

Name : Pritam Rao

Branch : TE Computer

Batch : C

UID : 2018130044

CEL 51, DCCN, Monsoon 2020

Lab 4: Prototyping a Network

Objective:

Prototype a network using Packet Tracer

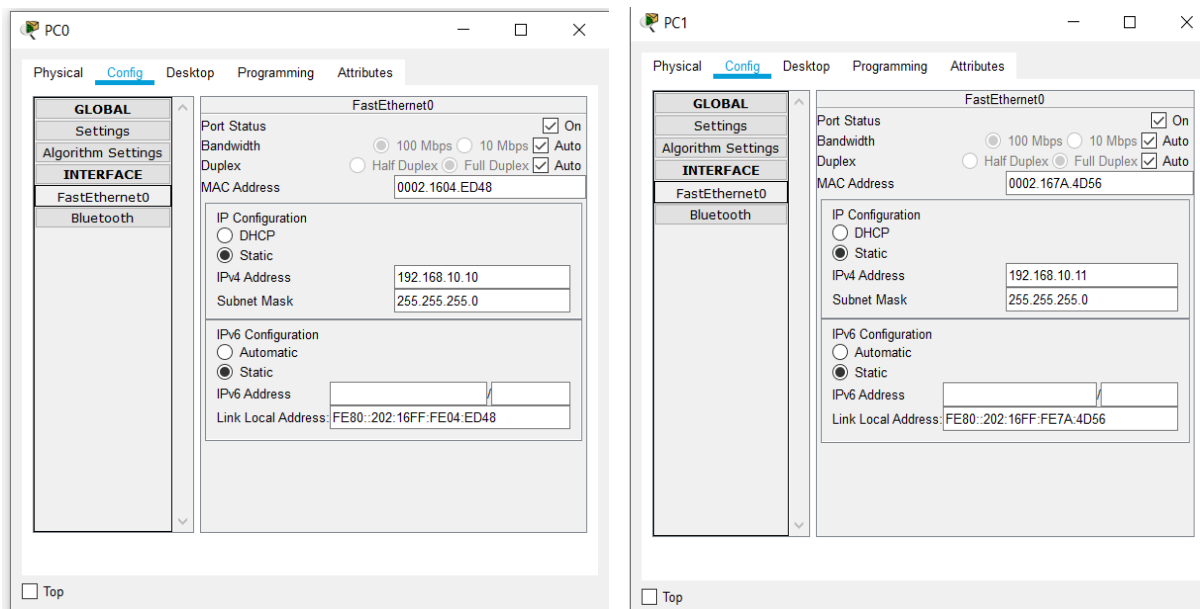
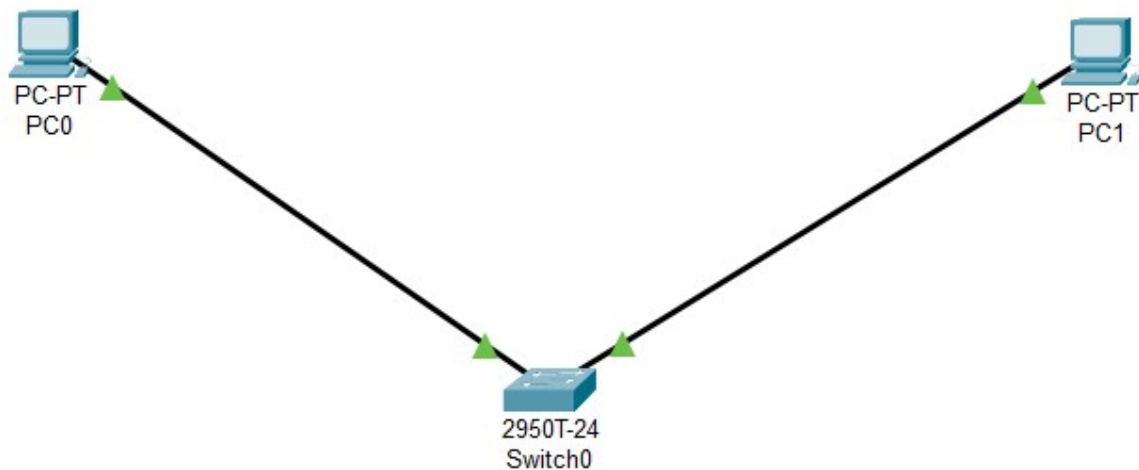
Background

A client has requested that you set up a simple network with two PCs connected to a switch. Verify that the hardware, along with the given configurations, meet the requirements of the client.

