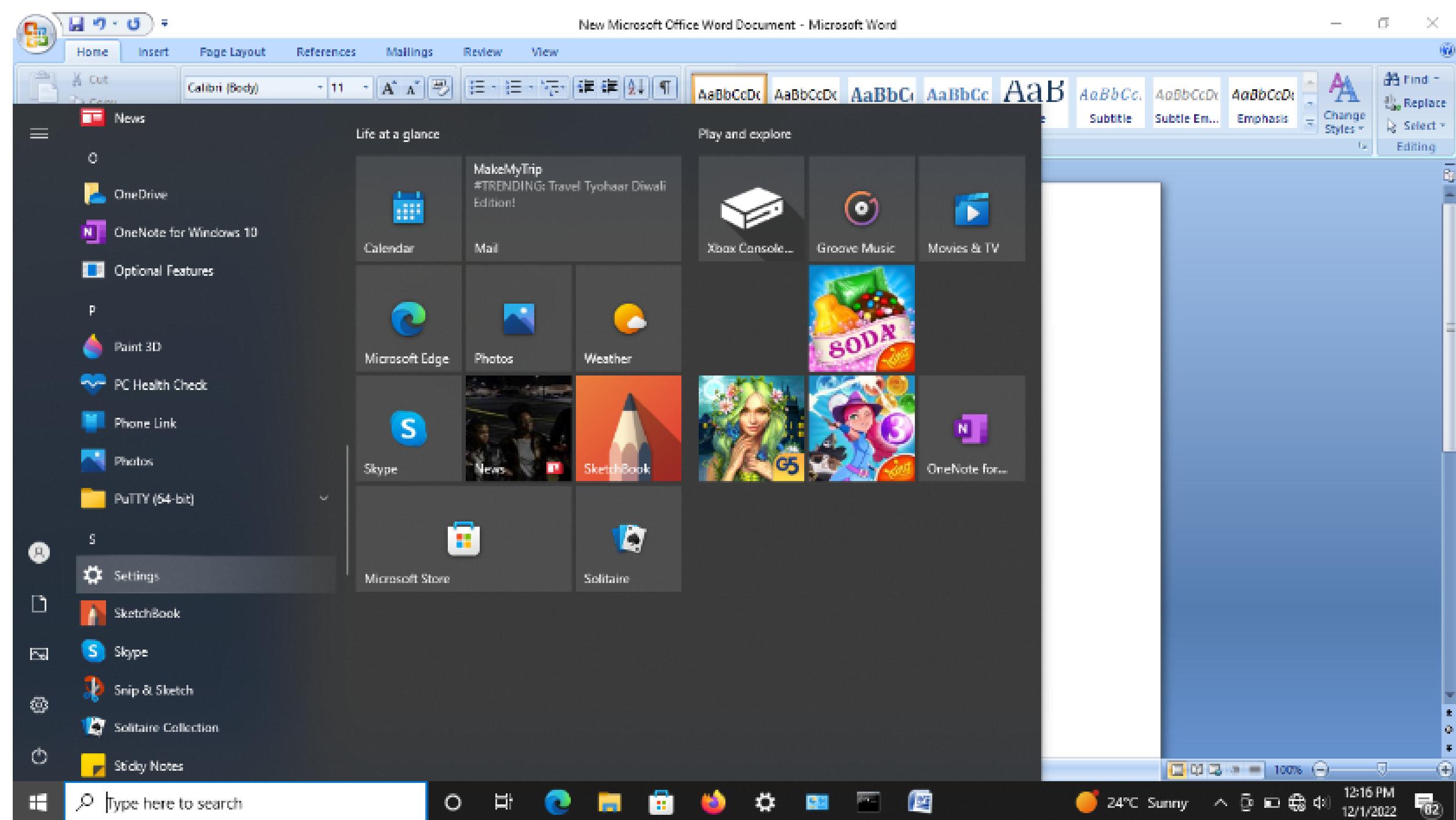


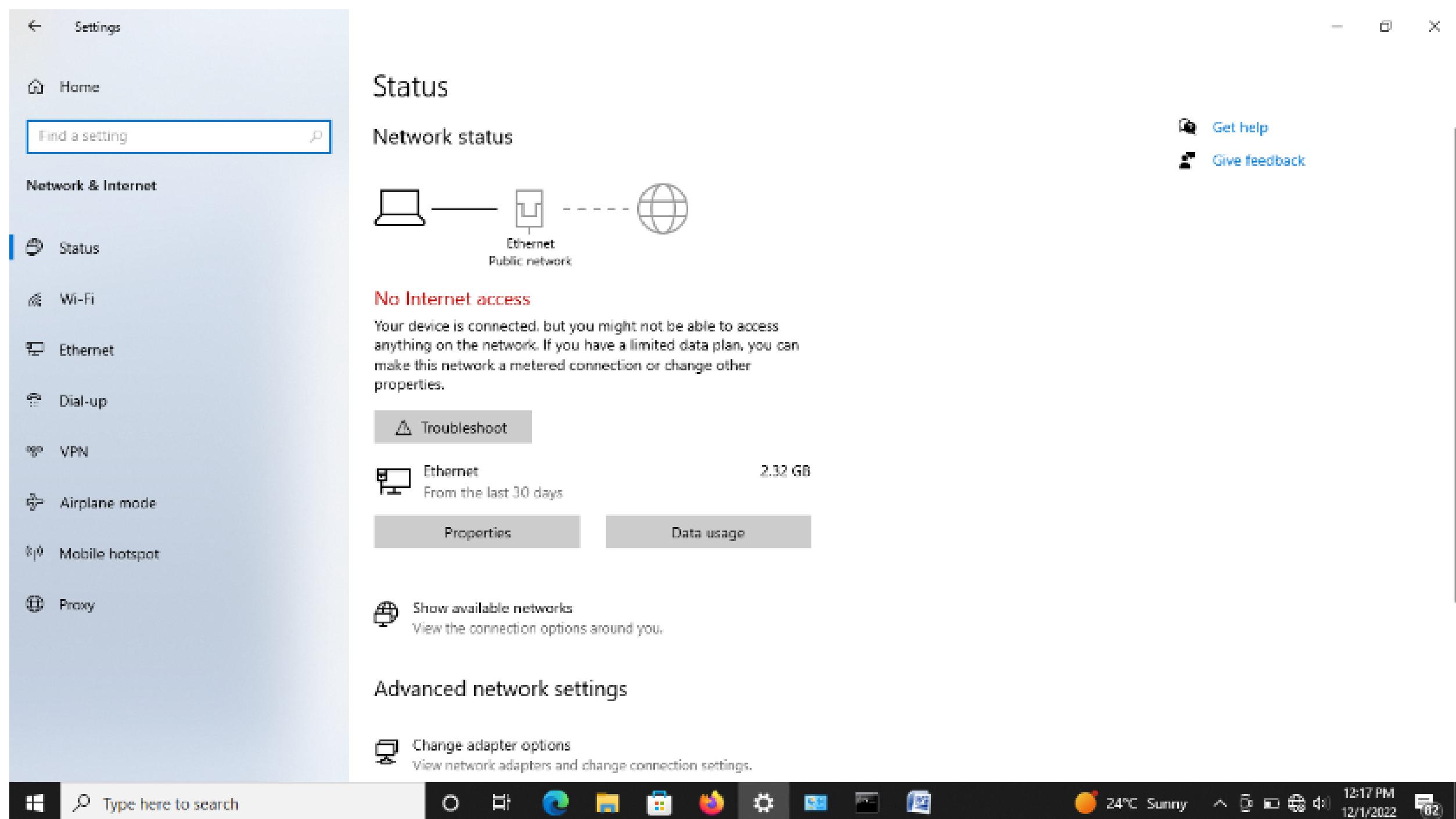
Program 7: Configuring LAN

Go to settings in PC

Click on start button– settings

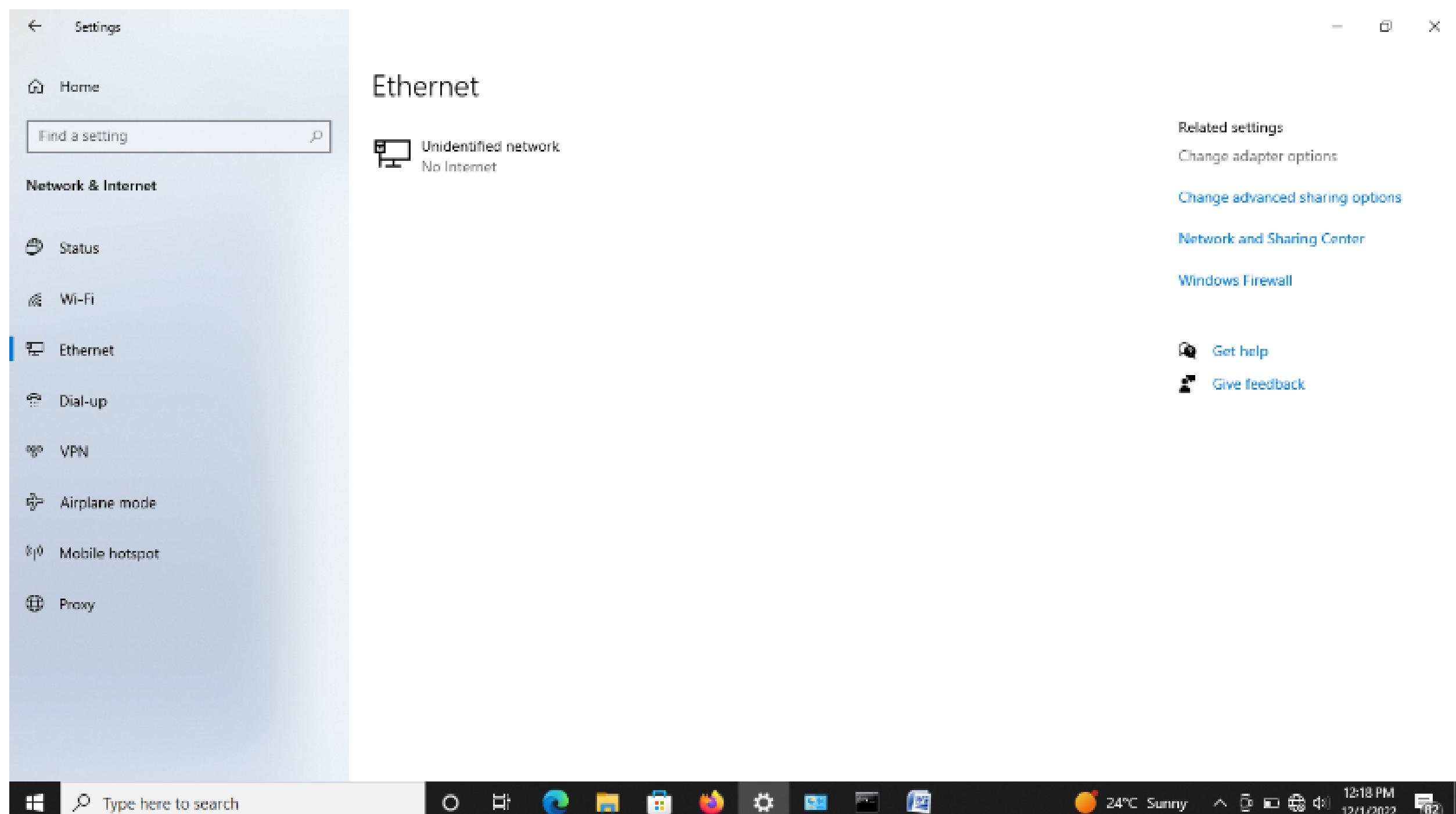


Select network and internet

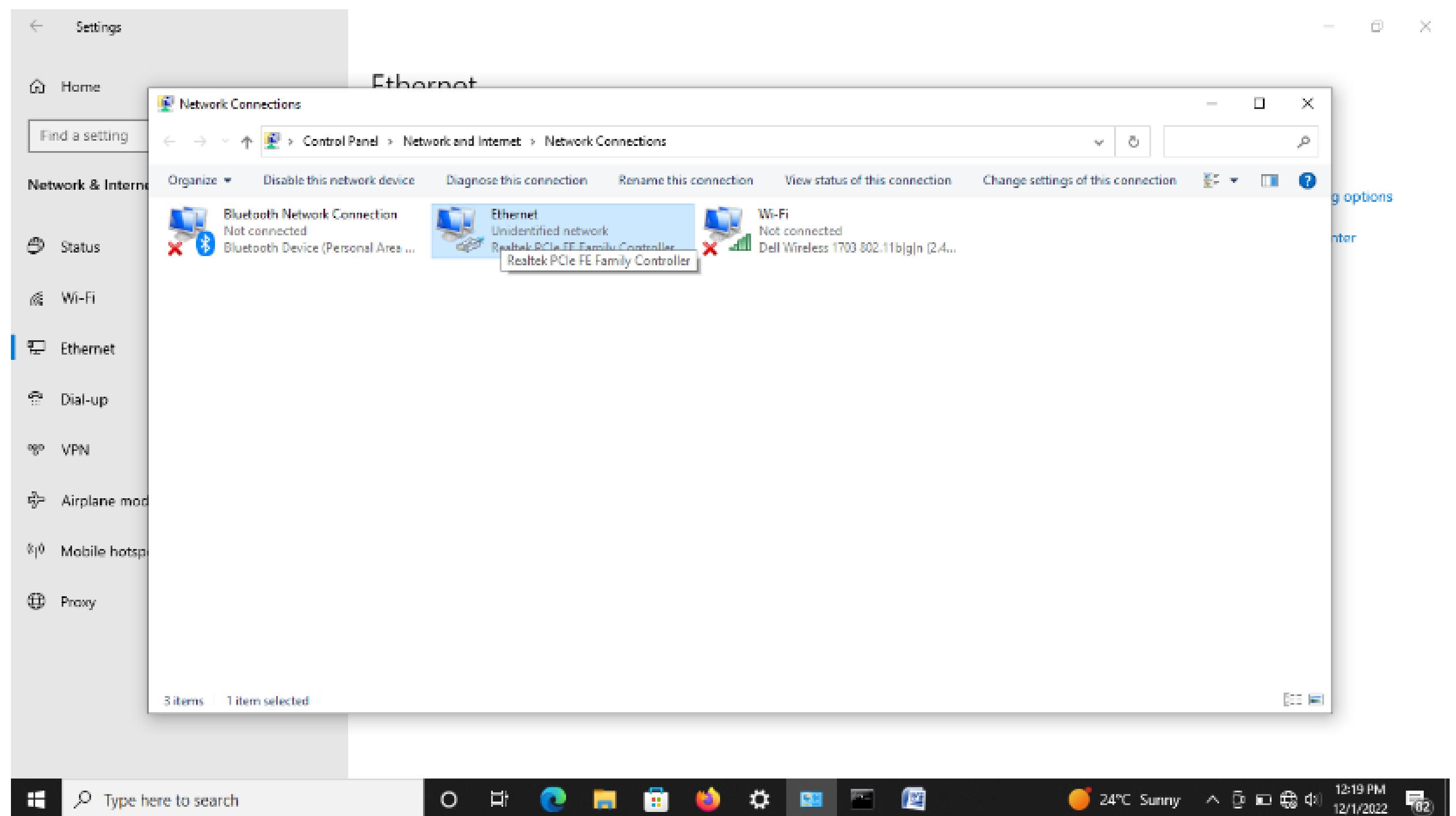


Select Ethernet on left side of the window

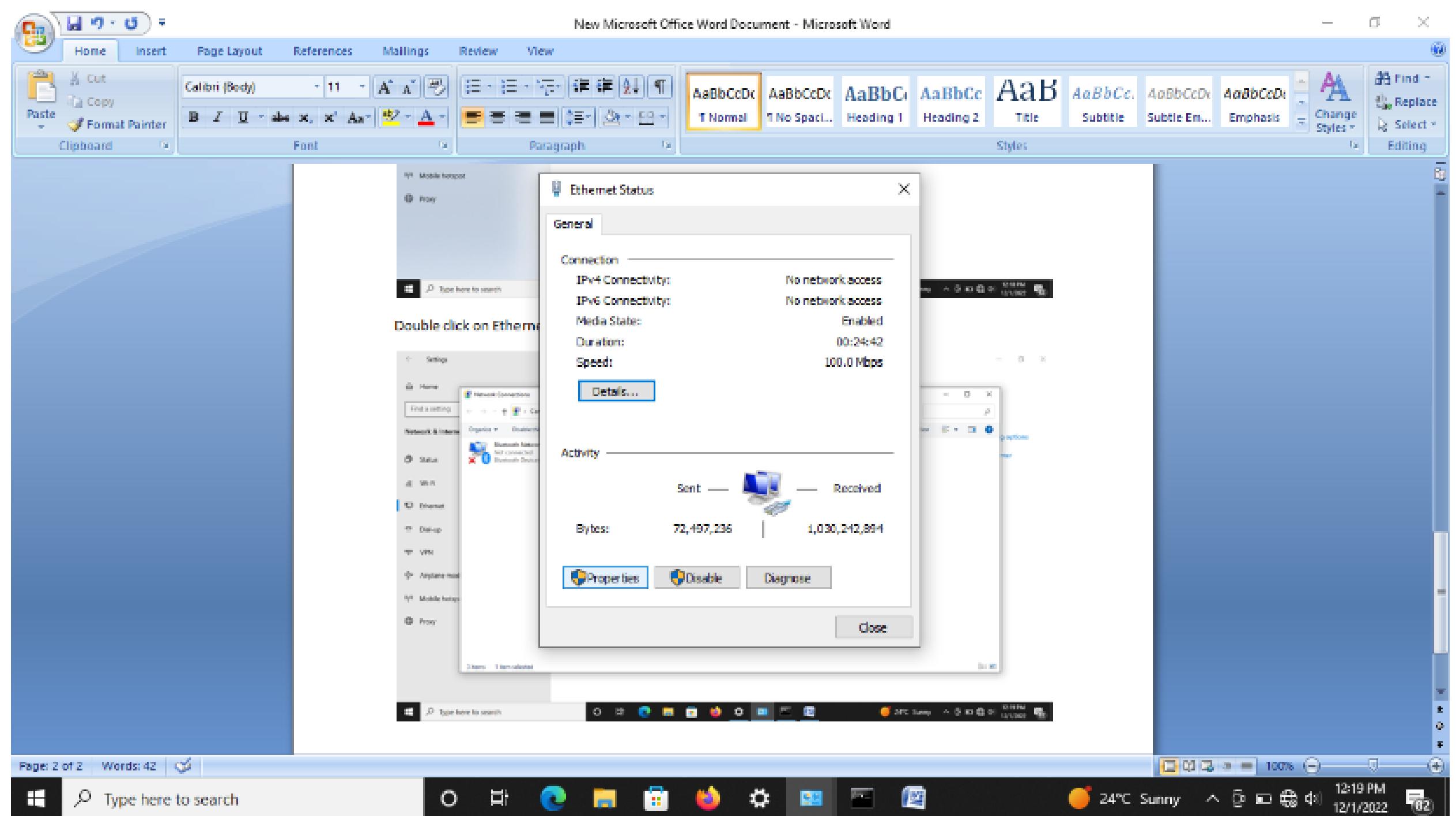
Select change adapter options on the right side of the screen



