R1#conf t

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

R1(config)#int f0/0

R1(config-if)#ip address 192.168.10.1 255.255.255.0

R1(config-if)#no shut

R1(config-if)#exit

R1(config)#

\*Mar 1 00:06:04.323: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up

\*Mar 1 00:06:05.323: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

R1(config)#int s0/0

R1(config-if)#ip address 193.0.1.1 255.255.255.252

R1(config-if)#no shut

R1(config-if)#

\*Mar 1 00:06:45.895: %LINK-3-UPDOWN: Interface Serial0/0, changed state to up

\*Mar 1 00:06:46.895: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0, changed state to up

R1(config-if)#exit

R1(config)#ip dhcp pool p10

R1(dhcp-config)#network 192.168.10.0 255.255.255.0

\*Mar 1 00:07:12.479: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0, changed state to down

R1(dhcp-config)#default-router 192.168.10.1

R1(dhcp-config)#exit

R1(config)#

\*Mar 1 00:11:02.471: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0, changed state to up

\*Mar 1 00:30:39.331: %SYS-5-CONFIG\_I: Configured from console by console

R1#show ip route

Codes: C - connected, S - static, 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

i - IS-IS, su - IS-IS summary, 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 192.168.10.0/24 is directly connected, FastEthernet0/0

193.0.1.0/30 is subnetted, 1 subnets

C 193.0.1.0 is directly connected, Serial0/0

R1#conf t

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

R1(config)#ip route 192.168.10.0 255.255.255.0 193.0.1.2

R1(config)#ip route 192.168.10.0 255.255.255.0 194.0.1.1

R1(config)#ip route 192.168.10.0 255.255.255.0 194.0.1.2

R1(config)#exit

R1#show i

\*Mar 1 00:31:58.707: %SYS-5-CONFIG\_I: Configured from console by console

R1#show ip route

Codes: C - connected, S - static, 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

i - IS-IS, su - IS-IS summary, 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 192.168.10.0/24 is directly connected, FastEthernet0/0

193.0.1.0/30 is subnetted, 1 subnets

C 193.0.1.0 is directly connected, Serial0/0

R1#conf t

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

R1(config)#ip route 192.168.10.0 255.255.255.0 194.0.0.1

R1(config)#exit

\*Mar 1 00:32:36.543: %SYS-5-CONFIG\_I: Configured from console by console

R1#show ip route

Codes: C - connected, S - static, 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

i - IS-IS, su - IS-IS summary, 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 192.168.10.0/24 is directly connected, FastEthernet0/0

193.0.1.0/30 is subnetted, 1 subnets

C 193.0.1.0 is directly connected, Serial0/0

R1#conf t

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

R1(config)#ip route 0.0.0.0 0.0.0.0 193.0.1.2

R1(config)#exit

R1#sh

\*Mar 1 00:39:06.987: %SYS-5-CONFIG\_I: Configured from console by console

R1#show ip route

Codes: C - connected, S - static, 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

i - IS-IS, su - IS-IS summary, 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 193.0.1.2 to network 0.0.0.0

C 192.168.10.0/24 is directly connected, FastEthernet0/0

193.0.1.0/30 is subnetted, 1 subnets

C 193.0.1.0 is directly connected, Serial0/0

S\* 0.0.0.0/0 [1/0] via 193.0.1.2

R1#

------------------------------------------------------------------------

R2#conf t

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

R2(config)#int f0/0

R2(config-if)#ip address 192.168.11.1 255.255.255.0

R2(config-if)#no shut

R2(config-if)#

\*Mar 1 00:08:15.327: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up

\*Mar 1 00:08:16.327: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

R2(config-if)#exit

R2(config)#int s0/0

R2(config-if)#ip address 193.0.1.2 255.255.255.252

R2(config-if)#no shut

R2(config-if)#exit

R2(config)#

\*Mar 1 00:10:47.979: %LINK-3-UPDOWN: Interface Serial0/0, changed state to up

\*Mar 1 00:10:48.979: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/0, changed state to up

R2(config)#ip dhcp pool p11

R2(dhcp-config)#network 192.168.11.0 255.255.255.0

R2(dhcp-config)#default-router 192.168.11.1

R2(dhcp-config)#exit

R2(config)#int s0/1

R2(config-if)#ip address 193.0.1.3 255.255.255.252

Bad mask /30 for address 193.0.1.3

R2(config-if)#int s0/1

R2(config-if)#ip address 194.0.1.1 255.255.255.252

R2(config-if)#no shut

R2(config-if)#exit

R2(config)#

\*Mar 1 00:16:51.091: %LINK-3-UPDOWN: Interface Serial0/1, changed state to up

\*Mar 1 00:16:52.091: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1, changed state to up

R2(config)#ip dhcp pool p11

R2(dhcp-config)#network 192.168.11.0 255.255.255.0

R2(dhcp-config)#default-router 192.168.11.1

R2(dhcp-config)#exit

R2(config)#exit

R2#

\*Mar 1 00:20:38.499: %SYS-5-CONFIG\_I: Configured from console by console

R2#conf t

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

R2(config)#int f0/0

R2(config-if)#ip dhcp pool p11

R2(dhcp-config)#network 192.168.11.0 255.255.255.0

R2(dhcp-config)#default-router 192.168.11.1

R2(dhcp-config)#exit

R2(config)#ip route 192.168.11.0 255.255.255.0 194.0.0.1

R2(config)#ip route 192.168.11.0 255.255.255.0 194.0.1.1

%Invalid next hop address (it's this router)

