

Router 1st

```
Router>enable
Router#configure terminal
Router(config)#hostname Router1
Router1(config)#interface FastEthernet0/0
Router1(config-if)#ip address 192.168.10.1 255.255.255.0
Router1(config-if)#no shutdown

Router1(config-if)#interface Serial0/0/0
Router1(config-if)#ip address 10.0.0.1 255.0.0.0
Router1(config-if)#no shutdown

Router1(config-if)#exit
Router1(config)#router eigrp 100
Router1(config-router)#network 192.168.10.0 0.0.0.255
Router1(config-router)#network 10.0.0.0 0.255.255.255
Router1(config-router)#no auto-summary
Router1(config-router)#exit
Router1(config)#exit
Router1#write memory
```

Router 2

```
Router>enable
Router#configure terminal
Router(config)#hostname Router2
Router2(config)#interface FastEthernet0/0
Router2(config-if)#ip address 192.168.11.1 255.255.255.0
Router2(config-if)#no shutdown

Router2(config-if)#interface Serial0/0/0
Router2(config-if)#ip address 10.0.0.2 255.0.0.0
Router2(config-if)#no shutdown

Router2(config-if)#interface Serial0/0/1
Router2(config-if)#ip address 11.0.0.1 255.0.0.0
Router2(config-if)#no shutdown

Router2(config-if)#exit
Router2(config)#router eigrp 100
Router2(config-router)#network 192.168.11.0 0.0.0.255
Router2(config-router)#network 10.0.0.0 0.255.255.255
Router2(config-router)#network 11.0.0.0 0.255.255.255
Router2(config-router)#ex

Router2(config-router)#exit
Router2(config)#exit
Router2#write memory
```

Router 3rd

```
Router>enable
Router#configure terminal
Router(config)#hostname Router3
Router3(config)#interface FastEthernet0/0
Router3(config-if)#ip address 192.168.12.1 255.255.255.0
Router3(config-if)#no shutdown

Router3(config-if)#interface Serial0/0/0
Router3(config-if)#ip address 11.0.0.2 255.0.0.0
Router3(config-if)#no shutdown

Router3(config-if)#interface Serial0/0/1
```

```
Router3(config-if)#ip address 12.0.0.1 255.0.0.0
Router3(config-if)#no shutdown

Router3(config-if)#exit
Router3(config)#router eigrp 100
Router3(config-router)#network 192.168.12.0 0.0.0.255
Router3(config-router)#network 11.0.0.0 0.255.255.255
Router3(config-router)#network 12.0.0.0 0.255.255.255
Router3(config-router)#no auto-summary
Router3(config-router)#exit
Router3(config)#exit
Router3#write memory
```