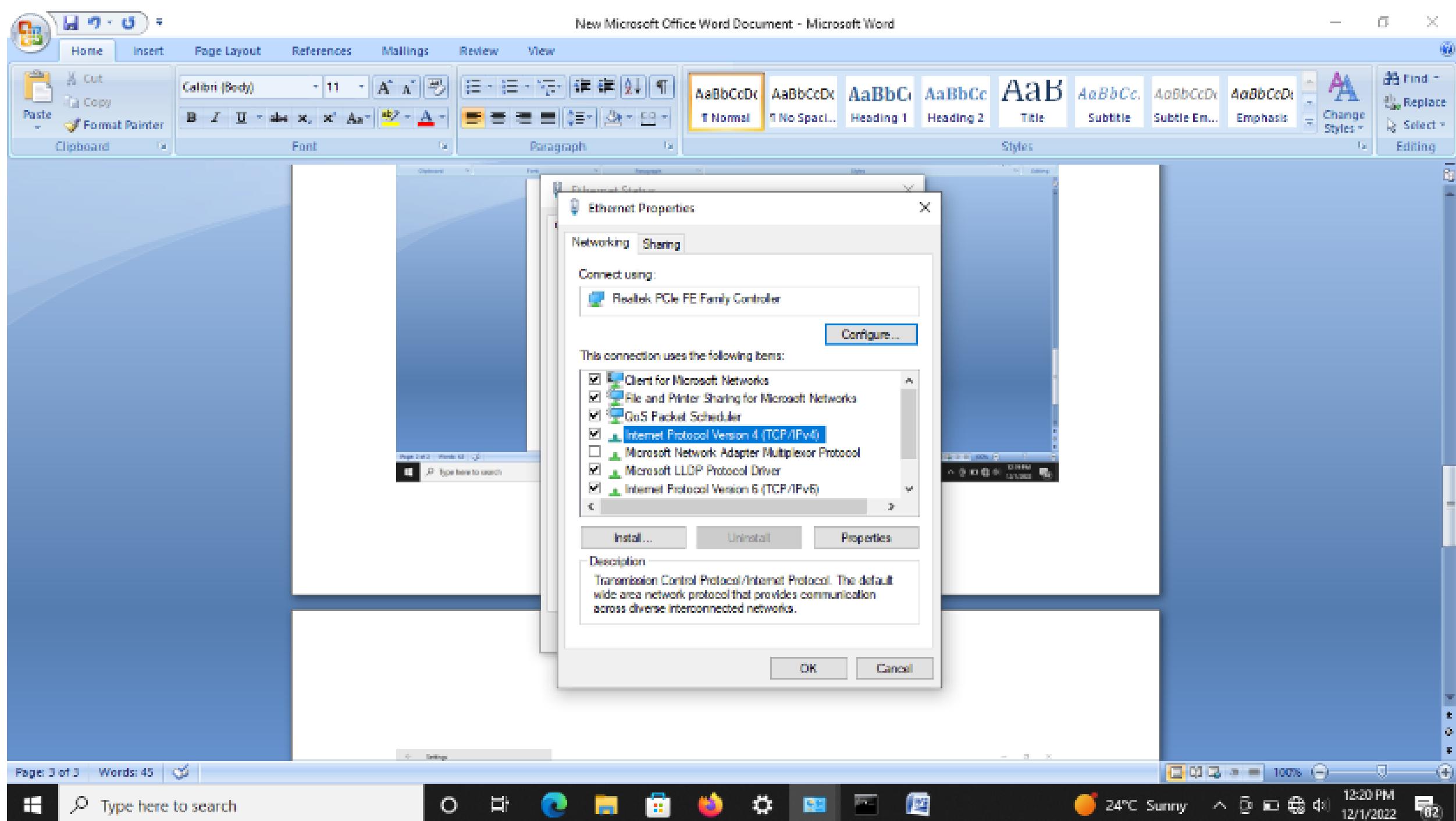
Double click on Ethernet



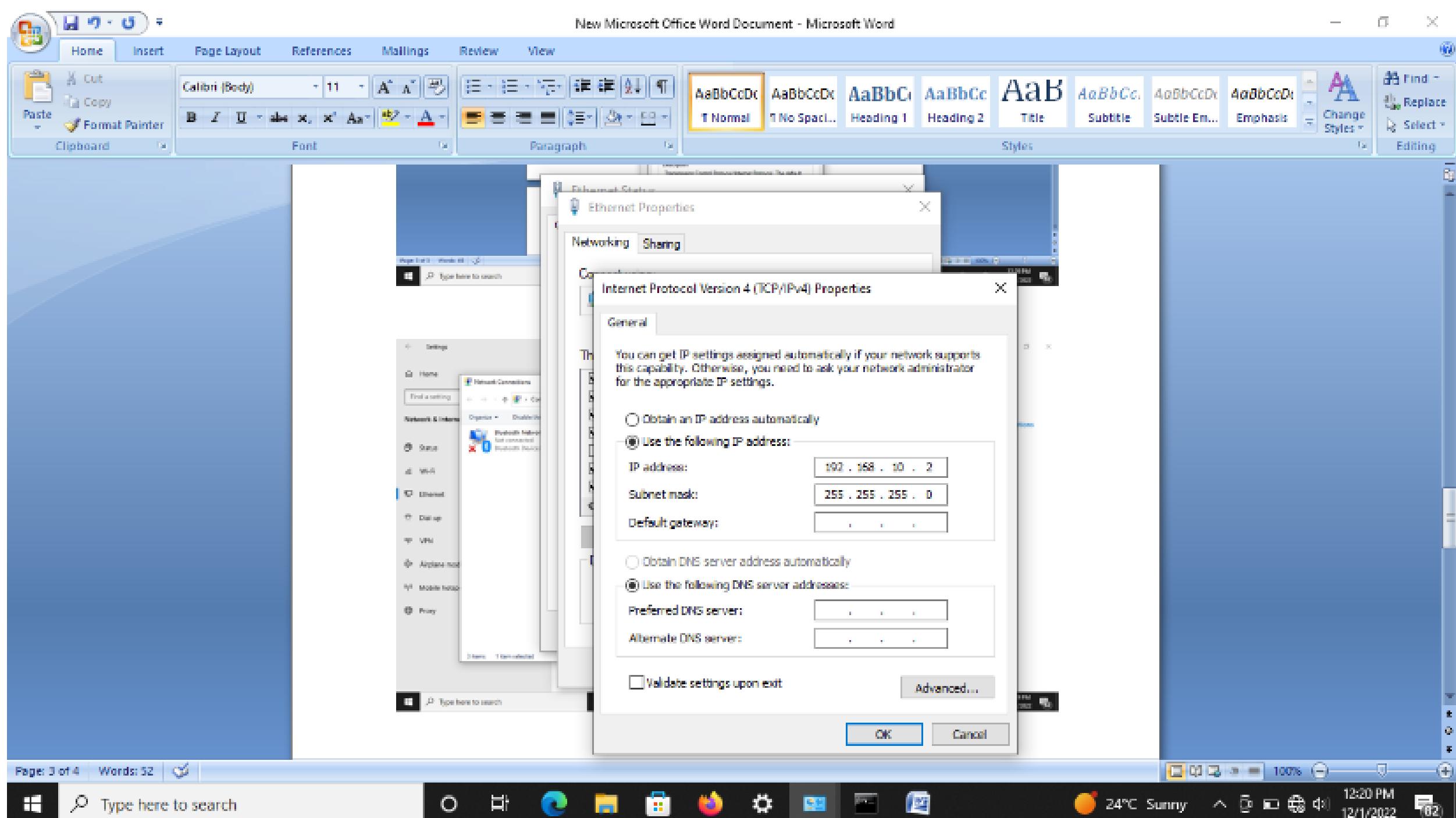
Click on properties



Highlight ipv4 protocol and click on properties



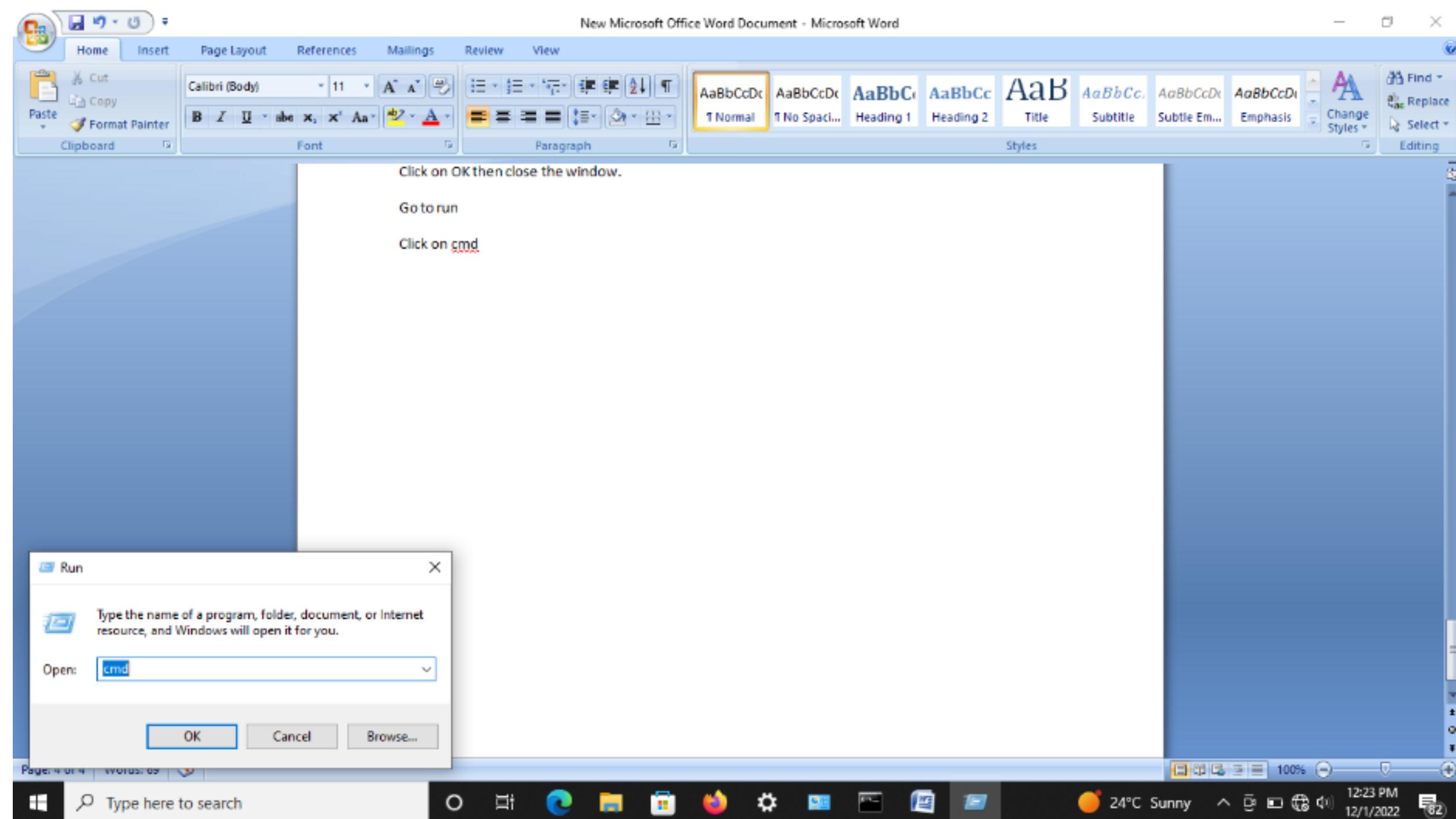
Select the manual settings



Click on OK then close the window.

Go to run

Click on cmd



In the terminal

Type ipconfig

```
Select C:\WINDOWS\system32\cmd.exe

Wireless LAN adapter Local Area Connection* 2:
  Media State . . . . . : Media disconnected
  Connection-specific DNS Suffix . :

Wireless LAN adapter Local Area Connection* 3:
  Media State . . . . . : Media disconnected
  Connection-specific DNS Suffix . :

Ethernet adapter Ethernet:
  Connection-specific DNS Suffix . :
  Link-local IPv6 Address . . . . : fe80::ad3d:12a:88d:59%9
  IPv4 Address. . . . . : 192.168.10.2
  Subnet Mask . . . . . : 255.255.255.0
  Default Gateway . . . . . : 172.16.35.254

Wireless LAN adapter Wi-Fi:
  Media State . . . . . : Media disconnected
  Connection-specific DNS Suffix . : rvce.in

Ethernet adapter Bluetooth Network Connection:
  Media State . . . . . : Media disconnected
  Connection-specific DNS Suffix . :

C:\Users\jayasimhasr>
```

Observe the changes in the ip address

Use ping ipaddress to check the connectivity

```
Select C:\WINDOWS\system32\cmd.exe

Wireless LAN adapter Local Area Connection* 2:
  Media State . . . . . : Media disconnected
  Connection-specific DNS Suffix . :

Wireless LAN adapter Local Area Connection* 3:
  Media State . . . . . : Media disconnected
  Connection-specific DNS Suffix . :

Ethernet adapter Ethernet:
  Connection-specific DNS Suffix . :
  Link-local IPv6 Address . . . . : fe80::ad3d:12a:88d:59%9
  IPv4 Address. . . . . : 192.168.10.2
  Subnet Mask . . . . . : 255.255.255.0
  Default Gateway . . . . . : 172.16.35.254

Wireless LAN adapter Wi-Fi:
  Media State . . . . . : Media disconnected
  Connection-specific DNS Suffix . : rvce.in

Ethernet adapter Bluetooth Network Connection:
  Media State . . . . . : Media disconnected
  Connection-specific DNS Suffix . :

C:\Users\jayasimhasr>ping 192.168.10.1

Pinging 192.168.10.1 with 32 bytes of data:
Reply from 192.168.10.1: bytes=32 time=1ms TTL=128
Reply from 192.168.10.1: bytes=32 time=1ms TTL=128
Reply from 192.168.10.1: bytes=32 time=15ms TTL=128
Reply from 192.168.10.1: bytes=32 time=1ms TTL=128

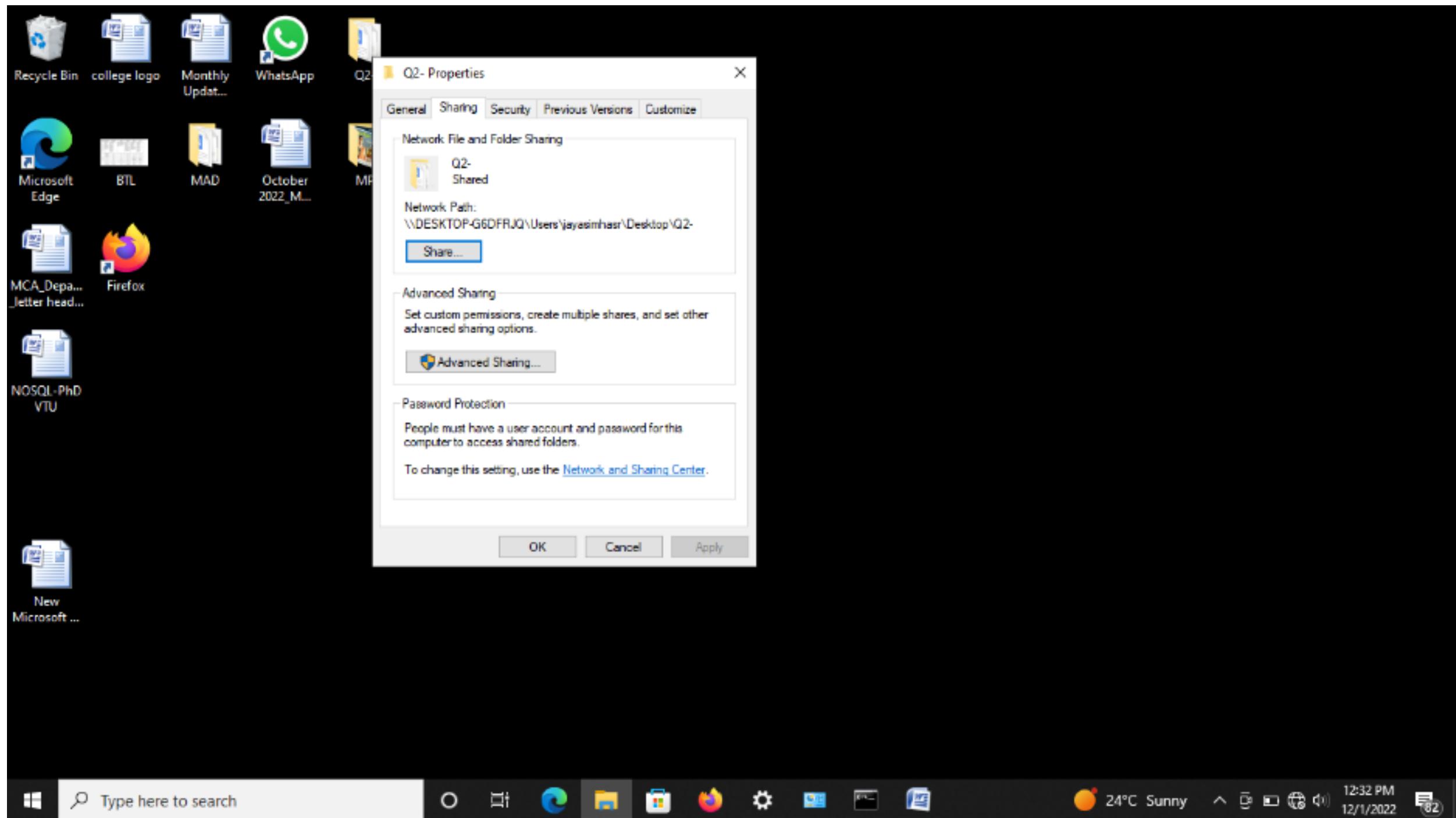
Ping statistics for 192.168.10.1:
  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
  Approximate round trip times in milli-seconds:
    Minimum = 1ms, Maximum = 15ms, Average = 4ms

C:\Users\jayasimhasr>
```