Step 1: Set up the network topology

- a) Add two PCs and a Cisco 2950T switch
- b) Using straight-through cables, connect **PC0** to interface **Fa0/1** on **Switch0** and **PC1** to interface **Fa0/2** on **Switch0**.
- c) Configure PC0 using the **Config** tab in the PC0 configuration window:
 - a. IP address: 192.168.10.10
 - b. Subnet Mask 255.255.255.0
- d) Configure PC1 using the **Config** tab in the PC1 configuration window
 - a. IP address: 192.168.10.11
 - b. Subnet Mask 255.255.255.0

Outcome :



In this step, a network of two generic personal computers and a Cisco 2950T switch is created and the computers are connected to the switch by means of a Copper straight-through cable.

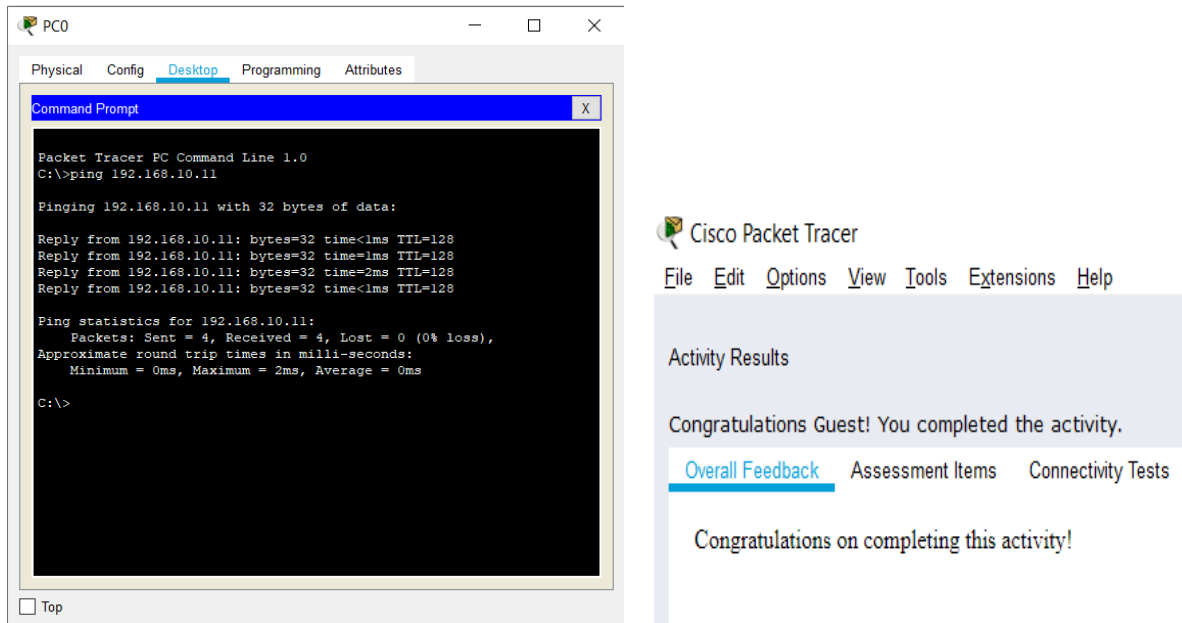
Step 2: Test connectivity from PC0 to PC1

- a) Use the **ping** command to test connectivity.
 - a. Click PC0.
 - b. Choose the **Desktop** tab.
 - c. Choose **Command Prompt**.
 - d. Type: **ping 192.168.10.11** and press *enter*.
- b) A successful **ping** indicates the network was configured correctly and

the prototype validates the hardware and software configurations.

- c) Close the configuration window.
- d) Click the **Check Results** button at the bottom of the instruction window to check your work.

Outcome :



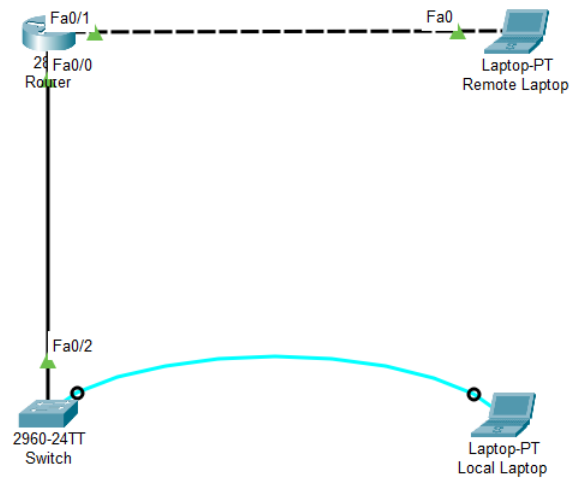
The output image shows that a connection was established correctly between the two personal computers via the switch as the ping command receives the response packets sent by PC0 to PC1. The results tab also conveys the same.

