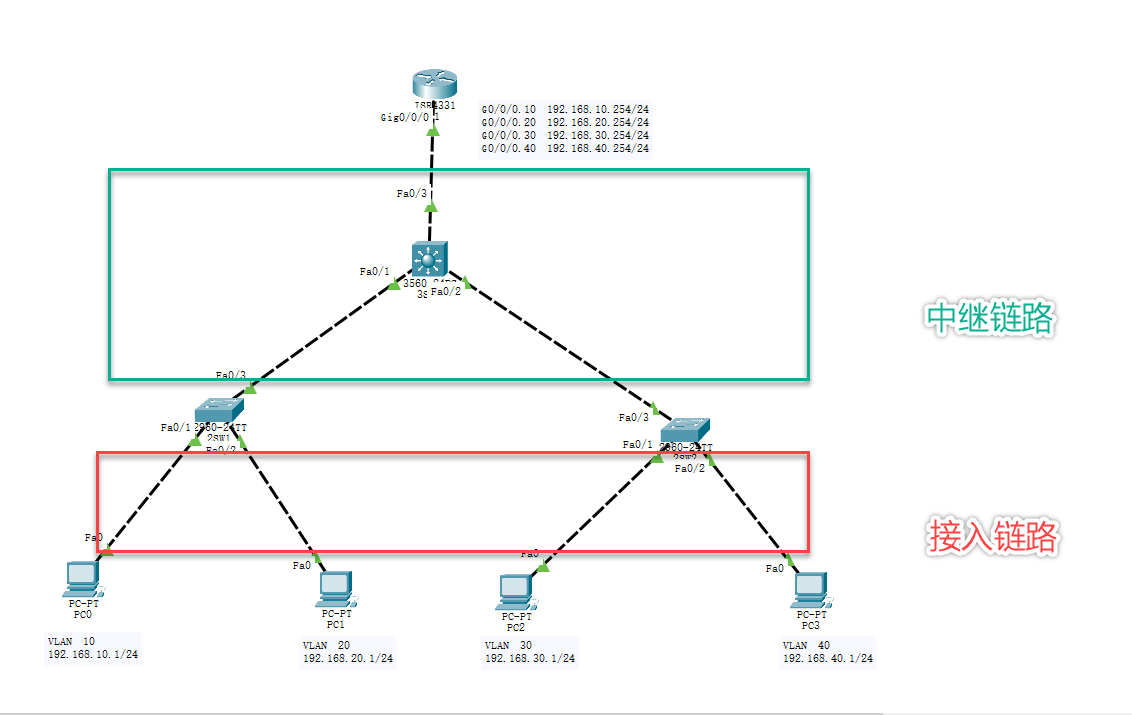
1.增加网络带宽

2.具有容错功能





# 实验2：单臂路由



**2SW1 = 2SW2 ：**

**Enable 特权模式**

**Configure terminal 全局模式**

**Hostname 2SW1 重命名2SW1**

**Vlan 10 创建 vlan 10**

**Vlan 20 创建 vlan 20**

**Exit 退出**

**Interface f0/1 进入f0/1接口**

**Switchport mode access 端口链路类型为接入**

**Switchport access vlan 10 端口接入vlan 10**

**Exit 退出**

**Interface f0/2 进入f0/2接口**

**Switchport mode access 端口链路类型为接入**

**Switchport access vlan 20 端口接入vlan 20**

**Exit 退出**

**Interface f0/3 进入f0/3接口**

**Switchport mode trunk 端口链路类型为中继**

**Exit 退出**

**3SW1：**

**Enable 特权模式**

**Configure terminal 全局模式**

**Hostname 3SW1 重命名3SW1**

**Vlan 10 创建vlan 10**

**Vlan 20 创建vlan 20**

**Vlan 30 创建vlan 30**

**Vlan 40 创建vlan40**

**Exit 退出**

**Interface range f0/1 – 3 同时配置f0/1 – 3的三个接口**

**Switchport trunk encapsulation dot1q 交换机端口中继链路封装成802.1q**

**Switchport mode trunk 交换机端口模式为中继**

**Exit 退出**

**R1路由器：**

**Enable 特权模式**

**Configure terminal 全局模式**

**Hostname R1 重命名R1**

**Interface g0/0/0 进入G0/0/0物理接口**

**No shutdown 激活端口**

**Interface g0/0/0.10 进入g0/0/0.10子接口**

**Encapsulation dot1q 10 将vlan10封装成802.1q**

**Ip address 192.168.10.254 255.255.255.0 设置子接口ip**

**No shutdown 激活子接口**

**Exit 退出**

**Interface g0/0/0.20 进入g0/0/0.20子接口**

**Encapsulation dot1q 20 将vlan20封装成802.1q**

**Ip address 192.168.20.254 255.255.255.0 设置子接口IP**

**No shutdown 激活子接口**

**Exit 退出**

**Interface g0/0/0.30 进入g0/0/0.30子接口**

**Encapsulation dot1q 30 将vlan30封装成802.1q**

**Ip address 192.168.30.254 255.255.255.0 设置子接口ip**

**No shutdown 激活子接口**

**Exit 退出**

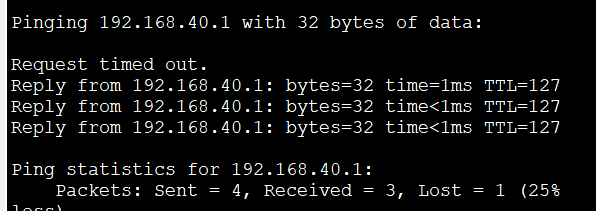
**Interface g0/0/0.40 进入g0/0/0.40子接口**

**Encapsulation dot1q 40 将vlan40封装成802.1q**

**Ip address 192.168.40.254 255.255.255.0 设置子接口IP**

**No shutdown 激活端口**

**Exit 退出**



**R1#show ip interface brief //查看ip接口的详细信息**

**Interface IP-Address OK? Method Status Protocol**

**GigabitEthernet0/0/0 unassigned YES unset up up**

**GigabitEthernet0/0/0.10192.168.1.1 YES manual up up**

**GigabitEthernet0/0/0.20192.168.2.1 YES manual up up**

**GigabitEthernet0/0/0.30192.168.3.1 YES manual up up**