INFORMATION SECURITY MANAGEMENT LAB DA-1

BY:

NAME: **LADI ROHIT**

ADMISSION NO: **19BDS0096**

COURSE CODE: **CSE3502**

FACULTY: **Dr. Ruby D**

STANDARD ACCESS CONTROL LIST

Aim:

To implement Standard ACL using Cisco packet tracer.

Scenario:

Develop and list the IP addresses of PCs for a network topology with 6 laptops, 3 switches, 2 servers and 3 routers. Each switch must be connected with 2 PCs and a router. Assume a case in which the services of entire 2 PCs of any router (R1) are being denied. But the PCs are able to communicate with each other in a switch and not able to communicate with the any one of the router (in the scenario). At the same time, the remaining PCs are able to communicate with each other and the other routers. Configure the network appropriately, Use ACLs (standard), and also provide the configuration code for switches and routers.

OUTPUT:
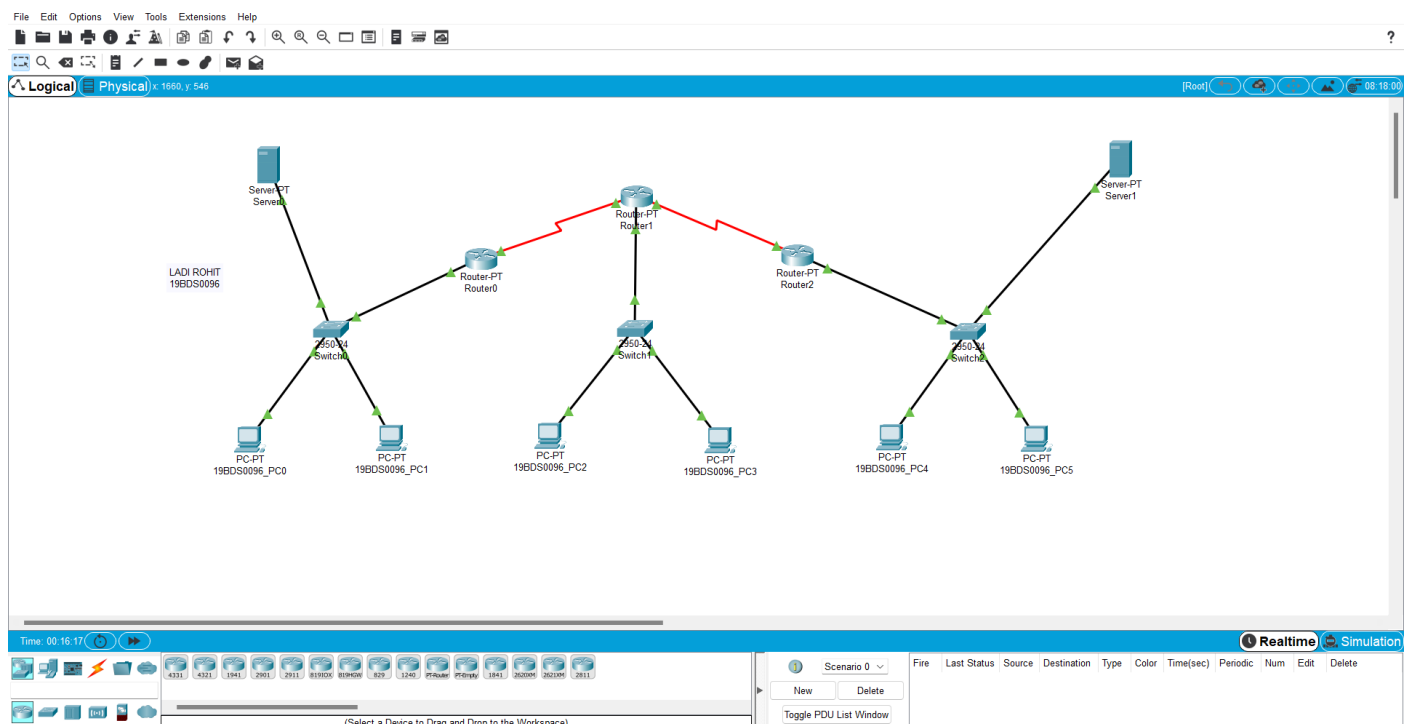
(a) Data communication before applying Standard ACL
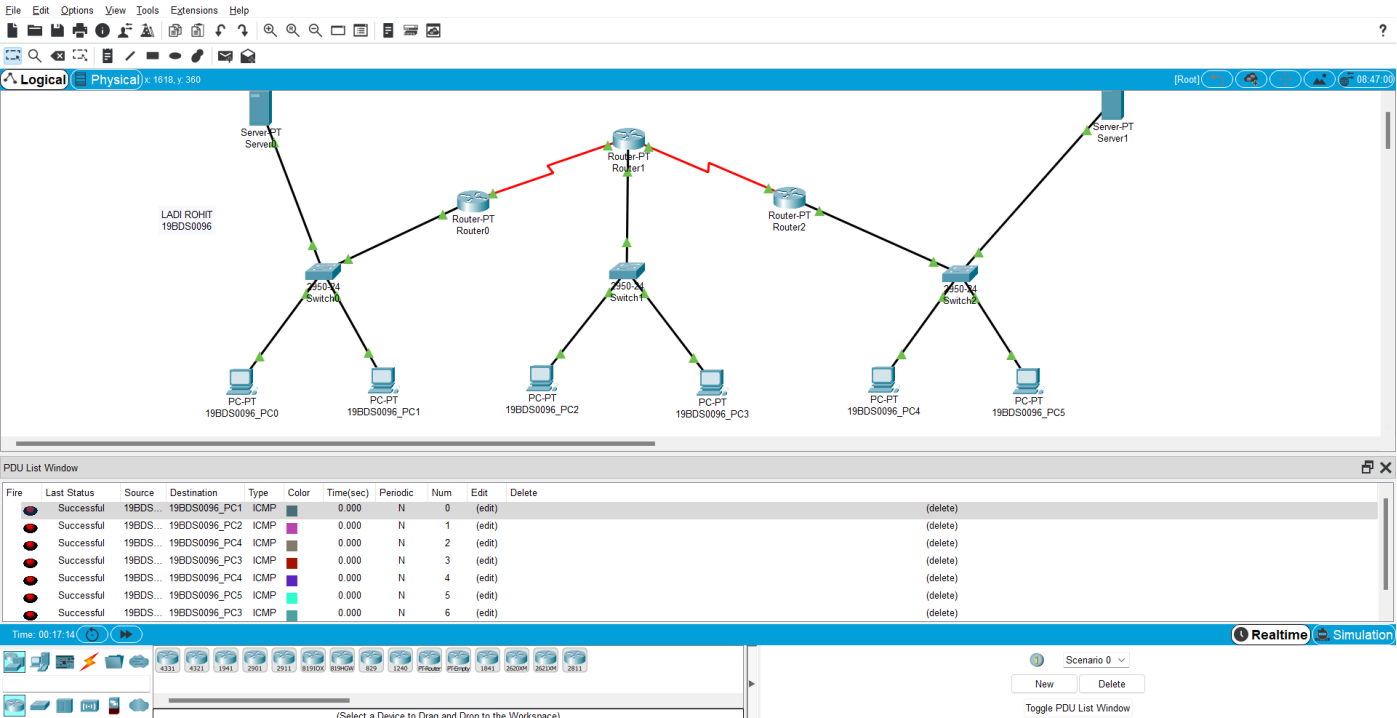
PC2, PC3 are Denied and PC0, PC1, PC4, PC5 are Permitted

Run Configuration


```
Router#
Router#
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#no access-list 25
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#access-list 25 deny 11.0.0.0 0.0.0.255
Router(config)#access-list 25 permit any
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#show running-config
Building configuration...

Current configuration : 910 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
!
!
!
ip cef
no ipv6 cef
!
!
!
!
!
!
!
!
!
--More--
```