Router 4th

```
Router>enable
Router#configure terminal
Router(config)#hostname Router4
Router4(config)#interface FastEthernet0/0
Router4(config-if)#ip address 192.168.13.1 255.255.255.0
Router4(config-if)#no shutdown

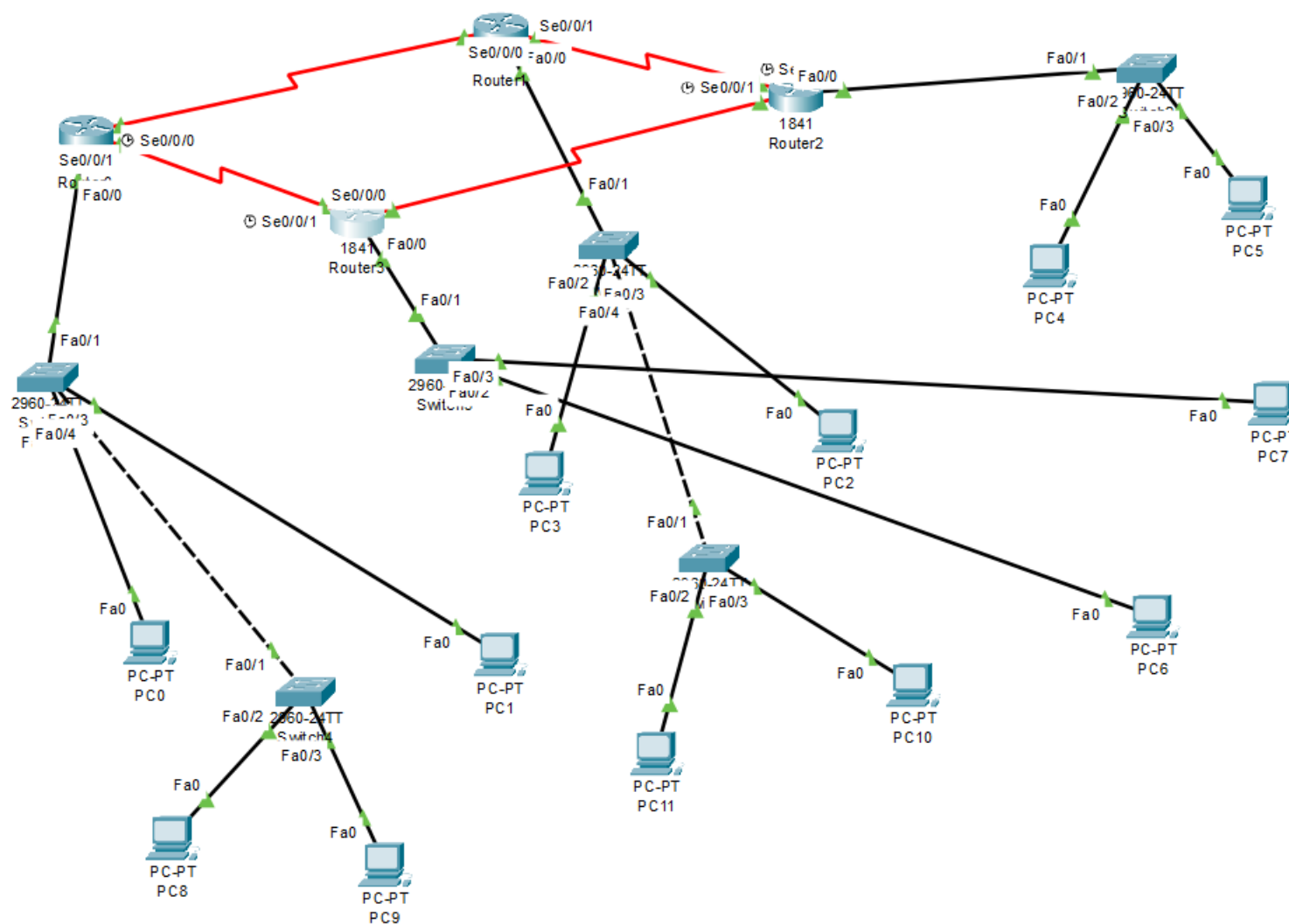
Router4(config-if)#interface Serial0/0/0
Router4(config-if)#ip address 12.0.0.2 255.0.0.0
Router4(config-if)#no shutdown

Router4(config-if)#exit
Router4(config)#router eigrp 100
Router4(config-router)#network 192.168.13.0 0.0.0.255
Router4(config-router)#network 12.0.0.0 0.255.255.255
Router4(config-router)#no auto-summary
Router4(config-router)#exit
Router4(config)#exit
Router4#write memory
```

Verification Command

```
Router#show ip eigrp neighbors    // Verify EIGRP neighbors are established
Router#show ip route              // Check routing table for EIGRP-learned routes
Router#show ip eigrp topology     // Display EIGRP topology table
Router#ping <destination IP>     // Test connectivity to other routers' networks
```

EIGRP 4 router shortest path



Router 1st

```
Router1>en
Router1#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router1(config)#interface FastEthernet0/0
Router1(config-if)#ip address 192.168.10.1 255.255.255.0
Router1(config-if)#no shutdown
Router1(config-if)#interface Serial0/0/0
Router1(config-if)#ip address 10.0.0.1 255.0.0.0
Router1(config-if)#no shutdown
Router1(config-if)#interface Serial0/0/1
Router1(config-if)#ip address 13.0.0.1 255.0.0.0
Router1(config-if)#no shutdown
Router1(config-if)#exit
Router1(config)#router eigrp 100
Router1(config-router)#network 192.168.10.0 0.0.0.255
Router1(config-router)#network 10.0.0.0 0.255.255.255
Router1(config-router)#network 13.0.0.0 0.255.255.255
Router1(config-router)#no auto-summary
Router1(config-router)#ex
Router1(config)#ex
Router1#
%SYS-5-CONFIG_I: Configured from console by console
```

```
Router1#wr
Building configuration...
[OK]
Router1#
%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 13.0.0.2 (Serial0/0/1) is up: new adjacency
```

