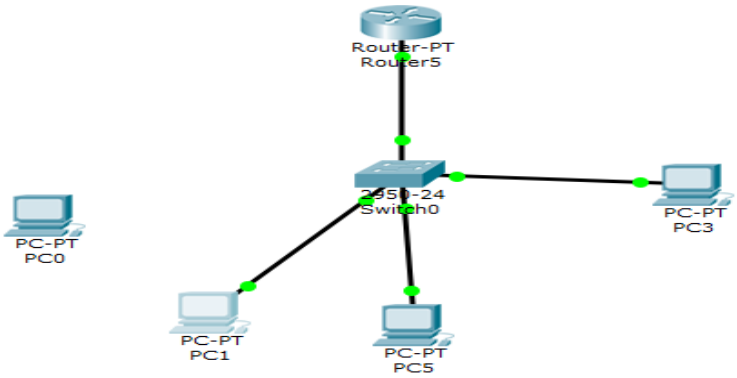
Experiment -2 Date:21/7/202 5

Configure Port Security in Cisco Packet Tracer

Step-1 Build the network single network topology in packet tracer.

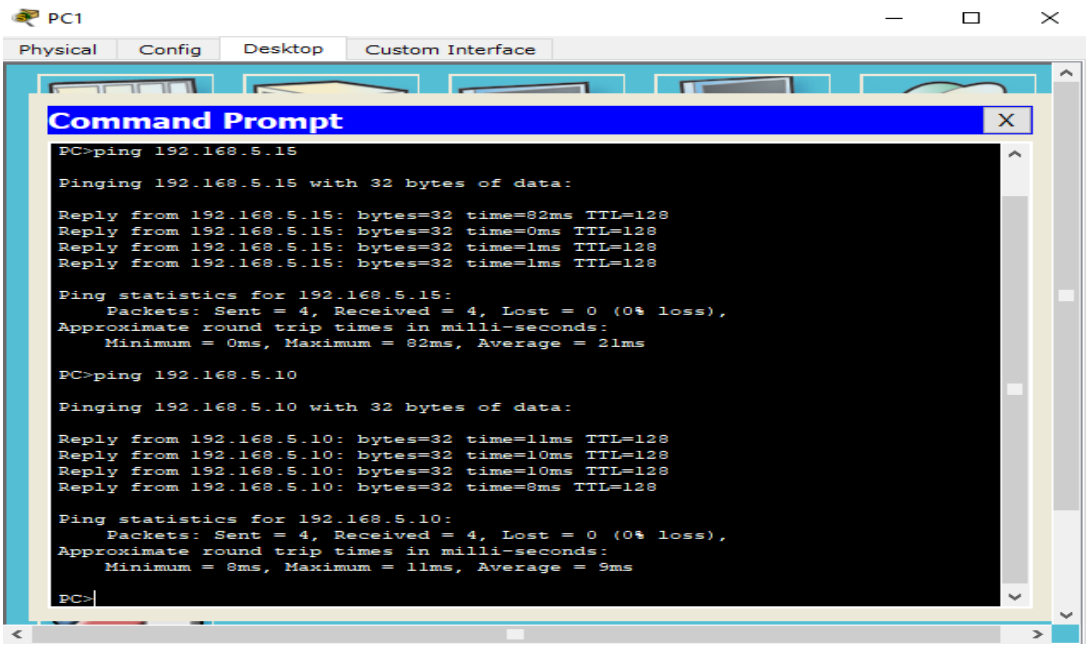


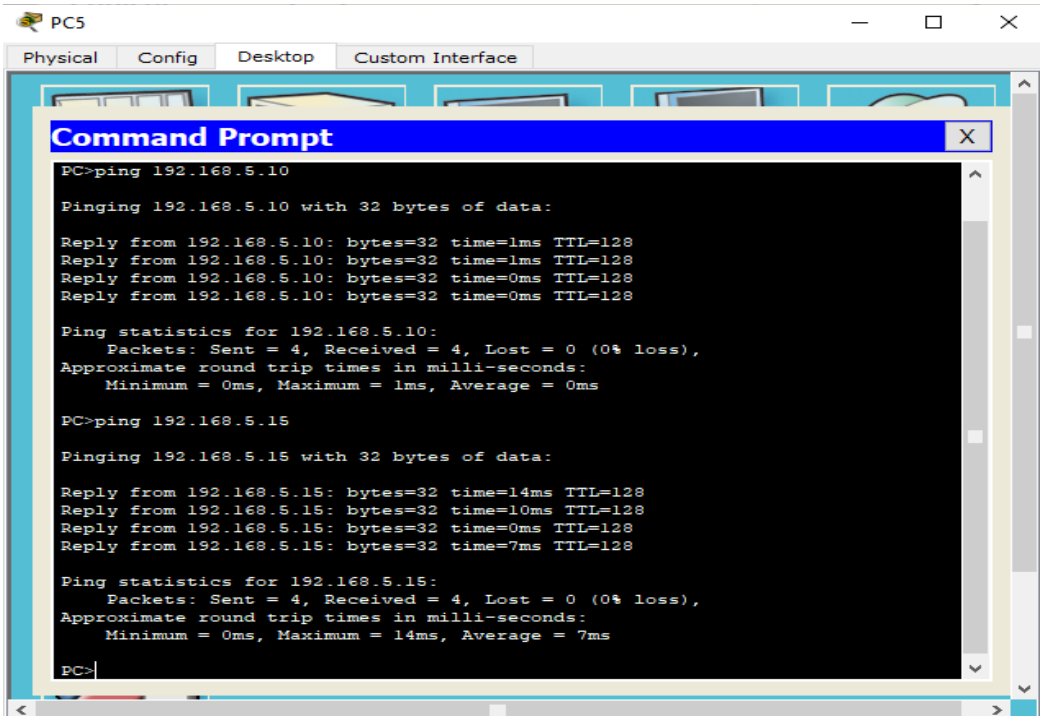
Step-2 Give wired connections for all the devices of PC1, PC2, PC3 and Router.

Step-3 Give IP addresses for PC1, PC2, PC3 and Router with default gateway address.

