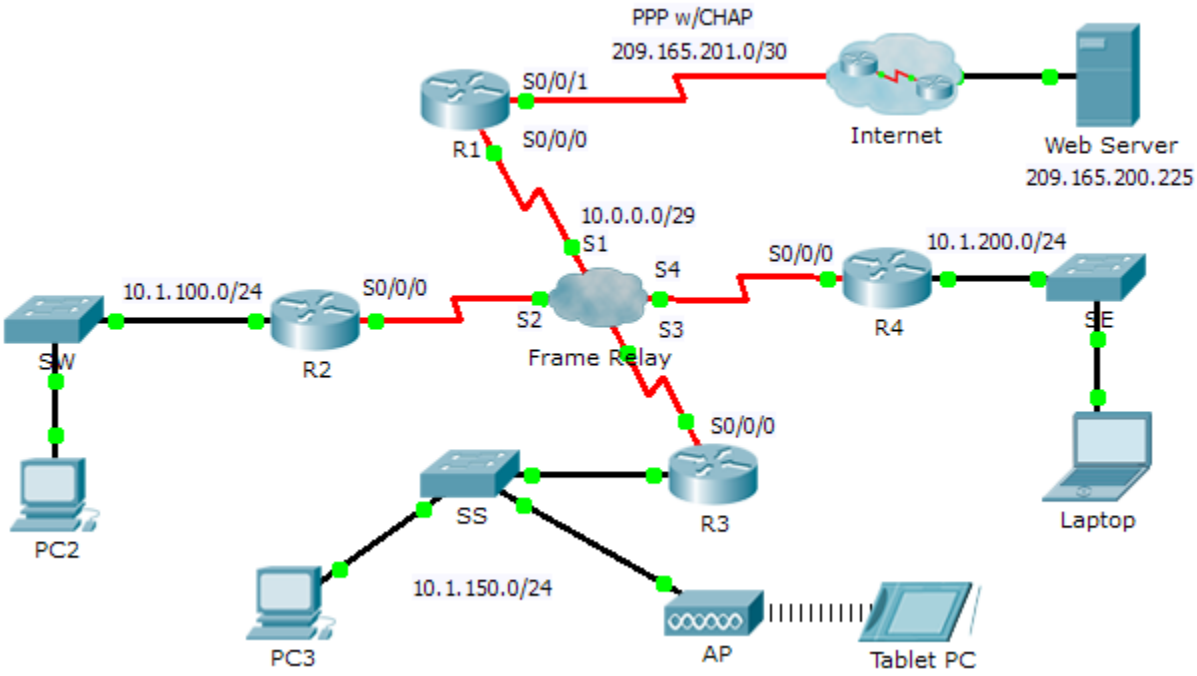
Packet Tracer – Skills Integration Challenge

Topology



Addressing Table

Device	Interface	IPv4 Address	Subnet Mask	Default Gateway
R1	S0/0/0	10.0.0.1	255.255.255.248	N/A
	S0/0/1	209.165.201.2	255.255.255.252	N/A
R2	G0/0	10.1.100.1	255.255.255.0	N/A
	S0/0/0	10.0.0.2	255.255.255.248	N/A
R3	G0/0	10.1.150.1	255.255.255.0	N/A
	S0/0/0	10.0.0.3	255.255.255.248	N/A
R4	G0/0	10.1.200.1	255.255.255.0	N/A
	S0/0/0	10.0.0.4	255.255.255.248	N/A
Web	NIC	209.165.200.226	255.255.255.252	209.165.200.225
PC2	NIC	10.1.100.10	255.255.255.0	10.1.100.1
PC3	NIC	10.1.150.10	255.255.255.0	10.1.150.1
Tablet PC	NIC	10.1.150.20	255.255.255.0	10.1.150.1
Laptop	NIC	10.1.200.10	255.255.255.0	10.1.200.1

DLCI Mappings

From / To	R1	R2	R3	R4
R1	-	102	103	104
R2	201	-	203	204
R3	301	302	-	304
R4	401	402	403	-

Background

This activity allows you to practice a variety of skills, including configuring Frame Relay, PPP with CHAP, EIGRP, static, and default routing.

Requirements

R1

- Configure **R1** to use PPP with CHAP on the link to the Internet. **ISP** is the router hostname. The password for CHAP is **cisco**.
- Configure a default route to the Internet. Use the exit interface.
- Configure a static route to the LAN on **R4**. Use the next-hop IP address.

- Configure EIGRP.
  - Use AS number 100.
  - Advertise the entire 10.0.0.0/8 network and disable automatic summarization.
  - Propagate the default route.
- Configure full mesh Frame Relay.
  - Configure Frame Relay encapsulation.
  - Configure a map to each of the other routers. The PVC to **R4** uses IETF encapsulation.
  - The LMI type is ANSI.

R2 and R3

- Configure EIGRP.
  - Use AS number 100.
  - Advertise the entire 10.0.0.0/8 network and disable automatic summarization.
  - Do not send EIGRP messages out the LAN interfaces.
- Configure full mesh Frame Relay.
  - Configure Frame Relay encapsulation.
  - Configure a map to each of the other routers. The PVC to **R4** uses IETF encapsulation.
  - The LMI type is ANSI.

R4

- Configure static and default routing.
  - Configure a static route for each of the LANs on **R2** and **R3**. Use the next-hop IP address.
  - Configure a default route to R1. Use the next-hop IP address.
- Configure full mesh Frame Relay.
  - Configure Frame Relay encapsulation using IETF.
  - Configure a map to each of the other routers.
  - The LMI type is ANSI.

Verify End-to-End Connectivity

- All end devices should now be able to ping each other and the **Web Server**.
- If not, click **Check Results** to see what configurations you may still be missing. Implement necessary fixes and retest for full end-to-end connectivity.