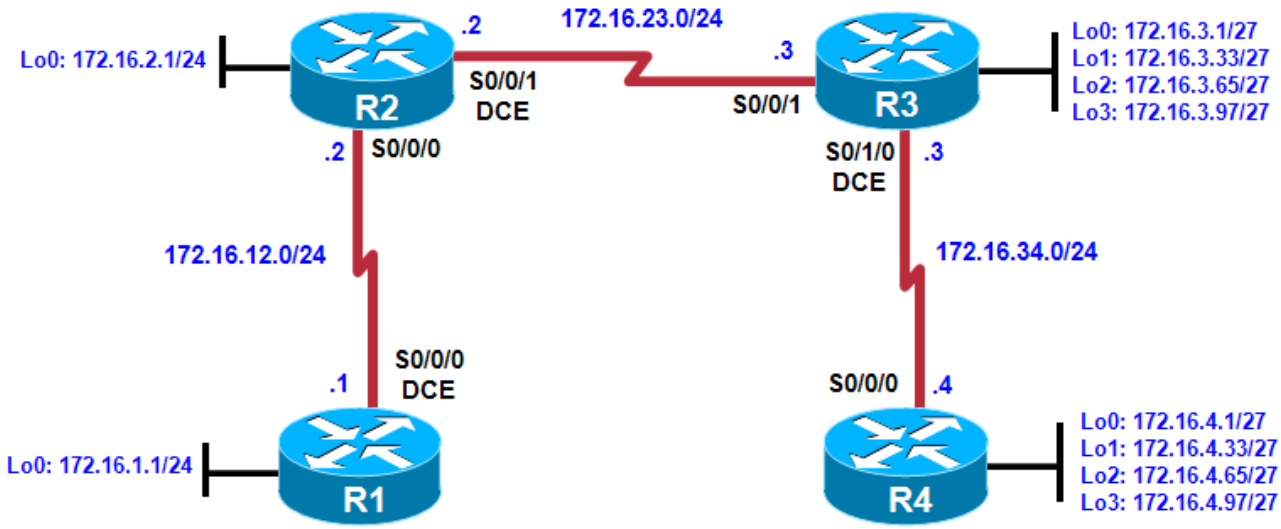
Chapter 2 Lab 2-6, EIGRP Challenge Lab

Topology



Objectives

- Implement a topology and EIGRP routing.

Required Resources

- 4 routers (Cisco 1841 with Cisco IOS Release 12.4(24)T1 Advanced IP Services or comparable)
- Serial and console cables

Note: This lab uses Cisco 1841 routers with Cisco IOS Release 12.4(24)T1 and the Advanced IP Services image c1841-advipservicesk9-mz.124-24.T1.bin. You can use other routers (such as a 2801 or 2811) and Cisco IOS Software versions if they have comparable capabilities and features. Depending on the router model and Cisco IOS Software version, the commands available and output produced might vary from what is shown in this lab.

Challenge Steps

1. Configure all interfaces in the topology diagram with the IP addresses shown. Configure a bandwidth of 64 on all serial interfaces.
2. Configure EIGRP AS 1 to route all networks shown in the diagram.
3. Disable auto-summarization.
4. Configure R4 to summarize its loopback addresses to the most specific summary possible.
5. Do not multicast EIGRP hellos on the network between R1 and R2.

6. Modify the hello timers on the link between R2 and R3 to send a hello packet every 2 seconds.

7. Use MD5 authentication with the key “cisco” over the link between R3 and R4.

8. Run a Tcl script on all routers to verify that there is connectivity between the correct routers and IP addresses.

As you work through the challenge steps, you can document commands used and ideas for satisfying the requirements specified in the Notes section below.

Notes:

Router Interface Summary Table

Router Interface Summary				
Router Model	Ethernet Interface #1	Ethernet Interface #2	Serial Interface #1	Serial Interface #2
1700	Fast Ethernet 0 (FA0)	Fast Ethernet 1 (FA1)	Serial 0 (S0)	Serial 1 (S1)
1800	Fast Ethernet 0/0 (FA0/0)	Fast Ethernet 0/1 (FA0/1)	Serial 0/0/0 (S0/0/0)	Serial 0/0/1 (S0/0/1)
2600	Fast Ethernet 0/0 (FA0/0)	Fast Ethernet 0/1 (FA0/1)	Serial 0/0 (S0/0)	Serial 0/1 (S0/1)
2800	Fast Ethernet 0/0 (FA0/0)	Fast Ethernet 0/1 (FA0/1)	Serial 0/0/0 (S0/0/0)	Serial 0/0/1 (S0/0/1)
Note: To find out how the router is configured, look at the interfaces to identify the type of router and how many interfaces the router has. Rather than list all combinations of configurations for each router class, this table includes identifiers for the possible combinations of Ethernet and serial interfaces in the device. The table does not include any other type of interface, even though a specific router might contain one. For example, for an ISDN BRI interface, the string in parenthesis is the legal abbreviation that can be used in Cisco IOS commands to represent the interface.				