Step-3 Click on PC1, goto command prompt and ping the IP address of other PCs.

Step-4 Repeat this step-3 for other two PCs as PC2 and PC3.





Step-5 Click on Switch 0

Goto CLI command

#enable

#configure terminal

#int fa0/1

#switchport mode access

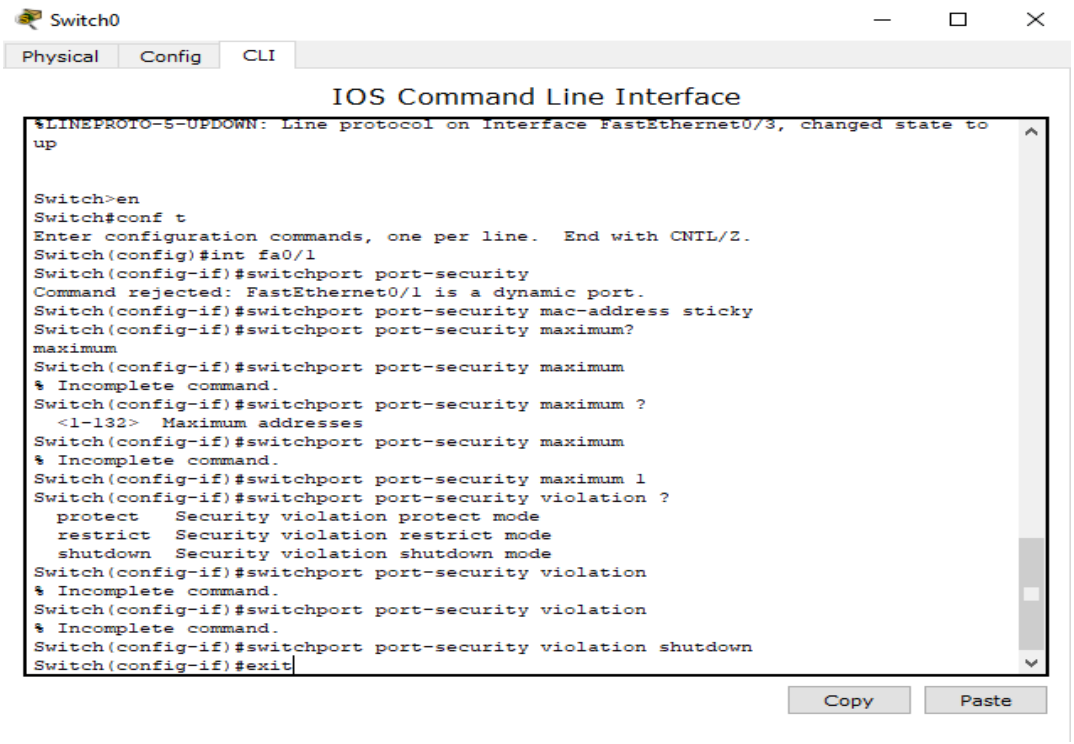
#switchport port-security

#switchport port-security mac-address sticky

#switchport port-security maximum ?