Router0 — □ ×

Physical Config CLI Attributes

IOS Command Line Interface

```
!
interface Serial2/0
 ip address 20.0.0.1 255.0.0.0
!
interface Serial3/0
 no ip address
 clock rate 2000000
 shutdown
!
interface FastEthernet4/0
 no ip address
 shutdown
!
interface FastEthernet5/0
 no ip address
 shutdown
!
router rip
 network 10.0.0.0
 network 11.0.0.0
 network 12.0.0.0
 network 20.0.0.0
 network 30.0.0.0
!
ip classless
!
ip flow-export version 9
!
access-list 25 deny 11.0.0.0 0.0.0.255
access-list 25 permit any
!
!
!
!
!
line con 0
!
line aux 0
!
line vty 0 4
 login
!
!
!
end


Router#
Router#
```

Ctrl+F6 to exit CLI focus   Copy   Paste

☐ Top

Router0 — □ ×

Physical Config CLI Attributes

IOS Command Line Interface

```
Router#
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface fastEtherner 0/0
                               ^
% Invalid input detected at '^' marker.

Router(config)#interface fastEthernet 0/0
Router(config-if)#ip access-group 25 out
Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#show running-config
Building configuration...

Current configuration : 910 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
!
!
!
!
!
ip cef
no ipv6 cef
!
!
!
!
!
!
!
!
!
!
!
!
 --More--
```

Ctrl+F6 to exit CLI focus   Copy   Paste

☐ Top

Physical   Config   CLI   Attributes

IOS Command Line Interface

```
!
interface FastEthernet0/0
 ip address 10.0.0.1 255.0.0.0
 ip access-group 25 out
 duplex auto
 speed auto
!
interface FastEthernet1/0
 no ip address
 duplex auto
 speed auto
 shutdown
!
interface Serial2/0
 ip address 20.0.0.1 255.0.0.0
!
interface Serial3/0
 no ip address
 clock rate 2000000
 shutdown
!
interface FastEthernet4/0
 no ip address
 shutdown
!
interface FastEthernet5/0
 no ip address
 shutdown
!
router rip
 network 10.0.0.0
 network 11.0.0.0
 network 12.0.0.0
 network 20.0.0.0
 network 30.0.0.0
!
ip classless
!
ip flow-export version 9
!
access-list 25 deny 11.0.0.0 0.0.0.255
access-list 25 permit any
!
!
!
!
!
line con 0
```

