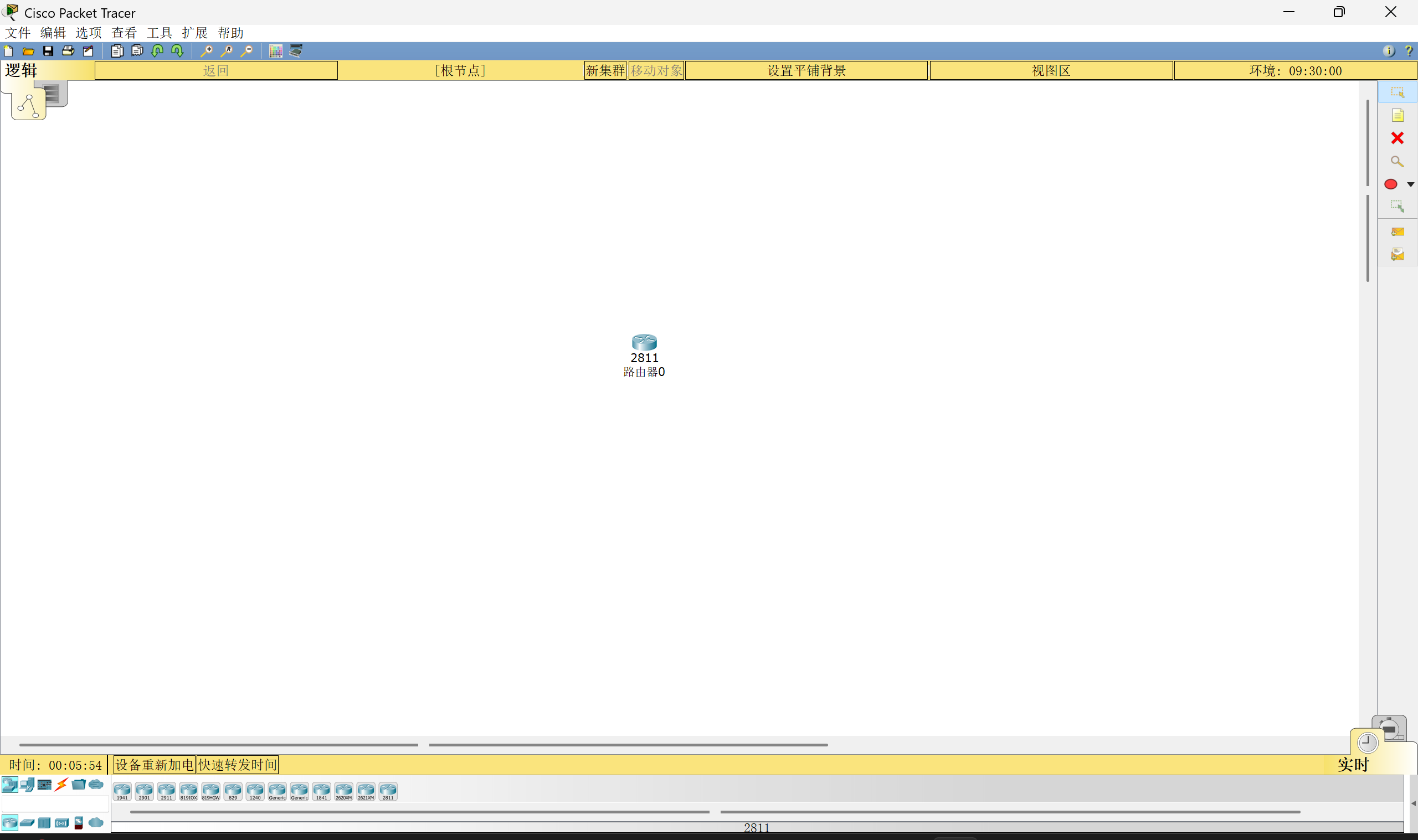
实验报告

|  |  |  |
| --- | --- | --- |
| **姓名：彭彦杰** | **时间：2025.** | **评分：** |

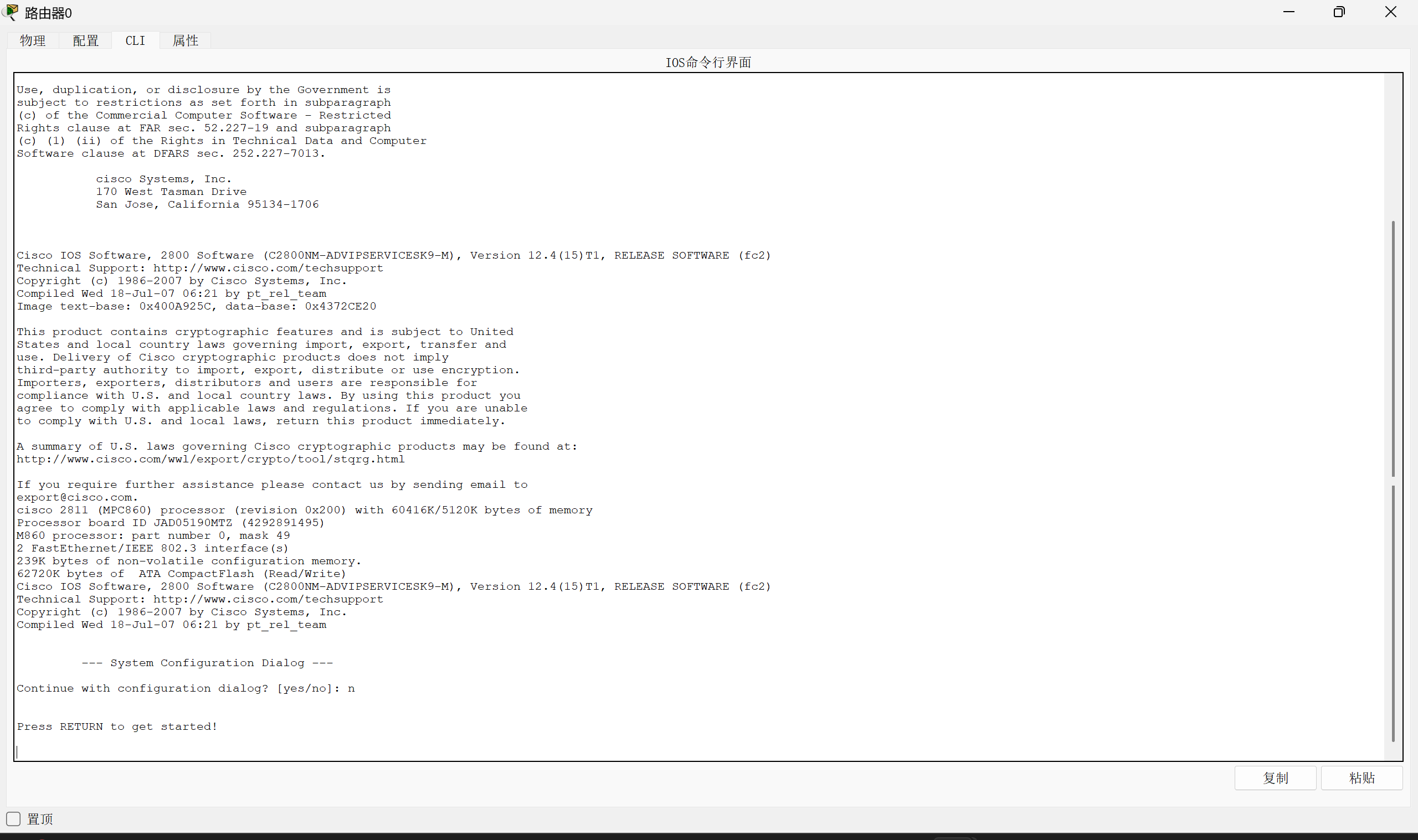
# 熟悉设备操作，学习ARP使用

## 教学

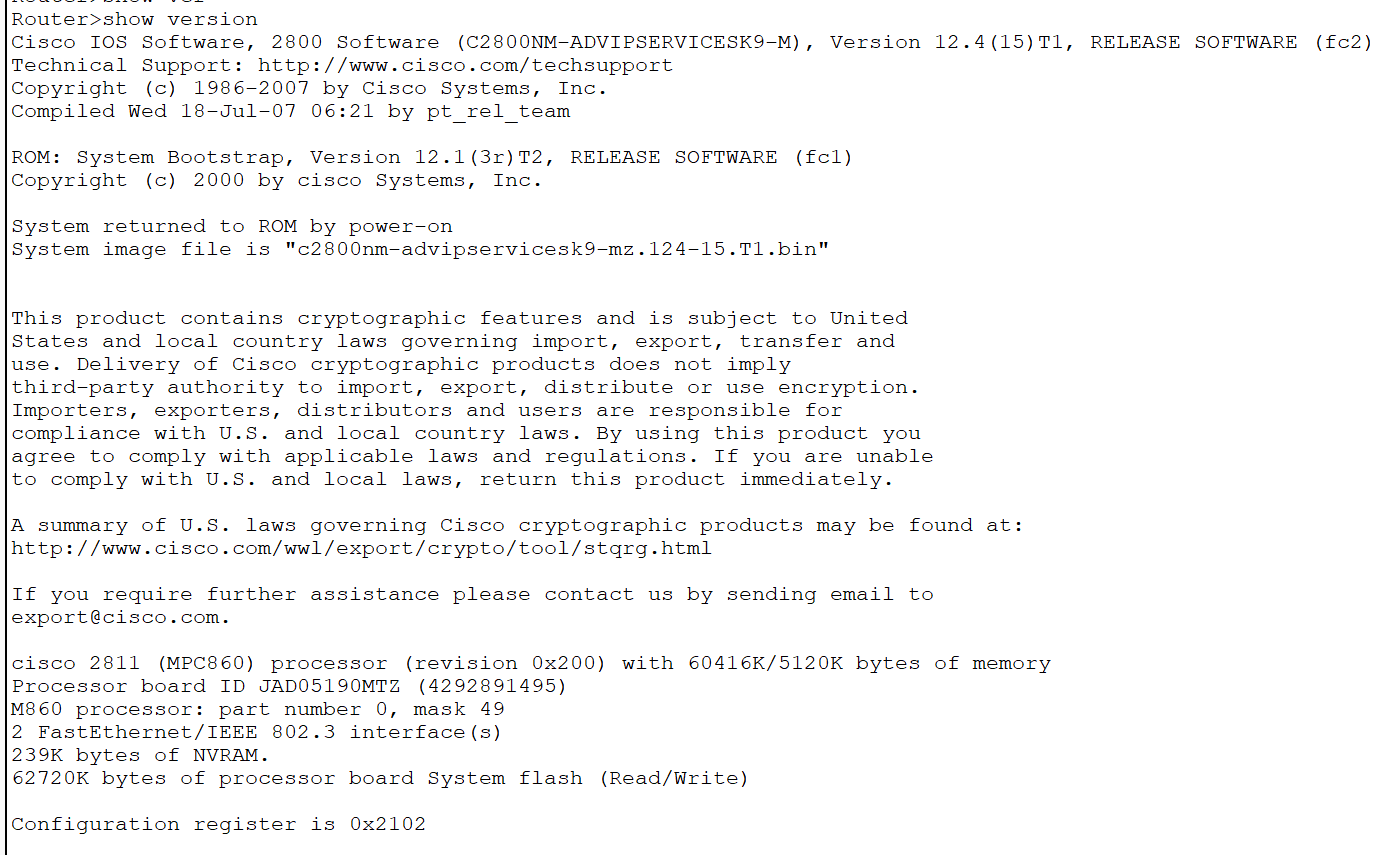
**步骤1 使用模拟器拖拽对应设备**



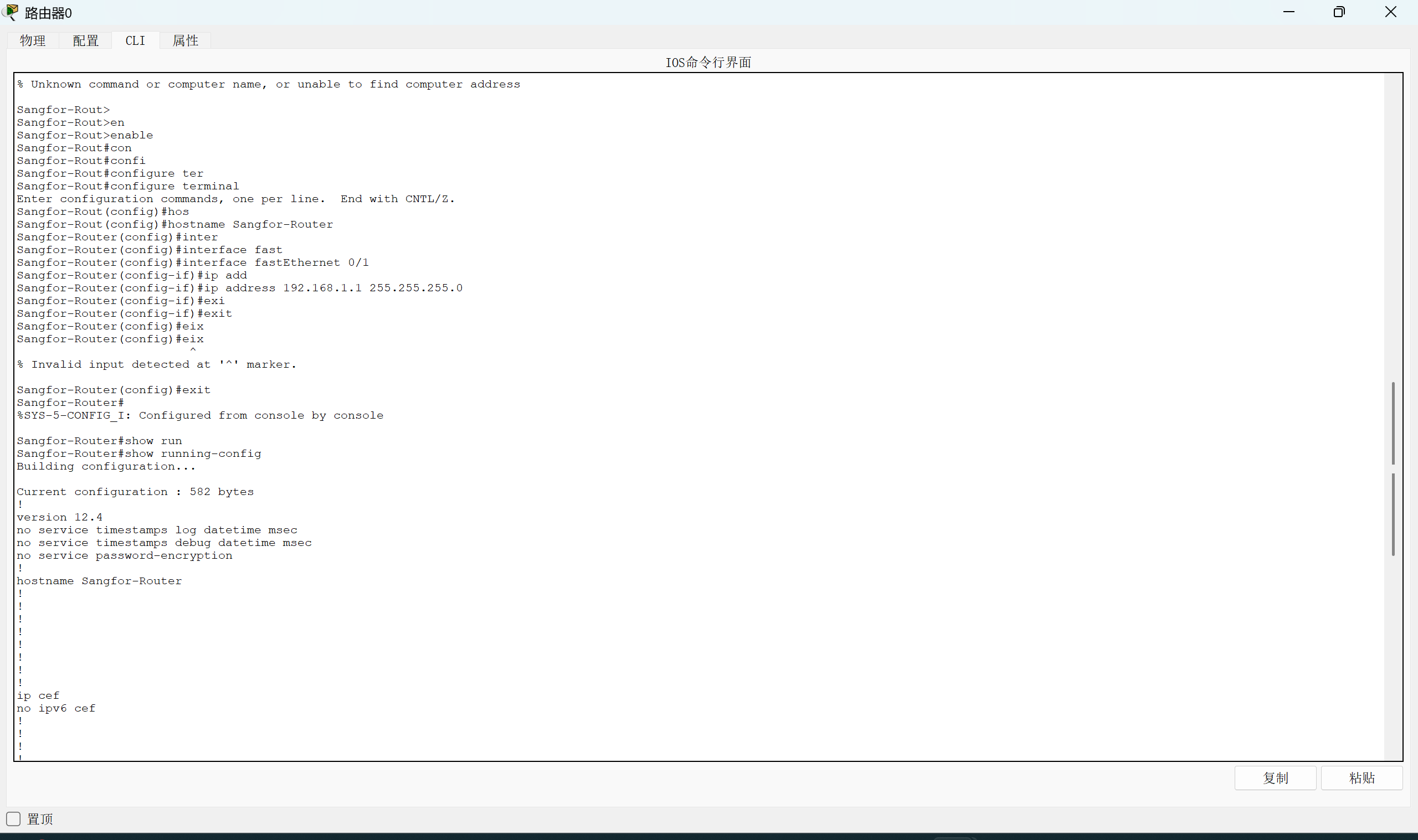
**步骤2 通过Console方式登录到Router的CLI**



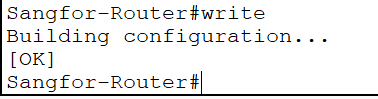
**步骤3 查看设备基本信息**



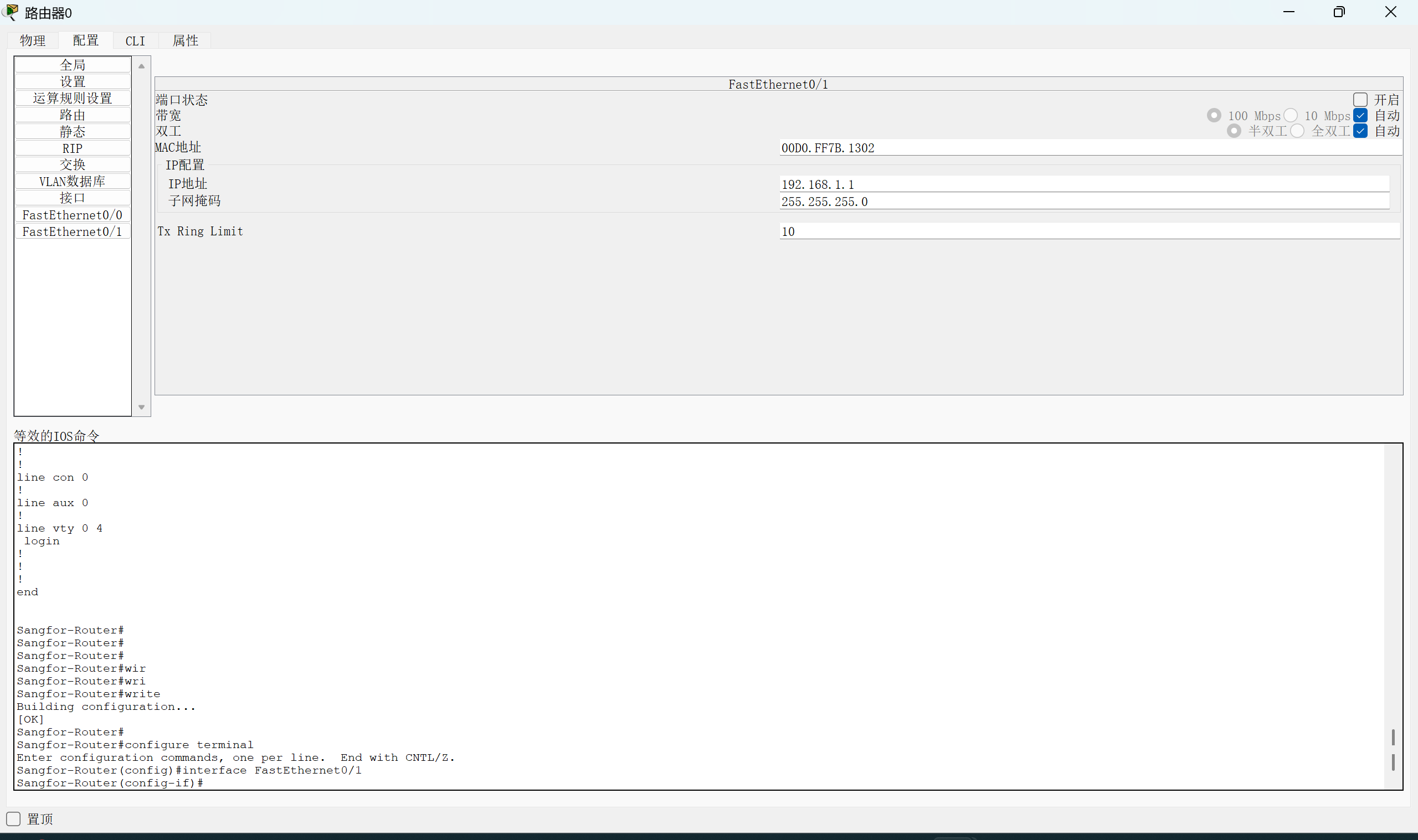