R2(config)#ip route 192.168.11.0 255.255.255.0 194.0.1.2

R2(config)#ip route 192.168.11.0 255.255.255.0 194.0.1.1

%Invalid next hop address (it's this router)

R2(config)#ip route 192.168.11.0 255.255.255.0 193.0.1.1

R2(config)#ip route 192.168.11.0 255.255.255.0 193.0.1.2

%Invalid next hop address (it's this router)

R2(config)#exit

\*Mar 1 00:36:00.363: %SYS-5-CONFIG\_I: Configured from console by console

R2#show ip route

Codes: C - connected, S - static, 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

i - IS-IS, su - IS-IS summary, 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 192.168.11.0/24 is directly connected, FastEthernet0/0

193.0.1.0/30 is subnetted, 1 subnets

C 193.0.1.0 is directly connected, Serial0/0

194.0.1.0/30 is subnetted, 1 subnets

C 194.0.1.0 is directly connected, Serial0/1

--------------------------------------------------------------------

R3#conf t

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

R3(config)#int f0/0

R3(config-if)#ip address 192.168.12.1 255.255.255.0

R3(config-if)#no shut

R3(config-if)#exit

R3(config)#int f

\*Mar 1 00:12:54.355: %LINK-3-UPDOWN: Interface FastEthernet0/0, changed state to up

\*Mar 1 00:12:55.355: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed state to up

R3(config)#int f0/1

R3(config-if)#ip address 192.168.13.1 255.255.255.0

R3(config-if)#no shut

R3(config-if)#

\*Mar 1 00:13:29.455: %LINK-3-UPDOWN: Interface FastEthernet0/1, changed state to up

\*Mar 1 00:13:30.455: %LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

R3(config-if)#exit

R3(config)#int s0/1

R3(config-if)#ip address 193.0.1.4 255.255.255.252

Bad mask /30 for address 193.0.1.4

R3(config-if)#ip address 194.0.1.2 255.255.255.252

R3(config-if)#no shut

R3(config-if)#exit

R3(config)#

\*Mar 1 00:17:08.227: %LINK-3-UPDOWN: Interface Serial0/1, changed state to up

\*Mar 1 00:17:09.227: %LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/1, changed state to up

R3(config)#int l0

R3(config-if)#

\*Mar 1 00:17:35.419: %LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback0, changed state to up

R3(config-if)#ip address 194.0.0.1 255.255.255.255

R3(config-if)#exit

R3(config)#ip dhcp pool p12

R3(dhcp-config)#network 192.168.12.0 255.255.255.0

R3(dhcp-config)#default-router 192.168.12.1

R3(dhcp-config)#exit

R3(config)#ip dhcp pool p13

R3(dhcp-config)#network 192.168.13.0 255.255.255.0

R3(dhcp-config)#default-router 192.168.13.1

R3(dhcp-config)#exit

R3(config)#ip route 192.168.12.0 255.255.255.0 193.0.1.2

R3(config)#ip route 192.168.12.0 255.255.255.0 193.0.1.1

R3(config)#ip route 192.168.12.0 255.255.255.0 194.0.1.1

R3(config)#exit

R3#show

\*Mar 1 00:37:16.051: %SYS-5-CONFIG\_I: Configured from console by console

R3#show ip route

Codes: C - connected, S - static, 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

i - IS-IS, su - IS-IS summary, 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 192.168.12.0/24 is directly connected, FastEthernet0/0

C 192.168.13.0/24 is directly connected, FastEthernet0/1

194.0.0.0/32 is subnetted, 1 subnets

C 194.0.0.1 is directly connected, Loopback0

194.0.1.0/30 is subnetted, 1 subnets

C 194.0.1.0 is directly connected, Serial0/1

R3#

----------------------------------------------------------------------------

PC1> show ip

NAME : PC1[1]

IP/MASK : 192.168.10.2/24

GATEWAY : 192.168.10.1

DNS :

DHCP SERVER : 192.168.10.1

DHCP LEASE : 86343, 86400/43200/75600

MAC : 00:50:79:66:68:00

LPORT : 10044

RHOST:PORT : 127.0.0.1:10045

MTU: : 1500

PC1> ping 194.0.0.1

\*192.168.10.1 icmp\_seq=1 ttl=255 time=30.194 ms (ICMP type:3, code:1, Destination host unreachable)

\*192.168.10.1 icmp\_seq=2 ttl=255 time=30.491 ms (ICMP type:3, code:1, Destination host unreachable)

\*192.168.10.1 icmp\_seq=3 ttl=255 time=15.620 ms (ICMP type:3, code:1, Destination host unreachable)

\*192.168.10.1 icmp\_seq=4 ttl=255 time=30.572 ms (ICMP type:3, code:1, Destination host unreachable)