Ctrl+F6 to exit CLI focus   Copy   Paste

☐ Top

Router2

Physical   Config   CLI   Attributes

IOS Command Line Interface

```
Press RETURN to get started.




Router>en
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#access-list 25 deny 11.0.0.0 0.0.0.255
Router(config)#access-list 25 permit any
```
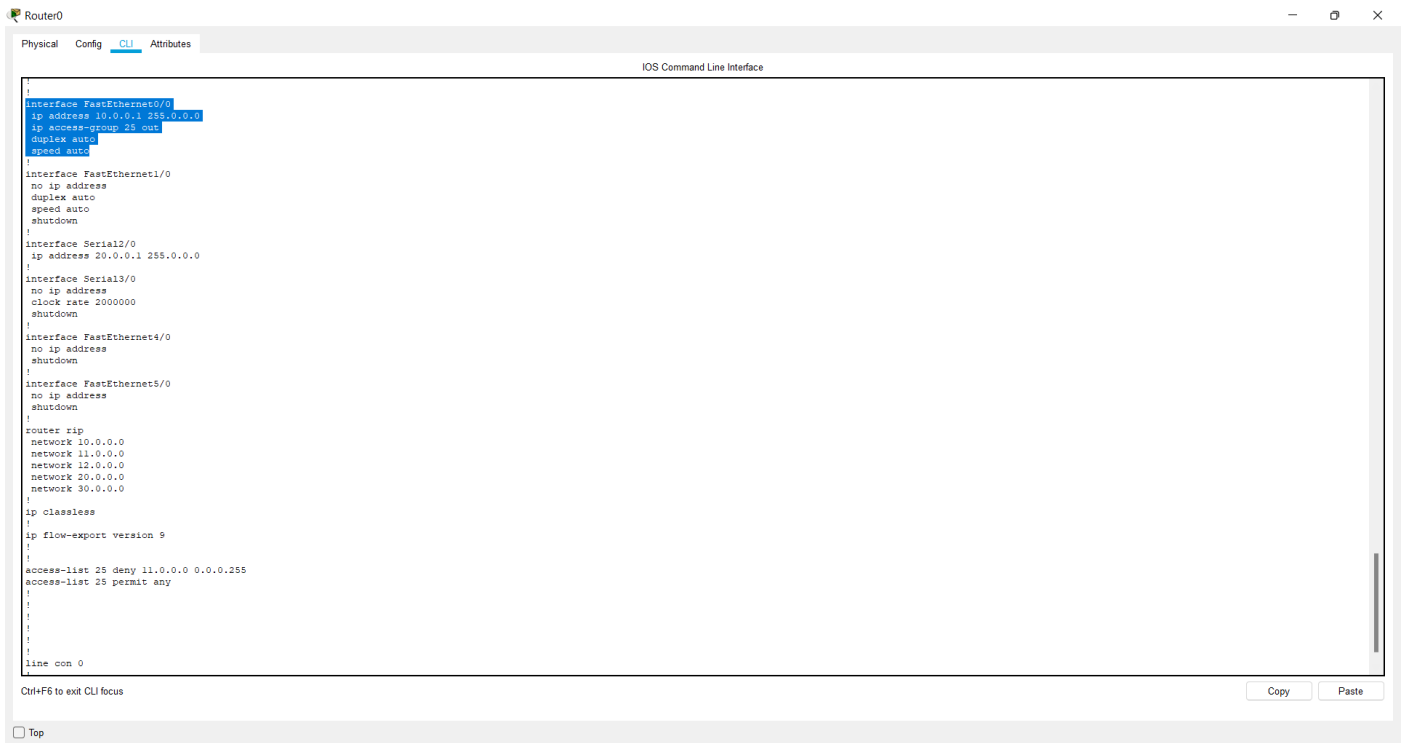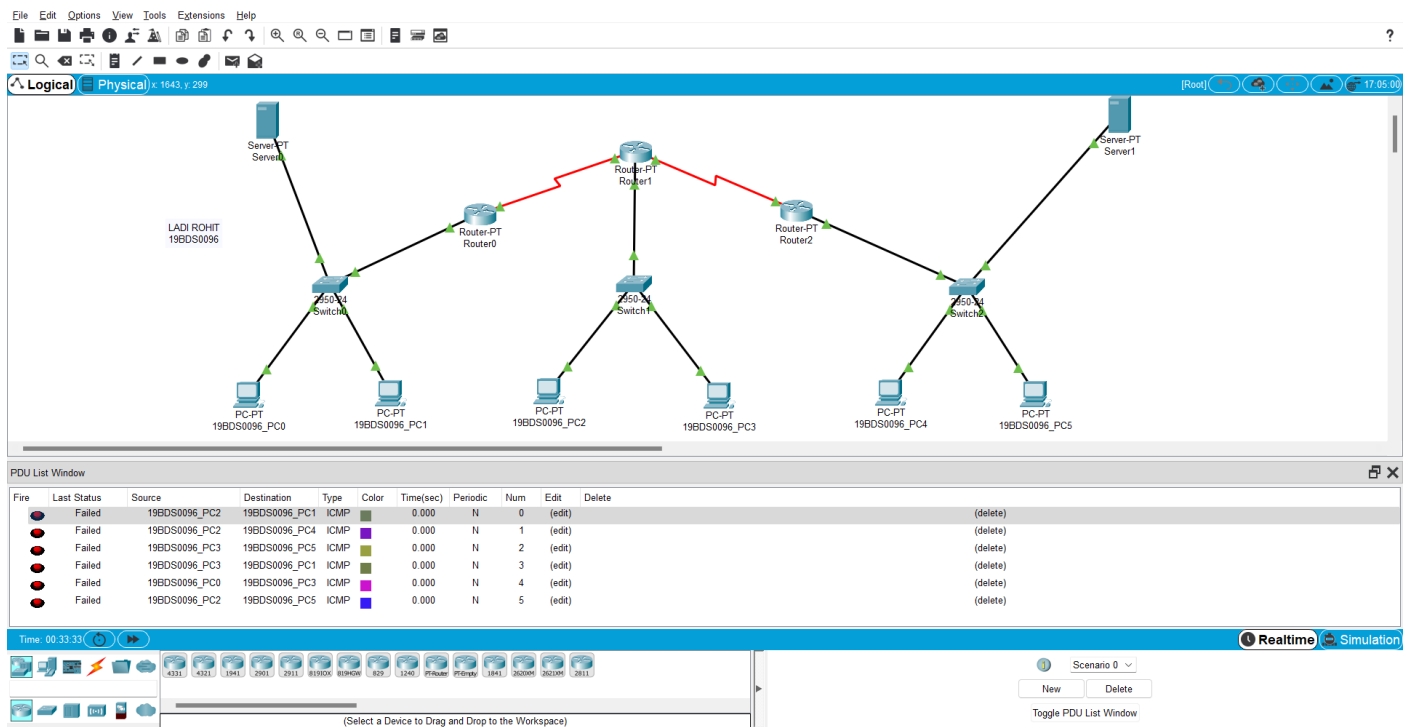
Ctrl+F6 to exit CLI focus   Copy   Paste