**步骤4 完成设备基本配置**



步骤5 保存设备当前配置

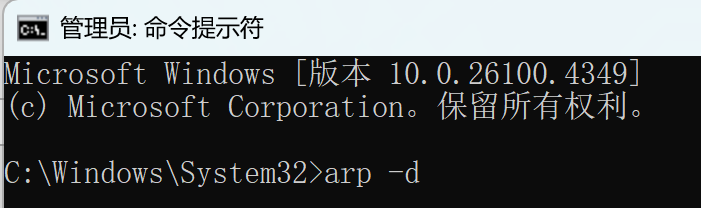


步骤6 使用设备图形化页面完成配置

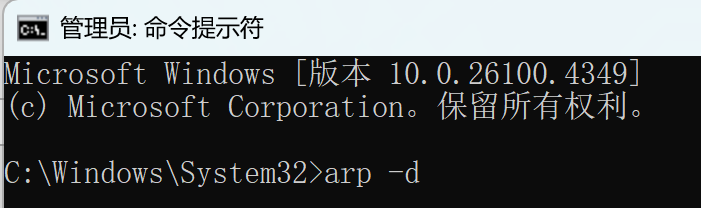


## 了解并熟悉PING和ARP的基本操作。

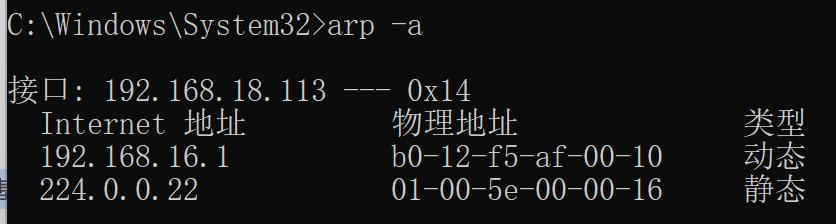
**步骤一：使用管理员模式打开CMD**



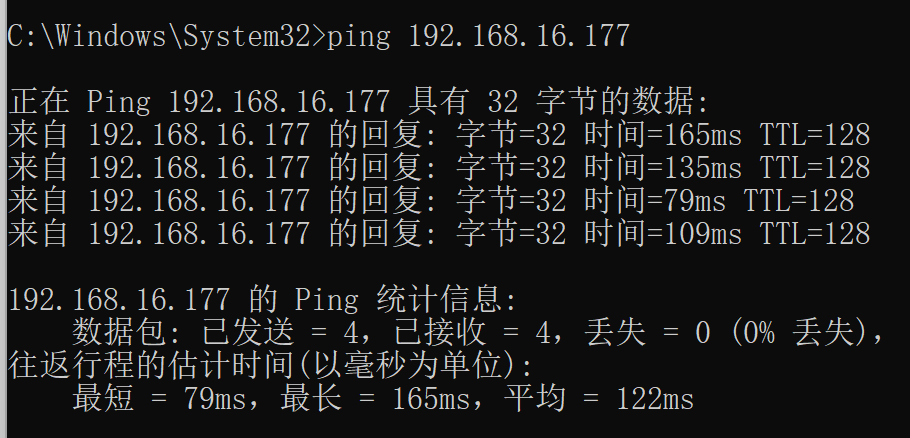
**步骤二：输入arp -d清除arp表**



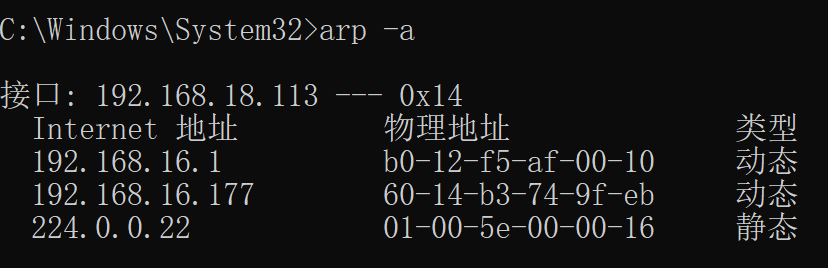
**步骤三：输入arp -a查看arp表，可看到现在arp表是空的，只有组播地址**



