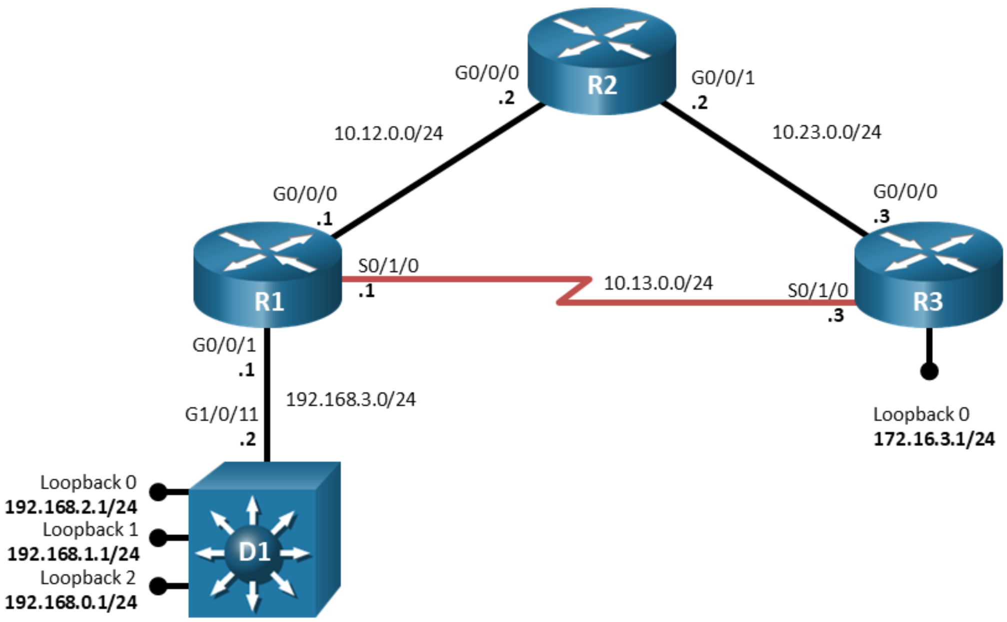
Lab - Implement Advanced EIGRP for IPv4 Features

Topology



Addressing Table

Device	Interface	IP Address	Subnet Mask
R1	G0/0/0	10.12.0.1	255.255.255.0
	G0/0/1	192.168.3.1	255.255.255.0
	S0/1/0	10.13.0.1	255.255.255.0
R2	G0/0/0	10.12.0.2	255.255.255.0
	G0/0/1	10.23.0.2	255.255.255.0
R3	G0/0/0	10.23.0.3	255.255.255.0
	S0/1/0	10.13.0.3	255.255.255.0
	Loopback0	172.16.3.1	255.255.255.0
D1	G1/0/11	192.168.3.2	255.255.255.0
	Loopback0	192.168.1.1	255.255.255.0
	Loopback1	192.168.1.1	255.255.255.0
	Loopback2	192.168.0.1	255.255.255.0

Objectives

Part 1: Build the Network and Configure Basic Device Settings

Part 2: Implement EIGRP for IPv4

Part 3: Implement Advanced Features

Background / Scenario

Customizing the operation of EIGRP can yield many benefits, most notably speeding convergence and stabilizing network operations during outages. In this lab you will explore some advanced techniques that can be used to customize and improve EIGRP performance on an enterprise network.

Note: The routers used with CCNP hands-on labs are Cisco 4221s with Cisco IOS XE Release 16.9.4 (universalk9 image). The switches used in the labs are Cisco Catalyst 3650s with Cisco IOS XE Release 16.9.4 (universalk9 image). Other routers, switches, and Cisco IOS versions can be used. Depending on the model and Cisco IOS version, the commands available and the output produced might vary from what is shown in the labs.

Note: Make sure that the routers and switches have been erased and have no startup configurations. If you are unsure, contact your instructor.

