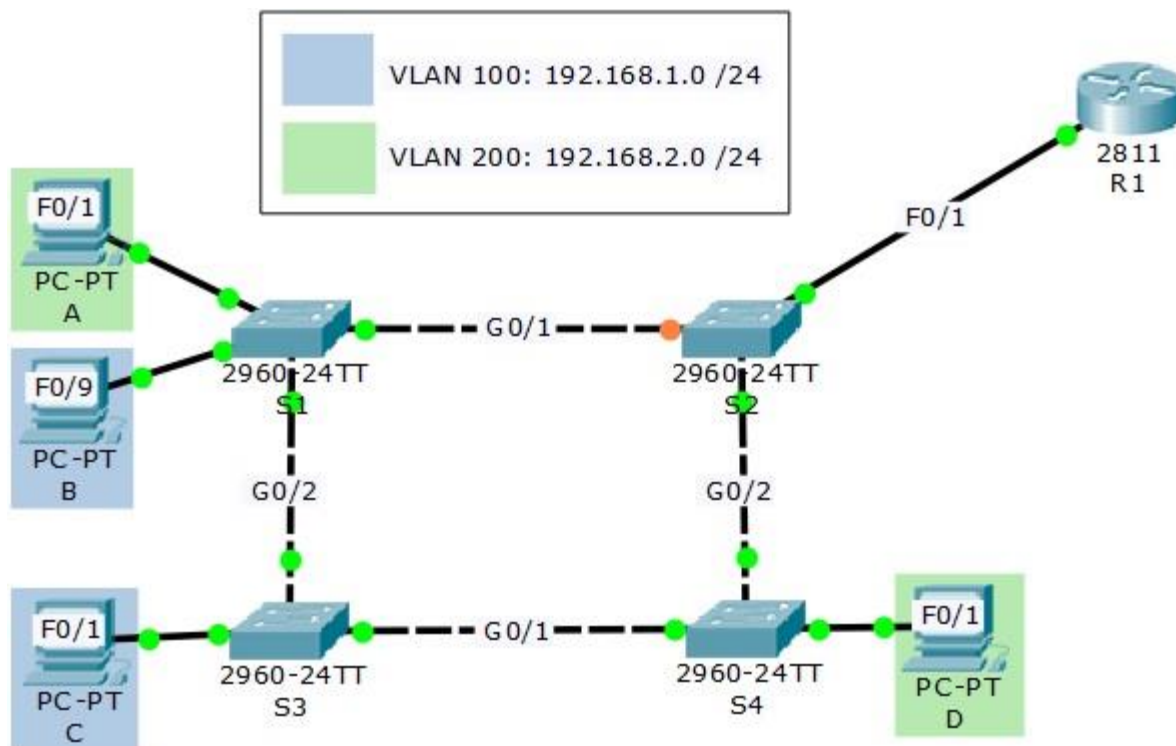


Goal. Recreate the diagram below and configure the following:

- ✓ 1. Hostname according to the diagram and a banner on R1 with your name.
2. Access interfaces and VLANs – 8 interfaces per VLAN.
3. Trunk interfaces.
4. Make sure to create all VLANs on all switches.
5. Configure R1 as a "Router-on-a-stick", with a DHCP server for both VLANs.
6. IP addresses on PCs using DHCP.



1. Hostname, banner

```
Router(config)#hostname R1
```

```
R1(config)#banner motd #Cyber Quince#
```

2. Access mode and VLANs

```
S1(config)#interface range FastEthernet 0/1-8
S1(config-if-range)#switchport mode access
S1(config-if-range)#switchport access vlan 200
```

```
S1(config)#interface range FastEthernet 0/9-16
S1(config-if-range)#switchport mode access
S1(config-if-range)#switchport access vlan 100
% Access VLAN does not exist. Creating vlan 100
```

3. Trunk

```
S3(config)#interface range GigabitEthernet 0/1-2
S3(config-if-range)#switchport mode trunk
```

S2-R1 link:

```
S2(config)#interface FastEthernet 0/1
S2(config-if)#switchport mode trunk
```

4. Creating VLANs on switches

```
S2(config)#vlan 100
S2(config)#vlan 200
```

5. Router on a stick

```
R1(config)#interface FastEthernet 0/1
R1(config-if)#no shutdown

R1(config)#interface FastEthernet 0/1.100
R1(config-subif)#encapsulation dot1Q 100
R1(config-subif)#ip address 192.168.1.1 255.255.255.0

R1(config)#interface FastEthernet 0/1.200
R1(config-subif)#encapsulation dot1Q 200
R1(config-subif)#ip address 192.168.2.1 255.255.255.0
```