**步骤四：输入ping+IP地址的方式，与组内同学进行通信，如ping 192.168.1.1**

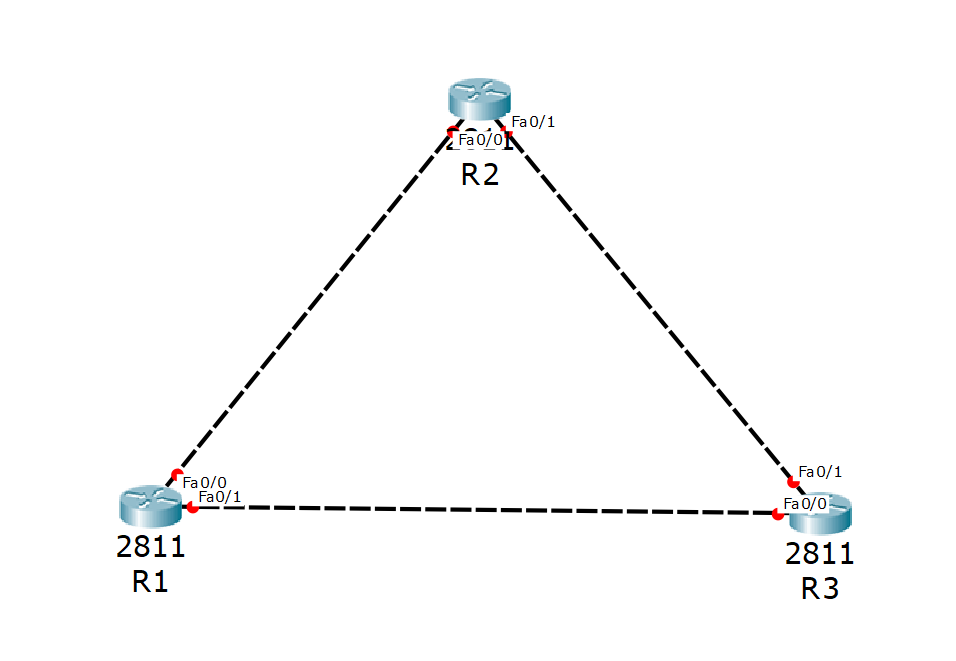


**步骤五：输入arp -a查看arp表，可看到现在arp表已经有你刚才ping过的记录**

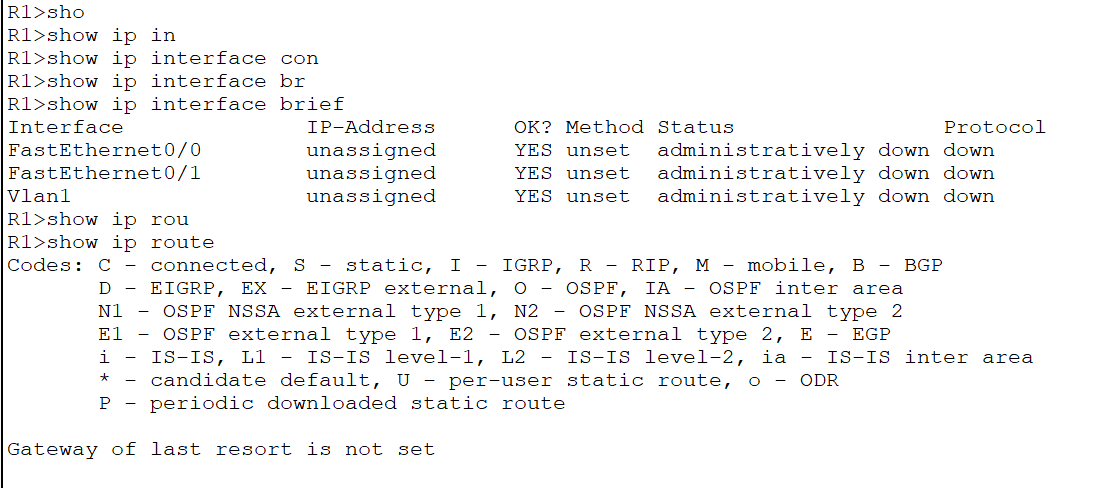


# 静态路由实验

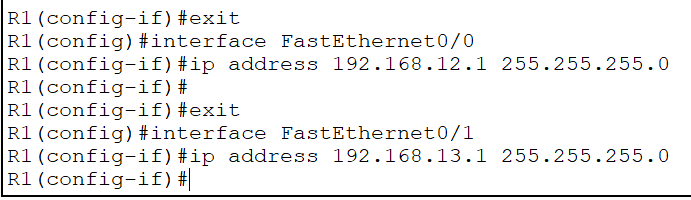
**步骤1 设备基础配置**

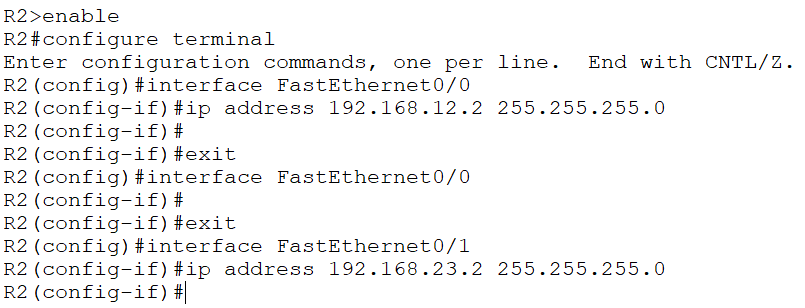


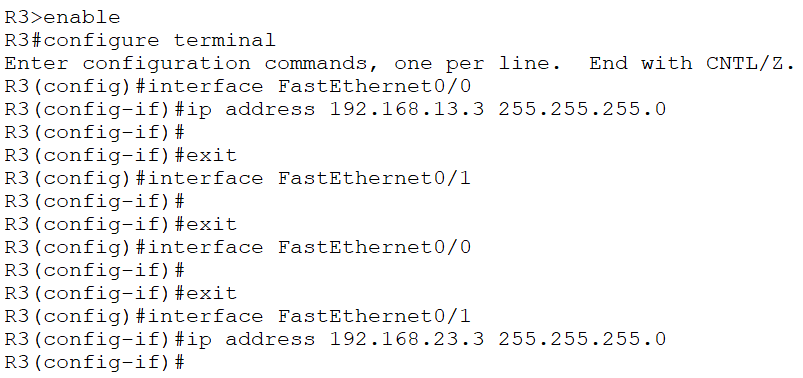
**步骤2 查看路由器当前接口IP地址配置与路由表**

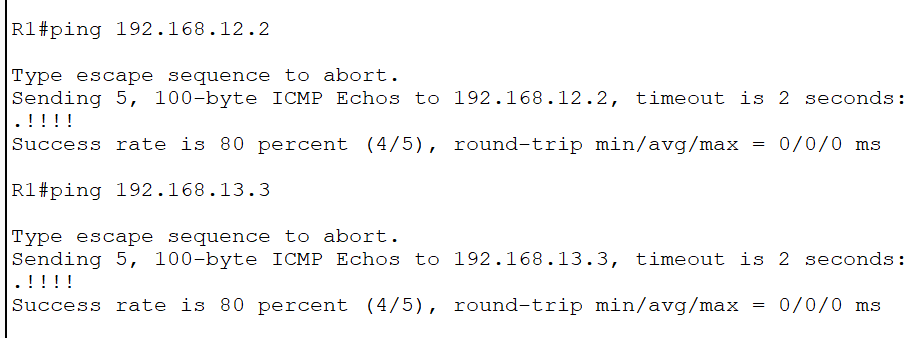


