**Basic Router Configuration – Static Routing**

**Router0 Configuration**

Router>enable

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#interface Serial0/1/0

Router(config-if)#ip address 20.0.0.2 255.0.0.0

Router(config-if)#no shutdown

Router(config-if)#

%LINK-5-CHANGED: Interface Serial0/1/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1/0, changed state to up

Router(config-if)#exit

Router(config)#interface Serial0/0/0

Router(config-if)#ip address 30.0.0.1 255.0.0.0

Router(config-if)#no shutdown

Router(config-if)#

%LINK-5-CHANGED: Interface Serial0/0/0, changed state to up

Router(config-if)#exit

Router(config)#interface Serial0/0/1

Router(config-if)#

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/0, changed state to up

ip address 50.0.0.1 255.0.0.0

Router(config-if)#no shutdown

Router(config-if)#

%LINK-5-CHANGED: Interface Serial0/0/1, changed state to up

Router(config-if)#exit

Router(config)#interface Serial0/1/1

Router(config-if)#ip address 70.0.0.1 255.0.0.0

Router(config-if)#

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0/1, changed state to up

no shutdown

Router(config-if)#

%LINK-5-CHANGED: Interface Serial0/1/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1/1, changed state to up

Router(config)#ip route 10.0.0.0 255.0.0.0 20.0.0.1

Router(config)#ip route 80.0.0.0 255.0.0.0 70.0.0.2

Router(config)#ip route 40.0.0.0 255.0.0.0 30.0.0.2

Router(config)#ip route 60.0.0.0 255.0.0.0 50.0.0.2

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

S 10.0.0.0/8 [1/0] via 20.0.0.1

C 20.0.0.0/8 is directly connected, Serial0/1/0

C 30.0.0.0/8 is directly connected, Serial0/0/0

S 40.0.0.0/8 [1/0] via 30.0.0.2

C 50.0.0.0/8 is directly connected, Serial0/0/1

S 60.0.0.0/8 [1/0] via 50.0.0.2

C 70.0.0.0/8 is directly connected, Serial0/1/1

S 80.0.0.0/8 [1/0] via 70.0.0.2

Router#

**Router1 Configuration**

Router>enable

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#interface FastEthernet0/0

Router(config-if)#ip address 80.0.0.1 255.0.0.0

Router(config-if)#no shutdown

Router(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

Router(config-if)#exit

Router(config)#interface Serial0/0/0

Router(config-if)#ip address 70.0.0.2 255.0.0.0

Router(config-if)#no shutdown

Router(config-if)#

Router(config)#ip route 10.0.0.0 255.0.0.0 70.0.0.1

Router(config)#ip route 20.0.0.0 255.0.0.0 70.0.0.1

Router(config)#ip route 30.0.0.0 255.0.0.0 70.0.0.1

Router(config)#ip route 40.0.0.0 255.0.0.0 70.0.0.1

Router(config)#ip route 50.0.0.0 255.0.0.0 70.0.0.1

Router(config)#ip route 60.0.0.0 255.0.0.0 70.0.0.1

**Router2 Configuration**

Router>enable

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#interface FastEthernet0/0

Router(config-if)#ip address 60.0.0.1 255.0.0.0

Router(config-if)#no shutdown

Router(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

Router(config-if)#exit

Router(config)#interface Serial0/0/0

Router(config-if)#no shutdown

Router(config-if)#exit

Router(config)#interface Serial0/0/0

Router(config-if)#ip address 50.0.0.2 255.0.0.0

Router(config-if)#

Router(config)#ip route 10.0.0.0 255.0.0.0 50.0.0.1

Router(config)#ip route 20.0.0.0 255.0.0.0 50.0.0.1

Router(config)#ip route 30.0.0.0 255.0.0.0 50.0.0.1

Router(config)#ip route 40.0.0.0 255.0.0.0 50.0.0.1

Router(config)#ip route 70.0.0.0 255.0.0.0 50.0.0.1

Router(config)#ip route 80.0.0.0 255.0.0.0 50.0.0.1

Router(config)#

**Router3 Configuration**

Router>enable

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#interface FastEthernet0/0

Router(config-if)#ip address 10.0.0.1 255.0.0.0

Router(config-if)#no shutdown

Router(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

Router(config-if)#exit

Router(config)#interface Serial0/0/0

Router(config-if)#ip address 20.0.0.1 255.0.0.0

Router(config-if)#clock rate 64000

Router(config-if)#no shutdown

Router(config-if)#

Router(config)#ip route 30.0.0.0 255.0.0.0 20.0.0.2

Router(config)#ip route 40.0.0.0 255.0.0.0 20.0.0.2

Router(config)#ip route 50.0.0.0 255.0.0.0 20.0.0.2

Router(config)#ip route 60.0.0.0 255.0.0.0 20.0.0.2

Router(config)#ip route 70.0.0.0 255.0.0.0 20.0.0.2

Router(config)#ip route 80.0.0.0 255.0.0.0 20.0.0.2

Router(config)#

Router#

%SYS-5-CONFIG\_I: Configured from console by console

Router#

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 10.0.0.0/8 is directly connected, FastEthernet0/0

C 20.0.0.0/8 is directly connected, Serial0/0/0

S 30.0.0.0/8 [1/0] via 20.0.0.2

S 40.0.0.0/8 [1/0] via 20.0.0.2

S 50.0.0.0/8 [1/0] via 20.0.0.2

S 60.0.0.0/8 [1/0] via 20.0.0.2

S 70.0.0.0/8 [1/0] via 20.0.0.2

S 80.0.0.0/8 [1/0] via 20.0.0.2

**Router4 Configuration**

Router>enable

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#interface FastEthernet0/0

Router(config-if)#ip address 40.0.0.1 255.0.0.0

Router(config-if)#no shutdown

Router(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

Router(config-if)#exit

Router(config)#interface Serial0/0/0

Router(config-if)#ip address 30.0.0.2 255.0.0.0

Router(config-if)#clock rate 64000

This command applies only to DCE interfaces

Router(config-if)#no shutdown

Router(config-if)#do write

Building configuration...

[OK]

Router(config-if)#

Router#config t

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#ip route 10.0.0.0 255.0.0.0 30.0.0.1

Router(config)#ip route 20.0.0.0 255.0.0.0 30.0.0.1

Router(config)#ip route 50.0.0.0 255.0.0.0 30.0.0.1

Router(config)#ip route 60.0.0.0 255.0.0.0 30.0.0.1

Router(config)#ip route 70.0.0.0 255.0.0.0 30.0.0.1

Router(config)#ip route 80.0.0.0 255.0.0.0 30.0.0.1