CEL51, DCCN, Monsoon 2020

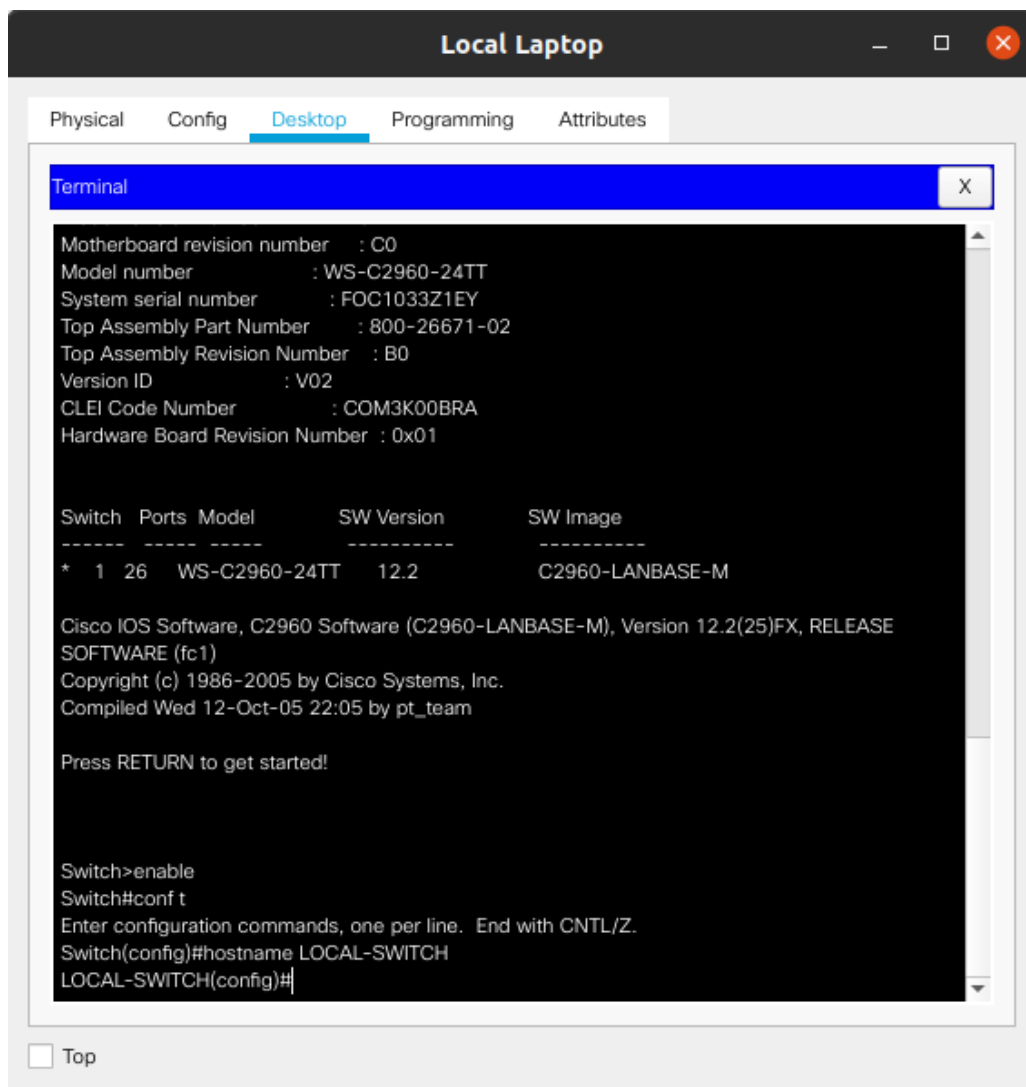
Lab 4.1: Basic configuration - hostname, motd banner, passwd etc

Objective:

This lab will test your ability to configure basic settings such as hostname, motd banner, encrypted passwords, and terminal options on a Packet Tracer 6.2 simulated Cisco Catalyst switch.



