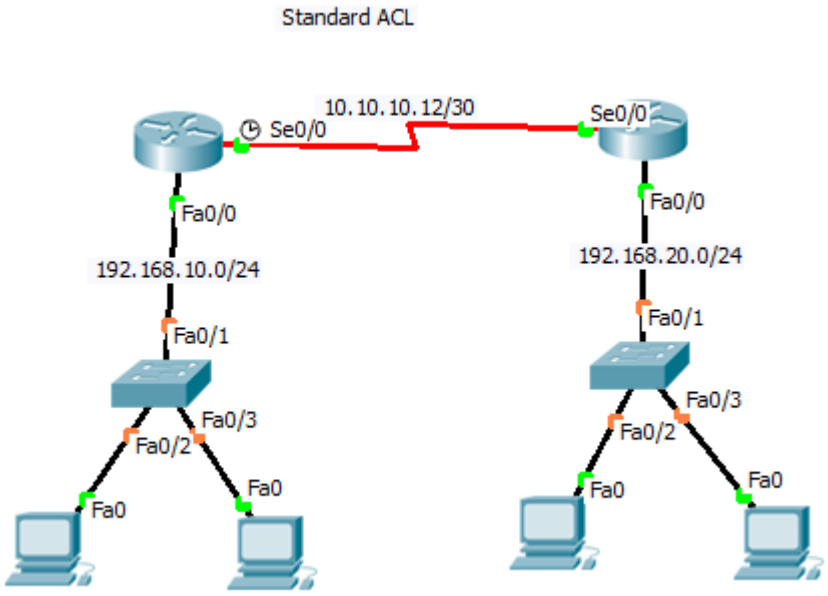
LAB 1

Standard ACL



Objective

- Configure Default routing
- Configure standard ACL on R2

Tasks

1. Change the routers default hostname to specific hostnames, refer the topology for hostname.
2. Configure the R1 serial interface ip address with the given network address 10.10.10.12/30.
3. Configure the R1 fast Ethernet ip address with the given network address 192.168.10.0/24.
4. Configure the R2 serial interface ip address with the given network address 10.10.10.12/30.
5. Configure the R2 fast Ethernet ip address with the given network address 192.168.20.0/24.
6. Configure the PC's with the valid ip addresses.
7. Configure the Default routing on the R1 and R2 router so that there is a full connectivity between R1 and R2 networks.
8. After configure them cross verify the network connectivity by pinging from PC's of R1 to the PC's of R2.
9. Configure standard ACL on R1 so that the traffic from 192.168.10.0/24 should not reach to R2 192.168.20.0/24 network.
10. Save the Routers configuration to a startup configuration file for a future reference.