#switchport port-security maximum 1

#switchport port-security violation ?



Step-6 Now, from the 3 port-security violation we will first process for

Shutdown Mode.

#switchport port-security violation shutdown

#exit

Now, for the next interface connection access the shutdown mode.

#int fa1/1

#switchport mode access

#switchport port-security

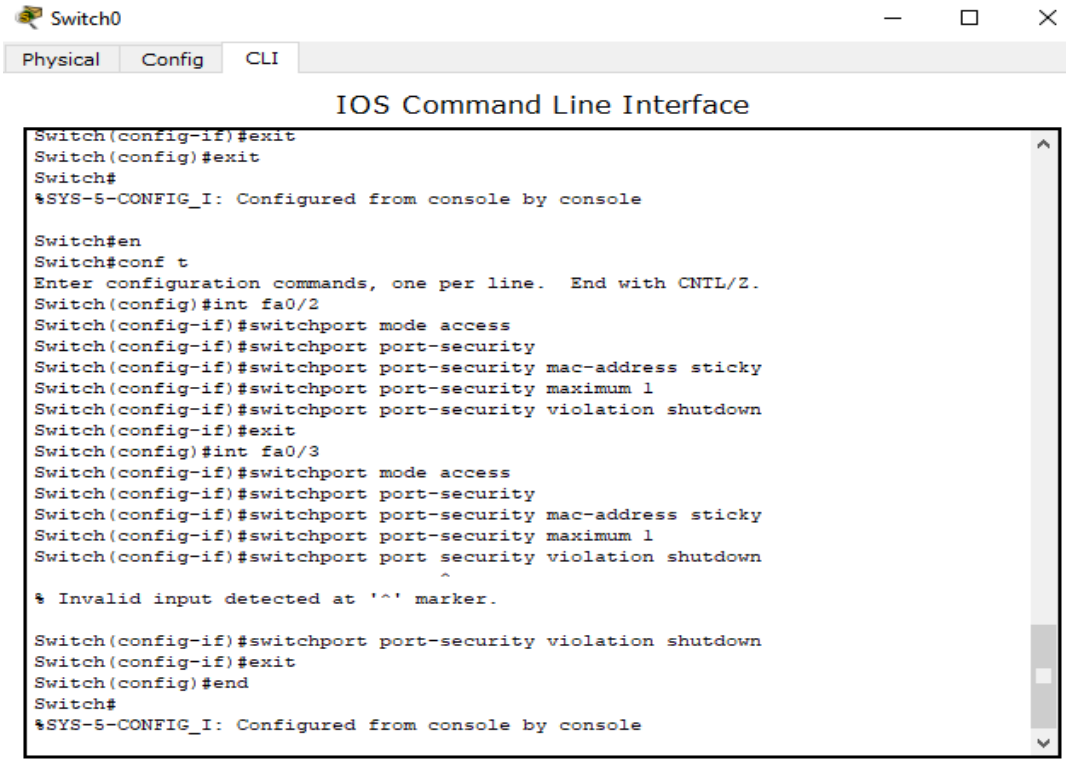
#switchport port-security mac-address sticky

