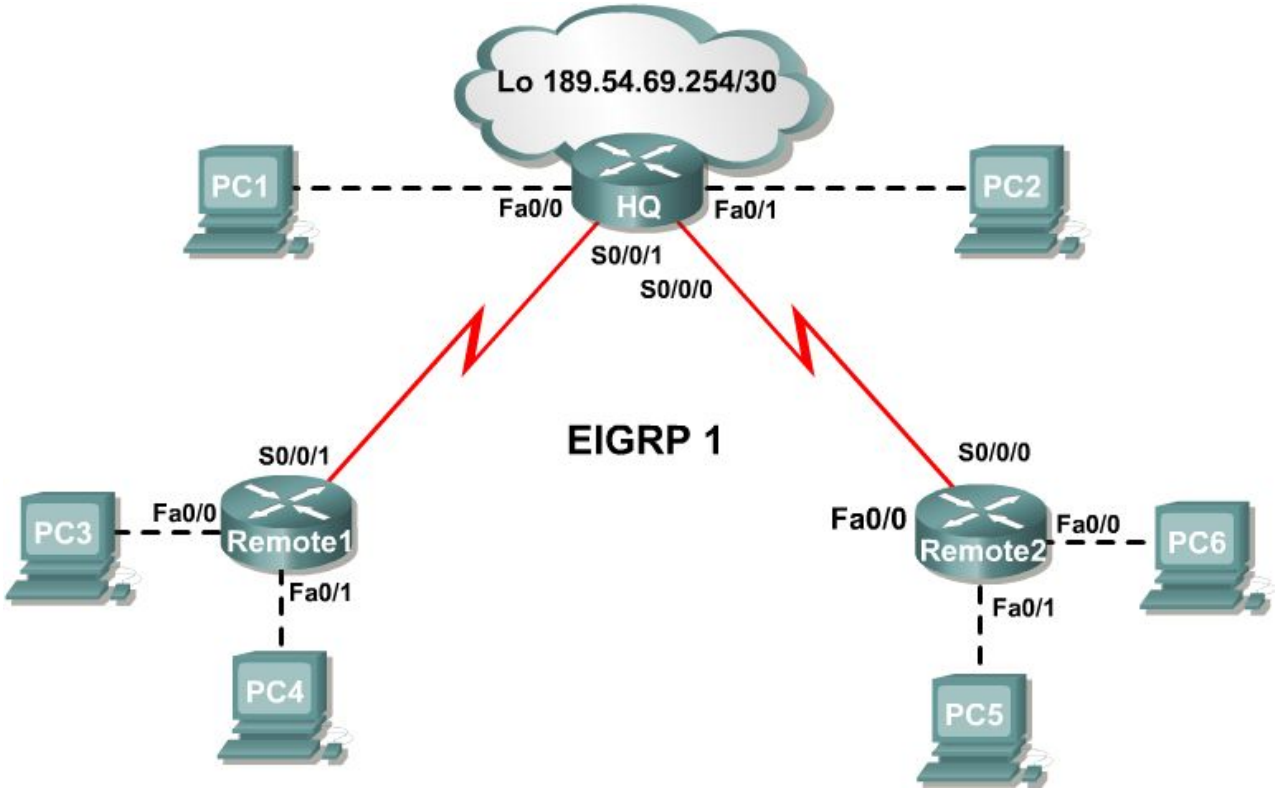
Exploration Routing: EIGRP Skills Based Assessment



Exam Objectives

Completion of this exam requires the following tasks:

- Subnet an address space with given requirements
- Assign appropriate addresses to interfaces and document them in the address table below
- Cable the network according to the diagram
- Erase the startup configuration and reload a router to the default state.
- Configure EIGRP routing on all routers.
- Configure and propagate a default static route.
- Verify EIGRP operation.
- Test and verify full connectivity.
- Reflect upon and document the network implementation.

Scenario

In this lab, you will be given a summarized address which you will use to create an efficient addressing scheme to accommodate all hosts on the network. A combination of EIGRP and a static default route will be required so that hosts on networks not directly connected can communicate. You have completed this lab when each host can ping the each other.

Task 1: Create an Addressing Scheme.

Step 1: Use the 192.168.156.0/22 address to create an addressing scheme to accommodate all hosts on the network. Begin the address assignments with the 192.168.157.0 address.

Document all subnet addresses in Table 1.

Table 1

Device	Interface	Number of Hosts	Subnet	Subnet Mask
HQ	**Fa0/0**	**90**		
	Fa0/1	**60**		
	S0/0/1	**2**		
	S0/0/0	**2**		
Remote1	**Fa0/0**	**30**		
	Fa0/1	**60**		
	S0/0/1	**2**		
Remote2	**Fa0/0**	**128**		
	Fa0/1	**60**		
	S0/0/0	**2**		

Step 2: Document router interface and PC addresses in Table 2.

Assign the last usable IP address of each subnet to each PC.

Table 2

Device	Interface	IP Address	Subnet Mask	Default Gateway
HQ	**Fa0/0**			**N/A**
	Fa0/1			**N/A**
	S0/0/1			**N/A**
	S0/0/0			**N/A**
	Lo0	**189.54.69.254**	**255.255.255.252**	**N/A**
Remote1	**Fa0/0**			**N/A**
	Fa0/1			**N/A**
	S0/0/1			**N/A**
Remote2	**Fa0/0**			**N/A**
	Fa0/1			**N/A**
	S0/0/0			**N/A**
PC1	**Ethernet**			
PC2	**Ethernet**			
PC3	**Ethernet**			
PC4	**Ethernet**			
PC5	**Ethernet**			
PC6	**Ethernet**			

Step 3: Cable and configure the network based on the diagram and the addressing scheme you created in the previous step.

Assign the last usable host address of each subnet to each PC.

Instructor's Initial _____

Task 2: Configure EIGRP with Process ID 1 using Wildcard Masks.

Step 1: Configure EIGRP on the HQ router and advertise all directly connected networks except the loopback interface.

Advertise the network along with a wildcard mask for the appropriate subnet.

Step 2: Configure EIGRP on the Remote1 router and advertise all directly connected networks.

Advertise the network along with a wildcard mask for the appropriate subnet.

Step 3: Configure EIGRP on the Remote2.

Advertise the network along with a wildcard mask for the appropriate subnet.

Instructor's Initial _____

Task 3: Discontiguous Networks.

Step 1: Configure each router so that subnet mask information about each network is propagated within the EIGRP updates.

Step 2: Verify that each router has a path to each network in the autonomous system.

Instructor's Initial _____

Task 4: Static Default Route

Step 1: Configure a static default route on the HQ router to the loopback interface.

Step 2: Propagate the static default route in the HQ routing update.

Step 3: Verify that the static default route is received by the Remote1 and Remote2 routers.

Step 4: Ping the loop back interface on the ISP router from each host.

Was PC1 successful? _____
Was PC2 successful? _____
Was PC3 successful? _____
Was PC4 successful? _____
Was PC5 successful? _____
Was PC6 successful? _____

If you are not successful, troubleshoot configurations using the appropriate **show** and **debug** commands.

Instructor's Initial _____