Configuration

R1 Configuration

R1>enable

R1#configure terminal

R1(config)#ip route 0.0.0.0 0.0.0.0 10.10.10.14

R1#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

10.0.0.0/30 is subnetted, 1 subnets

C 10.10.10.12/30 is directly connected, Serial0/0

C 192.168.10.0/24 is directly connected, FastEthernet0/0

S* 0.0.0.0/0 [1/0] via 10.10.10.14

R2 Configuration

R2>enable

R2#configure terminal

R2(config)#ip route 0.0.0.0 0.0.0.0 10.10.10.13

R2#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

10.0.0.0/30 is subnetted, 1 subnets

C 10.10.10.12/30 is directly connected, Serial0/0

C 192.168.20.0/24 is directly connected, FastEthernet0/0

S* 0.0.0.0/0 [1/0] via 10.10.10.13

R2#configure terminal

R2(config)#access-list 10 deny 192.168.10.0 0.0.0.255

R2(config)# access-list 10 permit any

R2(config)#interface f0/0

R2(config-if) ip access-group 10 out

R2(config-if)#exit

R2(config)#exit

R2#show access-lists

Standard IP access list 10

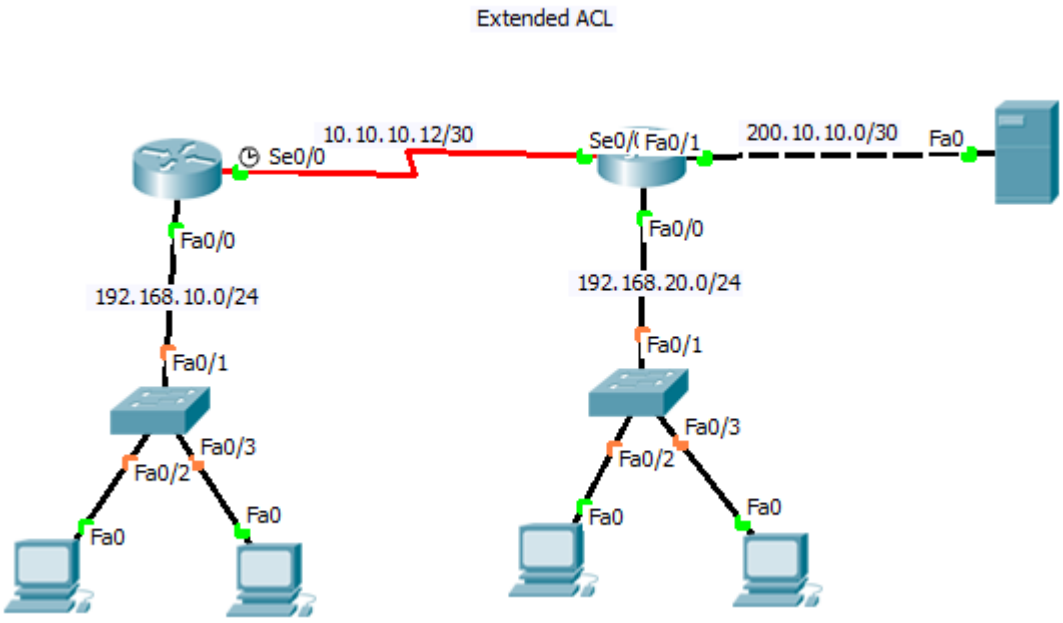
10 deny 192.168.10.0 0.0.0.255

20 permit any

R2#

LAB 2

Extended ACL



Objective

- Configure Default routing
- Configure extended ACL on R1

Tasks

1. Change the routers default hostname to specific hostnames, refer the topology for hostname.
2. Configure the R1 serial interface ip address with the given network address 10.10.10.12/30.
3. Configure the R1 fast Ethernet ip address with the given network address 192.168.10.0/24.
4. Configure the R2 serial interface ip address with the given network address 10.10.10.12/30.
5. Configure the R2 fast Ethernet ip address with the given network address as 192.168.20.0/24 and 200.10.10.0/30.
6. Configure the PC's with the valid ip addresses.

7. Configure the Default routing on the R1 and R2 router so that there is a full connectivity between R1 and R2 networks.
8. After configure them cross verify the network connectivity by pinging from PC's of R1 to the PC's of R2.
9. Configure extended ACL on R1 so that the PC's of R1 should not reach server, deny telnet from PC's to R2.
10. Allow ip traffic to go through R1 PC's to R2 PC's
11. Save the Routers configuration to a startup configuration file for a future reference.

Configuration

R1 Configuration

R1>enable

R1#configure terminal

R1(config)#ip route 0.0.0.0 0.0.0.0 10.10.10.14

R1#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

10.0.0.0/30 is subnetted, 1 subnets

C 10.10.10.12/30 is directly connected, Serial0/0

C 192.168.10.0/24 is directly connected, FastEthernet0/0

S* 0.0.0.0/0 [1/0] via 10.10.10.14

ACL configuration

R1(config)# access-list 100 deny tcp host 192.168.10.1 200.10.10.0 0.0.0.3 eq www

R1(config)# access-list 100 deny tcp host 192.168.10.2 200.10.10.0 0.0.0.3 eq telnet

R1(config)# access-list 100 deny tcp 192.168.10.0 0.0.0.255 192.168.20.0 0.0.0.255 eq telnet

R1(config)# access-list 100 permit tcp any any

R1(config)# access-list 100 permit ip any any

R1(config)#interface f0/0

R1(config-if)#ip access-group 100 in

R2 Configuration

R2>enable

R2#configure terminal

R2(config)#ip route 0.0.0.0 0.0.0.0 10.10.10.13

R2#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

10.0.0.0/30 is subnetted, 1 subnets

C 10.10.10.12/30 is directly connected, Serial0/0

C 192.168.20.0/24 is directly connected, FastEthernet0/0

S* 0.0.0.0/0 [1/0] via 10.10.10.13