

## **Information Security**

### **Experiment – 1**

#### **D 12**

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**Aim** – Create a Network using CISCO packet tracer

#### **Introduction -**

Cisco Packet Tracer is a network simulation tool widely used for educational purposes. In this experiment, we will learn how to create a basic network using Cisco Packet Tracer, which will include connecting devices, configuring routers and switches, and testing network connectivity.

#### **Objectives -**

1. Understand the basics of Cisco Packet Tracer.
2. Create a simple network topology.
3. Configure devices within the network.
4. Verify network connectivity.

#### **Steps to install CISOC Packet Tracer on Ubuntu –**

1. Visit the Cisco Networking Academy website, create an account and download the packet tracer for Linux
2. Open the terminal by ‘Ctrl + Alt + T’ and give the commands:

```
cd ~/Downloads
```

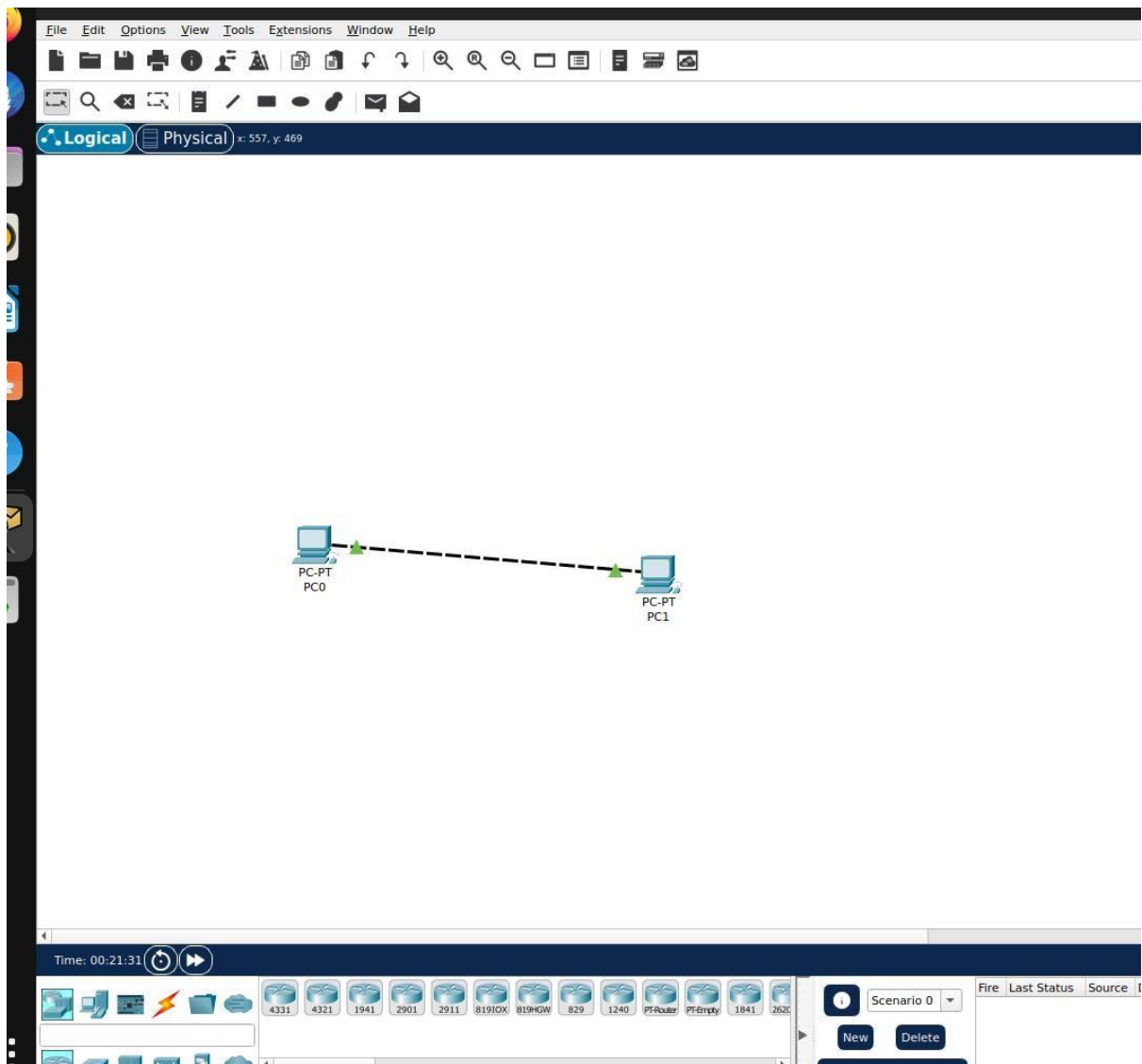
Enter the following command to install the packet tracer and provide the user password when prompted –

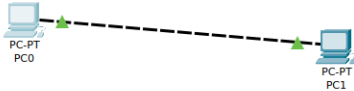
```
User@Ubuntu:~Downloads$ sudo apt-get install  
./CiscoPacketTracer_xxx_Ubuntu_64bit.deb  
Where xxx is packet tracer version
```

3. The Setup dialog opens the License Agreement. Use the Tab key to highlight <OK> and press Enter to continue.

Note: The mouse does not work while installing using CLI

4. Use the Tab key to select <Yes> and press Enter to accept the agreement.
5. Now you should be able to open Packet tracer via the application or the command packettracer in the terminal.





### PC0

Physical Config **Desktop** Programming Attributes

**IP Configuration**

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address: 60.92.10.116

Subnet Mask: 255.0.0.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address: /

Link Local Address: FE80::201:43FF:FE39:13AB

Default Gateway:

DNS Server:

802.1X

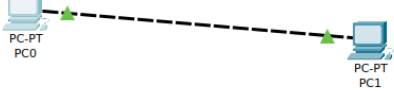
☐ Use 802.1X Security

Authentication: MDS

Username:

Password:

☐ Top



### PC0

Physical Config **Desktop** Programming Attributes

**Command Prompt**

```
Cisco Packet Tracer PC Command Line 1.0
C:\>ping 60.92.10.117

Pinging 60.92.10.117 with 32 bytes of data:

Reply from 60.92.10.117: bytes=32 time<1ms TTL=128
Reply from 60.92.10.117: bytes=32 time<1ms TTL=128
Reply from 60.92.10.117: bytes=32 time<1ms TTL=128
Reply from 60.92.10.117: bytes=32 time<1ms TTL=128

Ping statistics for 60.92.10.117:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

☐ Top

### **Steps to perform the experiment –**

1. Launch Cisco Packet Tracer application
2. Select two computers and drag them on the space
3. Select the Copper crossover cable and connect it with the two computers
4. Select the first computer and then go to Desktop, then go into the IP Configuration and in the IP address enter an address ranging from 0.0.0.0 to 255.255.255.0 and press Enter
5. Similarly enter the IP address for the second computer and press Enter
6. Now select the first computer and in Desktop, go to Command Prompt and enter the following command: ping <IP address of the second computer> and press Enter.
7. It will show you how many packets are lost or not during the message transfer.

### **Conclusion:**

In this experiment, you learned how to create a basic network using Cisco Packet Tracer. This hands-on experience with network configuration is valuable for understanding networking principles and preparing for more complex network scenarios. Continue to explore and experiment with Packet Tracer to build more advanced networks and gain a deeper understanding of networking concepts.