Required Resources

- 3 Routers (Cisco 4221 with Cisco IOS XE Release 16.9.4 universal image or comparable)
- 1 Switch (Cisco 3650 with Cisco IOS XE release 16.9.4 universal image or comparable)
- 1 PC (Choice of operating system with a terminal emulation program installed)
- Console cables to configure the Cisco IOS devices via the console ports
- Ethernet cables as shown in the topology

Instructions

Part 1: Build the Network and Configure Basic Device Settings

In Part 1, you will set up the network topology and configure basic settings and interface addressing.

Step 1: Cable the network as shown in the topology.

Attach the devices as shown in the topology diagram, and cable as necessary.

Step 2: Configure basic settings for each device.

a. Console into each device, enter global configuration mode, and apply the basic settings. The startup configurations for each device are provided below.

Router R1

```
hostname R1
no ip domain lookup
banner motd # R1, Implement Advanced EIGRP for IPv4 Features #
line con 0
 exec-timeout 0 0
 logging synchronous
 exit
```

```
line vty 0 4
 privilege level 15
 exec-timeout 0 0
 password cisco123
 login
 exit
!
interface g0/0/0
 ip address 10.12.0.1 255.255.255.0
 no shutdown
 exit
interface s0/1/0
 ip address 10.13.0.1 255.255.255.0
 no shutdown
 exit
interface g0/0/1
 ip address 192.168.3.1 255.255.255.0
 no shutdown
 exit
end
```

Router R2

```
hostname R2
no ip domain lookup
banner motd # R2, Implement Advanced EIGRP for IPv4 Features #
line con 0
 exec-timeout 0 0
 logging synchronous
 exit
line vty 0 4
 privilege level 15
 exec-timeout 0 0
 password cisco123
 login
 exit
!
interface g0/0/0
 ip address 10.12.0.2 255.255.255.0
 no shutdown
 exit
interface g0/0/1
 ip address 10.23.0.2 255.255.255.0
 no shutdown
 exit
end
```


Router R3

```
hostname R3
no ip domain lookup
banner motd # R3, Implement Advanced EIGRP for IPv4 Features #
line con 0
 exec-timeout 0 0
 logging synchronous
 exit
line vty 0 4
 privilege level 15
 exec-timeout 0 0
 password cisco123
 login
 transport input telnet
 exit
interface g0/0/0
 ip address 10.23.0.3 255.255.255.0
 no shutdown
 exit
interface s0/1/0
 ip address 10.13.0.3 255.255.255.0
 no shutdown
 exit
interface loopback 0
 ip address 172.16.3.1 255.255.255.0
 no shutdown
 exit
end
```

Switch D1

```
hostname D1
no ip domain lookup
ip routing
banner motd # D1, Implement Advanced EIGRP for IPv4 Features #
line con 0
 exec-timeout 0 0
 logging synchronous
 exit
line vty 0 4
 privilege level 15
 exec-timeout 0 0
 password cisco123
 login
 exit
interface range g1/0/1-24
```



```
 shutdown
 exit
interface g1/0/11
 no switchport
 ip address 192.168.3.2 255.255.255.0
 no shutdown
 exit
interface loopback 0
 ip address 192.168.2.1 255.255.255.0
 no shutdown
 exit
interface loopback 1
 ip address 192.168.1.1 255.255.255.0
 no shutdown
 exit
interface loopback 2
 ip address 192.168.0.1 255.255.255.0
 no shutdown
 exit
end
```

b. Set the clock on all devices to UTC time.

c. Save the running configuration to startup-config on all devices.

Part 2: Implement EIGRP for IPv4

In this part, you will configure classic EIGRP for IPv4 and verify that all routing tables are converged.

Step 1: Configure classic EIGRP for IPv4.

Configure classic EIGRP for IPv4 on all devices. Use Autonomous System number 98, and advertise only the connected interfaces on each device.

Step 2: Verify EIGRP for IPv4 routing.

Verify that each device has a complete routing table for all the networks shown in the topology and Addressing Table.

Part 3: Implement Advanced Features

In this part of the lab you will customize several different settings within EIGRP and see the impact of those changes on the network.

Step 1: Modify timers.