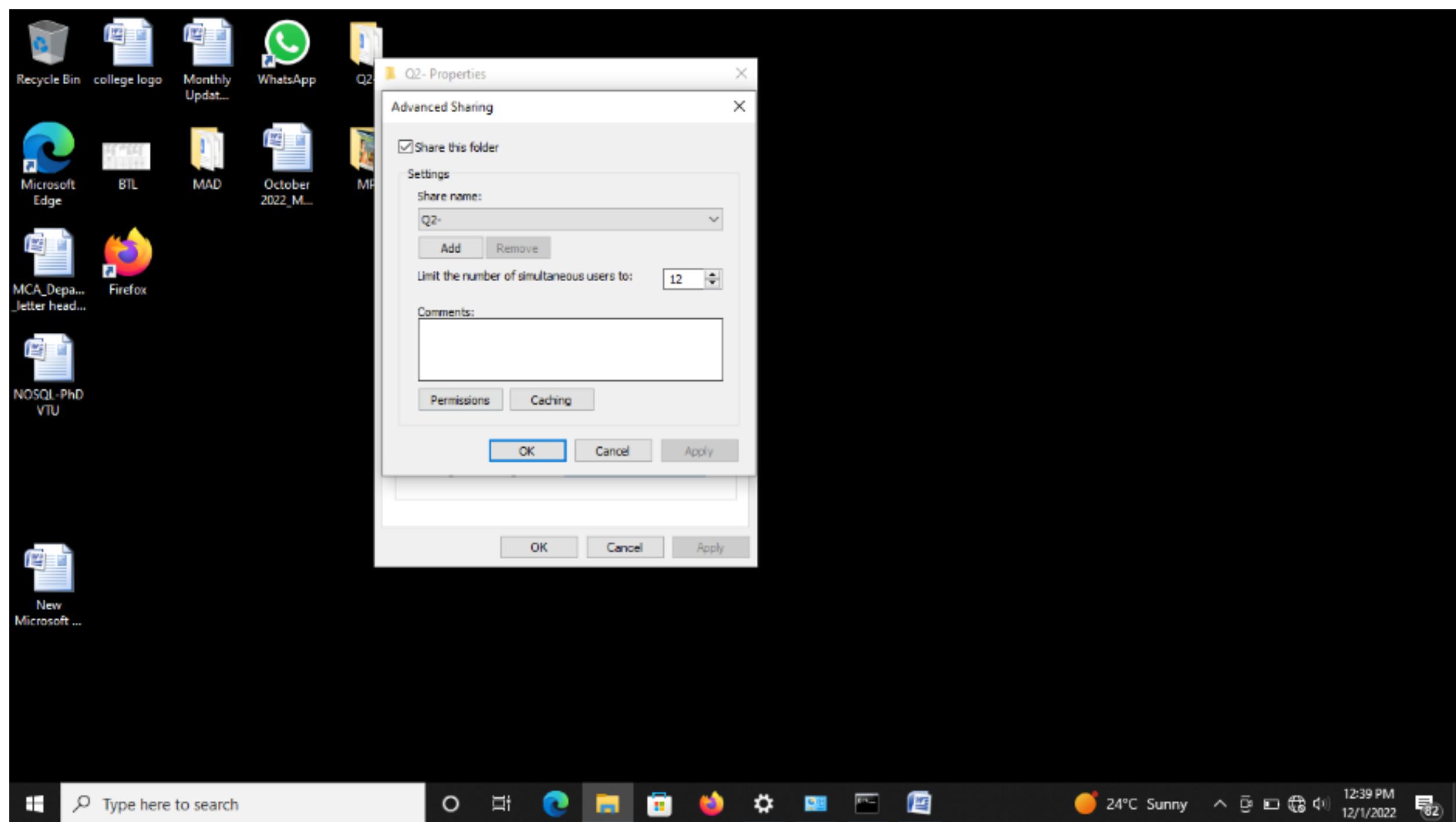
Program 9: Folder sharing

Right click on the created folder

Select properties 



click on advanced sharing

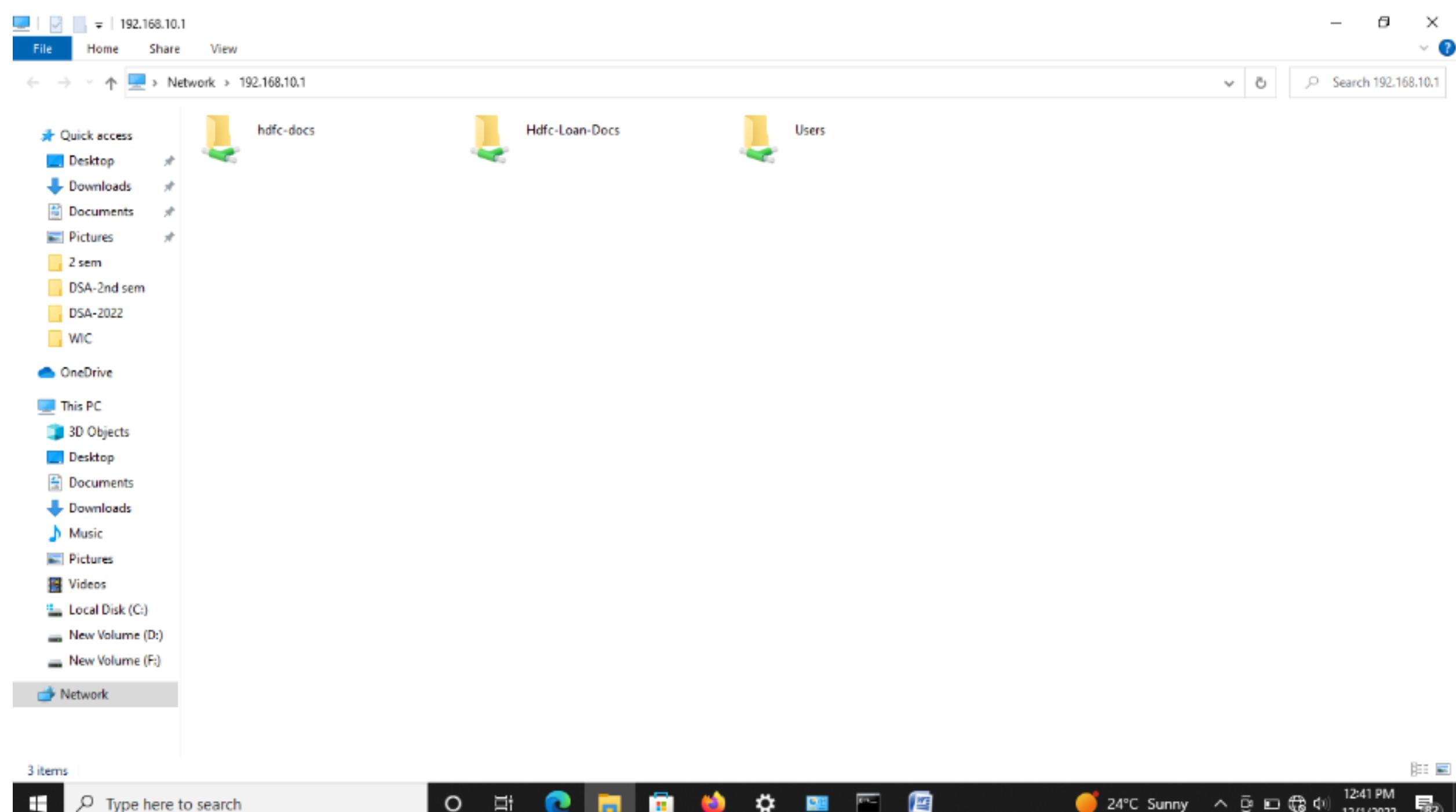


click on ok

Click on Apply then ok

Go to run select the ip of the destination

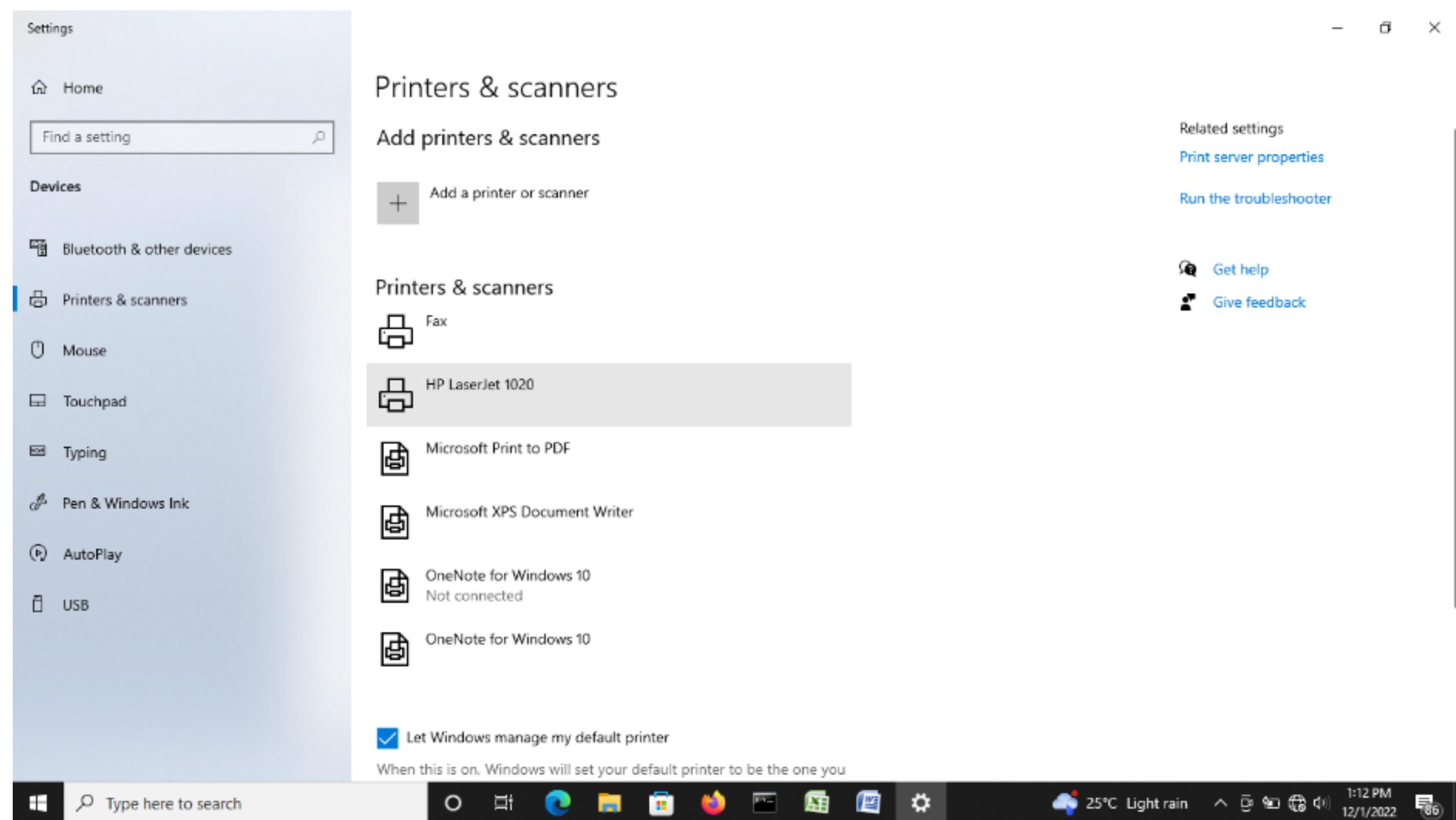
Folder shared.



