Aim: Configure and Verify Path Control Using PBR

Topology:

Lo2:223.168.2.1/24
R2
s0/0   s0/1
.2   .2

172.16.12.0/29   172.16.23.0/29

s0/0 .1   s0/1   Lo4:223.168.4.1/25
.1   172.16.13.0/29   .3 R3 .3   172.16.34.0/29   .4 R4
s0/1   .3
R1   s0/0 s0/2   s0/0

Lo1:223.168.1.1/24   Lo3:223.168.3.1/24   Lo5:223.168.4.129/25
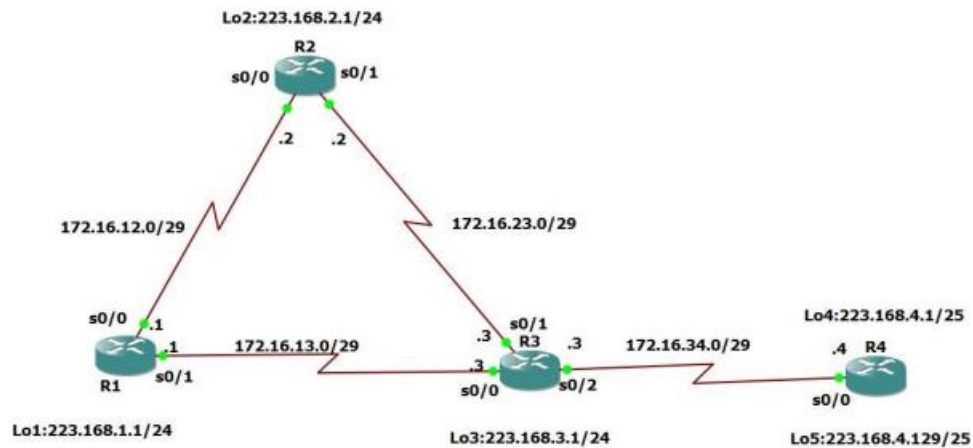
Router R1

 Interface Lo1

 ip address 223.168.1.1 255.255.255.0

interface Serial 0/0/0

ip address 172.16.12.1 255.255.255.248

 no shutdown

 interface Serial 0/0/1

 ip address 172.16.13.1 255.255.255.248

no shutdown

end

Router R2

Interface Lo2

 ip address 223.168.2.1 255.255.255.0

interface Serial 0/0/0

ip address 172.16.12.2 255.255.255.248

 no shutdown

interface Serial 0/0/1

ip address 172.16.23.2 255.255.255.248

 no shutdown

end

Router R3

 Interface Lo3

ip address 223.168.3.1 255.255.255.0

 interface Serial 0/0/0

ip address 172.16.13.3 255.255.255.248

no shutdown

 interface Serial 0/0/1

ip address 172.16.23.3 255.255.255.248

 interface Serial 0/1/0

ip address 172.16.34.3 255.255.255.248

no shutdown

end

Router R4

Interface Lo4

 ip address 223.168.4.1 255.255.255.128

interface Lo5

 ip address 223.168.4.129 255.255.255.128

 interface Serial 0/0/0

 ip address 172.16.34.4 255.255.255.248

no shutdown

end

R3# show ip interface brief

R3# show protocols

R3# show interface description

Router R1

Router eigrp 1

 network 223.168.1.0

network 172.16.12.0 0.0.0.7

 network 172.16.13.0 0.0.0.7

no auto-summary

Router R2

Router eigrp 1

network 223.168.2.0

 network 172.16.12.0 0.0.0.7

network 172.16.23.0 0.0.07

no auto-summary

Router R3

Router eigrp 1

network 223.168.3.0

 network 172.16.13.0 0.0.0.7

network 172.16.23.0 0.0.0.7

 network 172.16.34.0 0.0.0.7

 no auto-summary

Router R4

 router eigrp 1

network 223.168.4.0

 network 172.16.34.0 0.0.07

no auto-summary

R1# show ip eigrp neighbors

R2# show ip eigrp neighbors

R3# show ip eigrp neighbors

R4# show ip eigrp neighbors

R4# traceroute 223.168.1.1 source 223.168.4.1

R4# traceroute 223.168.1.1 source 223.168.4.129

R3# show ip route

show interfaces serial 0/0/0

w interfaces s0/0/1

R3# show ip eigrp topology 223.168.1.0

R3(config) #ip access-list standard PBR-ACL

R3(config-std-nacl) #remark ACL matches R4 LAN B traffic

 R3(config-std-nacl) #permit 223.168.4.128 0.0.0.127

R3(config-std-nacl) #exit

R3(config)# interface s0/1/0

 R3(config-if) #ip policy route-map R3-to-R1

 R3(config-if) # end

R3# conf t

R3(config)# access-list 1 permit 223.168.4.0 0.0.0.255

 R3(config)# exit

R3# debug ip policy?

R3# debug ip policy 1

R4# traceroute 223.168.1.1 source 223.168.4.1

R4# traceroute 223.168.1.1 source 223.168.4.129