EIGRP uses standard **hello-interval** and **hold-time** timers based on the speed of the interface. If the interface speed is a T1 or less, hellos are sent every 60 seconds and the hold-time is set to 180 seconds. If the interface speed is greater than a T1, hellos are sent every 5 seconds and the **hold-time** is set to 15 seconds. These default times might not be appropriate for some network scenarios.

a. To see what the timers are set to, issue the **show ip eigrp interfaces detail** command.

```
R1# show ip eigrp interfaces detail
```

```
EIGRP-IPv4 Interfaces for AS(98)
                              Xmit Queue   PeerQ        Mean   Pacing Time   Multicast
Pending
Interface              Peers  Un/Reliable  Un/Reliable  SRTT   Un/Reliable   Flow
Timer   Routes
Gi0/0/0                  1        0/0       0/0           1       0/050          0
  Hello-interval is 5, Hold-time is 15
  Split-horizon is enabled
  Next xmit serial <none>
  Packetized sent/expedited: 5/1
  Hello's sent/expedited: 29/2
  Un/reliable mcasts: 0/5  Un/reliable ucasts: 7/3
  Mcast exceptions: 0  CR packets: 0  ACKs suppressed: 0
  Retransmissions sent: 2  Out-of-sequence rcvd: 0
  Topology-ids on interface - 0
  Authentication mode is not set
  Topologies advertised on this interface:  base
  Topologies not advertised on this interface:

Se0/1/0                  1        0/0       0/0           1       0/1250          0
  Hello-interval is 5, Hold-time is 15
  Split-horizon is enabled
  Next xmit serial <none>
  Packetized sent/expedited: 4/0
  Hello's sent/expedited: 32/2
  Un/reliable mcasts: 0/0  Un/reliable ucasts: 6/5
  Mcast exceptions: 0  CR packets: 0  ACKs suppressed: 0
  Retransmissions sent: 0  Out-of-sequence rcvd: 0
  Topology-ids on interface - 0
  Authentication mode is not set
  Topologies advertised on this interface:  base
  Topologies not advertised on this interface:

Gi0/0/1                  1        0/0       0/0           4       0/050          0
  Hello-interval is 5, Hold-time is 15
  Split-horizon is enabled
  Next xmit serial <none>
  Packetized sent/expedited: 2/1
  Hello's sent/expedited: 31/2
  Un/reliable mcasts: 0/2  Un/reliable ucasts: 4/3
  Mcast exceptions: 0  CR packets: 0  ACKs suppressed: 0
  Retransmissions sent: 2  Out-of-sequence rcvd: 0
  Topology-ids on interface - 0
  Authentication mode is not set
  Topologies advertised on this interface:  base
  Topologies not advertised on this interface:
```

b. For this lab, the timers on R1 interface G0/0/0 and S0/1/0 need to be adjusted to send hellos every 10 seconds and establish a hold time of 30 seconds. EIGRP is unique in that each interface can have a customized **hello-interval** and **hold-time**. The times are not needed to match between the ends of a link.

Change the timers using the **ip hello-interval eigrp** *ASN seconds* and the **ip hold-time eigrp** *ASN seconds* interface configuration commands.

```
R1# config t
Enter configuration commands, one per line.  End with CNTL/Z.
R1(config)# interface g0/0/0
R1(config-if)# ip hello-interval eigrp 98 10
R1(config-if)# ip hold-time eigrp 98 30
R1(config-if)# exit
R1(config)# interface s0/1/0
R1(config-if)# ip hello-interval eigrp 98 10
R1(config-if)# ip hold-time eigrp 98 30
R1(config-if)# exit
R1(config)# end
```

