**PAPER – II         PRACTICAL NO. : 02**

**AIM : IMPLEMENT IPv4 ACLs**

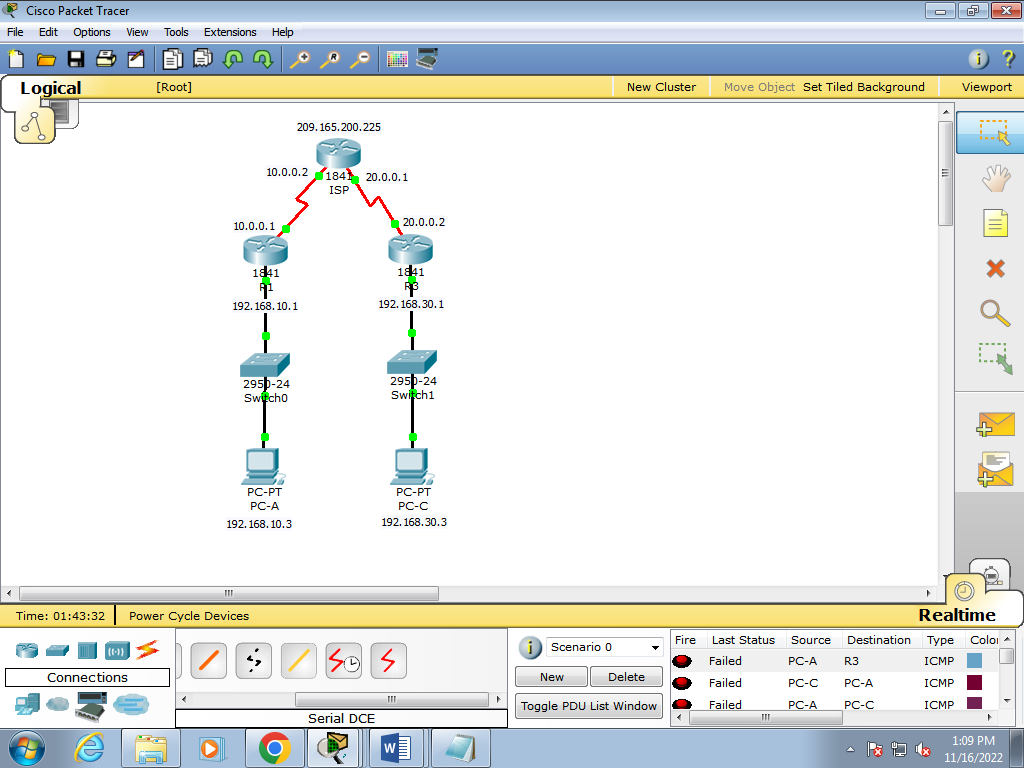
**1. STANDARD**

**2. EXTENDED**

**ROLL NO. : 02                                BATCH : M.SC PART-I**

**DATE : 16/11/22**

**CODE AND OUTPUT :**



R1 :

Router(config-router)#version 2

Router(config-router)#

Router(config-router)#exit

Router(config)#router rip

Router(config-router)#network 10.0.0.0

Router(config-router)#network 192.168.10.0

Router(config-router)#exit

Router(config)#interface Serial0/0/0

Router(config-if)#exit

Router(config)#interface FastEthernet0/0

Router(config-if)#end

Router>en

Router#conf t

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

Router(config)#no ip domain-lookup

Router(config)#hostname R1

R1(config)#service password-encryption

R1(config)#enable secret class

R1(config)#banner motd #

Enter TEXT message. End with the character '#'.

Unauthorized access is strictly prohibited. #

R1(config)#Line con 0

R1(config-line)#password cisco

R1(config-line)#login

R1(config-line)#logging synchronous

R1(config-line)#line vty 0 4

R1(config-line)#password cisco

R1(config-line)#login

Unauthorized access is strictly prohibited.

User Access Verification

Password:

R1>

R1>enable

Password:

R1#configure terminal

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

R1(config)#interface FastEthernet0/0

R1(config-if)#exit

R1(config)#interface FastEthernet0/0

R1(config-if)#exit

R1(config)#exit

R1#

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

R1#configure terminal

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

R1(config)#interface FastEthernet0/1

R1(config-if)#exit

R1(config)#end

R1#

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

R1#ping

Protocol [ip]:

Target IP address: 192.168.30.3

Repeat count [5]:

Datagram size [100]:

Timeout in seconds [2]:

Extended commands [n]: y

Source address or interface: 192.168.10.3

% Invalid source

Source address or interface: 192.168.10.1

Type of service [0]:

Set DF bit in IP header? [no]:

Validate reply data? [no]:

Data pattern [0xABCD]:

Loose, Strict, Record, Timestamp, Verbose[none]:

Sweep range of sizes [n]:

Type escape sequence to abort.