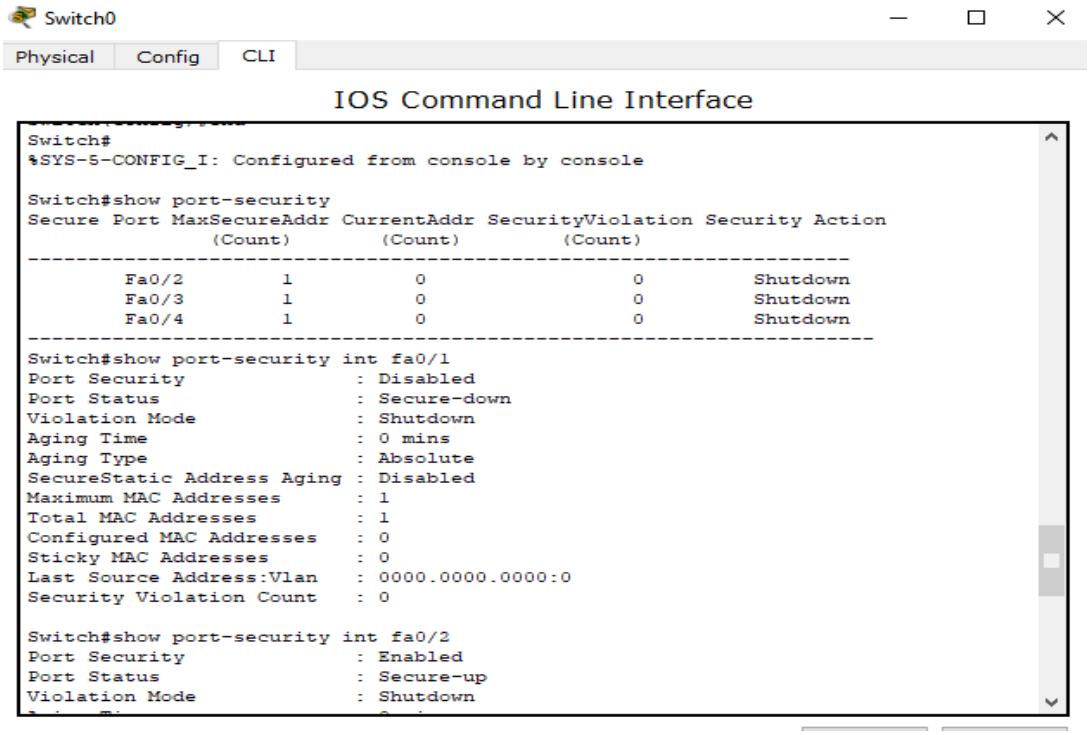
#switchport port-security maximum 1

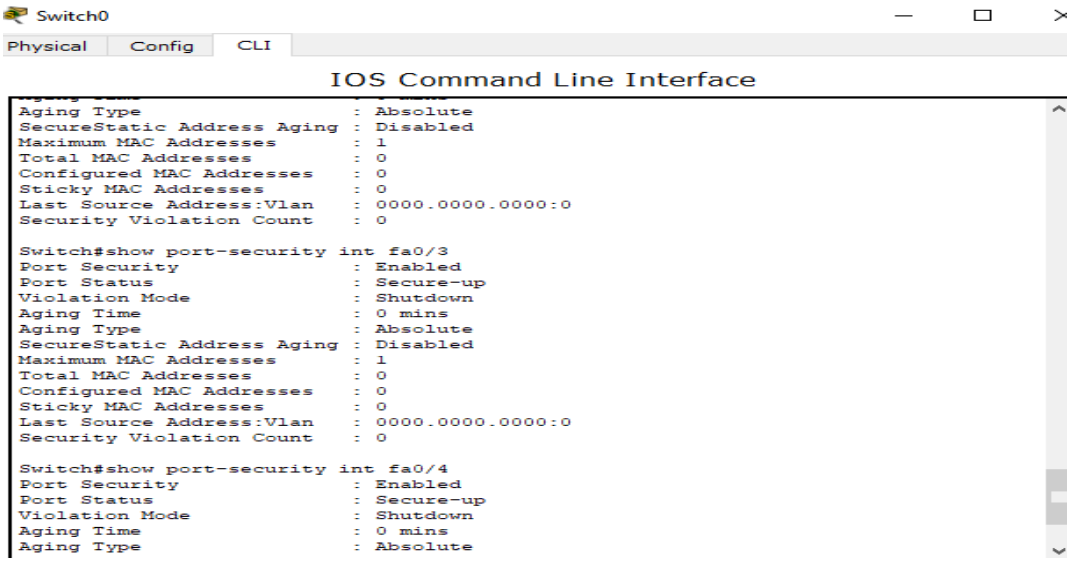
#switchport port-security violation shutdown