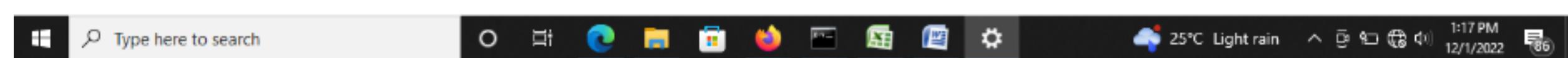
Program 10: Printer sharing

Install the driver of the printer in the PC

Open printer and scanning from pc

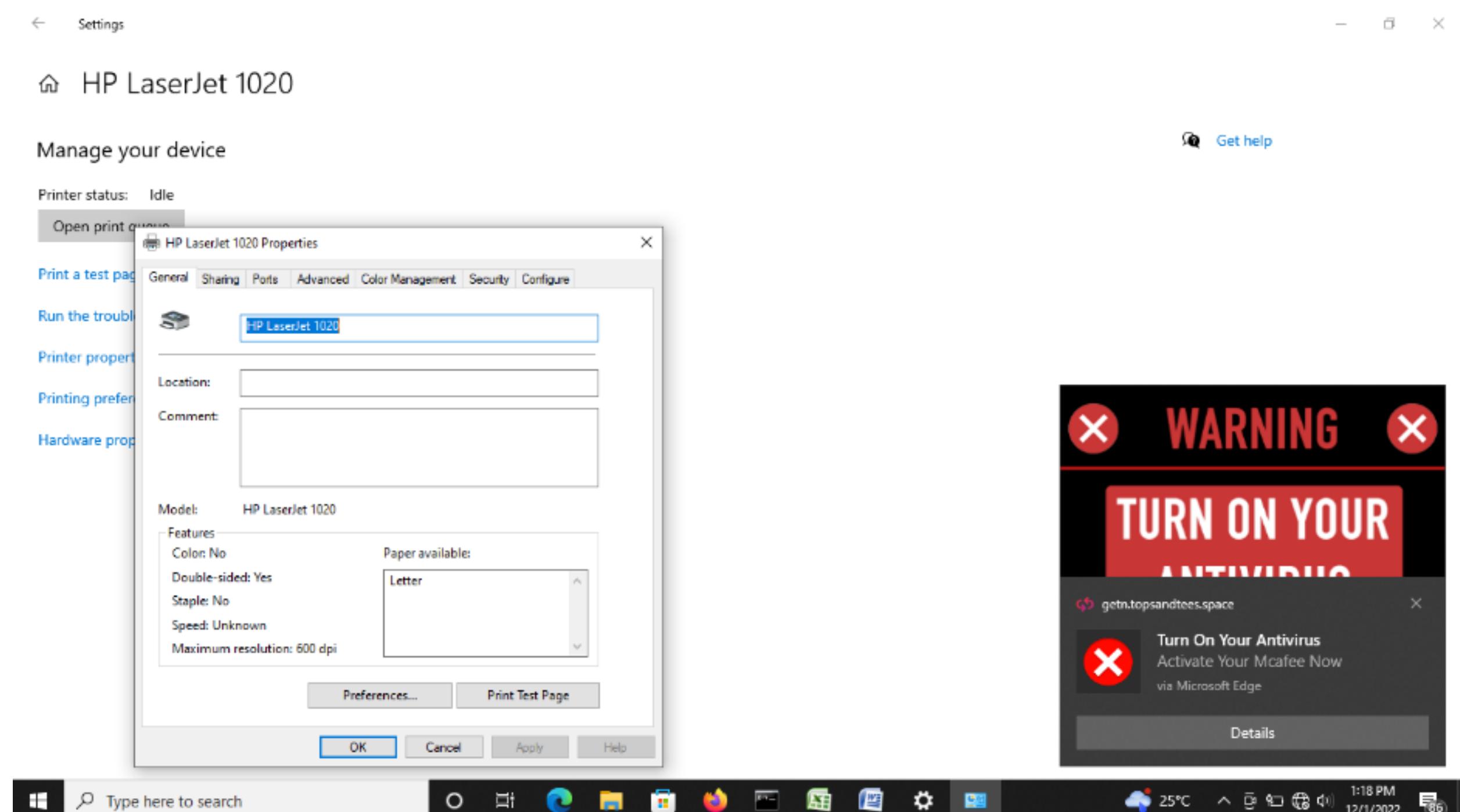


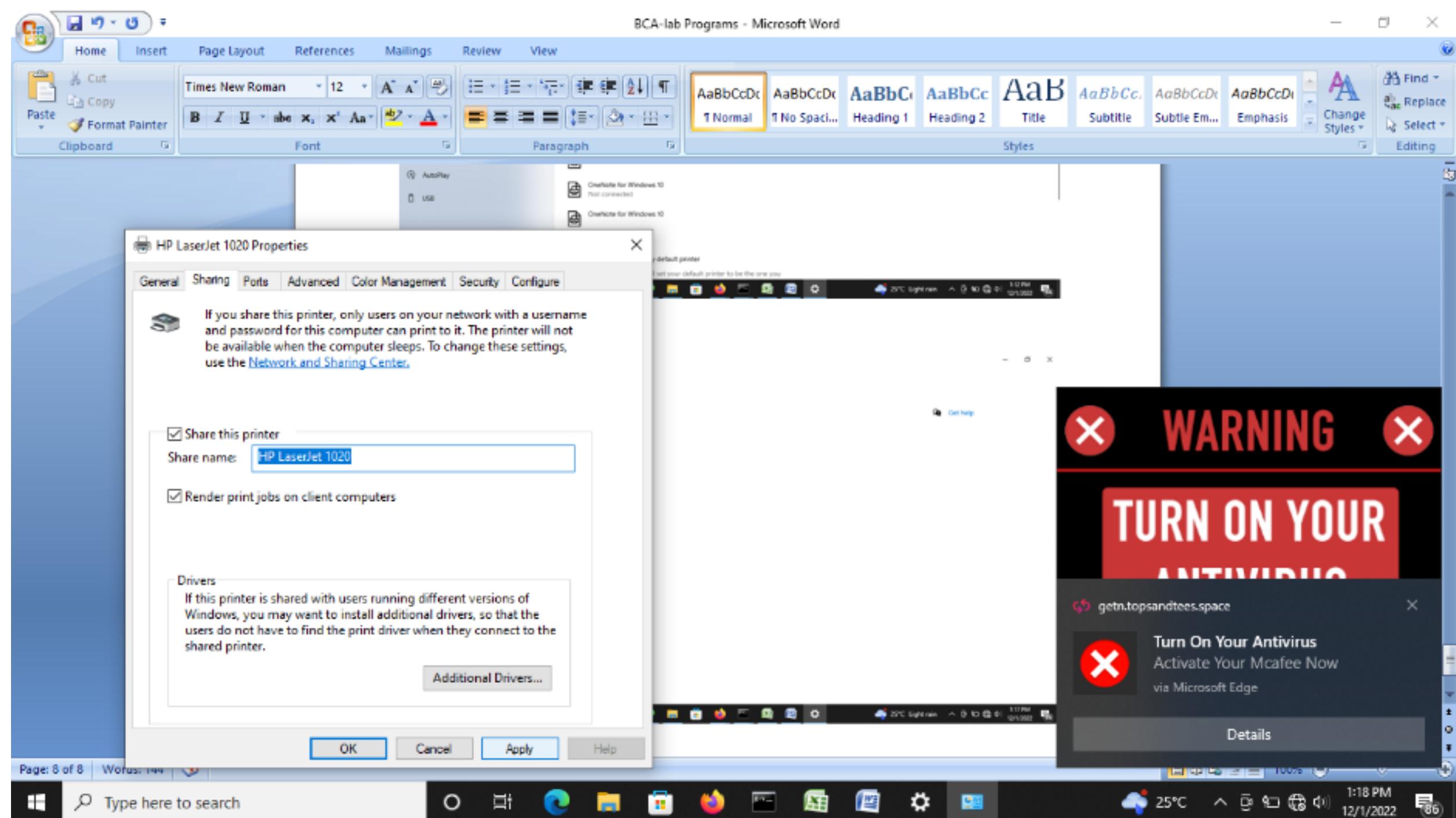
Manage-Printer properties



Print and scanners- Share

Printer properties



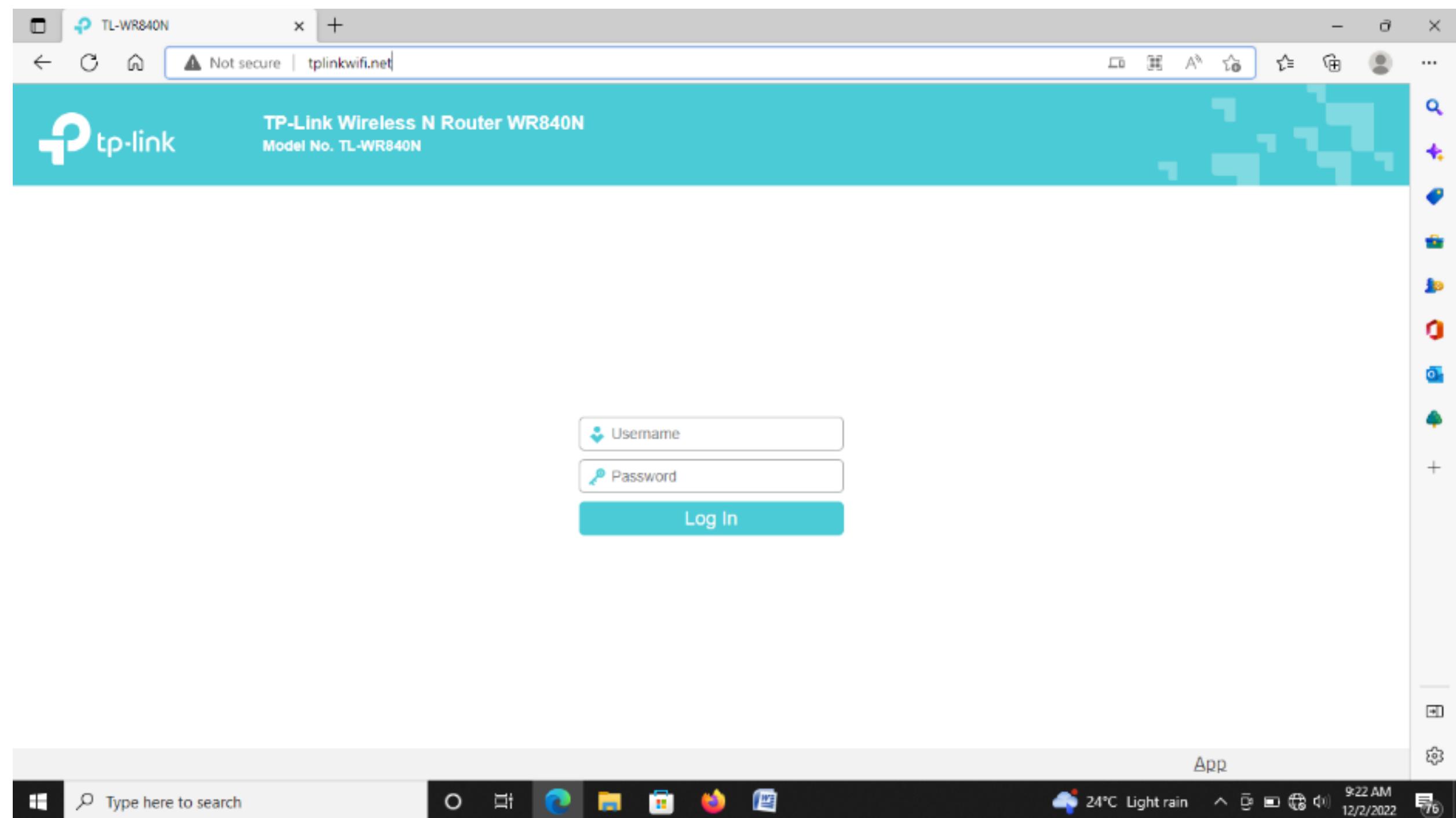


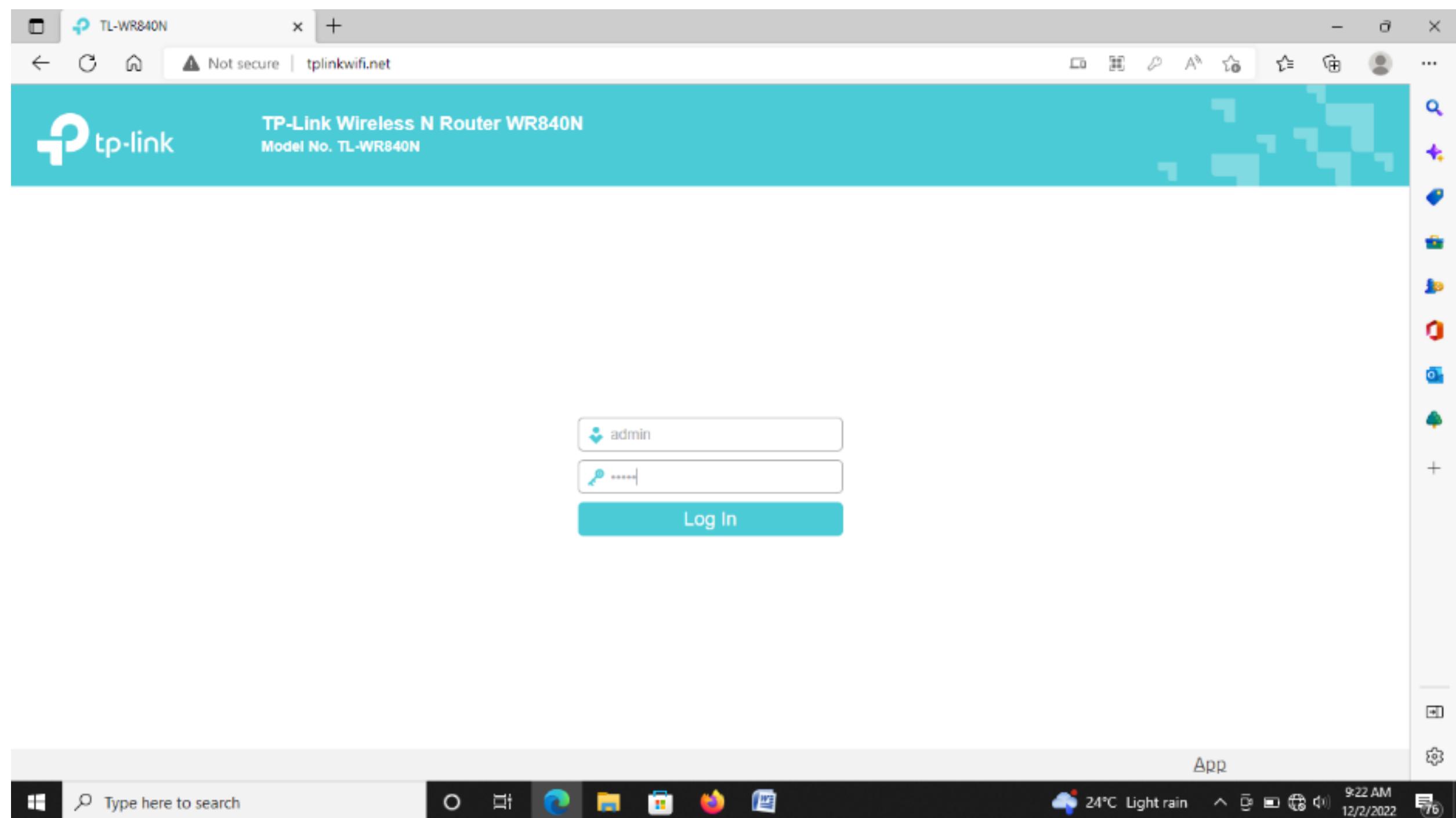
Program11: configuring wifi and connect other devices

Connect the wifi access point to the PC through Ethernet port and supply the power

Go to the browser and type: the URL/IP address present on the back of the access point.

Example: <http://tplinkwifi.net/> OR default IP address present at the back of the ip address.





Type the username: admin

Password: admin

Saved password automatically

Status

Firmware Version: 0.9.1.4.16 v0001.0 Build 180614 Rel.40494n