1. Use the local laptop to connect to the switch console.
2. Configure Switch hostname as LOCAL-SWITCH



Configure the message of the day as "Unauthorized access is forbidden"

```
LOCAL-SWITCH#enable
LOCAL-SWITCH#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
LOCAL-SWITCH(config)#banner motd "Unauthorized access is forbidden"
LOCAL-SWITCH(config)#exit
LOCAL-SWITCH#
%SYS-5-CONFIG_I: Configured from console by console
exit
```

LOCAL-SWITCH con0 is now available

Press RETURN to get started.

Unauthorized access is forbidden

4. Configure the password for privileged mode access as "cisco". The password must be md5 encrypted

```
LOCAL-SWITCH#conf t
^
% Invalid input detected at '^' marker.

LOCAL-SWITCH#conf t
Enter configuration commands, one per line. End with CNTL/Z.
LOCAL-SWITCH(config)#enable secret cisco
LOCAL-SWITCH(config)#service password-encryption
LOCAL-SWITCH(config)#exit
LOCAL-SWITCH#
%SYS-5-CONFIG_I: Configured from console by console
exit
```

5. Configure password encryption on the switch using the global configuration command

```
Password:
LOCAL-SWITCH#show secret
      ^
% Invalid input detected at '^' marker.

LOCAL-SWITCH#enable
LOCAL-SWITCH#show running-config | include enable
enable secret 5 $1$mERr$hx5rVt7rPNoS4wqbXX7m0
LOCAL-SWITCH#
```

6. Configure CONSOLE access with the following settings :

- Login enabled.
- Password : whatever you like
- History size : 15 commands
- Timeout : 6'45"
- Synchronous logging

```
LOCAL-SWITCH>enable
Password:
LOCAL-SWITCH#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
LOCAL-SWITCH(config)#password mr_robot
      ^
% Invalid input detected at '^' marker.

LOCAL-SWITCH(config)#password pritam
      ^
% Invalid input detected at '^' marker.

LOCAL-SWITCH(config)#line console 0
LOCAL-SWITCH(config-line)#password pritam
LOCAL-SWITCH(config-line)#login
LOCAL-SWITCH(config-line)#history size 15
LOCAL-SWITCH(config-line)#exec-timeout 6 45
LOCAL-SWITCH(config-line)#logging synchronous
LOCAL-SWITCH(config-line)#exit
LOCAL-SWITCH(config)#exit
LOCAL-SWITCH#
%SYS-5-CONFIG_I: Configured from console by console

LOCAL-SWITCH#exit
```

6. Configure TELNET access with the following settings :

- Login enabled
- Password : whatever you like
- History size : 15 commands
- Timeout : 8'20"
- Synchronous logging

```
% Invalid input detected at '^' marker.

LOCAL-SWITCH(config)#
LOCAL-SWITCH(config)#
LOCAL-SWITCH(config)#
LOCAL-SWITCH(config)#
LOCAL-SWITCH(config)#line vty 0 15
LOCAL-SWITCH(config-line)#password pritam
LOCAL-SWITCH(config-line)#login
LOCAL-SWITCH(config-line)#history size 15
LOCAL-SWITCH(config-line)#exec-timeout 8 20
LOCAL-SWITCH(config-line)#logging synchronous
LOCAL-SWITCH(config-line)#exit
LOCAL-SWITCH(config)#exit
LOCAL-SWITCH#
%SYS-5-CONFIG_I: Configured from console by console

LOCAL-SWITCH#exit
```

7. Configure the IP address of the switch as 192.168.1.2/24 and it's default gateway IP (192.168.1.1).

```
Password:

LOCAL-SWITCH>
LOCAL-SWITCH>
LOCAL-SWITCH>enable
Password:
LOCAL-SWITCH#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
LOCAL-SWITCH(config)#interface vlan1
^
% Invalid input detected at '^' marker.

LOCAL-SWITCH(config)#interface vlan1
LOCAL-SWITCH(config-if)#ip
% Incomplete command.
LOCAL-SWITCH(config-if)#ip address
% Incomplete command.
LOCAL-SWITCH(config-if)#ip address 192.168.1.24
% Incomplete command.
LOCAL-SWITCH(config-if)#ip address 192.168.1.24 255.255.255.0
LOCAL-SWITCH(config-if)#ip default-gateway 192.168.1.1
LOCAL-SWITCH(config)#exit
LOCAL-SWITCH#
%SYS-5-CONFIG_I: Configured from console by console

LOCAL-SWITCH#exit
```

8. Test telnet connectivity from the Remote Laptop using the telnet client.

