Module 3 Mastery Assessment

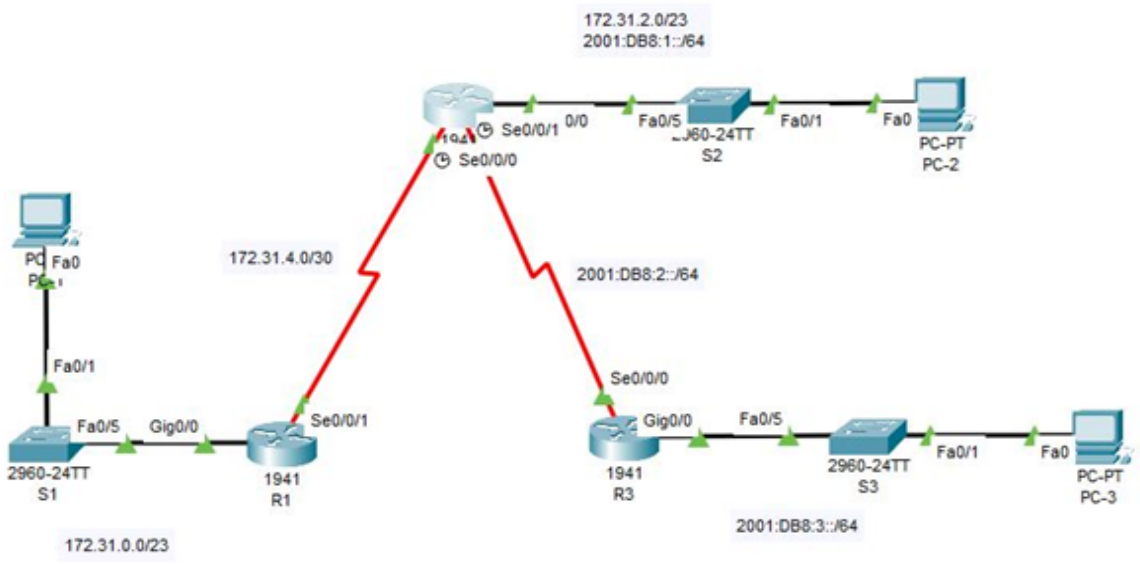
Introduction

In this Module 3 Mastery Assessment, your focus is EIGRP and EIGRP for IPv6 configurations.

Equipment/Supplies Needed

- Your computer workstation
- Cisco Packet Tracer
- Module 3 Mastery Assessment.pkt file

Topology



Addressing Table

Device	Interface	IPv4 Address	Subnet Mask	Default Gateway
		IPv6 Address/Prefix		
R1	G0/0	172.31.0.1	255.255.254.0	N/A
	S0/0/1	172.31.4.1	255.255.255.252	N/A
R2	G0/0	172.31.2.1	255.255.254.0	N/A
		2001:DB8:1::1/64		N/A
	S0/0/0	172.31.4.2	255.255.255.252	N/A
	S0/0/1	2001:DB8:2::1/64		N/A
R3	G0/0	2001:DB8:3::1/64		N/A
	S0/0/0	2001:DB8:2::2/64		N/A
PC-1	NIC			
PC-2	NIC			
PC-3	NIC			

Requirements

- Use the following requirements to configure **R1** addressing and EIGRP routing:
  - IPv4 addressing according to the Addressing Table
  - Process ID 1
  - Router ID 1.1.1.1
  - Network address for each interface
  - LAN interface set to passive (do not use the default keyword)

- Use the following requirements to configure **R2** addressing, for EIGRP routing:
  - IPv4 and IPv6 addressing according to the Addressing Table
  - Set the Gigabit Ethernet 0/0 Link Local address to FE80::1
  - EIGRP 1 routing requirements:
    - Process ID 1
    - Router ID 2.2.2.2
    - Network address for each interface

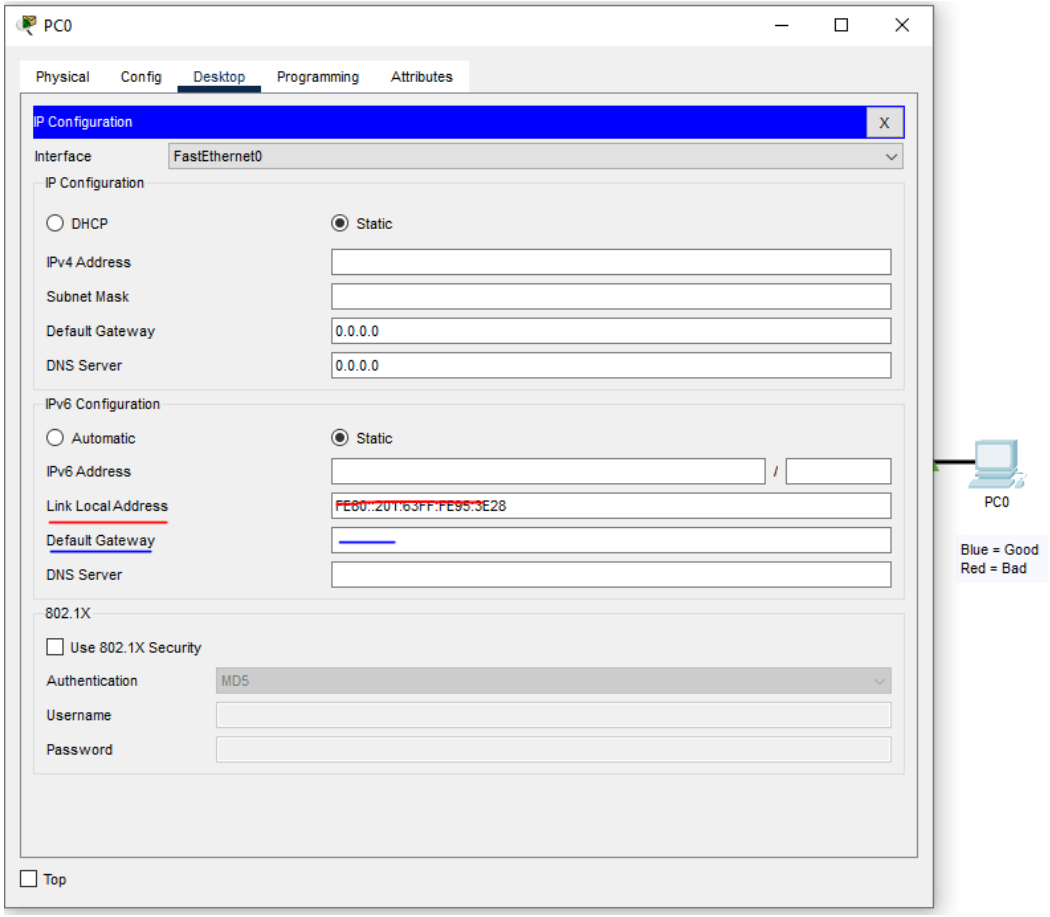
        - LAN interface set to passive (do not use the default keyword)

