

NETWORKING ASSIGNMENT-1

Cisco tracer lab assignments

Lab Report: Switch & End Device (PC) Connection with Static IP Configuration

Objective:

The objective of this lab is to demonstrate how to set up a **network** using a **switch** and **two PCs** with **static IP addresses**, establish connectivity between the devices, and verify the successful communication between them through **ping tests**.

Switch & End Device (PC) Connection Report

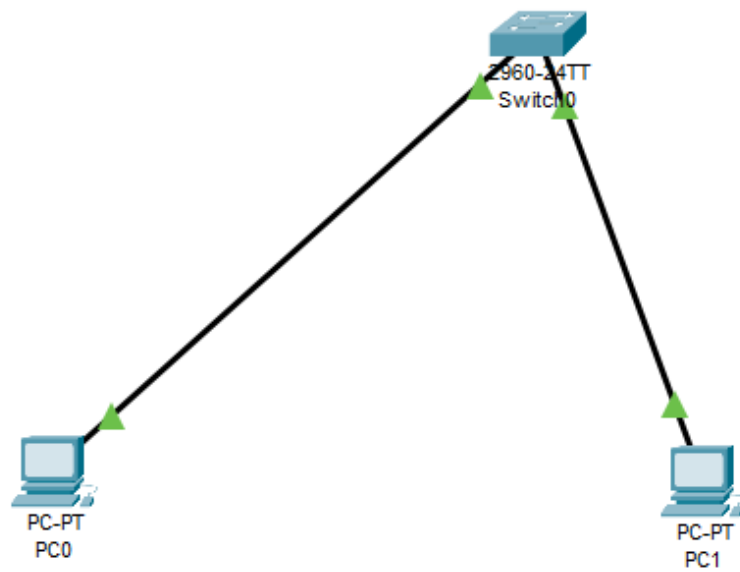
1. Network Devices and Connections:

- **Switch-0** (Connected via **FastEthernet ports**)
 - **PC 1** (Connected via **FastEthernet 0** on Switch-0)
 - **PC 2** (Connected via **FastEthernet 1** on Switch-0)
-

2. Physical Connections:

2.1 Connect Switch to End Devices (PCs):

- **Copper Straight-Through Cable:**
 - **PC 1** is connected to **Switch-0** via **Copper Straight-Through Cable** from **PC 1's FastEthernet 0** to **Switch-0's FastEthernet 0**.
 - **PC 2** is connected to **Switch-0** via **Copper Straight-Through Cable** from **PC 2's FastEthernet 1** to **Switch-0's FastEthernet 1**.



3. Configure End Devices (PCs):

3.1 Configure IP Settings for PC 1:

- **IP Address:** 192.168.1.2
- **Subnet Mask:** 255.255.255.0

The screenshot shows a configuration window for PC0 with tabs for Physical, Config, Desktop, Programming, and Attributes. The Desktop tab is active, displaying the IP Configuration window for the FastEthernet0 interface. The IP Configuration section has two radio buttons: DHCP (unselected) and Static (selected). The Static configuration fields are filled with the following values: IPv4 Address: 192.168.1.2, Subnet Mask: 255.255.0.0, Default Gateway: 0.0.0.0, and DNS Server: 0.0.0.0. The IPv6 Configuration section also has two radio buttons: Automatic (unselected) and Static (selected). The Static configuration fields are: IPv6 Address (empty), Link Local Address: FE80::20A:F3FF:FEC0:5B77, Default Gateway (empty), and DNS Server (empty). The 802.1X section has a checkbox for 'Use 802.1X Security' (unchecked), an Authentication dropdown menu set to MD5, and empty fields for Username and Password. A 'Top' button is located at the bottom left of the configuration window.

PC0

Physical Config Desktop Programming Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address: 192.168.1.2

Subnet Mask: 255.255.0.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address: /

Link Local Address: FE80::20A:F3FF:FEC0:5B77

Default Gateway:

DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: MD5

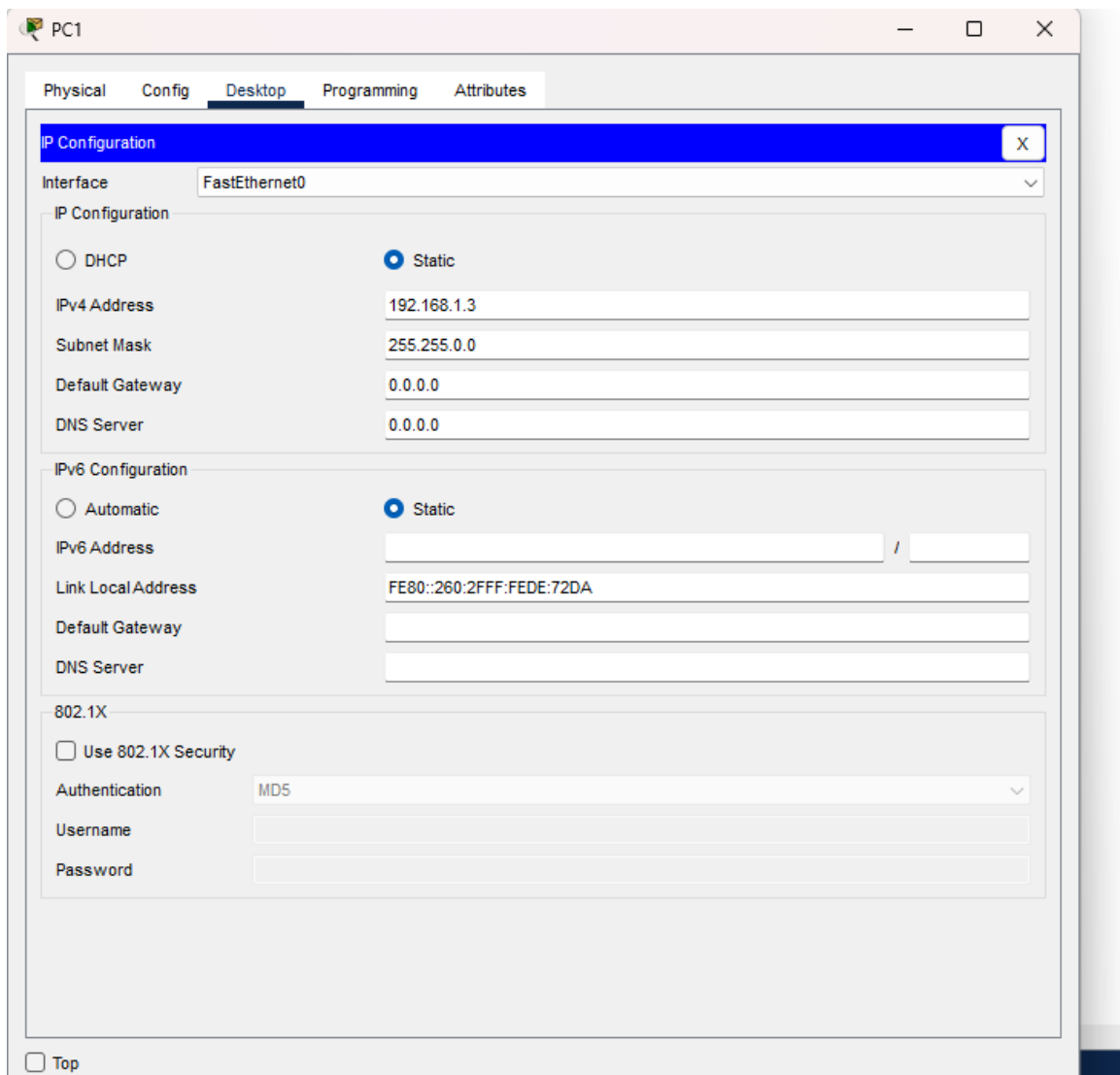
Username:

Password:

☐ Top

3.2 Configure IP Settings for PC 2:

- **IP Address:** 192.168.1.3
- **Subnet Mask:** 255.255.255.0



4. Verify Connectivity:

Test Connectivity Between PCs:

After configuring the **PCs** and **Switch**, test the connectivity using the **ping** command.

- From **PC 1**, ping **PC 2** to verify communication:

```
ping 192.168.1.3
```

- You should receive a successful reply if the network configuration is correct.

The screenshot shows a window titled "PC0" with tabs for Physical, Config, Desktop, Programming, and Attributes. The "Desktop" tab is active, displaying a "Command Prompt" window. The command prompt shows the execution of the 'ping' command to 192.168.1.3, resulting in four successful replies and a summary of 0% packet loss.

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping
Cisco Packet Tracer PC Ping

Usage: ping [-n count | -v TOS | -t ] target

C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

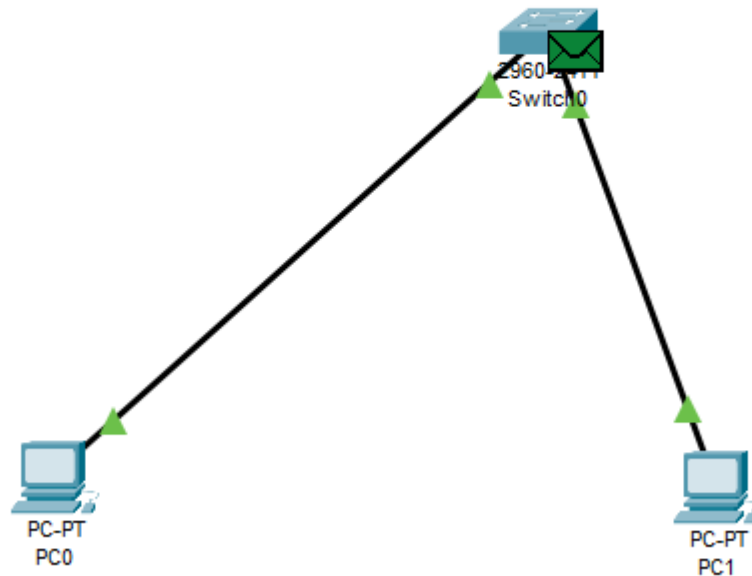
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>|
```

☐ Top

Final Look



Conclusion:

This setup demonstrates the process of connecting **PCs** to a **Switch** using **Copper Straight-Through Cables**, configuring **IP settings** on the **PCs**, and verifying the **network connectivity** using **ping tests**. The **ping test results** confirm that **PC 1** and **PC 2** can communicate with each other and the **Switch**.

Created By: Suvendu Das