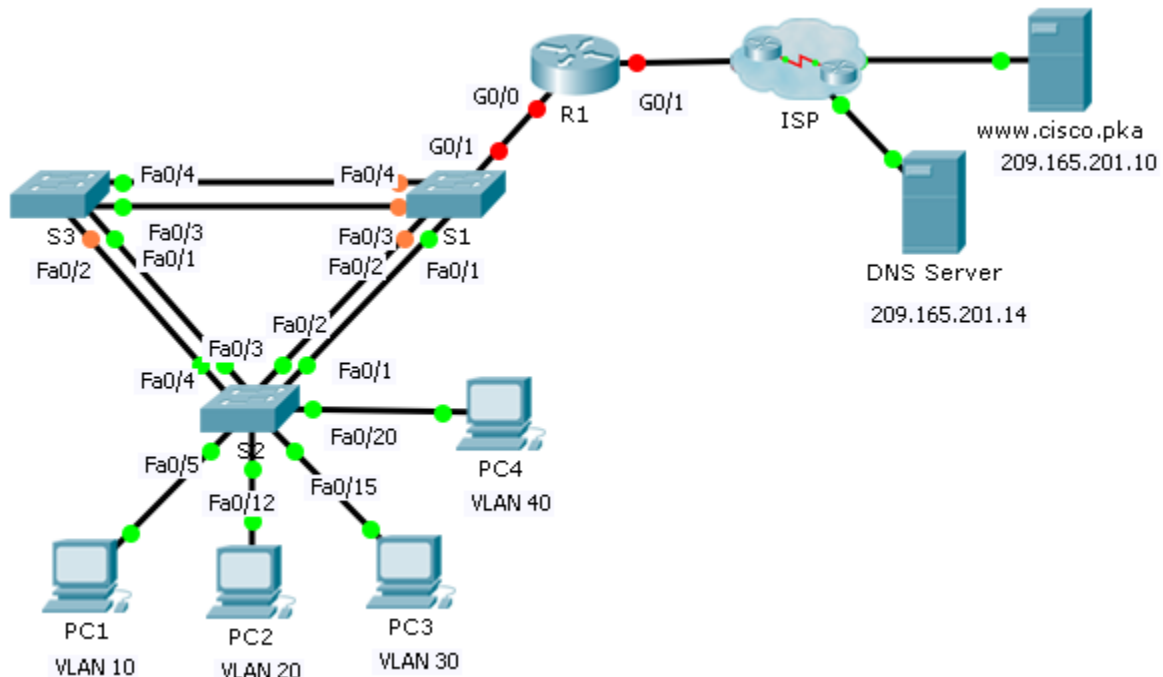


Packet Tracer – Skills Integration Challenge

Topology



Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
R1	G0/0.10	172.31.10.1	255.255.255.224	N/A
	G0/0.20	172.31.20.1	255.255.255.240	N/A
	G0/0.30	172.31.30.1	255.255.255.128	N/A
	G0/0.40	172.31.40.1	255.255.255.192	N/A
	G0/1	DHCP Assigned	DHCP Assigned	N/A
PC1	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
PC2	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
PC3	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned
PC4	NIC	DHCP Assigned	DHCP Assigned	DHCP Assigned

VLAN Port Assignments and DHCP Information

Ports	VLAN Number - Name	DHCP Pool Name	Network
Fa0/5 – 0/9	VLAN 10 - Sales	VLAN_10	172.31.10.0/27
Fa0/10 – Fa0/14	VLAN 20 - Production	VLAN_20	172.31.20.0/28
Fa0/15 – Fa0/19	VLAN 30 - Marketing	VLAN_30	172.31.30.0/25
Fa0/20 - Fa0/24	VLAN 40 - HR	VLAN_40	172.31.40.0/26

Scenario

In this culminating activity, you will configure VLANs, trunks, DHCP Server, DHCP relay agents, and configure a router as a DHCP client.

Requirements

Using the information in the tables above, implement the following requirements:

- Create VLANs on **S2** and assign VLANs to appropriate ports. Names are case-sensitive
- Configure **S2** ports for trunking.
- Configure all non-trunk ports on **S2** as access ports.
- Configure **R1** to route between VLANs. Subinterface names should match the VLAN number.
- Configure **R1** to act as a DHCP server for the VLANs attached to S2.
 - Create a DHCP pool for each VLAN. Names are case-sensitive.
 - Assign the appropriate addresses to each pool.
 - Configure DHCP to provide the default gateway address
 - Configure the DNS server 209.165.201.14 for each pool.
 - Prevent the first 10 addresses from each pool from being distributed to end devices.
- Verify that each PC has an address assigned from the correct DHCP pool.

Note: DHCP address assignments may take some time. Click **Fast Forward Time** to speed up the process.

- Configure **R1** as a DHCP client so that it receives an IP address from the ISP network.
- Verify all devices can now ping each other and **www.cisco.pka**.