\*192.168.10.1 icmp\_seq=5 ttl=255 time=30.290 ms (ICMP type:3, code:1, Destination host unreachable)

PC1> ping 194.0.0.1

194.0.0.1 icmp\_seq=1 timeout

194.0.0.1 icmp\_seq=2 timeout

194.0.0.1 icmp\_seq=3 timeout

194.0.0.1 icmp\_seq=4 timeout

194.0.0.1 icmp\_seq=5 timeout

PC1> ping 192.168.12.1

192.168.12.1 icmp\_seq=1 timeout

192.168.12.1 icmp\_seq=2 timeout

192.168.12.1 icmp\_seq=3 timeout

192.168.12.1 icmp\_seq=4 timeout

192.168.12.1 icmp\_seq=5 timeout

PC1>

-----------------------------------------------------------------

PC2> ip dhcp

DDORA IP 192.168.10.3/24 GW 192.168.10.1

PC2> show ip

NAME : PC2[1]

IP/MASK : 192.168.10.3/24

GATEWAY : 192.168.10.1

DNS :

DHCP SERVER : 192.168.10.1

DHCP LEASE : 86352, 86400/43200/75600

MAC : 00:50:79:66:68:01

LPORT : 10046

RHOST:PORT : 127.0.0.1:10047

MTU: : 1500

PC2> ping 192.168.12.1

192.168.12.1 icmp\_seq=1 timeout

192.168.12.1 icmp\_seq=2 timeout

192.168.12.1 icmp\_seq=3 timeout

192.168.12.1 icmp\_seq=4 timeout

192.168.12.1 icmp\_seq=5 timeout

PC2> ping 192.168.13.3

192.168.13.3 icmp\_seq=1 timeout

192.168.13.3 icmp\_seq=2 timeout

192.168.13.3 icmp\_seq=3 timeout

192.168.13.3 icmp\_seq=4 timeout

192.168.13.3 icmp\_seq=5 timeout

PC2>

----------------------------------------------------------------------

PC3> ip dhcp

DDORA IP 192.168.12.3/24 GW 192.168.12.1

PC3> show ip

NAME : PC3[1]

IP/MASK : 192.168.12.3/24

GATEWAY : 192.168.12.1

DNS :

DHCP SERVER : 192.168.12.1

DHCP LEASE : 86397, 86400/43200/75600

MAC : 00:50:79:66:68:02

LPORT : 10048

RHOST:PORT : 127.0.0.1:10049

MTU: : 1500

PC3>

----------------------------------------------------------------------

PC4> ip dhcp

DDORRA IP 192.168.12.2/24 GW 192.168.12.1

PC4> show ip

NAME : PC4[1]

IP/MASK : 192.168.12.2/24

GATEWAY : 192.168.12.1

DNS :

DHCP SERVER : 192.168.12.1

DHCP LEASE : 86391, 86400/43200/75600

MAC : 00:50:79:66:68:03

LPORT : 10050

RHOST:PORT : 127.0.0.1:10051

MTU: : 1500

PC4>

-------------------------------------------------------------------

PC5> ip dhcp

DDORA IP 192.168.13.3/24 GW 192.168.13.1

PC5> show ip

NAME : PC5[1]

IP/MASK : 192.168.13.3/24

GATEWAY : 192.168.13.1

DNS :

DHCP SERVER : 192.168.13.1

DHCP LEASE : 86384, 86400/43200/75600

MAC : 00:50:79:66:68:04

LPORT : 10052

RHOST:PORT : 127.0.0.1:10053

MTU: : 1500

PC5>

------------------------------------------------------------------

PC6> ip dhcp

DDORA IP 192.168.13.2/24 GW 192.168.13.1

PC6> show ip

NAME : PC6[1]

IP/MASK : 192.168.13.2/24

GATEWAY : 192.168.13.1

DNS :

DHCP SERVER : 192.168.13.1

DHCP LEASE : 86375, 86400/43200/75600

MAC : 00:50:79:66:68:05

LPORT : 10054

RHOST:PORT : 127.0.0.1:10055

MTU: : 1500

PC6>

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PC7> ip dhcp

DDORA IP 192.168.11.2/24 GW 192.168.11.1

PC7> show ip

NAME : PC7[1]

IP/MASK : 192.168.11.2/24

GATEWAY : 192.168.11.1

DNS :

DHCP SERVER : 192.168.11.1

DHCP LEASE : 86050, 86400/43200/75600

MAC : 00:50:79:66:68:06

LPORT : 10056

RHOST:PORT : 127.0.0.1:10057

MTU: : 1500

PC7>

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PC8> ip dhcp

DDORA IP 192.168.11.3/24 GW 192.168.11.1

PC8> show ip

NAME : PC8[1]

IP/MASK : 192.168.11.3/24

GATEWAY : 192.168.11.1

DNS :

DHCP SERVER : 192.168.11.1

DHCP LEASE : 86057, 86400/43200/75600

MAC : 00:50:79:66:68:07

LPORT : 10058

RHOST:PORT : 127.0.0.1:10059

MTU: : 1500

PC8>

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