#exit

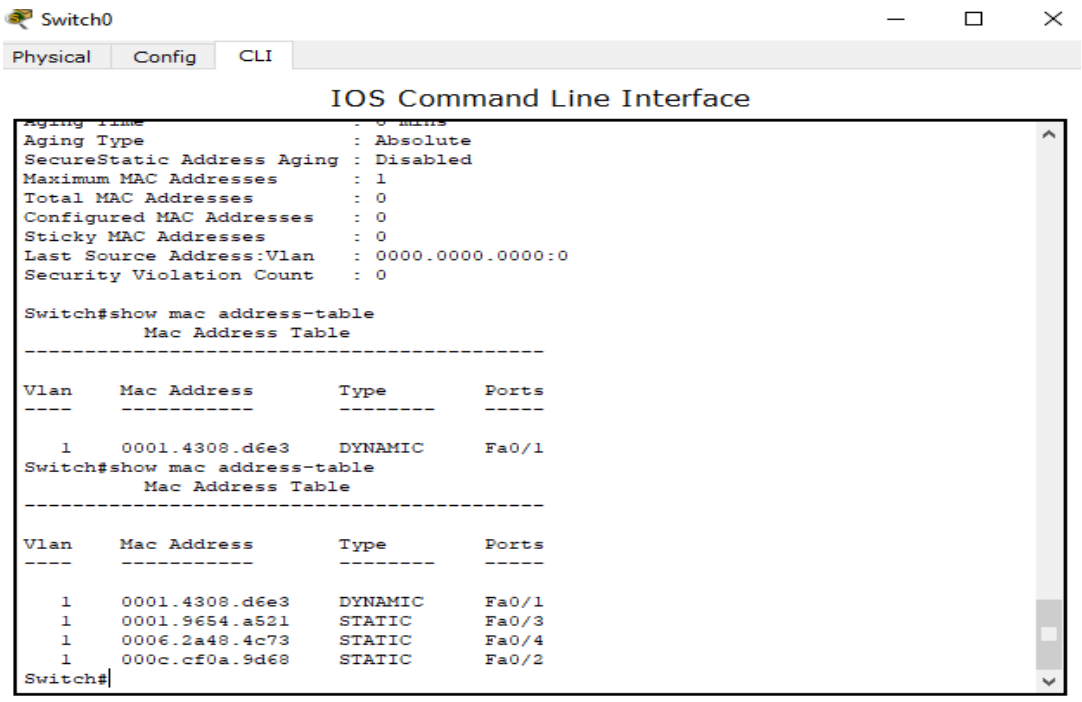
Now, for the next interface connection access the shutdown mode.


Switch0
Physical
Config
CLI
IOS Command Line Interface
Switch(config-if)#exit
Switch(config)#exit
Switch#
%SYS-5-CONFIG_I: Configured from console by console
Switch#en
Switch#conf t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int fa0/2
Switch(config-if)#switchport mode access
Switch(config-if)#switchport port-security
Switch(config-if)#switchport port-security mac-address sticky
Switch(config-if)#switchport port-security maximum 1
Switch(config-if)#switchport port-security violation shutdown
Switch(config-if)#exit
Switch(config)#int fa0/3
Switch(config-if)#switchport mode access
Switch(config-if)#switchport port-security
Switch(config-if)#switchport port-security mac-address sticky
Switch(config-if)#switchport port-security maximum 1
Switch(config-if)#switchport port security violation shutdown
% Invalid input detected at '^' marker.
Switch(config-if)#switchport port-security violation shutdown
Switch(config-if)#exit
Switch(config)#end
Switch#
%SYS-5-CONFIG_I: Configured from console by console


Switch0
Physical
Config
CLI
IOS Command Line Interface
Switch#
%SYS-5-CONFIG_I: Configured from console by console
Switch#show port-security
Secure Port MaxSecureAddr CurrentAddr SecurityViolation Security Action
(Count) (Count) (Count)
Fa0/2 1 0 0 Shutdown
Fa0/3 1 0 0 Shutdown
Fa0/4 1 0 0 Shutdown
Switch#show port-security int fa0/1
Port Security : Disabled
Port Status : Secure-down
Violation Mode : Shutdown
Aging Time : 0 mins
Aging Type : Absolute
SecureStatic Address Aging : Disabled
Maximum MAC Addresses : 1
Total MAC Addresses : 1
Configured MAC Addresses : 0
Sticky MAC Addresses : 0
Last Source Address:Vlan : 0000.0000.0000:0
Security Violation Count : 0
Switch#show port-security int fa0/2
Port Security : Enabled
Port Status : Secure-up
Violation Mode : Shutdown



#show mac address-table



Step-7 Now, Ping all PCs.