Hardware Version: TL-WR840N v6 00000007

LAN

MAC Address: D8:0D:17:58:60:F0
IP Address: 192.168.0.1
Subnet Mask: 255.255.255.0

Wireless 2.4GHz

Operation Mode: Range Extender
Wireless Radio: Enabled
Name(SSID) of Root AP: Router2A_exe
Name(SSID): Router2A_exe
Mode: 11bgn mixed
Channel: 5

Status Help

The Status page displays the AP's current status and configuration. All information is read-only.

LAN - The following parameters apply to the LAN port of the AP. You can configure them on the Network > LAN page.

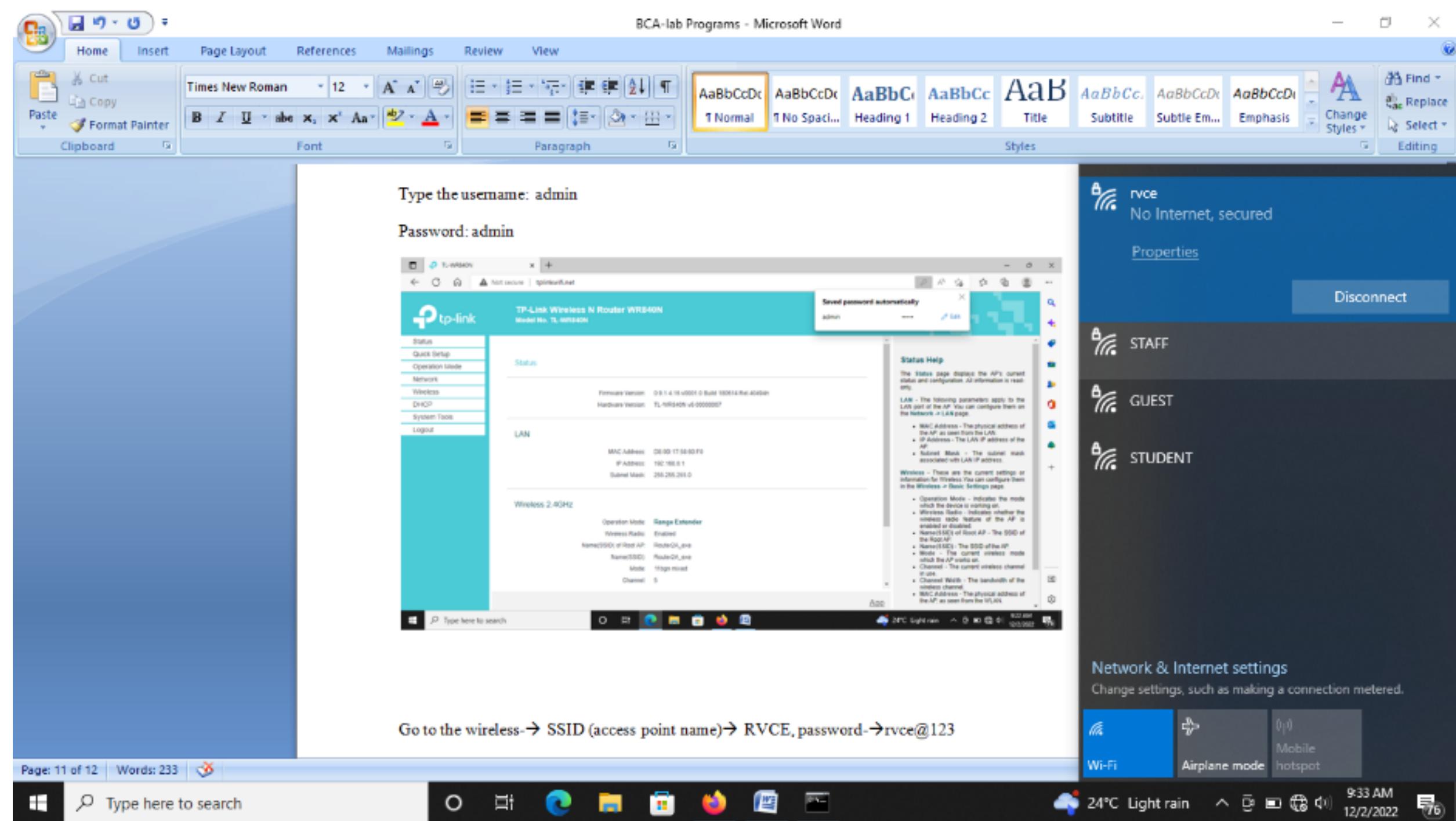
- MAC Address - The physical address of the AP, as seen from the LAN.
- IP Address - The LAN IP address of the AP.
- Subnet Mask - The subnet mask associated with LAN IP address.

Wireless - These are the current settings or information for Wireless. You can configure them in the Wireless > Basic Settings page.