c. To verify that the changes were made, check the output of the **show ip eigrp interfaces detail** command.

```
R1# show ip eigrp interfaces detail
EIGRP-IPv4 Interfaces for AS(98)
                              Xmit Queue   PeerQ        Mean   Pacing Time   Multicast
Pending
Interface              Peers  Un/Reliable  Un/Reliable  SRTT   Un/Reliable   Flow
Timer   Routes
Gi0/0/0                  1        0/0       0/0           1       0/050           0
  Hello-interval is 10, Hold-time is 30
  Split-horizon is enabled
  Next xmit serial <none>
  Packetized sent/expedited: 5/1
  Hello's sent/expedited: 84/2
  Un/reliable mcasts: 0/5  Un/reliable ucasts: 7/3
  Mcast exceptions: 0  CR packets: 0  ACKs suppressed: 0
  Retransmissions sent: 2  Out-of-sequence rcvd: 0
  Topology-ids on interface - 0
  Authentication mode is not set
  Topologies advertised on this interface:  base
  Topologies not advertised on this interface:

Se0/1/0                  1        0/0       0/0           1       0/1250           0
  Hello-interval is 10, Hold-time is 30
  Split-horizon is enabled
  Next xmit serial <none>
  Packetized sent/expedited: 4/0
  Hello's sent/expedited: 87/2
  Un/reliable mcasts: 0/0  Un/reliable ucasts: 6/5
  Mcast exceptions: 0  CR packets: 0  ACKs suppressed: 0
  Retransmissions sent: 0  Out-of-sequence rcvd: 0
  Topology-ids on interface - 0
  Authentication mode is not set
  Topologies advertised on this interface:  base
  Topologies not advertised on this interface:
```

```
Gi0/0/1                    1        0/0       0/0           4       0/050            0
  Hello-interval is 5, Hold-time is 15
  Split-horizon is enabled
  Next xmit serial <none>
  Packetized sent/expedited: 2/1
  Hello's sent/expedited: 92/2
  Un/reliable mcasts: 0/2  Un/reliable ucasts: 4/3
  Mcast exceptions: 0  CR packets: 0  ACKs suppressed: 0
  Retransmissions sent: 2  Out-of-sequence rcvd: 0
  Topology-ids on interface - 0
  Authentication mode is not set
  Topologies advertised on this interface:  base
  Topologies not advertised on this interface:
```

Step 2: Create summarized routes in EIGRP.

Large routing tables take more memory and require more CPU time to process. Reducing the size of the routing table is advantageous in all network scenarios. EIGRP supports summarization of routes at any point in the network. There is no boundary router limitation like the limitations imposed in OSPF. However, in order for the summary route to be valid, EIGRP requires that some component of the summary route be in the routing table for the router doing the summarization.

a. Issue the **show ip route eigrp | begin Gateway** command on R3 and note the group of networks from the 192.168 range of addresses. R1 is advertising this contiguous block of networks individually, instead of sending a summary.

```
R3# show ip route eigrp | begin Gateway
Gateway of last resort is not set

      10.0.0.0/8 is variably subnetted, 5 subnets, 2 masks
D        10.12.0.0/24 [90/3072] via 10.23.0.2, 00:06:35, GigabitEthernet0/0/0
D     192.168.0.0/24 [90/131328] via 10.23.0.2, 00:06:08, GigabitEthernet0/0/0
D     192.168.1.0/24 [90/131328] via 10.23.0.2, 00:06:08, GigabitEthernet0/0/0
D     192.168.2.0/24 [90/131328] via 10.23.0.2, 00:06:08, GigabitEthernet0/0/0
D     192.168.3.0/24 [90/3328] via 10.23.0.2, 00:06:35, GigabitEthernet0/0/0
```

b. On R1, configure a summary of the networks between R1 and D1, as well as the networks on D1 on the interfaces connecting to R3 and R2.

```
R1# conf t
R1(config)# interface g0/0/0
R1(config-if)# ip summary-address eigrp 98 192.168.0.0 255.255.252.0
*Mar  6 00:07:33.742: %DUAL-5-NBRCHANGE: EIGRP-IPv4 98: Neighbor 10.12.0.2
(GigabitEthernet0/0/0) is resync: summary configured
R1(config-if)# exit
R1(config)# interface s0/1/0
R1(config-if)# ip summary-address eigrp 98 192.168.0.0 255.255.252.0
*Mar  6 00:07:35.220: %DUAL-5-NBRCHANGE: EIGRP-IPv4 98: Neighbor 10.13.0.3
(Serial0/1/0) is resync: summary configured
R1(config-if)# end
```