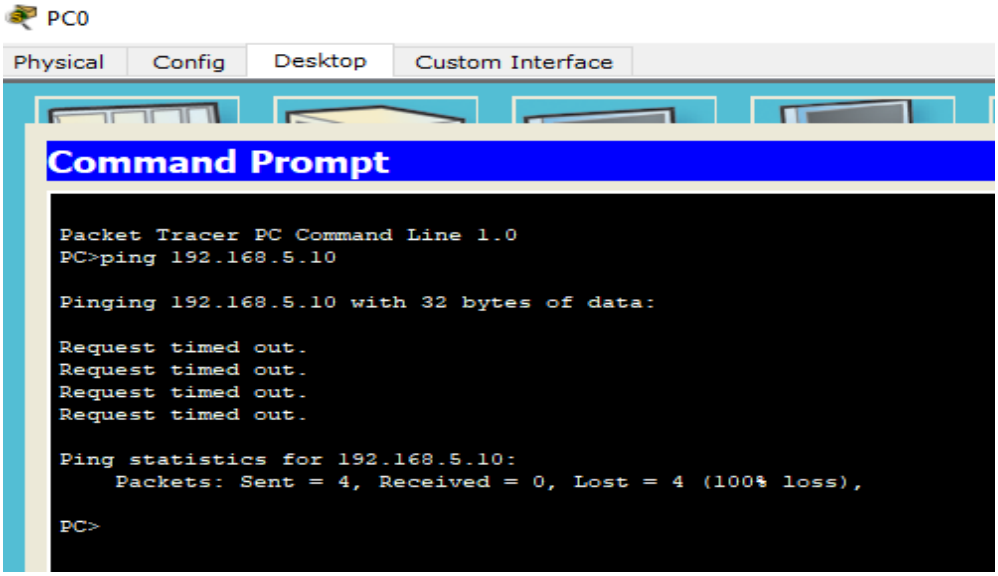
Step-8 Now, Give IP address for Rogue PC0.

Step-9 Now, again Ping PC1, PC2 and PC3.

Step-9 Now remove the wired connection from PC1 and give connection to

Rogue PC0.

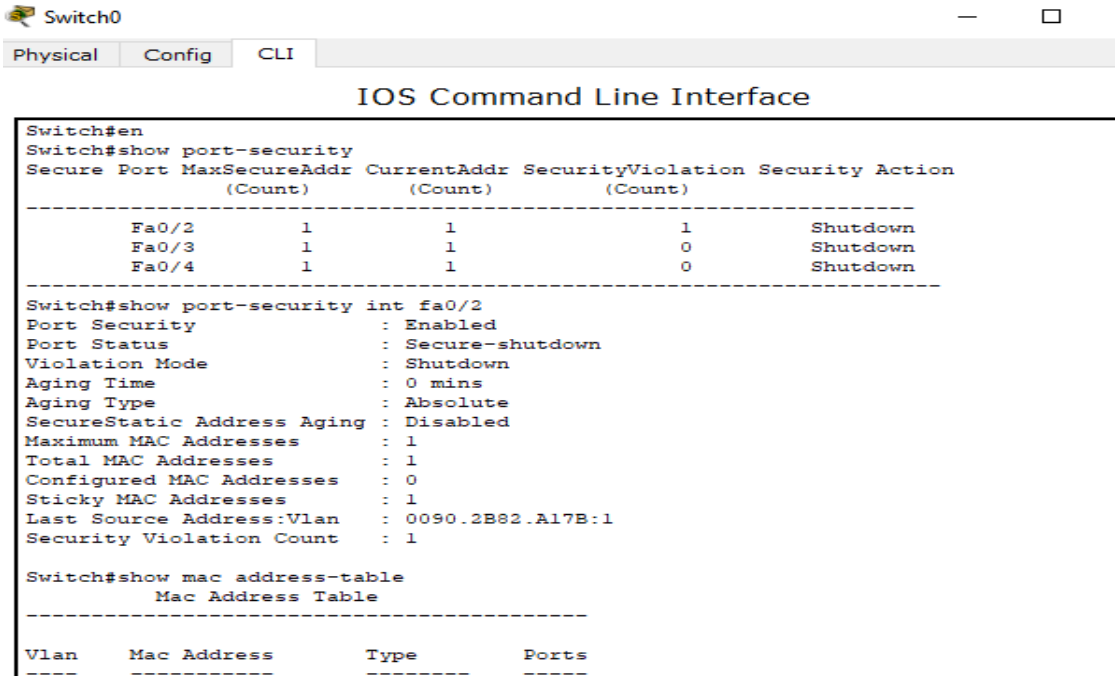
Step-10 Then, Ping the IP address of PC2 192.168.5.15 in the command prompt.

