

Lab 4: EIGRP

Router 0

```
Router#
Router#
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Router#
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#router eigrp 100
Router(config-router)#no auto-summary
Router(config-router)#network 192.168.1.0
Router(config-router)#network 192.168.2.0
Router(config-router)#
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#
%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 192.168.2.2 (FastEthernet0/1) is up:
new adjacency
```

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Router 1:

```
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#router eigrp 100
Router(config-router)#no auto-summary
Router(config-router)#network 192.168.2.0
Router(config-router)#
%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 192.168.2.1 (FastEthernet0/0) is up:
new adjacency

Router(config-router)#network 192.168.3.0
Router(config-router)#
%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 192.168.3.2 (FastEthernet0/1) is up:
new adjacency
```

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Router 2:

```
Router#conf t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#router eigrp 100
Router(config-router)#no auto-summary
Router(config-router)#network 192.168.3.0
Router(config-router)#
%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 192.168.3.1 (FastEthernet0/0) is up:
new adjacency

Router(config-router)#network 192.168.4.0
Router(config-router)#
```

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Show run for router 0:

```
!
!
!
interface FastEthernet0/0
 ip address 192.168.1.1 255.255.255.0
 duplex auto
 speed auto
!
interface FastEthernet0/1
 ip address 192.168.2.1 255.255.255.0
 duplex auto
 speed auto
!
interface Vlan1
 no ip address
 shutdown
!
router eigrp 100
 network 192.168.1.0
 network 192.168.2.0
 no auto-summary
!
ip classless
!
ip flow-export version 9
!
!
!
!
!
!
!
!
!
line con 0
!
line aux 0
```

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Show ip protocols and show ip route:

```
Router0
Physical Config CLI Attributes
IOS Command Line Interface

Router#show ip protocols
Routing Protocol is "eigrp 100"
  Outgoing update filter list for all interfaces is not set
  Incoming update filter list for all interfaces is not set
  Default networks flagged in outgoing updates
  Default networks accepted from incoming updates
  EIGRP metric weight K1=1, K2=0, K3=1, K4=0, K5=0
  EIGRP maximum hopcount 100
  EIGRP maximum metric variance 1
  Redistributing: eigrp 100
    Automatic network summarization is not in effect
  Maximum path: 4
  Routing for Networks:
    192.168.1.0
    192.168.2.0
  Routing Information Sources:
    Gateway         Distance      Last Update
  192.168.2.2       90            4824504
  Distance: internal 90 external 170

Router#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

C 192.168.1.0/24 is directly connected, FastEthernet0/0
C 192.168.2.0/24 is directly connected, FastEthernet0/1
D 192.168.3.0/24 [90/30720] via 192.168.2.2, 00:06:17, FastEthernet0/1
D 192.168.4.0/24 [90/33280] via 192.168.2.2, 00:04:41, FastEthernet0/1
```

Outputs for the commands:

#show ip route eigrp

#show ip eigrp neighbour

#show ip eigrp topology

```
Router#show ip route eigrp
D 192.168.3.0/24 [90/30720] via 192.168.2.2, 00:07:43, FastEthernet0/1
D 192.168.4.0/24 [90/33280] via 192.168.2.2, 00:06:07, FastEthernet0/1

Router#show ip eigrp neighbor
IP-EIGRP neighbors for process 100
H Address          Interface      Hold Uptime    SRTT  RTO  Q  Seq
  (sec)              (ms)
0 192.168.2.2       Fa0/1         12  00:09:08    40   1000  0   7

Router#show ip eigrp topology
IP-EIGRP Topology Table for AS 100/ID(192.168.2.1)
Codes: P - Passive, A - Active, U - Update, Q - Query, R - Reply,
       r - Reply status

P 192.168.1.0/24, 1 successors, FD is 28160
   via Connected, FastEthernet0/0
P 192.168.2.0/24, 1 successors, FD is 28160
   via Connected, FastEthernet0/1
P 192.168.3.0/24, 1 successors, FD is 30720
   via 192.168.2.2 (30720/28160), FastEthernet0/1
P 192.168.4.0/24, 1 successors, FD is 33280
   via 192.168.2.2 (33280/30720), FastEthernet0/1

Router#
```

Ping output:

```
C:\>ping 192.168.4.4

Pinging 192.168.4.4 with 32 bytes of data:

Request timed out.
Reply from 192.168.4.4: bytes=32 time=1ms TTL=125
Reply from 192.168.4.4: bytes=32 time<1ms TTL=125
Reply from 192.168.4.4: bytes=32 time<1ms TTL=125

Ping statistics for 192.168.4.4:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>ping 192.168.4.4

Pinging 192.168.4.4 with 32 bytes of data:

Reply from 192.168.4.4: bytes=32 time=1ms TTL=125
Reply from 192.168.4.4: bytes=32 time<1ms TTL=125
Reply from 192.168.4.4: bytes=32 time<1ms TTL=125
Reply from 192.168.4.4: bytes=32 time=1ms TTL=125

Ping statistics for 192.168.4.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 1ms, Average = 0ms
```