Sending 5, 100-byte ICMP Echos to 192.168.30.3, timeout is 2 seconds:

Packet sent with a source address of 192.168.10.1

!!!!!

Success rate is 100 percent (5/5), round-trip min/avg/max = 42/97/125 ms

R1#conf t

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

R1(config)#end

R1#en

R1#conf t

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

R1(config)#ip access-list standard BRANCH-OFFICE-POLICY

R1(config-std-nacl)#permit host 192.168.30.3

R1(config-std-nacl)#permit 192.168.40.0 0.0.0.255

R1(config-std-nacl)#end

R1#

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

R1#show access-lists

Standard IP access list BRANCH-OFFICE-POLICY

permit host 192.168.30.3

permit 192.168.40.0 0.0.0.255

R1#

R3 :

Router(config)#interface Serial0/0/1

Router(config-if)#exit

Router(config)#interface FastEthernet0/0

Router(config-if)#exit

Router(config)#interface FastEthernet0/1

Router(config-if)#exit

Router(config)#interface FastEthernet0/0

Router(config-if)#end

Router>enable

Router#copy running-config startup-config

Destination filename [startup-config]?

Building configuration...

[OK]

Router#en

Router#conf t

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

Router(config)#hostname R3

R3(config)#access-list 1 remark Allow R1 LANs Access

R3(config)#access-list 1 permit 192.168.10.0 0.0.0.255

R3(config)#access-list 1 permit 192.168.20.0 0.0.0.255

R3(config)#access-list 1 deny any

R3(config)#end

R3#

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

show access-list 1

Standard IP access list 1

permit 192.168.10.0 0.0.0.255

permit 192.168.20.0 0.0.0.255

deny any

R3#

R3>en

R3#conf t

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

R3(config)#int f0/0

R3(config-if)#end

R3#

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

R3#show ip int f0/0

FastEthernet0/0 is up, line protocol is up (connected)

Internet address is 192.168.30.1/24

Broadcast address is 255.255.255.255

Address determined by setup command

MTU is 1500

Helper address is not set

Directed broadcast forwarding is disabled

Outgoing access list is not set

Inbound access list is not set

Proxy ARP is enabled

Security level is default

Split horizon is enabled

ICMP redirects are always sent

ICMP unreachables are always sent

ICMP mask replies are never sent

IP fast switching is disabled

IP fast switching on the same interface is disabled

IP Flow switching is disabled

IP Fast switching turbo vector

IP multicast fast switching is disabled

IP multicast distributed fast switching is disabled

Router Discovery is disabled

IP output packet accounting is disabled

IP access violation accounting is disabled

TCP/IP header compression is disabled

RTP/IP header compression is disabled

Probe proxy name replies are disabled

Policy routing is disabled

Network address translation is disabled

WCCP Redirect outbound is disabled

WCCP Redirect exclude is disabled

BGP Policy Mapping is disabled

R3#en

R3#conf t

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

R3(config)#conf f

R3(config)#int f0/0

R3(config-if)#ip access-group 1 out

R3(config-if)#end

R3#

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

R3#show ip int f0/0

FastEthernet0/0 is up, line protocol is up (connected)

Internet address is 192.168.30.1/24

Broadcast address is 255.255.255.255

Address determined by setup command

MTU is 1500

Helper address is not set

Directed broadcast forwarding is disabled

Outgoing access list is 1

Inbound access list is not set

Proxy ARP is enabled

Security level is default

Split horizon is enabled

ICMP redirects are always sent

ICMP unreachables are always sent

ICMP mask replies are never sent

IP fast switching is disabled

IP fast switching on the same interface is disabled

IP Flow switching is disabled

IP Fast switching turbo vector

IP multicast fast switching is disabled

IP multicast distributed fast switching is disabled

Router Discovery is disabled

--More—

ISP :

Router(config)#int lo0

%LINK-5-CHANGED: Interface Loopback0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Loopback0, changed state to up

Router(config-if)#ip address 209.165.200.225 255.255.255.224

Router(config-if)#no shutdown

Router(config-if)#exit

Router(config)#router rip

Router(config-router)#version 2

Router(config-router)#exit

Router(config)#router rip

Router(config-router)#network 10.0.0.0

Router(config-router)#network 20.0.0.0

Router(config-router)#network 209.165.200.0

Router(config-router)#exit