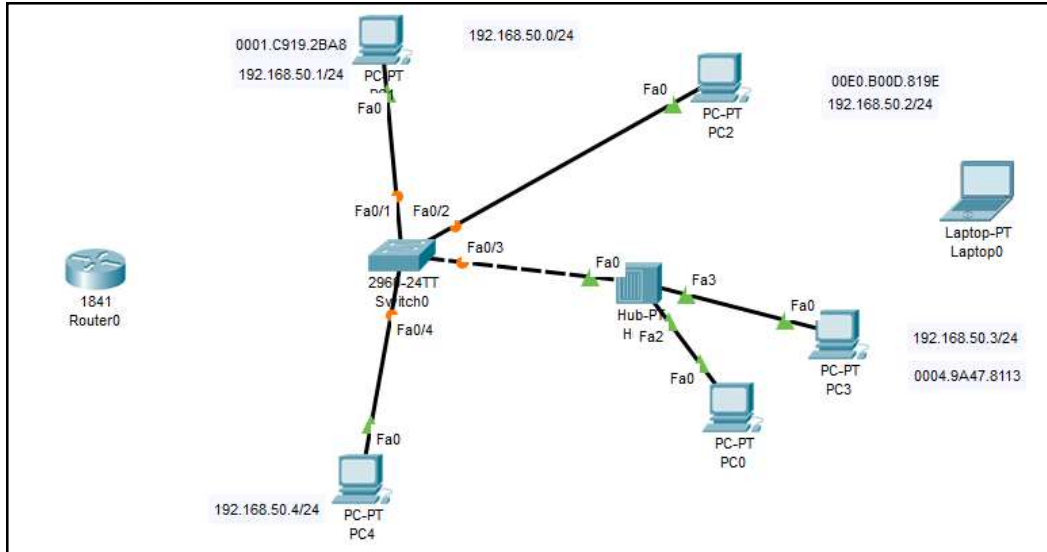


IT2050 – Computer Networks
Year 2– Semester 2
Worksheet - Switch Security

Switch Security Configurations

*** Use the given Initial Network.



- Go in to the global configuration mode and rename the switch as “SW_Metro”.
- Apply login banner as “### Welcome to METRO ###”.
Ex : SW_Metro (config)#banner motd @ ### Welcome to METRO ### @
- Assign privilege level passwords to the switch.
- Observe the ip configurations of the Router. Switch and PC’s.
- Assign IP address of 192.168.50.111 to the switch.
 Connect the switch to Fa0/0 of the Router. Configure the default gateways of Switch and PCs accordingly.

Cisco Switch IOS Commands

Enter global configuration mode.	S1# configure terminal
Enter interface configuration mode for the SVI.	S1(config)# interface vlan 99
Configure the management interface IP address.	S1(config-if)# ip address 172.17.99.11 255.255.255.0
Enable the management interface.	S1(config-if)# no shutdown
Return to the privileged EXEC mode.	S1(config-if)# Exit
Configure the default gateway for the switch.	S1(config)# ip default-gateway 172.17.99.1
Return to the privileged EXEC mode.	S1(config)# end
Save the running config to the startup config.	S1# copy running-config startup-config

- Use “show ip interface brief” to verify above configurations in the switch.
- Observe the Mac Address Table. Use “show mac-address-table” command.
- Use ‘ping’ command to check the connectivity and observe the learned MAC addresses again.

9. Apply the following security policy accordingly.

Security Policy of the Switch

- *All unused ports must be disabled.*
- *PC3 attached to FastEthernet0/3 interface is a permanent device. Another ONLY ONE device can be attached to the FastEthernet0/3 interface. If above rule violates, discard the data transmission and disable the port.*
- *FastEthernet0/4 interface should learn the MAC address of the connected device by sticky method. If above rule violates, discard the data transmission but keep the port up and running.*

```
interface range fastEthernet 0/6-24
(config-if-range)#shutdown
```

```
interface FastEthernet0/3
switchport mode access
switchport port-security
switchport port-security maximum 2
switchport port-security mac-address 0004.9A47.8113
switchport port-security violation Shutdown
```

```
interface FastEthernet0/4
switchport port-security mac-address sticky
switchport port-security violation Restrict
```

10. Observe port security of the switches.

Ex : *show port-security interface FastEthernet 0/3*

Port Security	: Enabled
Port Status	: Secure-up
Violation Mode	: Shutdown
Aging Time	: 0 mins
Aging Type	: Absolute
SecureStatic Address Aging	: Disabled
Maximum MAC Addresses	: 2

11. Attach the laptop of the attacker to observe how the applied security policy works.