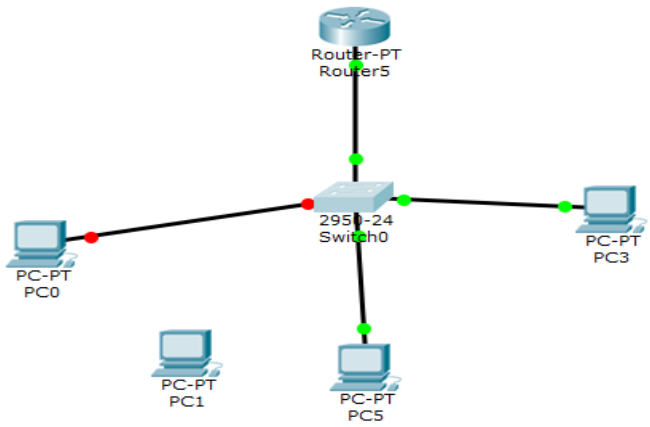


Step-11 Click on Switch

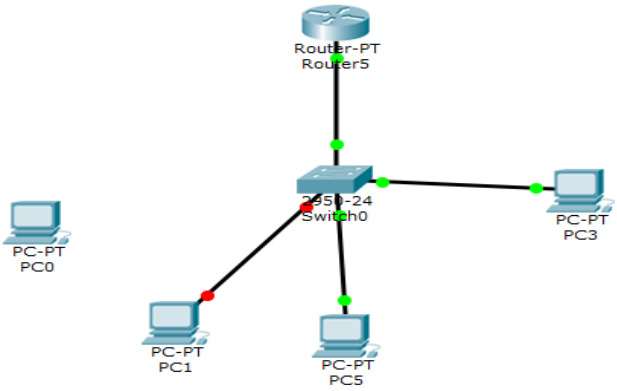
#enable

#show port-security





Step-12 Now, remove the wired connection from Rogue PC0 and connect the wire to PC1. But still it is in red color mode.