Router 2nd

```
Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname Router2
Router2(config)#interface FastEthernet0/0
Router2(config-if)#ip address 192.168.11.1 255.255.255.0
Router2(config-if)#no shutdown

Router2(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Router2(config-if)#interface Serial0/0/0
Router2(config-if)#ip address 10.0.0.2 255.0.0.0
Router2(config-if)#no shutdown

Router2(config-if)#
%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up

Router2(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed state to up

Router2(config-if)#interface Serial0/0/1
Router2(config-if)#ip address 11.0.0.1 255.0.0.0
Router2(config-if)#no shutdown

%LINK-5-CHANGED: Interface Serial0/0/1, changed state to down
Router2(config-if)#exit
Router2(config)#router eigrp 100
Router2(config-router)#network 192.168.11.0 0.0.0.255
Router2(config-router)#network 10.0.0.0 0.255.255.255
Router2(config-router)#
%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 10.0.0.1 (Serial0/0/0) is up: new adjacency

Router2(config-router)#network 11.0.0.0 0.255.255.255
Router2(config-router)#no auto-summary
Router2(config-router)#
%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 10.0.0.1 (Serial0/0/0) resync: summary configured

Router2(config-router)#ex
Router2(config)#ex
Router2#
%SYS-5-CONFIG_I: Configured from console by console

Router2#wr
Building configuration...
[OK]
Router2#
%LINK-5-CHANGED: Interface Serial0/0/1, changed state to up
```

Router 3rd

```
Router>en
Router#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#hostname Router2
Router2(config)#interface FastEthernet0/0
Router2(config-if)#ip address 192.168.11.1 255.255.255.0
Router2(config-if)#no shutdown

Router2(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

Router2(config-if)#interface Serial0/0/0
Router2(config-if)#ip address 10.0.0.2 255.0.0.0
Router2(config-if)#no shutdown

Router2(config-if)#
%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up

Router2(config-if)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed state to up

Router2(config-if)#interface Serial0/0/1
Router2(config-if)#ip address 11.0.0.1 255.0.0.0
Router2(config-if)#no shutdown

%LINK-5-CHANGED: Interface Serial0/0/1, changed state to down
Router2(config-if)#exit
Router2(config)#router eigrp 100
Router2(config-router)#network 192.168.11.0 0.0.0.255
Router2(config-router)#network 10.0.0.0 0.255.255.255
Router2(config-router)#
%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 10.0.0.1 (Serial0/0/0) is up: new adjacency

Router2(config-router)#network 11.0.0.0 0.255.255.255
Router2(config-router)#no auto-summary
Router2(config-router)#
%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 10.0.0.1 (Serial0/0/0) resync: summary configured

Router2(config-router)#ex
Router2(config)#ex
Router2#
%SYS-5-CONFIG_I: Configured from console by console

Router2#wr
Building configuration...
[OK]
Router2#
%LINK-5-CHANGED: Interface Serial0/0/1, changed state to up
```

Router 4th

```
Router>en
Router#conf
Configuring from terminal, memory, or network [terminal]?
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#conf t
```

```
%Invalid hex value
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 192.168.13.1 255.255.255.0
Router(config-if)#no shutdown
Router(config-if)#interface Serial0/0/0
Router(config-if)#ip address 12.0.0.2 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#interface Serial0/0/1
Router(config-if)#ip address 13.0.0.2 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#exit
Router(config)#router eigrp 100
Router(config-router)#network 192.168.13.0 0.0.0.255
Router(config-router)#network 12.0.0.0 0.255.255.255
Router(config-router)#network 13.0.0.0 0.255.255.255
Router(config-router)#
%DUAL-5-NBRCHANGE: IP-EIGRP 100: Neighbor 13.0.0.1 (Serial0/0/1) is up: new adjacency

Router(config-router)#no auto-summary
Router(config-router)#ex
Router(config)#ex
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#wr
Building configuration...
[OK]
Router#
```