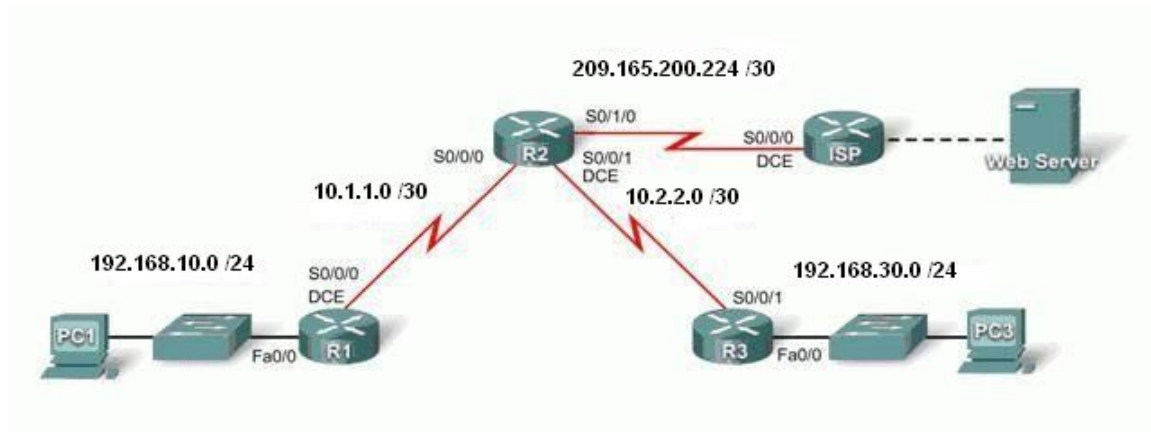Cisco | Networking Academy®
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PT Activity 2.3.4: Configuring Point-to-Point Encapsulations

Topology Diagram

Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
R1	Fa0/0	192.168.10.1	255.255.255.0	N/A
	S0/0/0	10.1.1.1	255.255.255.252	N/A
R2	S0/0/0	10.1.1.2	255.255.255.252	N/A
	S0/0/1	10.2.2.1	255.255.255.252	N/A
	S0/1/0	209.165.200.225	255.255.255.252	N/A
R3	Fa0/0	192.168.30.1	255.255.255.0	N/A
	S0/0/1	10.2.2.2	255.255.255.252	N/A
ISP	S0/0/0	209.165.200.226	255.255.255.252	N/A
	Fa0/0	209.165.200.1	255.255.255.252	N/A
Web Server	NIC	209.165.200.2	255.255.255.252	209.165.200.1
PC1	NIC	192.168.10.10	255.255.255.0	192.168.10.1
PC3	NIC	192.168.30.10	255.255.255.0	192.168.30.1

Learning Objectives

- Review routing configurations.
- Configure PPP as the Encapsulation method.
- Configure HDLC as the Encapsulation method.

Task 1: Review Routing Configurations.

Step 1. View running configurations on all routers.

Note the routing configurations, both static and dynamic. You will be configuring both types of routing in the Packet Tracer Skills Integration Challenge Activity at the end of the chapter.

Step 2. Test connectivity between PCs and the Web Server.

1. Open a command line from PC1.
2. Issue the command **ping 209.165.200.2**
3. Repeat with PC3.

Both **ping** commands should be successful. Remember to give enough time for STP and OSPF to converge.

Task 2: Configure PPP as the Encapsulation Method.

Step 1. Configure R1 to use PPP encapsulation with R2.

```
R1(config)#interface serial0/0/0
R1(config-if)#encapsulation ppp
```

Step 2. Configure R2 to use PPP encapsulation with R1 and R3.

Step 3. Configure R3 to use PPP encapsulation with R2.

Step 4. Test connectivity between the PCs and the Web Server.

Why does OSPF need to converge after the encapsulation change?

_____

_____

_____

Step 5. Check results.

Your completion percentage should be 67%. If not, click **Check Results** to see which required components are not yet completed.

Task 3: Configure HDLC as the Encapsulation Method.

Step 1. Configure ISP to use HDLC encapsulation with R2.

```
ISP(config)#interface serial0/0/0
ISP(config-if)#encapsulation hdlc
ISP(config-if)#no shutdown
```

Step 2. Configure R2 to use HDLC encapsulation with ISP.

```
R2(config)#interface serial0/1/0
R2(config-if)#encapsulation hdlc
R2(config-if)#no shutdown
```

Note: Although Check Results may show 100%, the Connectivity Tests will fail unless you configure the **no shutdown** command on R2 and ISP.

Step 3. Test connectivity between the PCs and the Web Server.

Use a Packet Tracer Simple PDU to check connectivity. It should be successful.

Step 4. Check results.

Your completion percentage should be 100%. If not, click **Check Results** to see which required components are not yet completed.