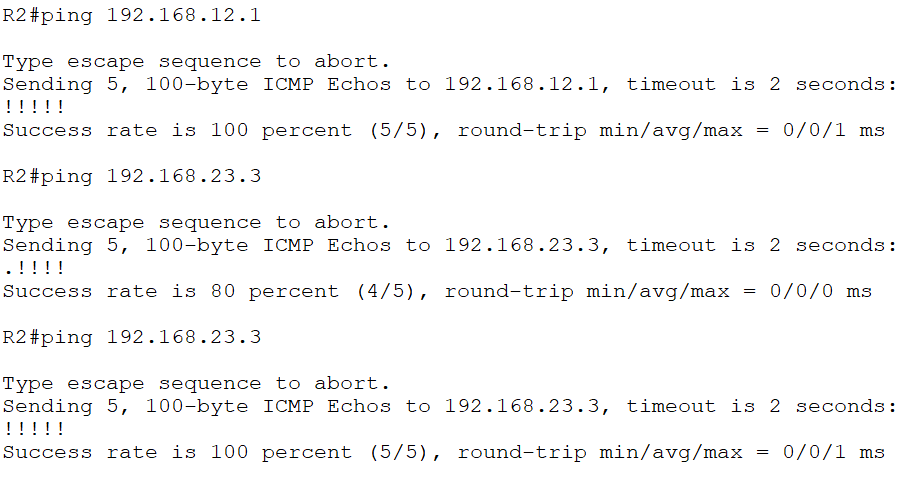
**步骤3 配置路由物理接口的IP地址**

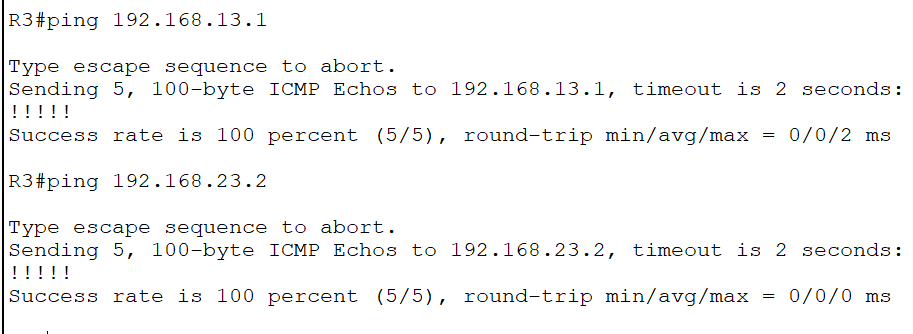


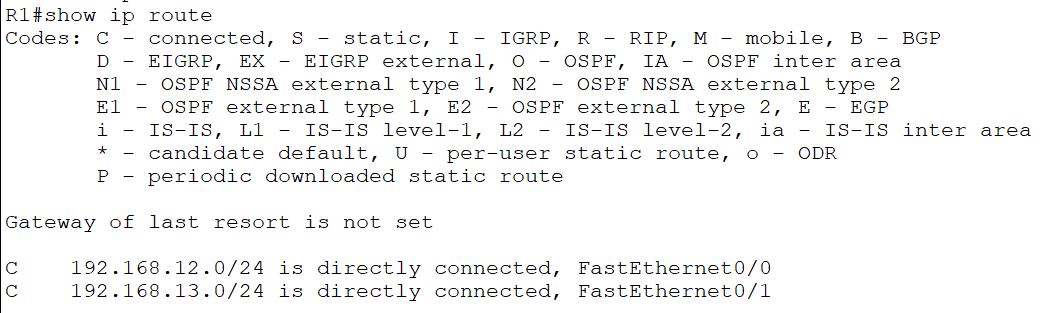




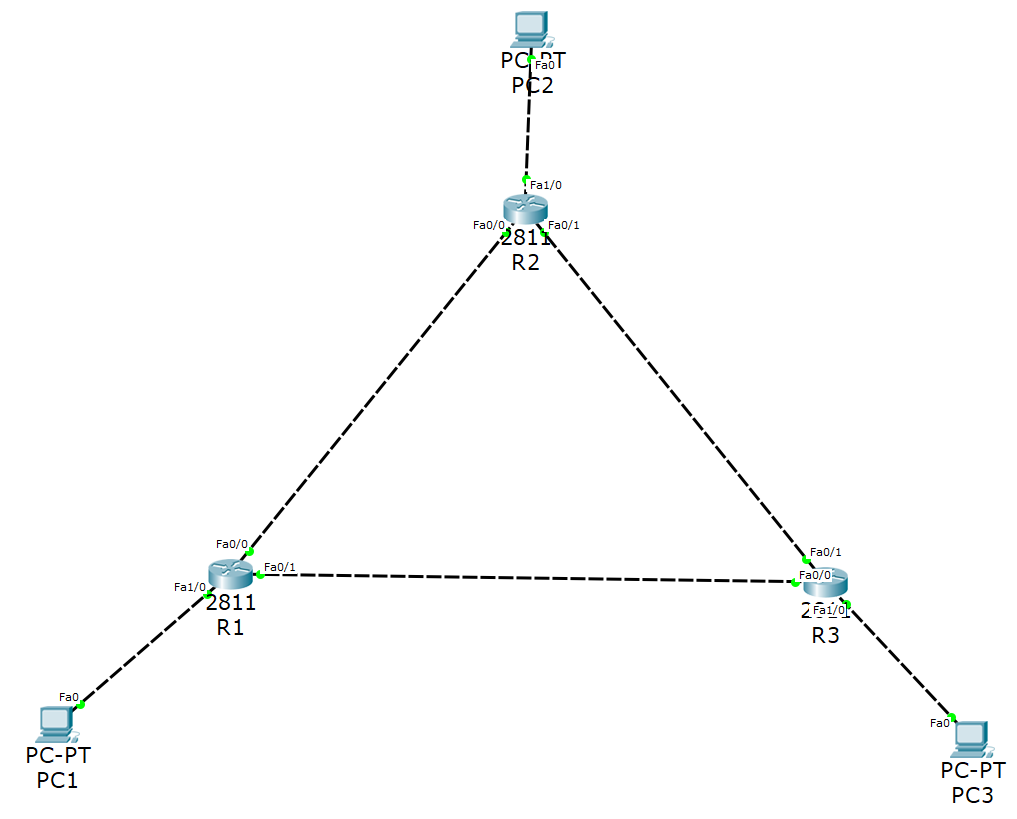






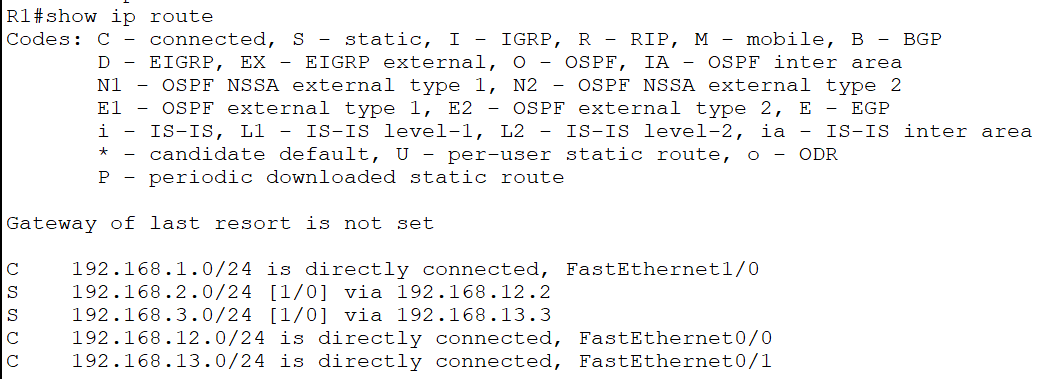


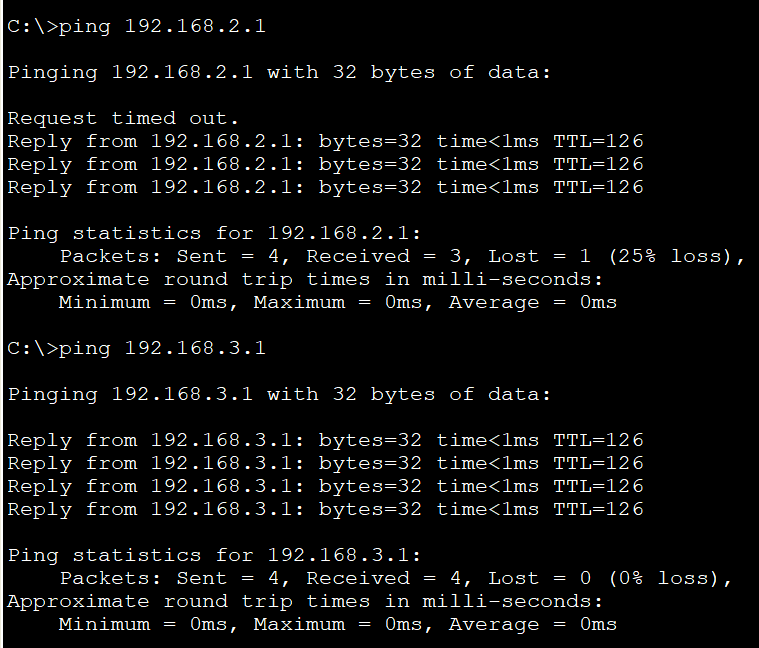
**步骤4 添加不同网段的PC**



**步骤5 配置静态路由**





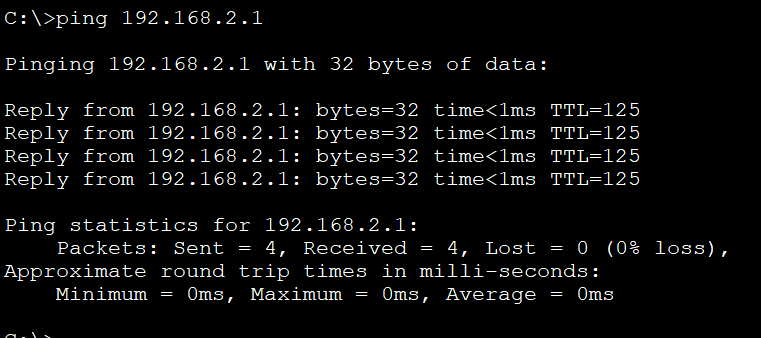