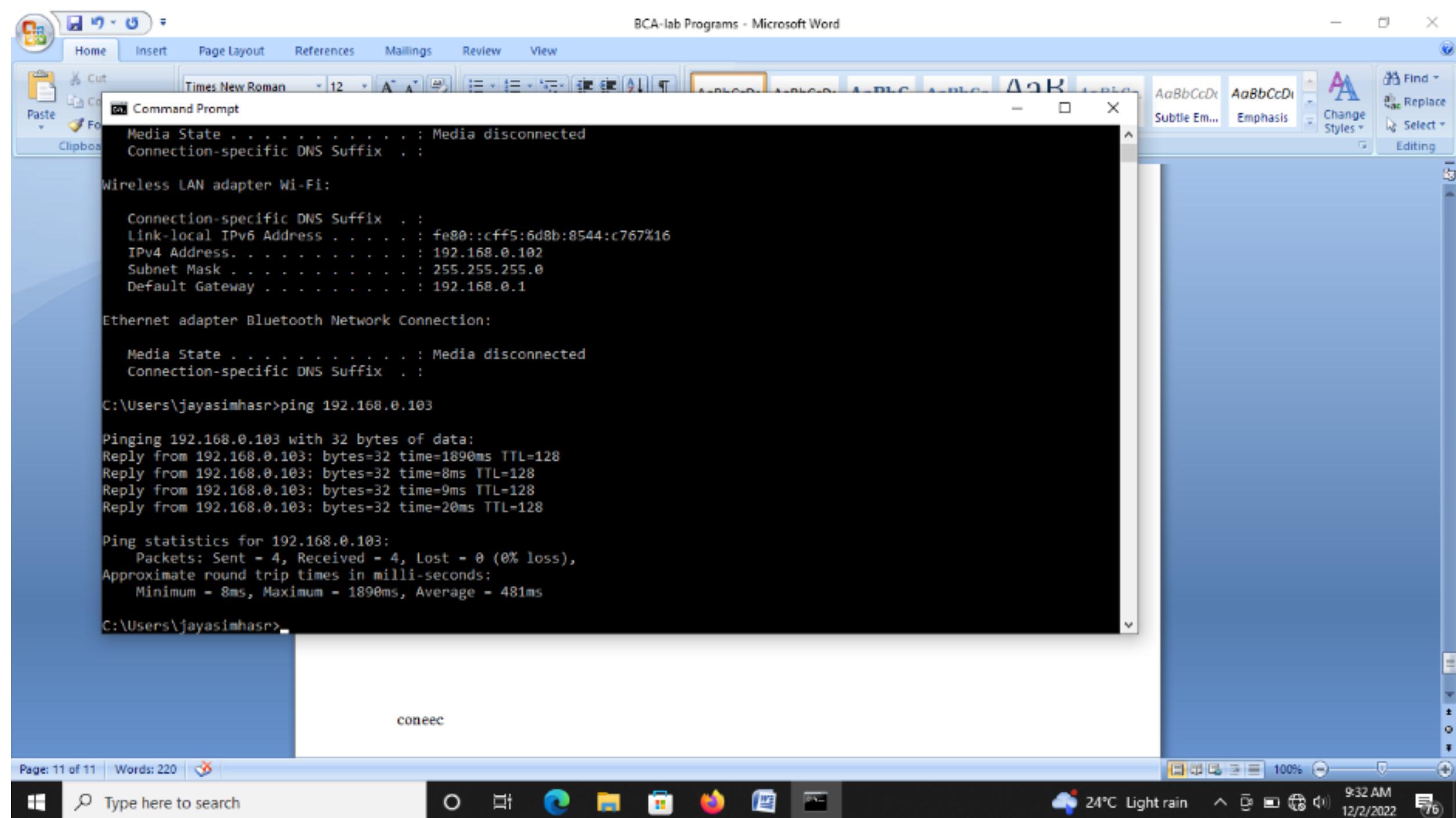
- Operation Mode - Indicates the mode which the device is working on.
- Wireless Radio - Indicates whether the wireless radio feature of the AP is enabled or disabled.
- Name(SSID) of Root AP - The SSID of the Root AP.
- Name(SSID) - The SSID of the AP.
- Mode - The current wireless mode which the AP works on.
- Channel - The current wireless channel in use.
- Channel Width - The bandwidth of the wireless channel.
- MAC Address - The physical address of the AP, as seen from the WLAN.

Go to the wireless-→ SSID (access point name)→ RVCE, password-→rvce@123

Check the wifi connection in the mobile and PC then connect through the credentials

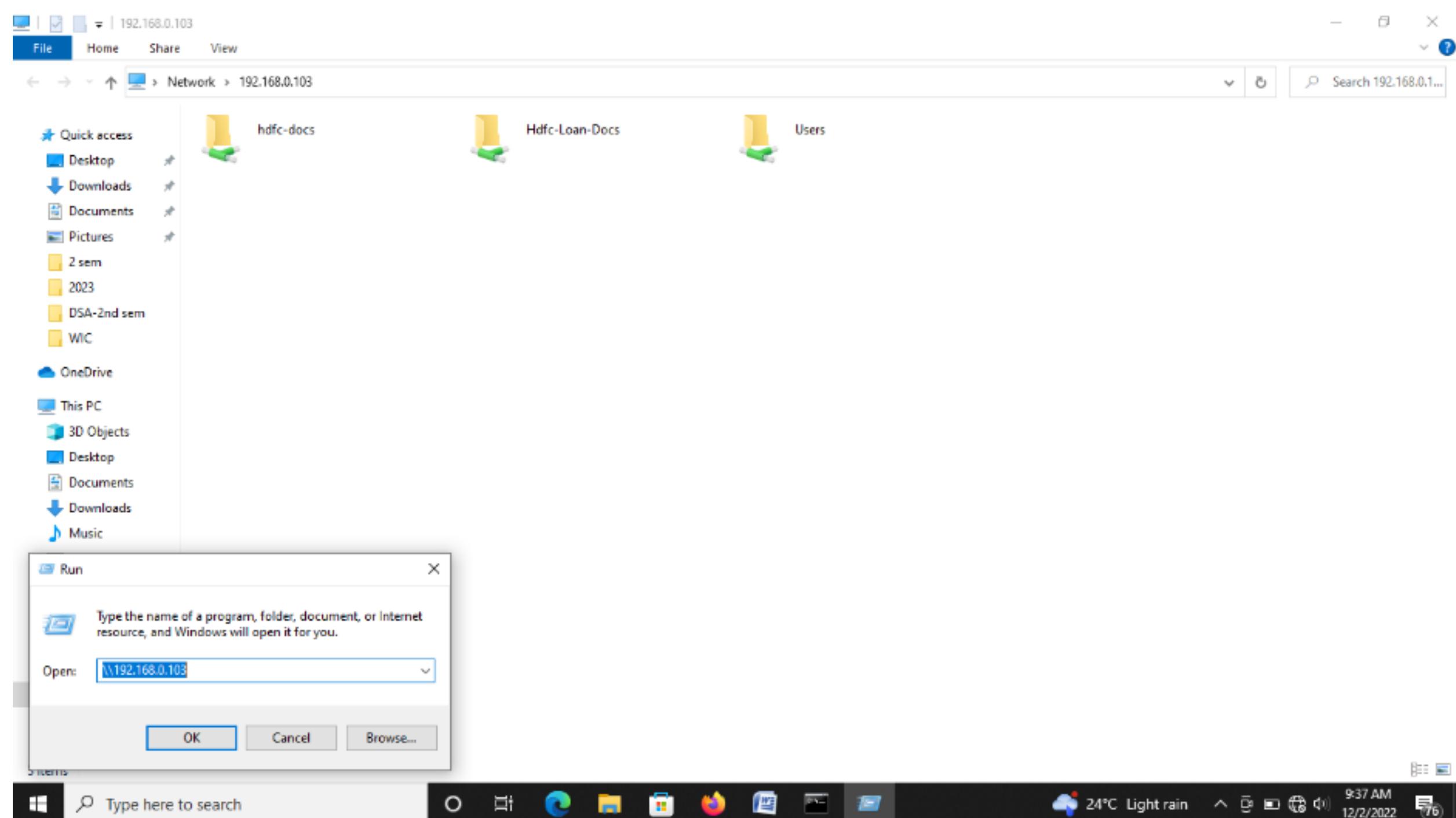


Rvce is listed



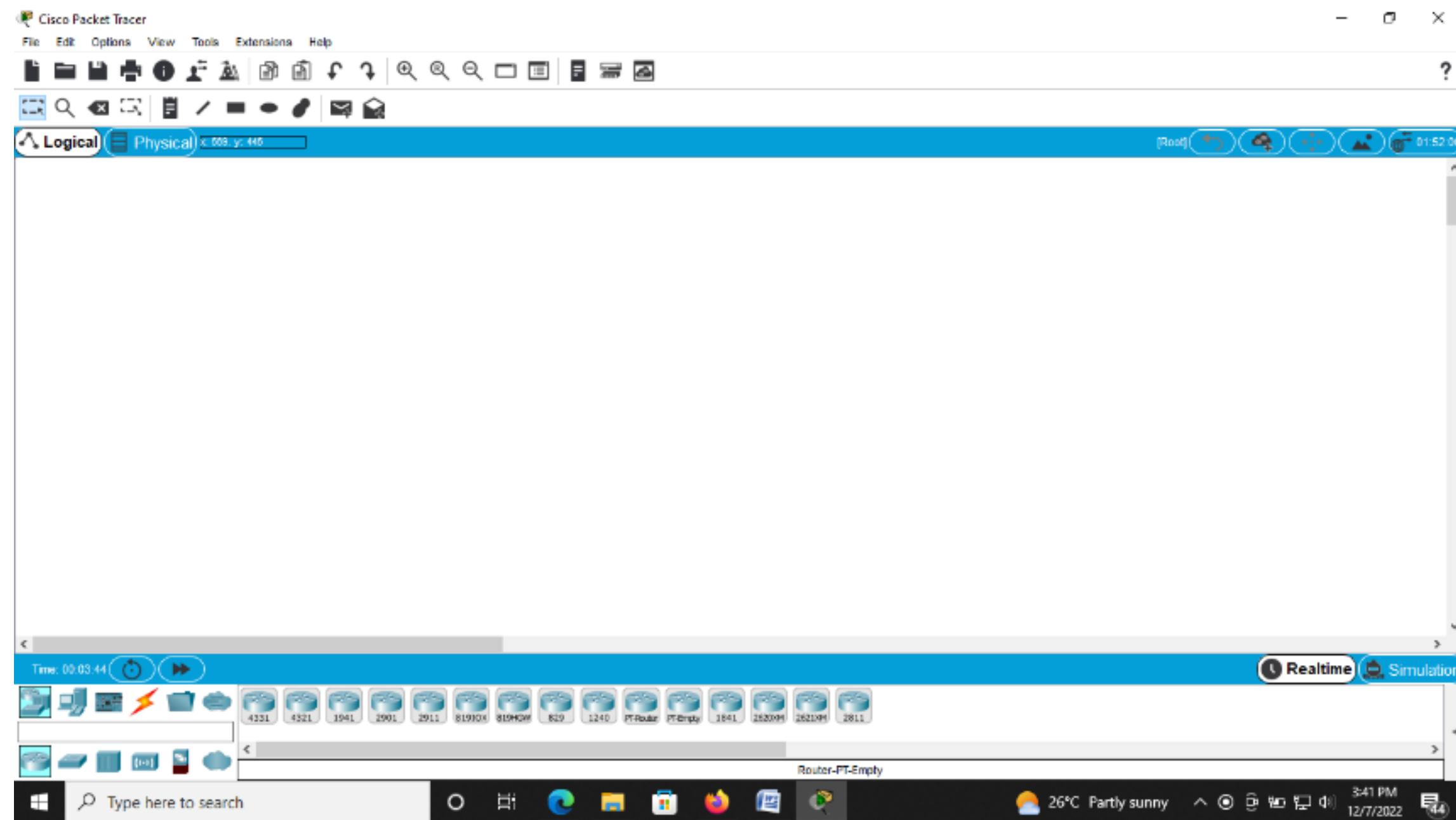
File sharing

Go to run



Program15: Configure VLAN using Packet Tracer/GNS3

Cisco Packet Tracer Home Screen

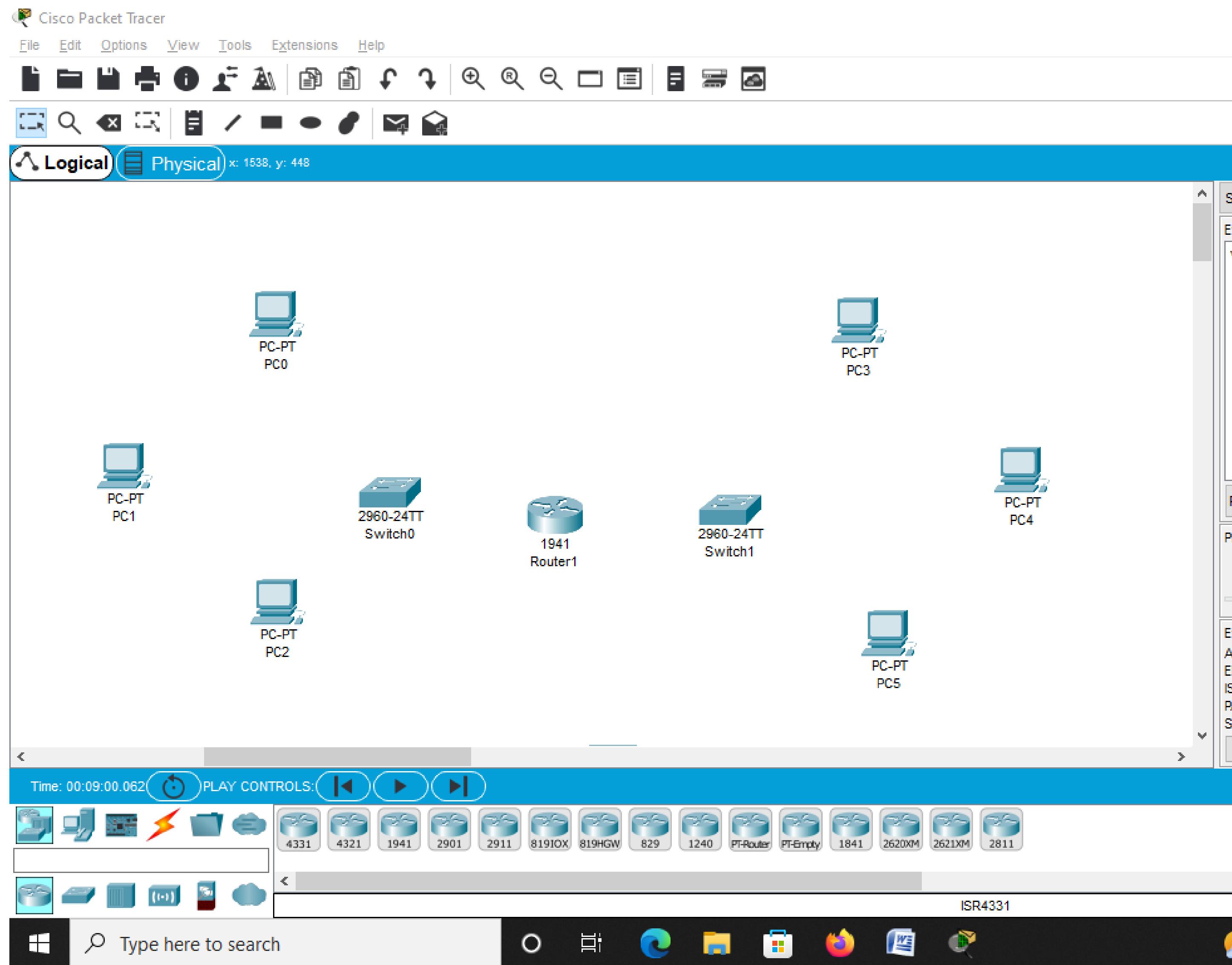


Step 1: insert 6 Pcs, 2 switches, 1 router as shown in the diagram.