☐ Top

Router2 — CLI (IOS Command Line Interface)

```
 shutdown
!
interface Serial2/0
 no ip address
 clock rate 2000000
 shutdown
!
interface Serial3/0
 ip address 30.0.0.2 255.0.0.0
 clock rate 2000000
!
interface FastEthernet4/0
 no ip address
 shutdown
!
interface FastEthernet5/0
 no ip address
 shutdown
!
router rip
 network 10.0.0.0
 network 11.0.0.0
 network 12.0.0.0
 network 20.0.0.0
 network 30.0.0.0
!
ip classless
!
ip flow-export version 9
!
!
access-list 25 deny 11.0.0.0 0.0.0.255
access-list 25 permit any
!
!
!
!
!
line con 0
!
line aux 0
!
line vty 0 4
 login
!
!
!
end

  --More--
```

Ctrl+F6 to exit CLI focus

Copy   Paste

☐ Top

Router2 — CLI (IOS Command Line Interface)

```
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface fastEthernet 0/0
Router(config-if)#ip access-group 25 out
Router(config-if)#exit
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console
s
% Ambiguous command: "s"
Router#show running-config
Building configuration...

Current configuration : 930 bytes
!
version 12.2
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Router
!
!
!
!
!
!
!
ip cef
no ipv6 cef
!
!
!
!
!
!
!
!
!
!
!
!
!
!
!
```

Ctrl+F6 to exit CLI focus

Copy   Paste

☐ Top

```
!
interface FastEthernet0/0
 ip address 12.0.0.1 255.0.0.0
 ip access-group 25 out
 duplex auto
 speed auto
!
interface FastEthernet1/0
 no ip address
 duplex auto
 speed auto
 shutdown
!
interface Serial2/0
 no ip address
 clock rate 2000000
 shutdown
!
interface Serial3/0
 ip address 30.0.0.2 255.0.0.0
 clock rate 2000000
!
interface FastEthernet4/0
 no ip address
 shutdown
!
interface FastEthernet5/0
 no ip address
 shutdown
!
router rip
 network 10.0.0.0
 network 11.0.0.0
 network 12.0.0.0
 network 20.0.0.0
 network 30.0.0.0
!
ip classless
!
ip flow-export version 9
!
!
access-list 25 deny 11.0.0.0 0.0.0.255
access-list 25 permit any
!
!
!
!
 --More--
```

(b) Data communication after applying Standard ACL

RESULT:

Standard ACL is implemented successfully for the given scenario and data communication is checked using realtime simulation before and after applying Standard ACL.