**步骤6 配置R1->R3->R2作为R1的PC到R2的PC接口的备份路径**

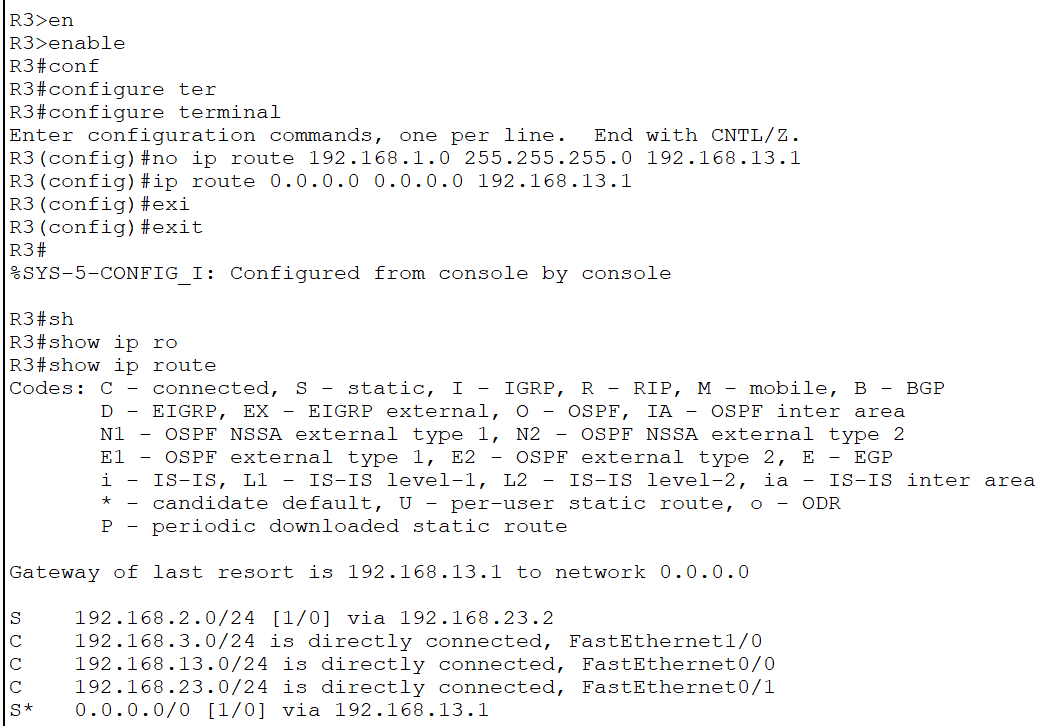


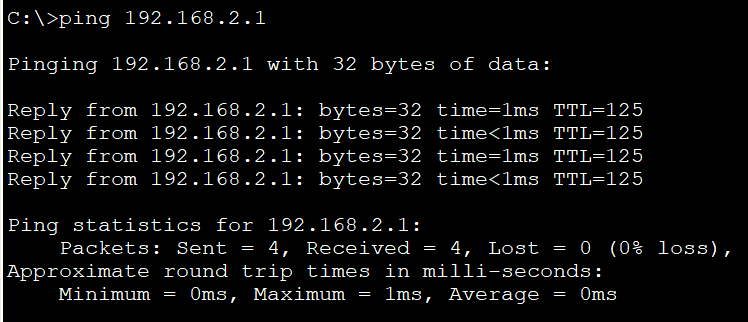






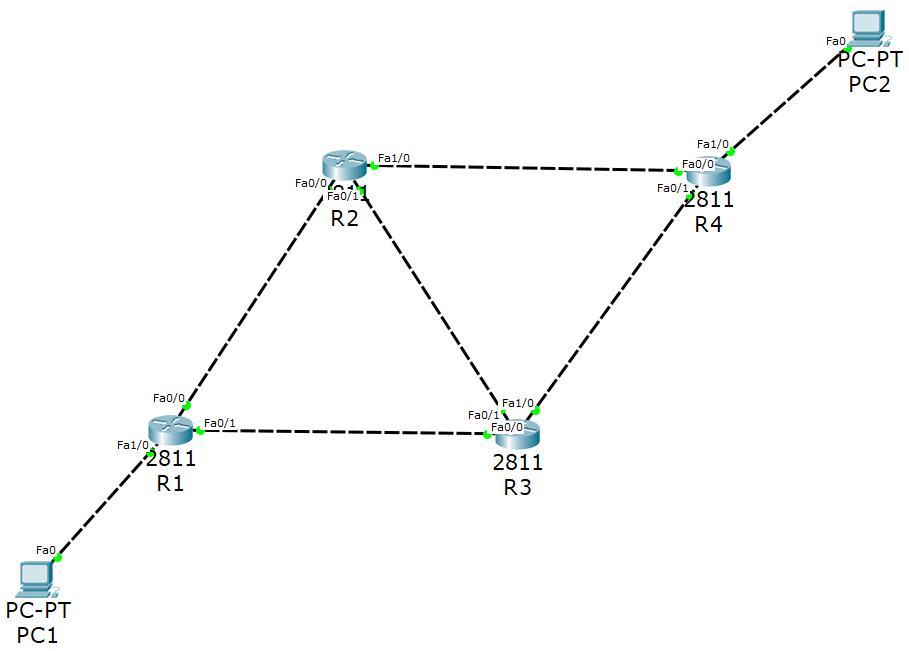
**步骤7 通过默认路由实现R3的PC接口和R1的PC接口互联互通**



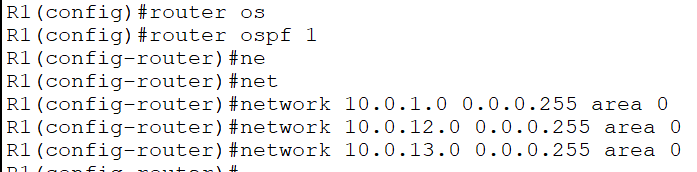


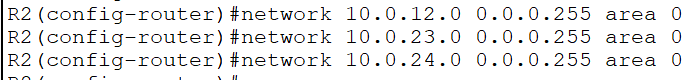
# OSPF路由协议基础实验

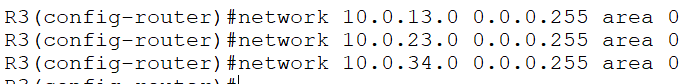