c. Now examine the routing table on R3 again using the **show ip route eigrp | begin Gateway** command. In the output, you now see a single route taking the place of what had been four distinct routes.

```
R3# show ip route eigrp | begin Gateway
Gateway of last resort is not set

      10.0.0.0/8 is variably subnetted, 5 subnets, 2 masks
D        10.12.0.0/24 [90/3072] via 10.23.0.2, 00:07:59, GigabitEthernet0/0/0
D     192.168.0.0/22 [90/3328] via 10.23.0.2, 00:00:25, GigabitEthernet0/0/0
```

Step 3: Control EIGRP query propagation with EIGRP stub routers.

EIGRP uses query messages to find a path to networks in the autonomous system. The query messages always require an acknowledgement. But a router will only send a response if it has a potential route that satisfies the query. If it does not have a route, it sends its own queries to its neighbors. This process can lead to long delays in reconvergence after an outage.

Query scoping refers to using various techniques to control how far across a network queries have to be sent. Summarization is one way of controlling query propagation. Another way to control query propagation is to use EIGRP stub routers where appropriate. When a router is single-homed to the rest of the network, and no other networks exist beyond that router, there is no real point in sending it a query looking for lost networks. The stub router declares itself as a stub to the router connected to the rest of the network, which is considered a hub router. The hub router then forwards no queries to the stub router because it knows there are no other networks, beyond those reported, existing beyond the stub router. In the topology for this lab, switch D1 is a stub router and R1 is its hub router.

a. To verify that switch D1 is receiving EIGRP queries, issue the **shutdown** command on R2 interface G0/0/1. On switch D1, issue the **show ip eigrp events** command. This command outputs a timestamped list of actions that EIGRP is taking. In the output, you will find an entry that says switch D1 received a query trying to find the 10.23.0.0/24 network. Take note of the time stamp.

```
D1# show ip eigrp events
Event information for AS 98:
1    00:10:46.753 NDB delete: 10.23.0.0/24 1
2    00:10:46.753 RDB delete: 10.23.0.0/24 192.168.3.1
3    00:10:46.737 Metric set: 10.23.0.0/24 metric(Infinity)
4    00:10:46.737 Poison squashed: 10.23.0.0/24 lost if
5    00:10:46.737 Poison squashed: 10.23.0.0/24 rt net gone
6    00:10:46.737 Route installing: 10.23.0.0/24 192.168.3.1
7    00:10:46.737 Send reply: 10.23.0.0/24 192.168.3.1
8    00:10:46.737 Not active net/1=SH: 10.23.0.0/24 1
9    00:10:46.737 FC not sat Dmin/met: metric(Infinity) metric(1782272)
10   00:10:46.737 Find FS: 10.23.0.0/24 metric(1782272)
11   00:10:46.737 Rcv query met/succ met: metric(Infinity) metric(Infinity)
12   00:10:46.737 Rcv query dest/nh: 10.23.0.0/24 192.168.3.1
```

b. Issue the **no shutdown** command on R2 interface G0/0/1.

c. Configure D1 as an EIGRP stub router.

```
D1# config t
Enter configuration commands, one per line.  End with CNTL/Z.
D1(config)# router eigrp 98
D1(config-router)# eigrp stub
D1(config)# end
D1#
Mar  6 00:11:40.624: %DUAL-5-NBRCHANGE: EIGRP-IPv4 98: Neighbor 192.168.3.1
(GigabitEthernet1/0/11) is down: peer info changed
```

```
Mar  6 00:11:45.174: %DUAL-5-NBRCHANGE: EIGRP-IPv4 98: Neighbor 192.168.3.1
(GigabitEthernet1/0/11) is up: new adjacency
```