Step-13 Click on switch

#enable

#configure terminal

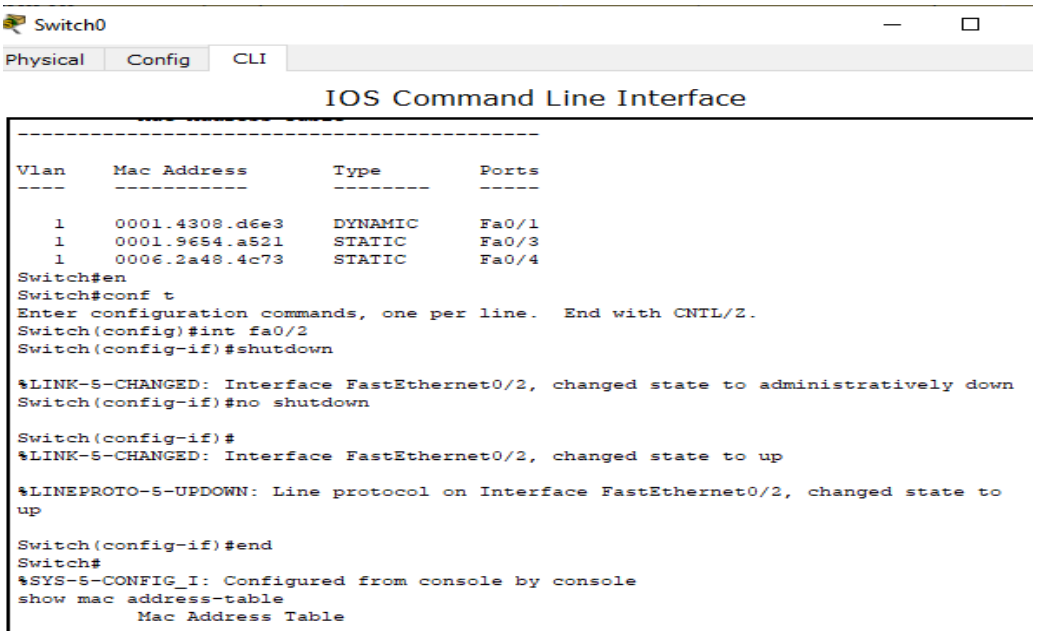
#int fa0/1

#shutdown

#no shutdown

#end

#show mac address-table




```
Switch#
%SYS-5-CONFIG_I: Configured from console by console
show mac address-table
           Mac Address Table
-------------------------------------------

Vlan     Mac Address         Type          Ports
----     -----------         --------      -----

   1     0001.4308.d6e3      DYNAMIC       Fa0/1
   1     0001.9654.a521      STATIC        Fa0/3
   1     0006.2a48.4c73      STATIC        Fa0/4
   1     000c.cf0a.9d68      STATIC        Fa0/2
Switch#en
Switch#show running-config
Building configuration...

Current configuration : 1491 bytes
!
version 12.1
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Switch
!
!
!
spanning-tree mode pvst
!
```

Step-14 Click on PC1 and ping the command 192.168.5.15 and 192.168.5.20

#show running-config

```
   1    0001.4308.d6e3    DYNAMIC     Fa0/1
   1    0001.9654.a521    STATIC      Fa0/3
   1    0006.2a48.4c73    STATIC      Fa0/4
   1    000c.cf0a.9d68    STATIC      Fa0/2
Switch#en
Switch#show running-config
Building configuration...

Current configuration : 1491 bytes
!
version 12.1
no service timestamps log datetime msec
no service timestamps debug datetime msec
no service password-encryption
!
hostname Switch
!
!
!
spanning-tree mode pvst
!
interface FastEthernet0/1
 switchport port-security mac-address sticky
!
interface FastEthernet0/2
 switchport mode access
 switchport port-security
 switchport port-security mac-address sticky
 --More--
```

Restrict Mode:

Step-1 Click on switch 0

#enable

#configure terminal

#int fa1/1

#switchport mode access

#switchport port-security

#switch port-security violation restrict

#exit

#end

#show port-security

#show port-security int fa1/1

Step-2 Now, cut the wired connection from PC2 and give connection to PC

(Rogue).

Step-3 Give the Ping command 192.168.5.10 and 192.168.5.20

(mode of switch not changed, we will get request timeout)

Close it

Step-4 Click switch 0

#show port-security

#show port-security int fa1/1

Step-5 Now cut the connection wire connection from PC0 (Rogue) and connect

to PC2.

Step-6 Check ping command from PC2 to PC1 and PC3, 192.168.5.10 and

192.168.5.20.

#show running-config

Protect Mode:

Step-1 Click on switch 0

#enable

#configure terminal

#int fa2/1

#switchport mode access

#switchport port-security

#switch port-security violation protect

#exit

#end

#show port-security

#show port-security int fa2/1

Step-2 Check ping command PC1to PC2 and PC3,

Check ping command PC3 to PC2 and PC1.

Step-3 Now, cut the wired connection from PC3 and give connection to PC0

(Rogue).

Step-4 Give the Ping command 192.168.5.10 and 192.168.5.20

(mode of switch not changed, we will get request timeout)

Close it

Step-5 Click switch 0

#show port-security

#show port-security int fa1/1

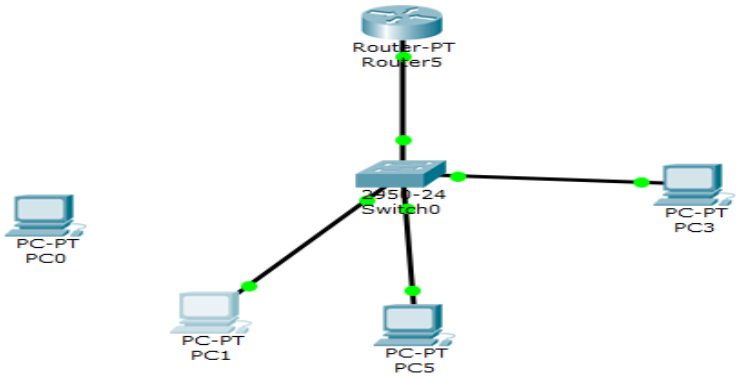
#show mac address-table

#show ip int br

Ping -t 192.168.5.10

Cntrl c

OUTPUT:



RESULT:

The port security is configured successfully in cisco packet tracer.