**步骤1 设备基础配置**

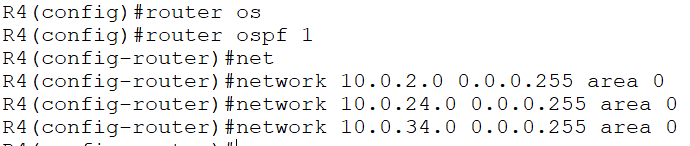


**步骤2 完成OSPF基本配置**

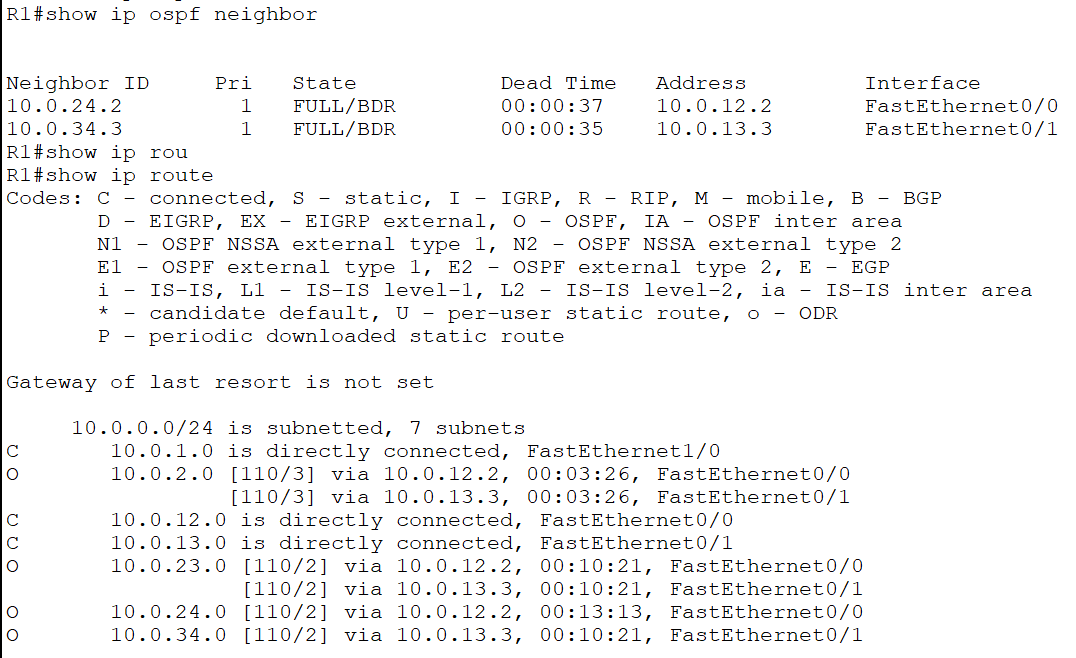


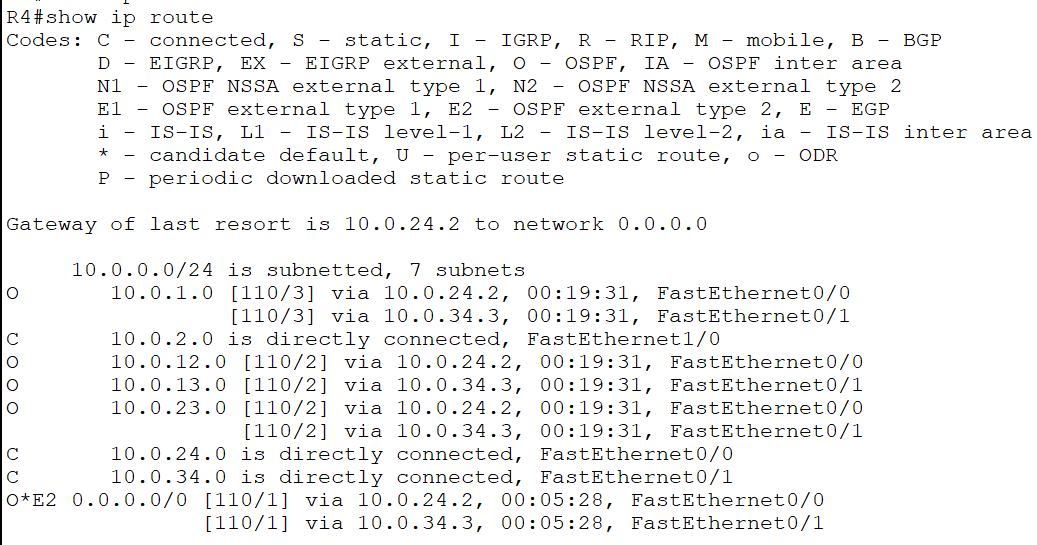


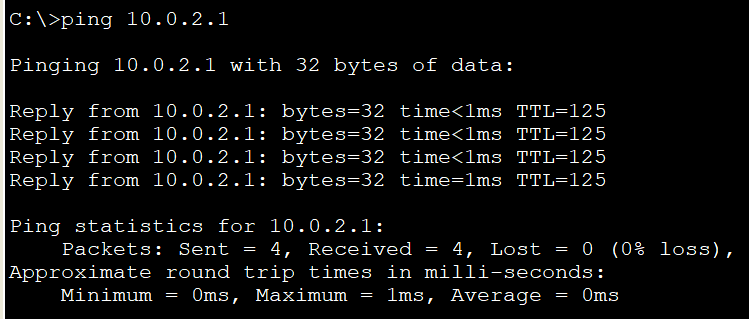




**步骤3 查看OSPF状态**

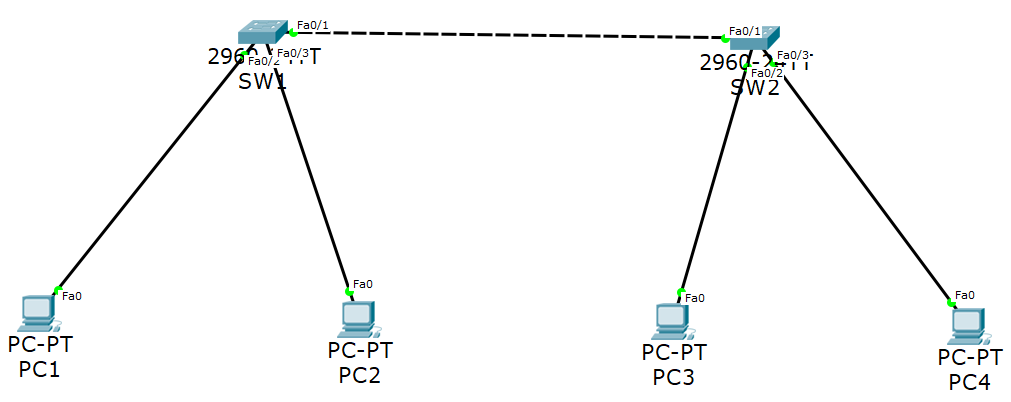




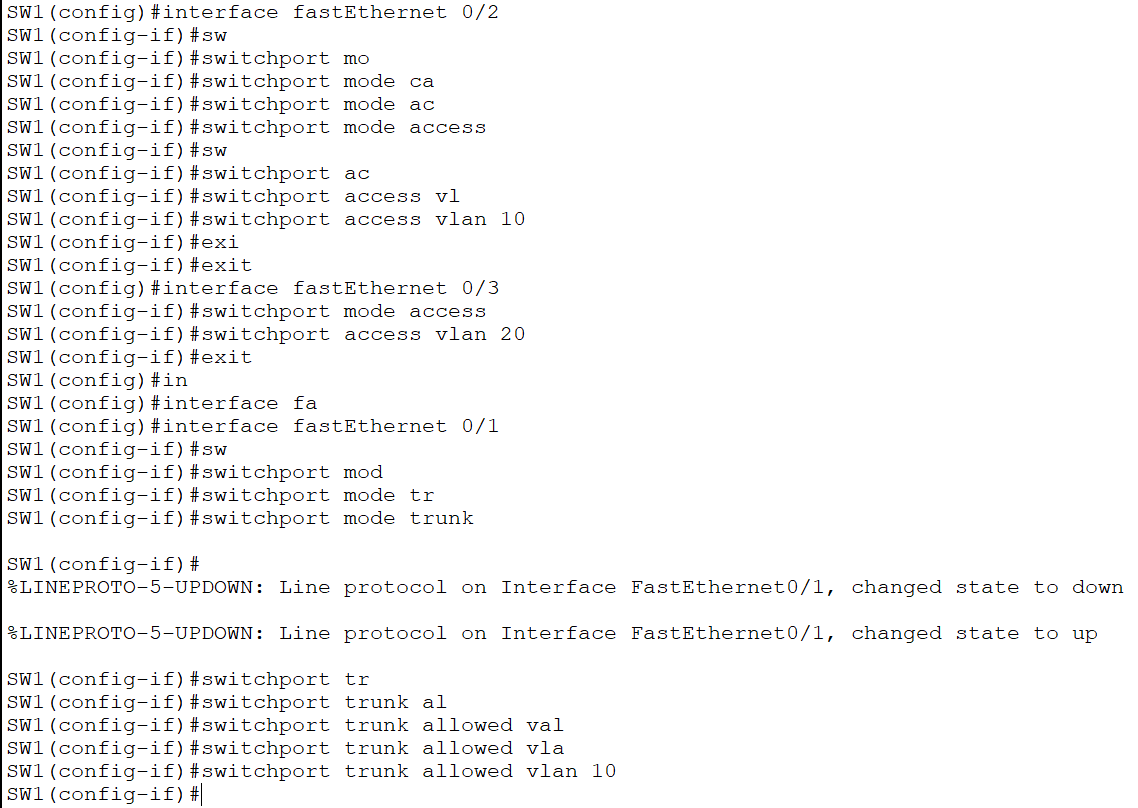


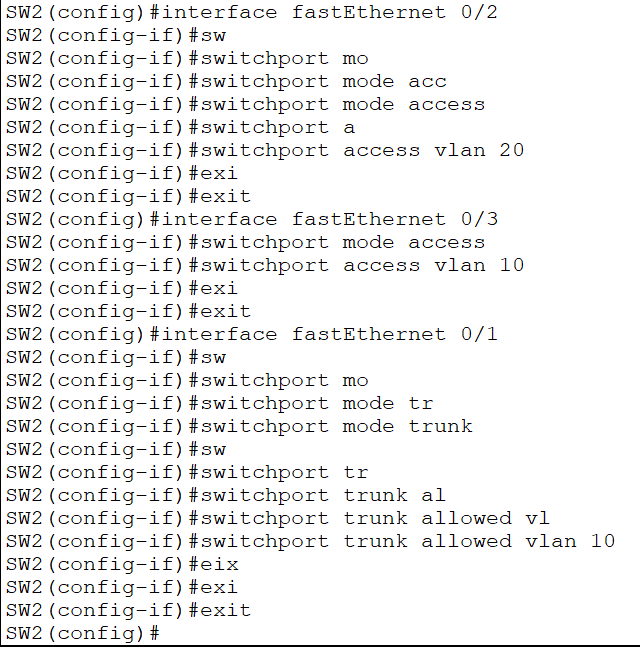