d. Verify that R1 sees switch D1 as a stub by examining the output of the **show ip eigrp neighbor detail** command.

```
R1# show ip eigrp neighbor detail
EIGRP-IPv4 Neighbors for AS(98)
H   Address                 Interface              Hold Uptime   SRTT   RTO  QSeq
                                                   (sec)         (ms)       CntNum
2   192.168.3.2             Gi0/0/1                  14 00:00:39    3   100  010
   Version 25.0/2.0, Retrans: 1, Retries: 0, Prefixes: 3
   Topology-ids from peer - 0
   Topologies advertised to peer:   base

   Stub Peer Advertising (CONNECTED SUMMARY ) Routes
   Suppressing queries
1   10.13.0.3               Se0/1/0                  11 00:11:44    1   100  028
   Time since Restart 00:04:06
   Version 25.0/2.0, Retrans: 0, Retries: 0, Prefixes: 3
   Topology-ids from peer - 0
   Topologies advertised to peer:   base

0   10.12.0.2               Gi0/0/0                  12 00:12:24    1   100  030
   Time since Restart 00:04:07
   Version 25.0/2.0, Retrans: 2, Retries: 0, Prefixes: 2
   Topology-ids from peer - 0
   Topologies advertised to peer:   base

Max Nbrs: 0, Current Nbrs: 0
```

e. Issue the **shutdown** command on R2 interface G0/0/1. Take note of the timestamp on the syslog message reporting that the interface is down.

f. On switch D1, issue the **show ip eigrp events** command. You will see that no query was received looking for the 10.23.0.0/24 network. The query was stopped at R1, speeding up the convergence process.

```
D1# show ip eigrp events
Event information for AS 98:
1    00:12:53.776 NDB delete: 10.23.0.0/24 1
2    00:12:53.776 Poison squashed: 10.23.0.0/24 rt net gone
3    00:12:53.776 RDB delete: 10.23.0.0/24 192.168.3.1
4    00:12:53.776 Not active net/1=SH: 10.23.0.0/24 1
5    00:12:53.776 FC not sat Dmin/met: metric(Infinity) metric(1782272)
6    00:12:53.776 Find FS: 10.23.0.0/24 metric(1782272)
7    00:12:53.776 Rcv update met/succmet: metric(Infinity) metric(Infinity)
8    00:12:53.776 Rcv update dest/nh: 10.23.0.0/24 192.168.3.1
9    00:12:53.776 Ignored route, hopcount: 10.23.0.0 255
10   00:12:50.077 Metric set: 172.16.3.0/24 metric(1910016)
11   00:12:50.077 Route installed: 172.16.3.0/24 192.168.3.1
12   00:12:50.077 Route installing: 172.16.3.0/24 192.168.3.1
13   00:12:50.077 Find FS: 172.16.3.0/24 metric(Infinity)
```



```
14   00:12:50.077 Free reply status: 172.16.3.0/24
15   00:12:50.077 Clr handle num/bits: 0 0x0
16   00:12:50.077 Clr handle dest/cnt: 172.16.3.0/24 0
17   00:12:50.077 Rcv reply met/succ met: metric(1910016) metric(1909760)
18   00:12:50.077 Rcv reply dest/nh: 172.16.3.0/24 192.168.3.1
19   00:12:50.077 Metric set: 10.23.0.0/24 metric(1782272)
20   00:12:50.076 Route installed: 10.23.0.0/24 192.168.3.1
21   00:12:50.076 Route installing: 10.23.0.0/24 192.168.3.1
22   00:12:50.076 Find FS: 10.23.0.0/24 metric(Infinity)
23   00:12:50.076 Free reply status: 10.23.0.0/24
```

g. Issue the **no shutdown** command on R2 interface G0/0/1.

Step 4: Filter EIGRP routes with a distribute list.