Select end devices to get the PC icon on screen

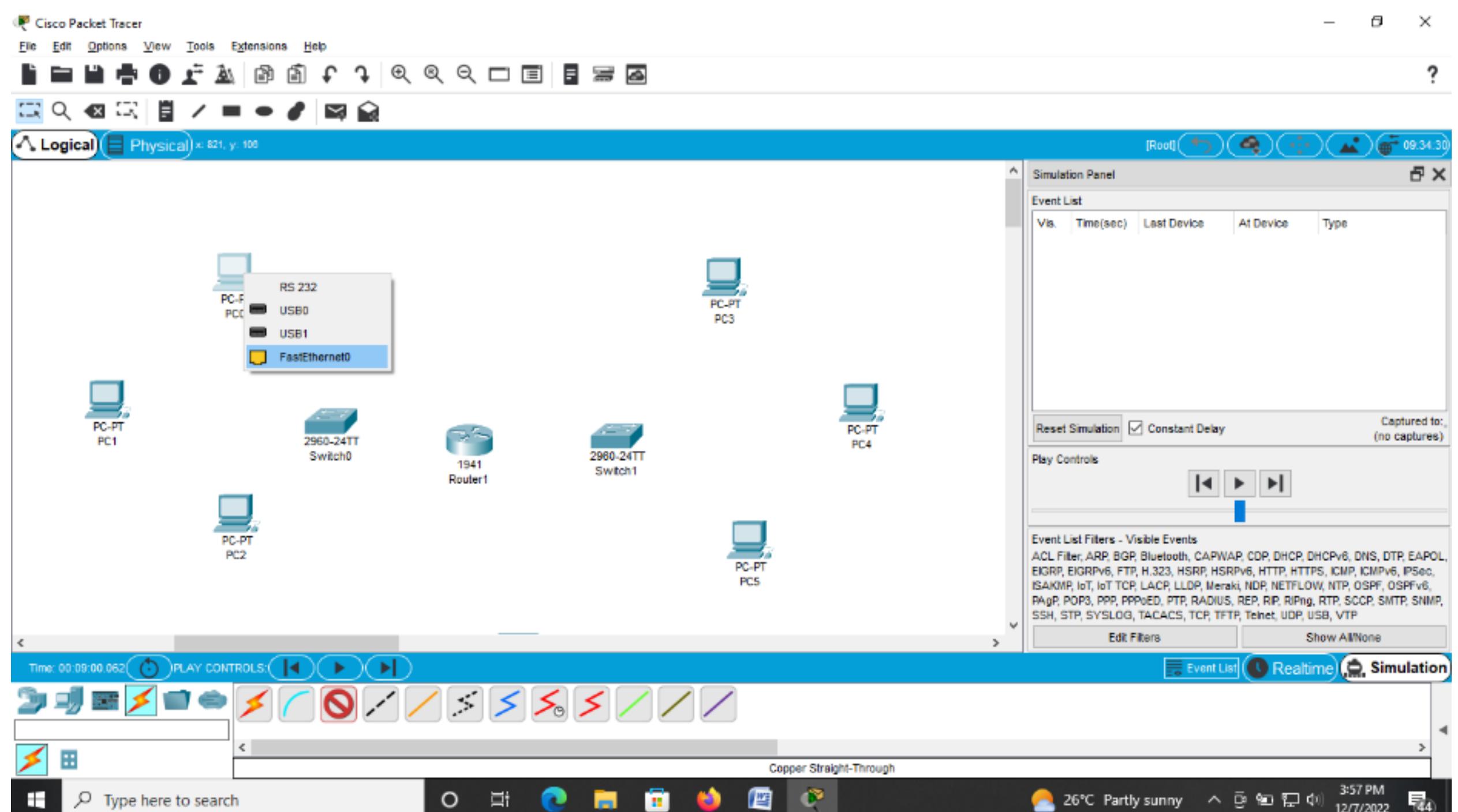
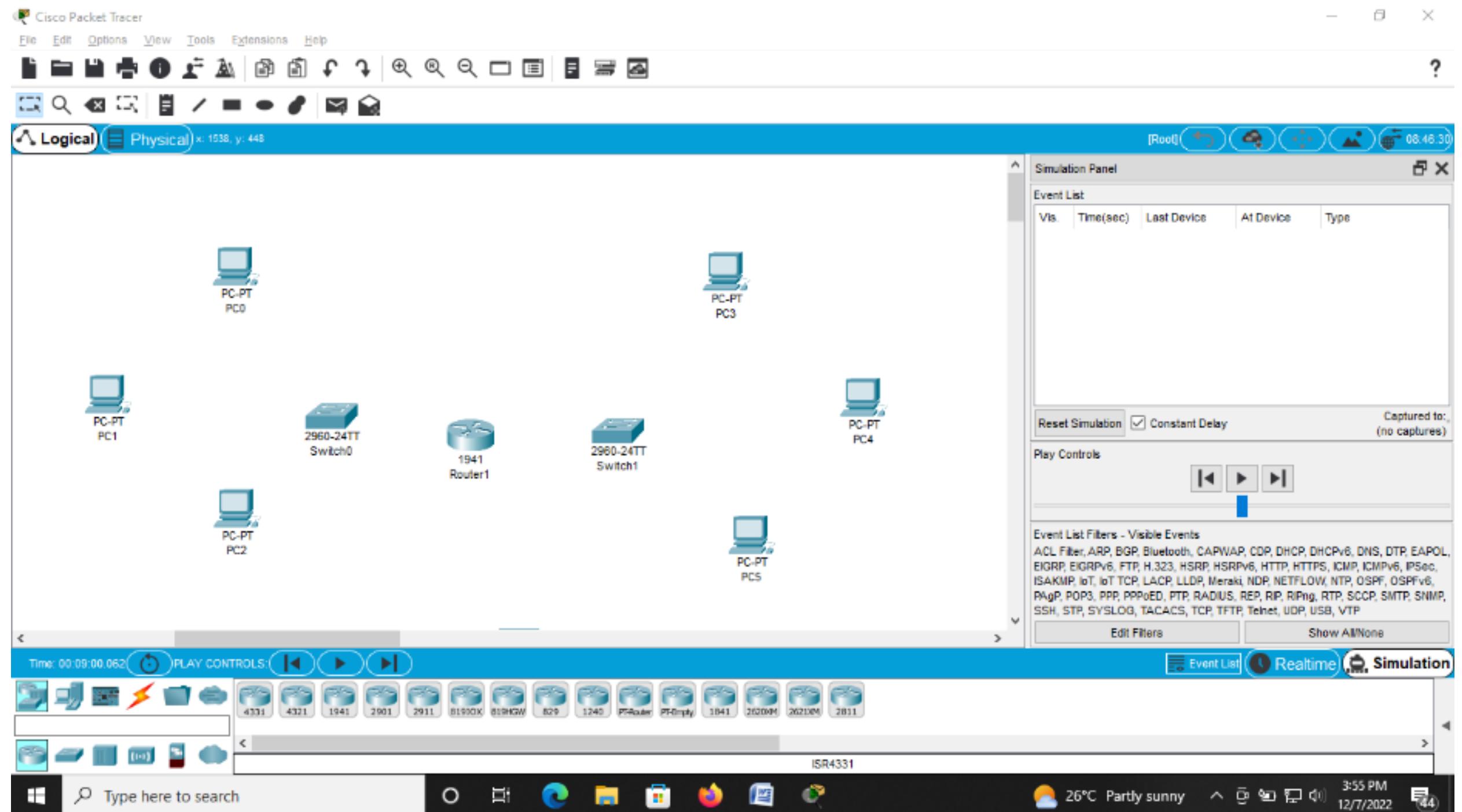
Take 2 switches (by click on switch icon)