# 以太网基础与VLAN配置实验

**步骤1 配置S1和S2设备名称**

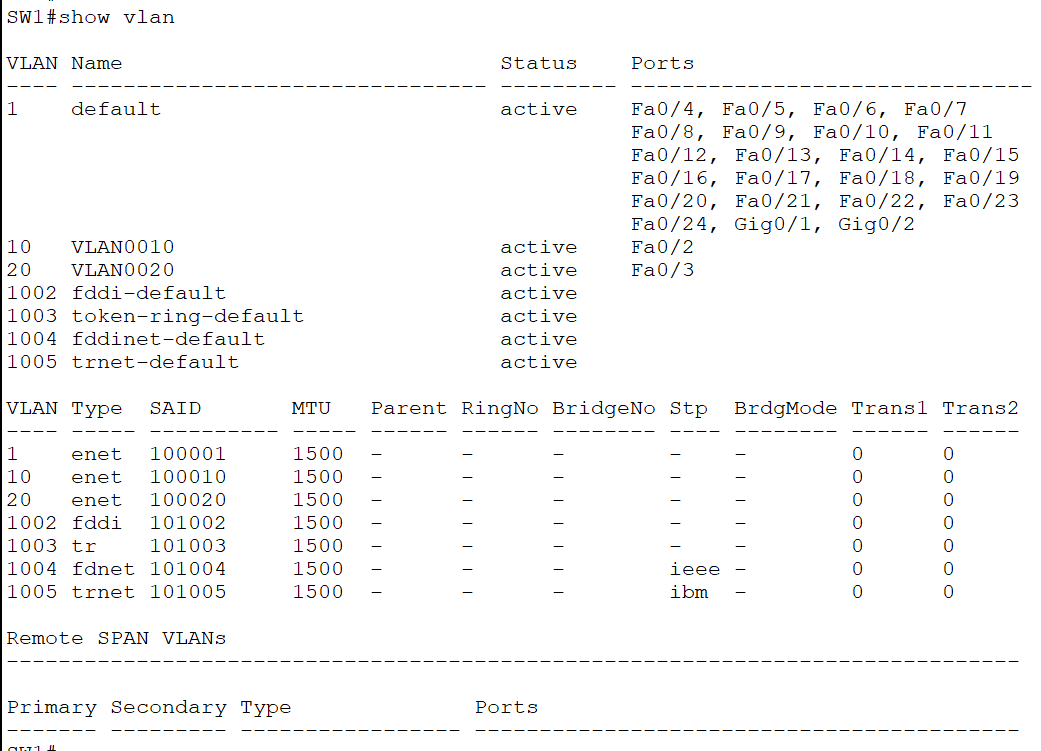


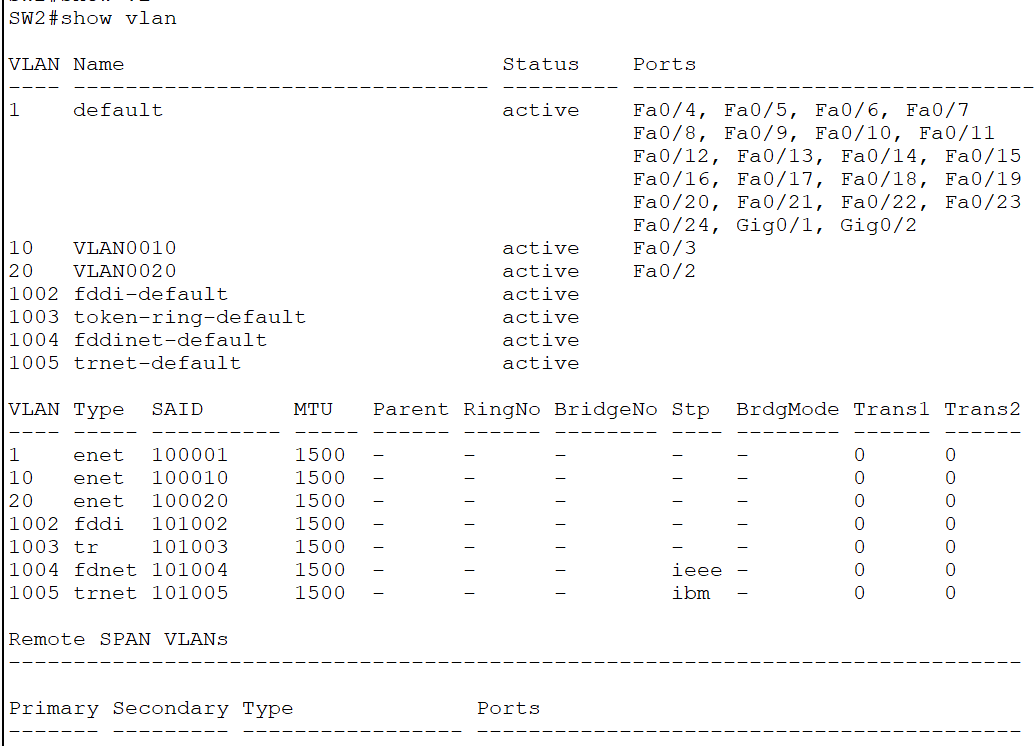
**步骤2 配置PC设备的IP地址**

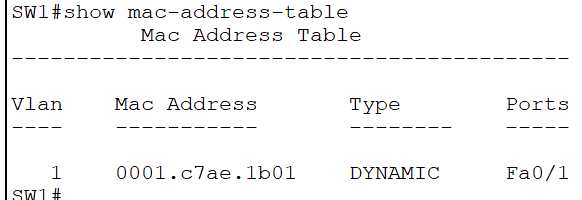




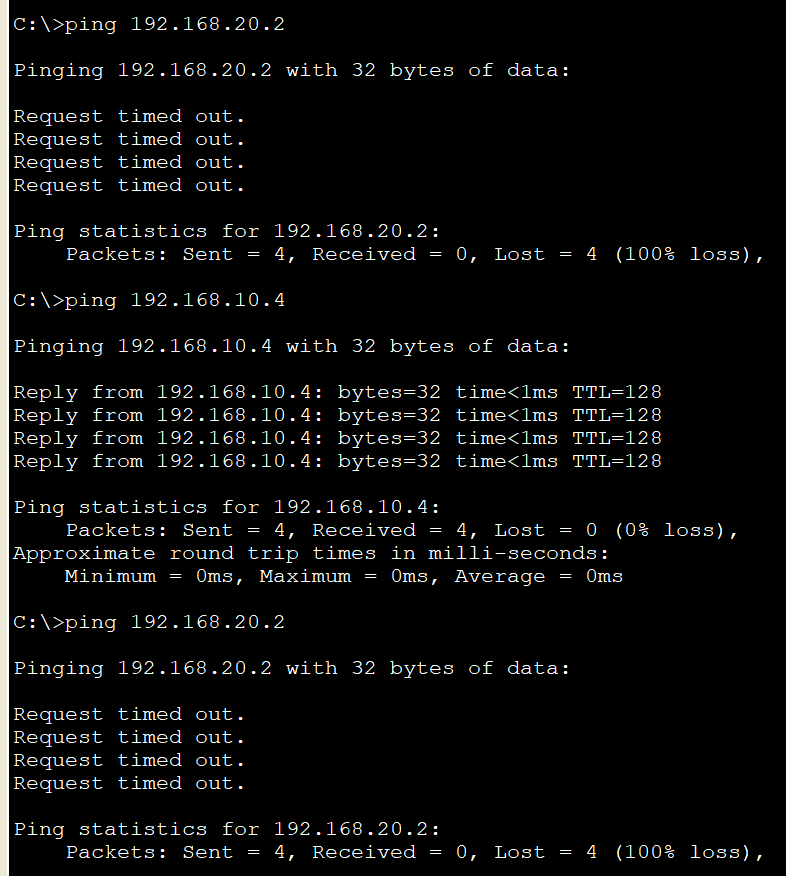
**步骤3 查看配置信息**

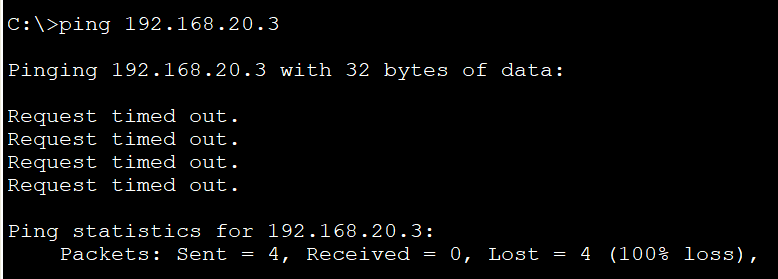






**结果验证**

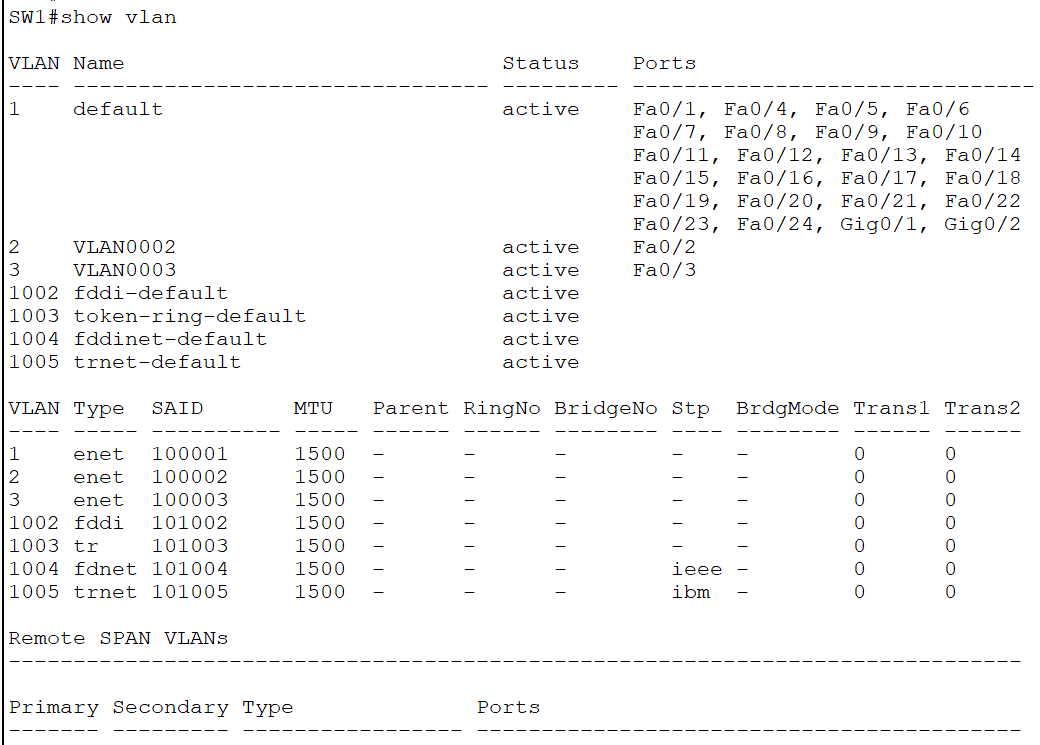


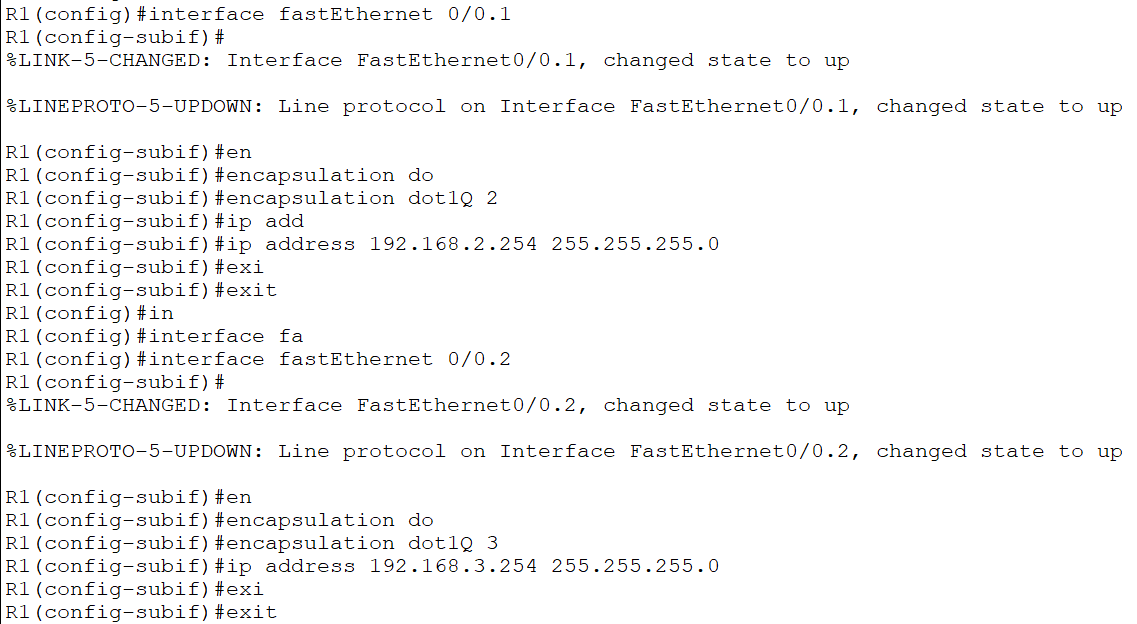


被trunk口拦截