EIGRP supports several different filtering capabilities. The simplest and most direct is to use a distribute list. A distribute list refers to an access list which can be applied to all EIGRP updates being sent by a certain router, or it can be applied to a specific interface to modify updates as they exit. For this exercise, we will filter the 10.12.0.0/24 network from updates being sent out of R2 interface G0/0/1. This will cause a change in R3's routing table.

a. Examine the routing table on R3 by issuing the **show ip route eigrp | begin Gateway** command. In the output, you can see that R3 has calculated the path via R2 at 10.23.0.2 to be the best path to reach the 10.12.0.0/24 network.

```
R3# show ip route eigrp | begin Gateway
Gateway of last resort is not set

      10.0.0.0/8 is variably subnetted, 5 subnets, 2 masks
D        10.12.0.0/24 [90/3072] via 10.23.0.2, 00:00:17, GigabitEthernet0/0/0
D     192.168.0.0/22 [90/3328] via 10.23.0.2, 00:00:53, GigabitEthernet0/0/0
```

b. Our intent is to change the configuration at R2 so that R3 only learns about the 10.12.0.0/24 network from R1. Create an access list that denies the 10.12.0.0/24 network and permits all other networks.

```
R2# config t
R2(config)# ip access-list standard EIGRP-FILTER
R2(config-std-nacl)# deny 10.12.0.0 0.0.255.255
R2(config-std-nacl)# permit any
R2(config-std-nacl)# exit
```

c. Enter EIGRP router configuration mode and configure the distribute list to reference the access list you just created, further specifying that the filter should be effective outbound on interface G0/0/1.

```
R2(config)# router eigrp 98
R2(config-router)# distribute-list EIGRP-FILTER out g0/0/1
R2(config-router)# end
*Mar 6 00:19:56.379: %DUAL-5-NBRCHANGE: EIGRP-IPv4 98: Neighbor 10.23.0.3
(GigabitEthernet0/0/1) is resync: intf route configuration changed
```

d. On R3, issue the **show ip route eigrp | begin Gateway** command. As you can see, the successor for the 10.12.0.0/24 network has changed to R1 at 10.13.0.1.

```
R3# show ip route eigrp | begin Gateway
Gateway of last resort is not set
```

```
        10.0.0.0/8 is variably subnetted, 5 subnets, 2 masks
D          10.12.0.0/24 [90/1792256] via 10.13.0.1, 00:01:30, Serial0/1/0
D       192.168.0.0/22 [90/3328] via 10.23.0.2, 00:03:00, GigabitEthernet0/0/0
```

Router Interface Summary Table

Router Model	Ethernet Interface #1	Ethernet Interface #2	Serial Interface #1	Serial Interface #2
1800	Fast Ethernet 0/0 (F0/0)	Fast Ethernet 0/1 (F0/1)	Serial 0/0/0 (S0/0/0)	Serial 0/0/1 (S0/0/1)
1900	Gigabit Ethernet 0/0 (G0/0)	Gigabit Ethernet 0/1 (G0/1)	Serial 0/0/0 (S0/0/0)	Serial 0/0/1 (S0/0/1)
2801	Fast Ethernet 0/0 (F0/0)	Fast Ethernet 0/1 (F0/1)	Serial 0/1/0 (S0/1/0)	Serial 0/1/1 (S0/1/1)
2811	Fast Ethernet 0/0 (F0/0)	Fast Ethernet 0/1 (F0/1)	Serial 0/0/0 (S0/0/0)	Serial 0/0/1 (S0/0/1)
2900	Gigabit Ethernet 0/0 (G0/0)	Gigabit Ethernet 0/1 (G0/1)	Serial 0/0/0 (S0/0/0)	Serial 0/0/1 (S0/0/1)
4221	Gigabit Ethernet 0/0/0 (G0/0/0)	Gigabit Ethernet 0/0/1 (G0/0/1)	Serial 0/1/0 (S0/1/0)	Serial 0/1/1 (S0/1/1)
4300	Gigabit Ethernet 0/0/0 (G0/0/0)	Gigabit Ethernet 0/0/1 (G0/0/1)	Serial 0/1/0 (S0/1/0)	Serial 0/1/1 (S0/1/1)

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. There is no way to effectively list all the 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 may contain one. An example of this might be an ISDN BRI interface. The string in parenthesis is the legal abbreviation that can be used in Cisco IOS commands to represent the interface.