    - EIGRP for IPv6 routing requirements:
        - Enable IPv6 routing
        - Process ID 1
        - Router ID 2.2.2.2
        - Enable EIGRP for IPv6 on each interface

- Use the following requirements to configure **R3** addressing and EIGRP for IPv6 routing:
    - IPv6 addressing according to the Addressing Table
    - Set the Gigabit Ethernet 0/0 Link Local address to FE80::3
    - EIGRP for IPv6 routing requirements:
        - Enable IPv6 routing
        - Process ID 1
        - Router ID 3.3.3.3
        - Enable EIGRP for IPv6 on each interface

- Configure PCs with appropriate addressing.

    - **PC1** and **PC2** IPv4 addressing must use the last assignable address in the IPv4 subnet.
    - **PC2** and **PC3** IPv6 addressing must use the second assignable address in the IPv6 network and the link-local FE80 address as the default gateway.
    - Do **not** configure the IPv6 link local address of the PCs. Only configure the default gateway of the PC with the link local address of the directly connected router interface of the local network segment. Example below.
    - Finish the Addressing Table documentation.



Note: If you accidentally statically set the local address on the PC. The PC will no longer auto-generate a link-local address at this point. And you will have to statically assign a link local address not already used on the local network segment.

- Verify your configurations and test connectivity
    - EIGRP neighbors should be established and routing tables should be complete
    - Pings between PCA and PCB should be successful
    - Pings between PCB and PCC should be successful

Note: If EIGRP has not converged, check the status of interfaces using the "**show ip eigrp interface**" command. Sometimes, the EIGRP for IPv6 process needs to be deleted from the configuration and reapplied to force convergence. To remove and reestablish the Enhanced Interior Gateway Routing Protocol

(EIGRP) neighbor entries from the appropriate table, use the **clear ip eigrp neighbors** command.

Submit Your Work:

Submit all text files, screenshots, or answers to questions to your instructor Using the most appropriate method below.

Packet Tracer:

Submit Packet Tracer file as well as your text file with your findings and notes.

Rubric

Checklist/Single Point Mastery

Concerns Working Towards Proficiency	Criteria Standards for This Competency	Accomplished Evidence of Mastering Competency
	Criteria #1:Configure IPv4 addressing and EIGRP parameters for R1 router. (20 pts)	Configure IPv4 addressing and EIGRP parameters for R1 router. (15 pts) Configure IPv4 addressing on R1 router interfaces. (10 pts) Configure EIGRP parameters for local IPv4 networks. (10 pts)
	Criteria #2: Configure IPv4 addressing and EIGRP parameters for R2 router. (20 pts	Configure IPv4 addressing and EIGRP parameters for R2 router. (15 pts) Configure IPv4 addressing on R2 router interfaces. (10 pts) Configure EIGRP parameters for local IPv4 networks. (10 pts)
	Criteria #3: Configure IPv6 addressing and EIGRP parameters for R2 router. (20 pts	Configure IPv6 addressing and EIGRP parameters for R2 router. (15 pts) Configure IPv6 addressing on R2 router interfaces. (10 pts) Configure EIGRP parameters for local IPv4 networks. (10 pts)
	Criteria #4: Configure IPv6 addressing and EIGRP for R3 router. (20 pts	Configure IPv6 addressing and EIGRP parameters for R3 router. (15 pts) Configure IPv6 addressing on R3 router interfaces. (10 pts) Configure EIGRP parameters for local IPv4 networks. (10 pts)
	Criteria #5: Configure PCs with appropriate IP addressing. (10 pts)	Configure PCs with appropriate IP addressing. (10 pts) Configure each PC with appropriate Ip address and default

		gateway. (3.3 pts)
	Criteria #6: Test connectivity between all remote networks using ping. (10 pts)	Test connectivity between all remote networks using ping. (10 pts) 3 remote networks (3.3 pts)