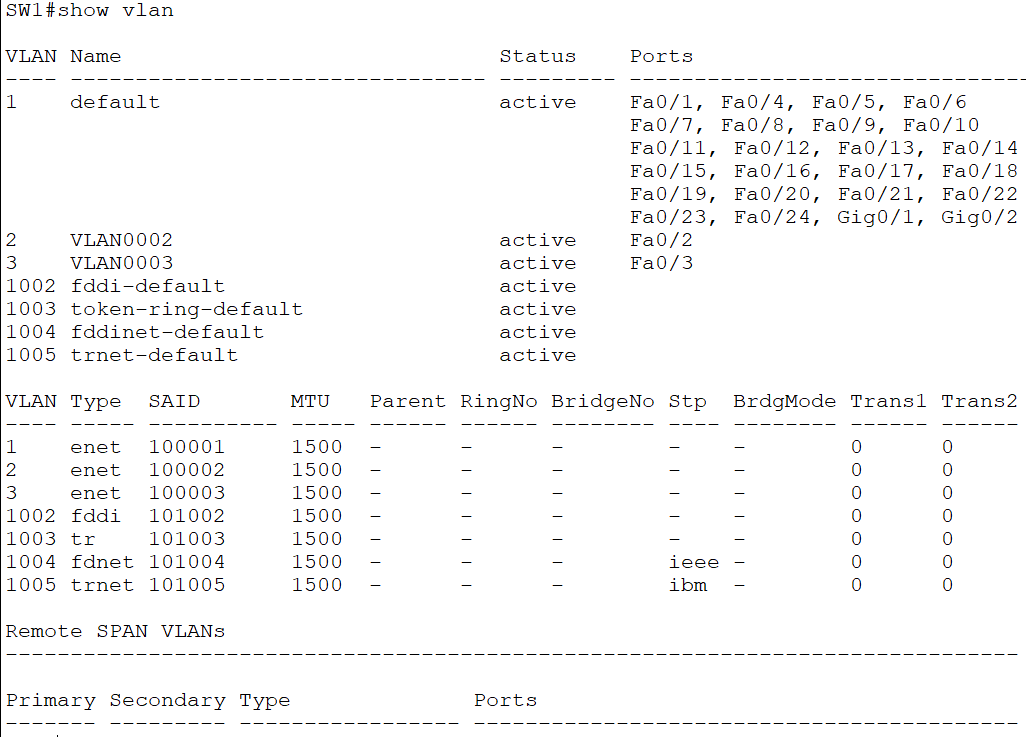
# 实验五实现VLAN间通信

**步骤1 配置S1和R1设备名称和配置PC设备的IP地址**

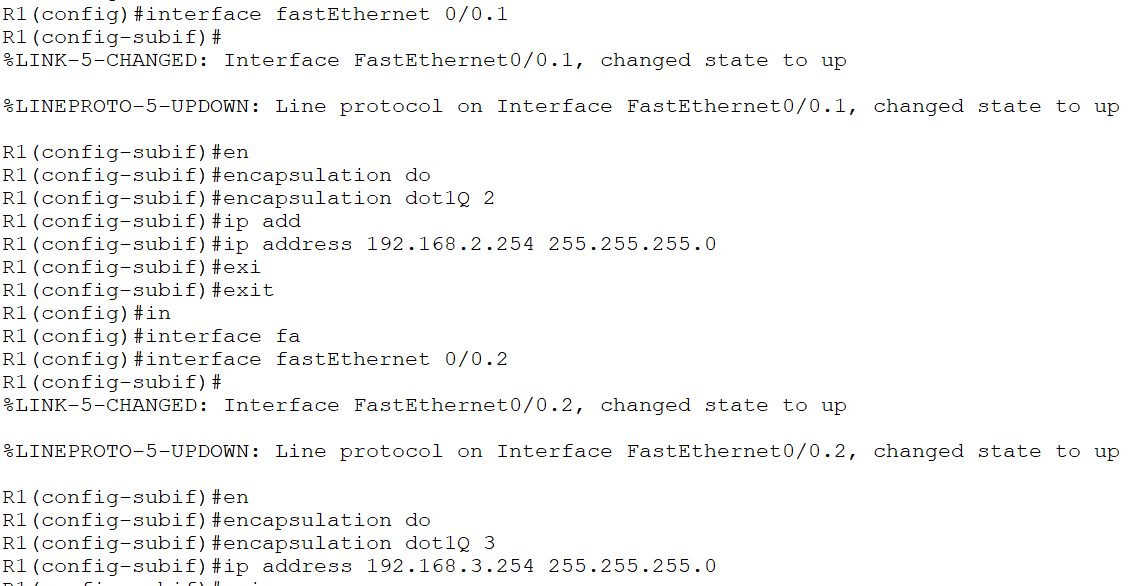


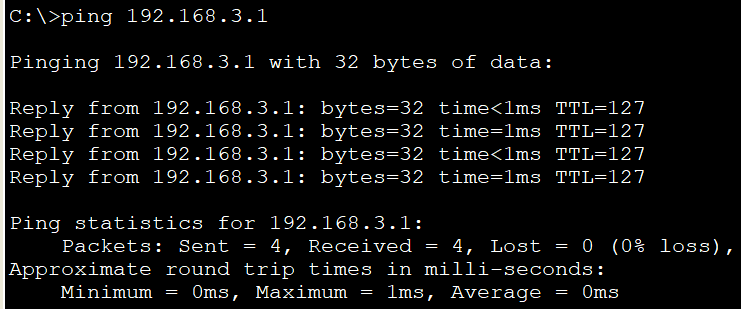


**步骤2 在S1上对R2和R3进行VLAN划分**

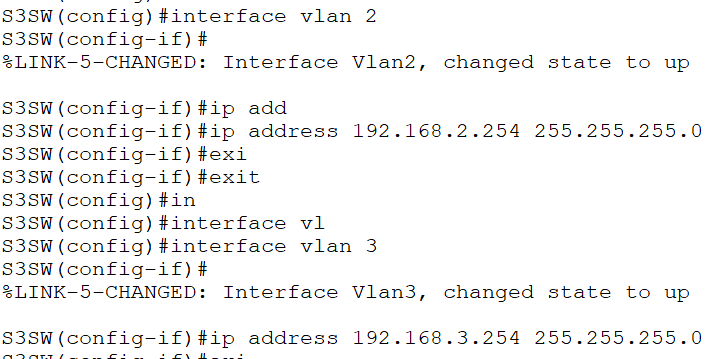


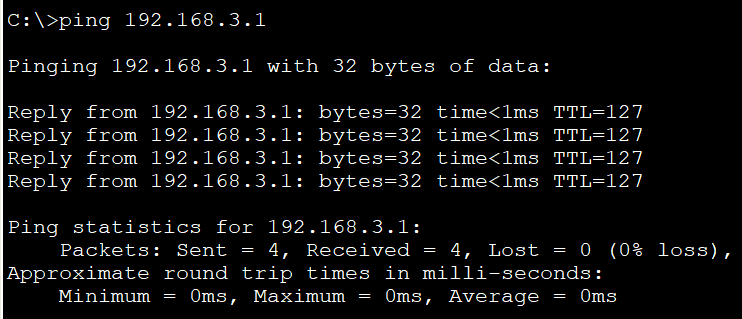
**步骤3 通过Dot1q子接口实现VLAN间互访**





**步骤4 通过VLANIF接口实现VLAN间互访**





# 实验六DHCP基础配置实验

**步骤1 基本配置**