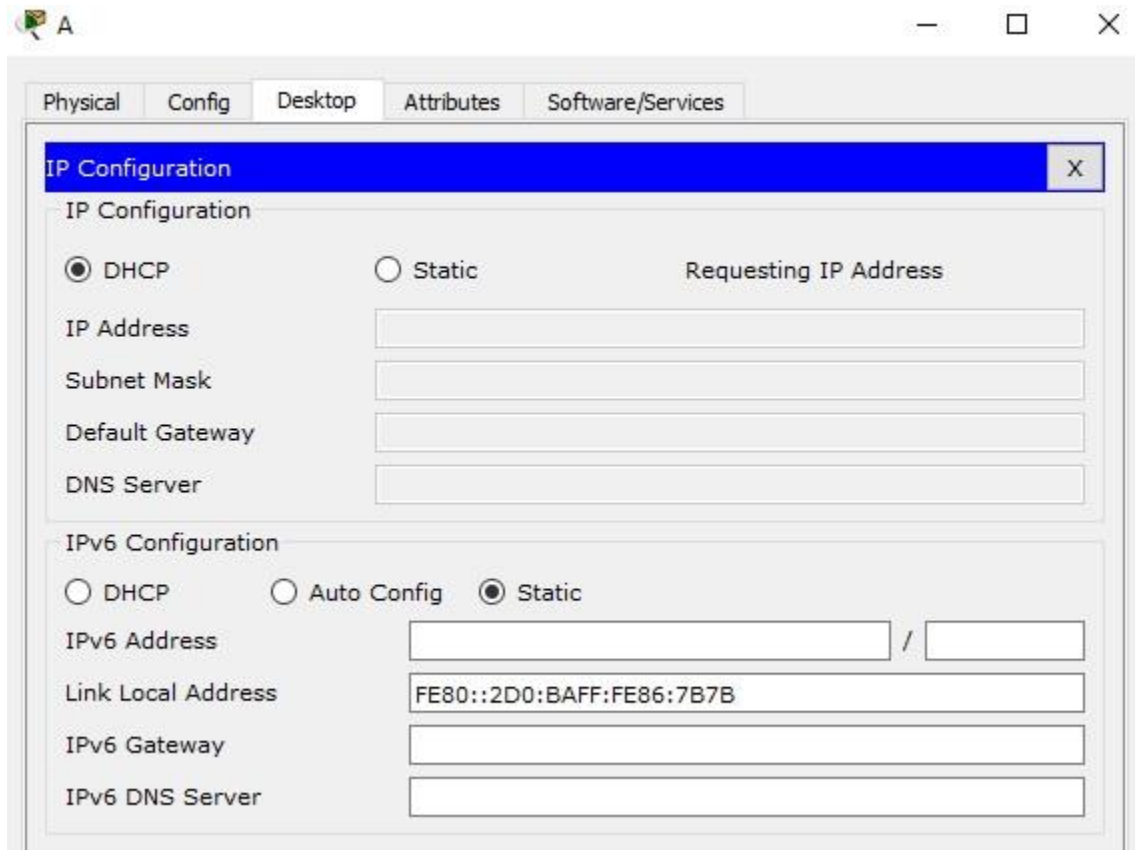
DHCP server on R1

```
R1(config)#ip dhcp excluded-address 192.168.1.0 192.168.1.10
R1(config)#ip dhcp excluded-address 192.168.2.0 192.168.2.10

R1(config)#ip dhcp pool Vlan100
R1(dhcp-config)#network 192.168.1.0 255.255.255.0
R1(dhcp-config)#default-router 192.168.1.1

R1(config)#ip dhcp pool Vlan200
R1(dhcp-config)#network 192.168.2.0 255.255.255.0
R1(dhcp-config)#default-router 192.168.2.1
```

6. PC IP addresses



The screenshot shows a Windows Network Connections window with the 'Config' tab selected. The 'IP Configuration' section is expanded, showing the 'DHCP' radio button selected. Below it are fields for 'IP Address', 'Subnet Mask', 'Default Gateway', and 'DNS Server'. The 'IPv6 Configuration' section is also expanded, showing the 'Static' radio button selected. Below it are fields for 'IPv6 Address', 'Link Local Address' (containing 'FE80::2D0:BAFF:FE86:7B7B'), 'IPv6 Gateway', and 'IPv6 DNS Server'.

Physical Config Desktop Attributes Software/Services

IP Configuration

☒ DHCP ☐ Static Requesting IP Address

IP Address

Subnet Mask

Default Gateway

DNS Server

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address

Link Local Address FE80::2D0:BAFF:FE86:7B7B

IPv6 Gateway

IPv6 DNS Server