Take 1 router

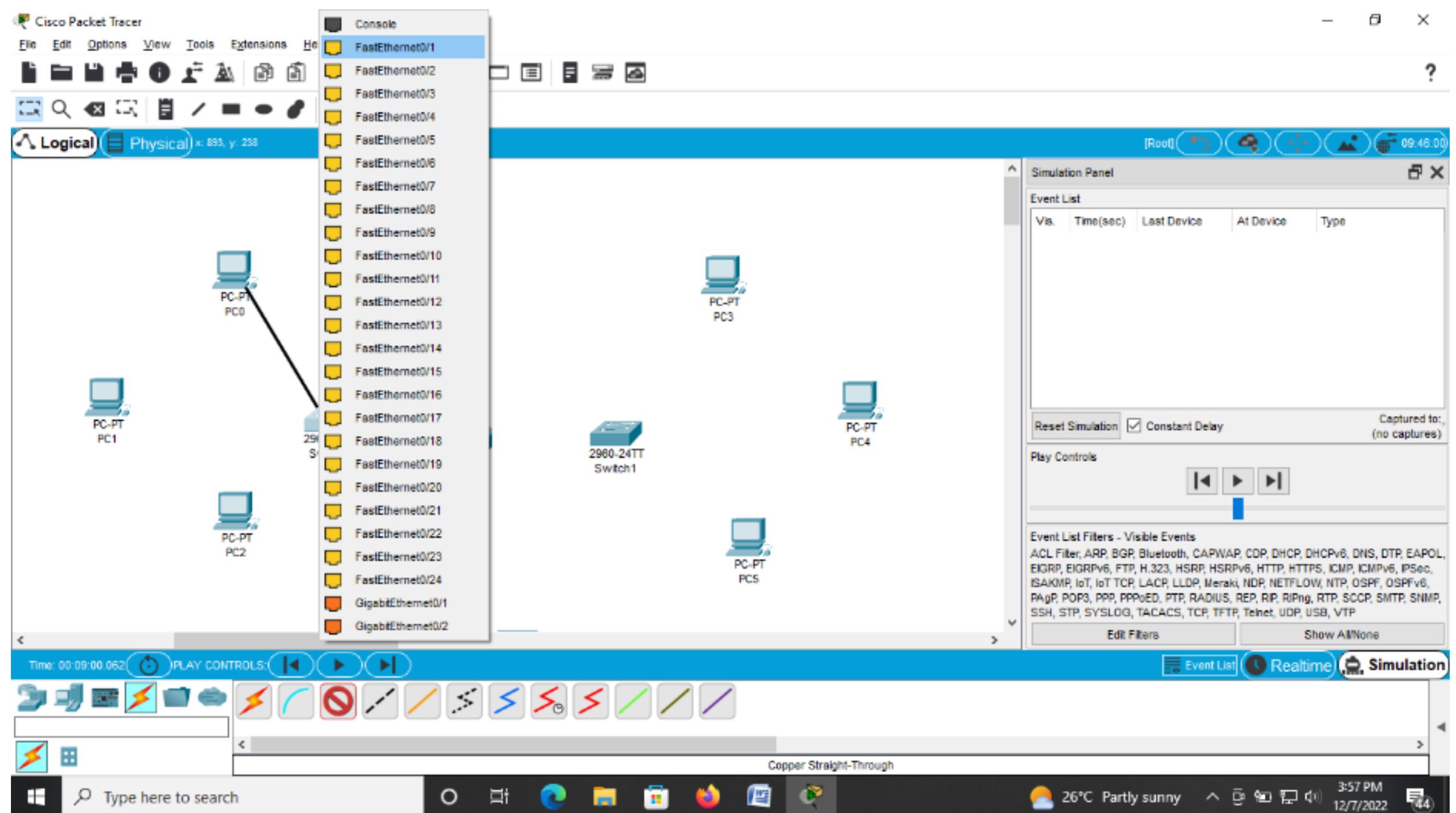


Connect all the devices

Select cable

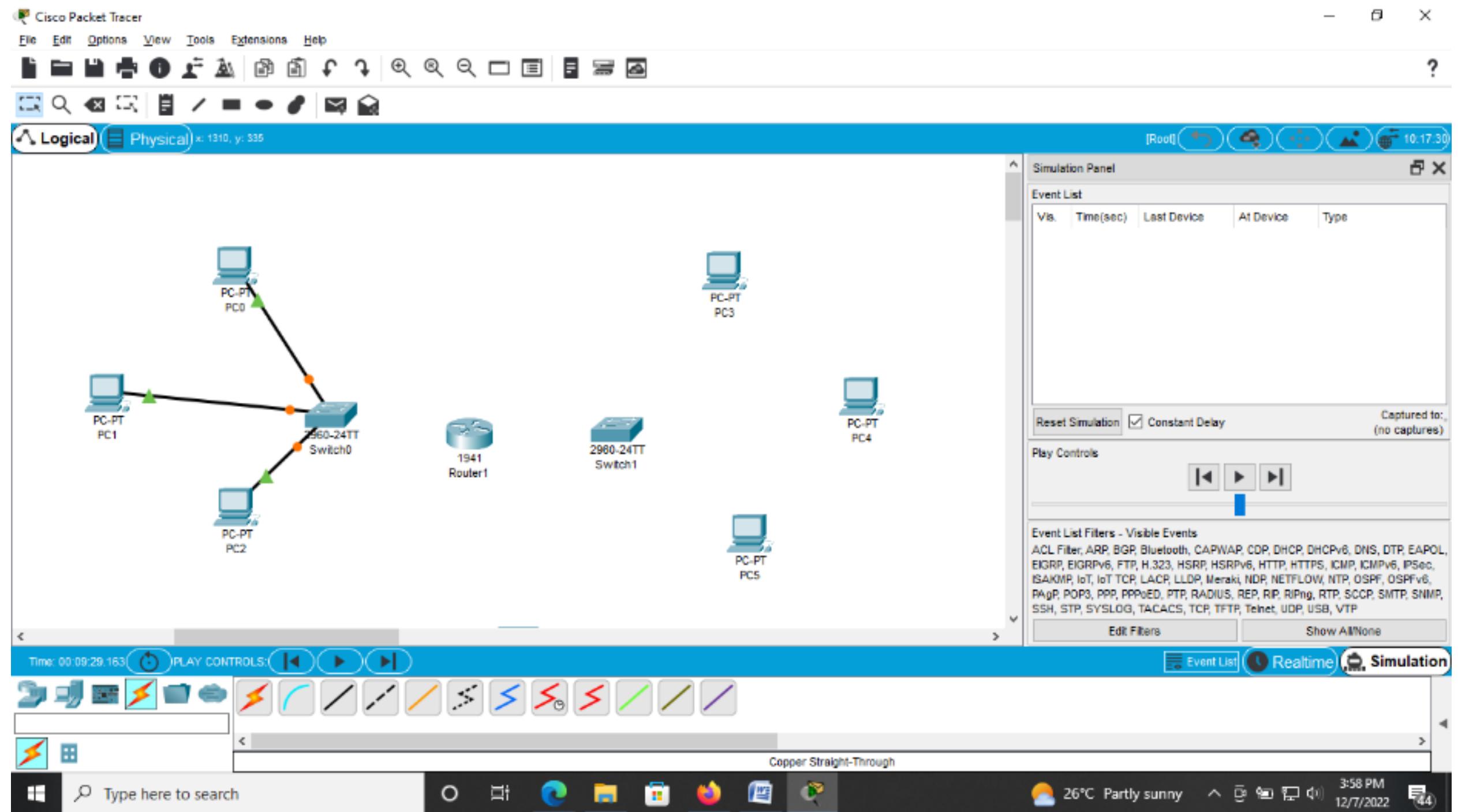


Fast Ethernet 0 to fast ethernet0/1



Fast Ethernet 0 to fast ethernet0/2

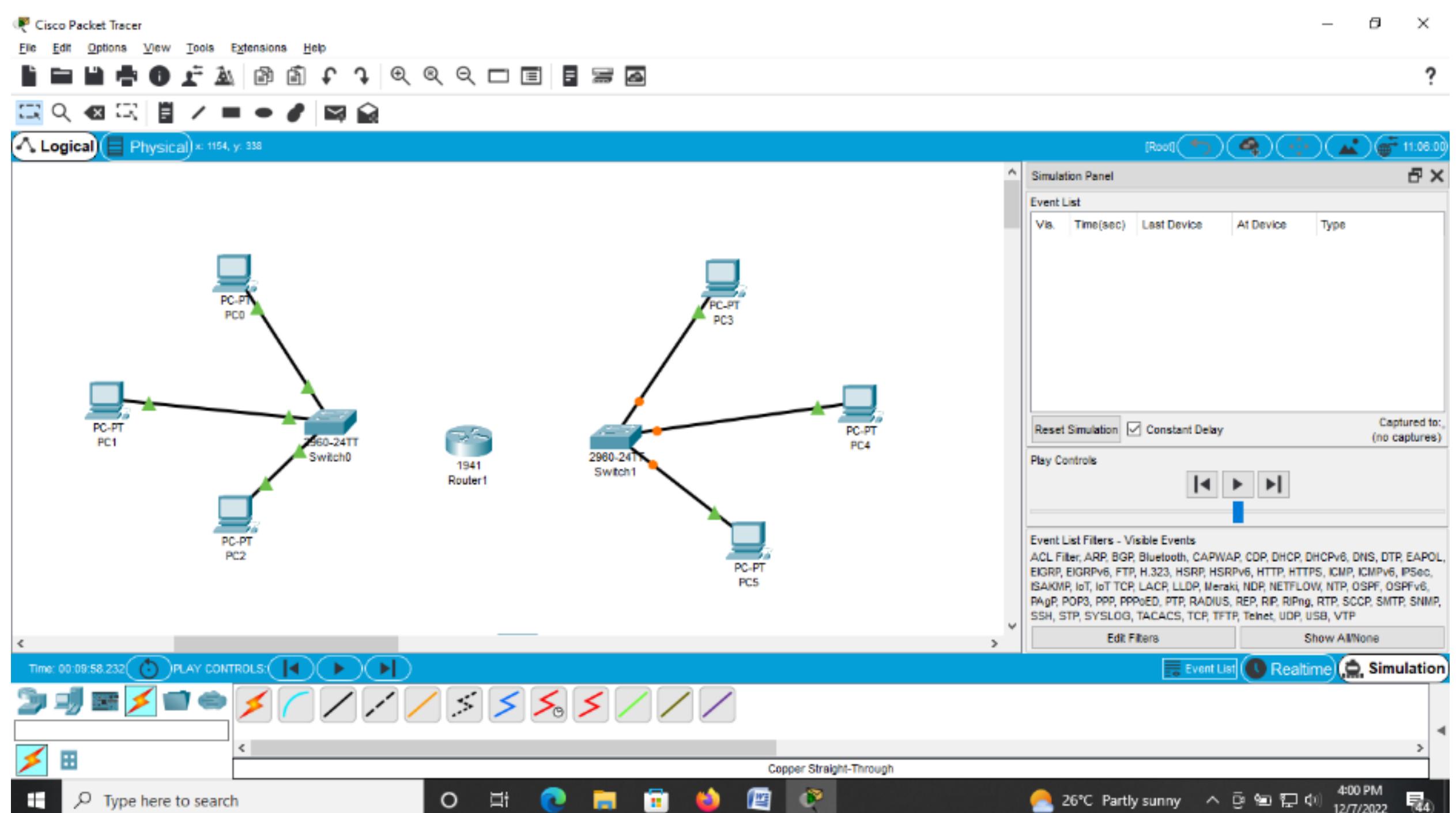
Fast Ethernet 0 to fast ethernet0/3



Fast Ethernet 0 to fast ethernet0/1

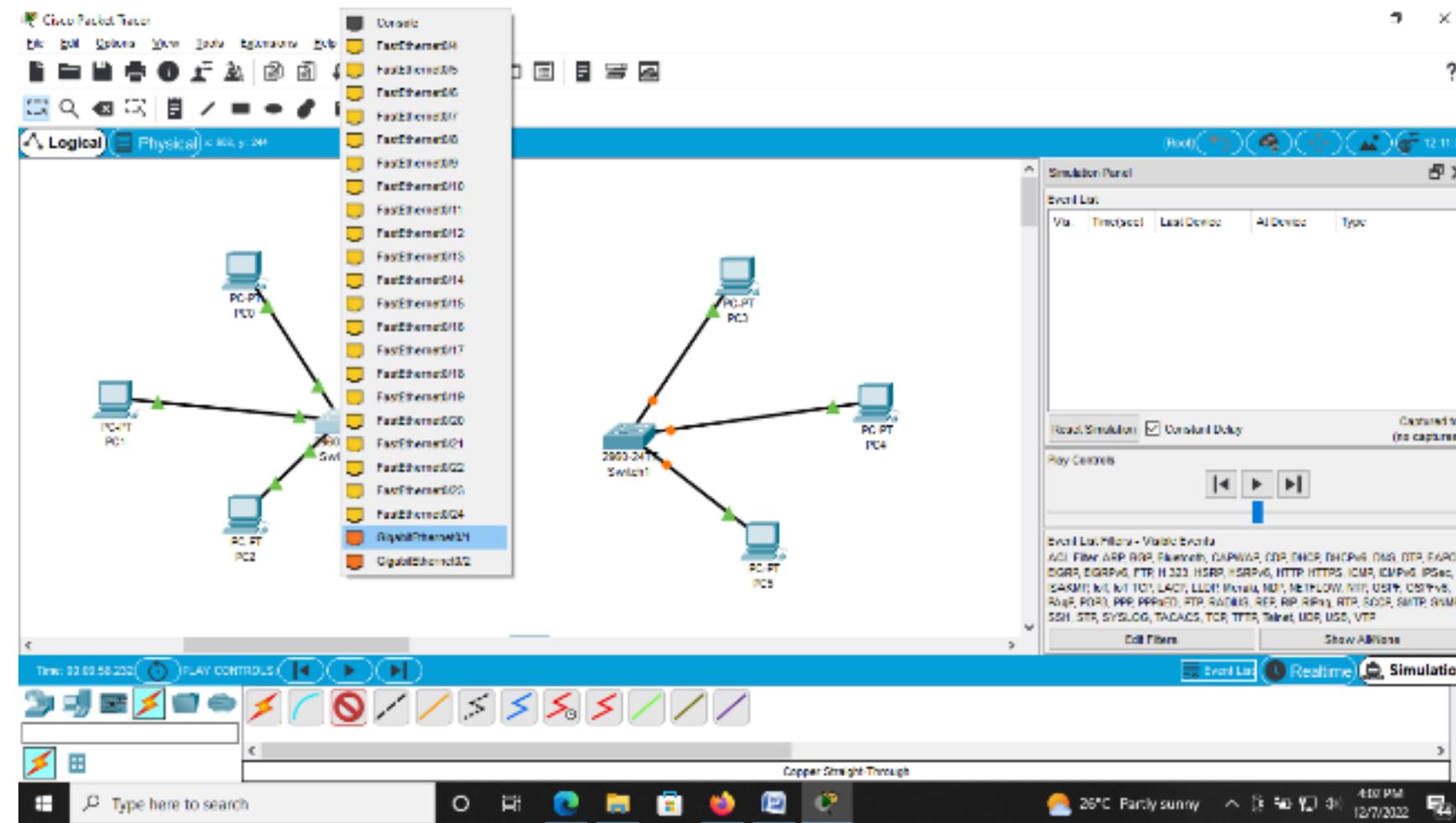
Fast Ethernet 0 to fast ethernet0/2

Fast Ethernet 0 to fast ethernet0/3



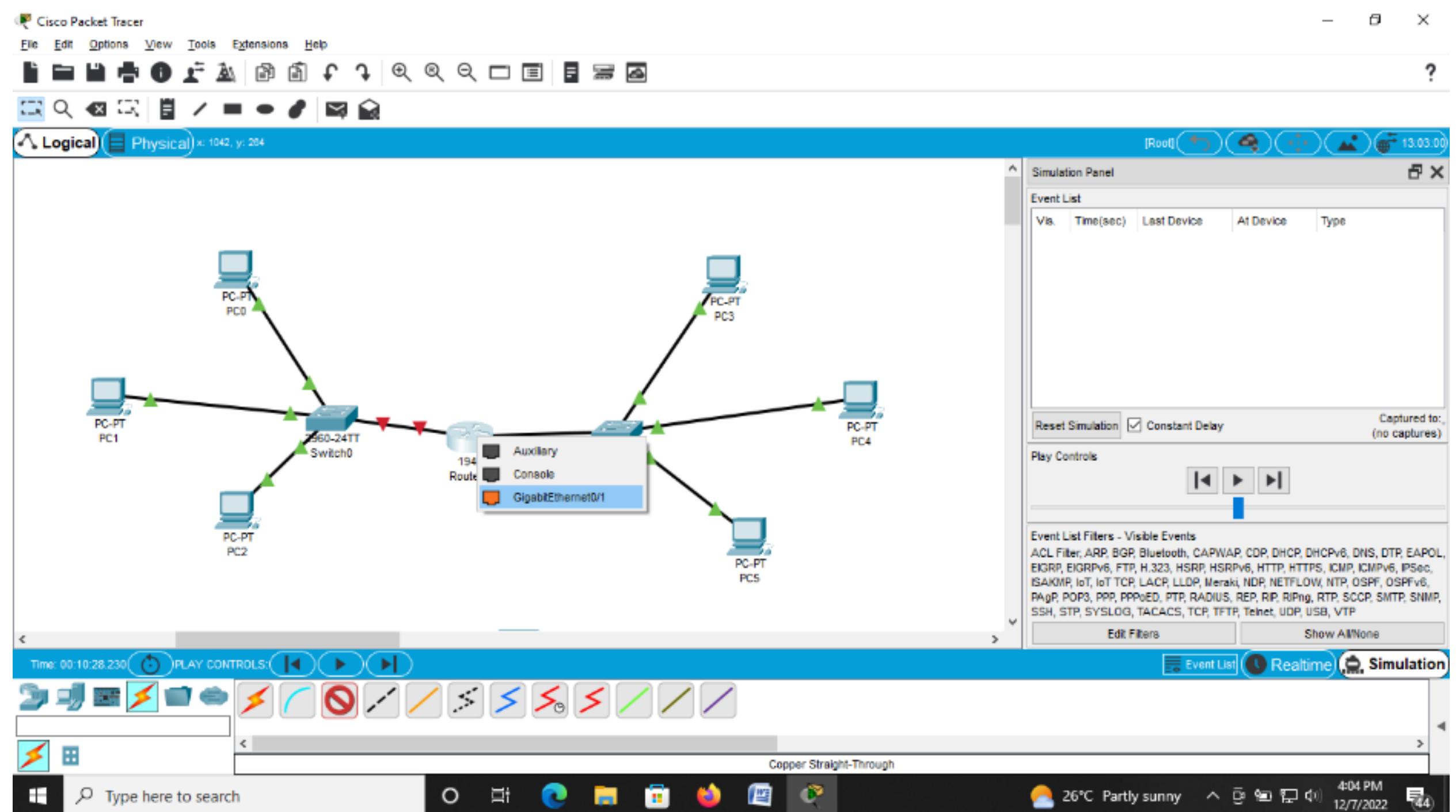
Connect switch to router

Connect switch to router gigabit Ethernet 0/1 to gigabit Ethernet 0/0



gigabit Ethernet 0/1 from switch side

Ethernet 0/1 to gigabit Ethernet 0/1 towards routerside



Topology is ready

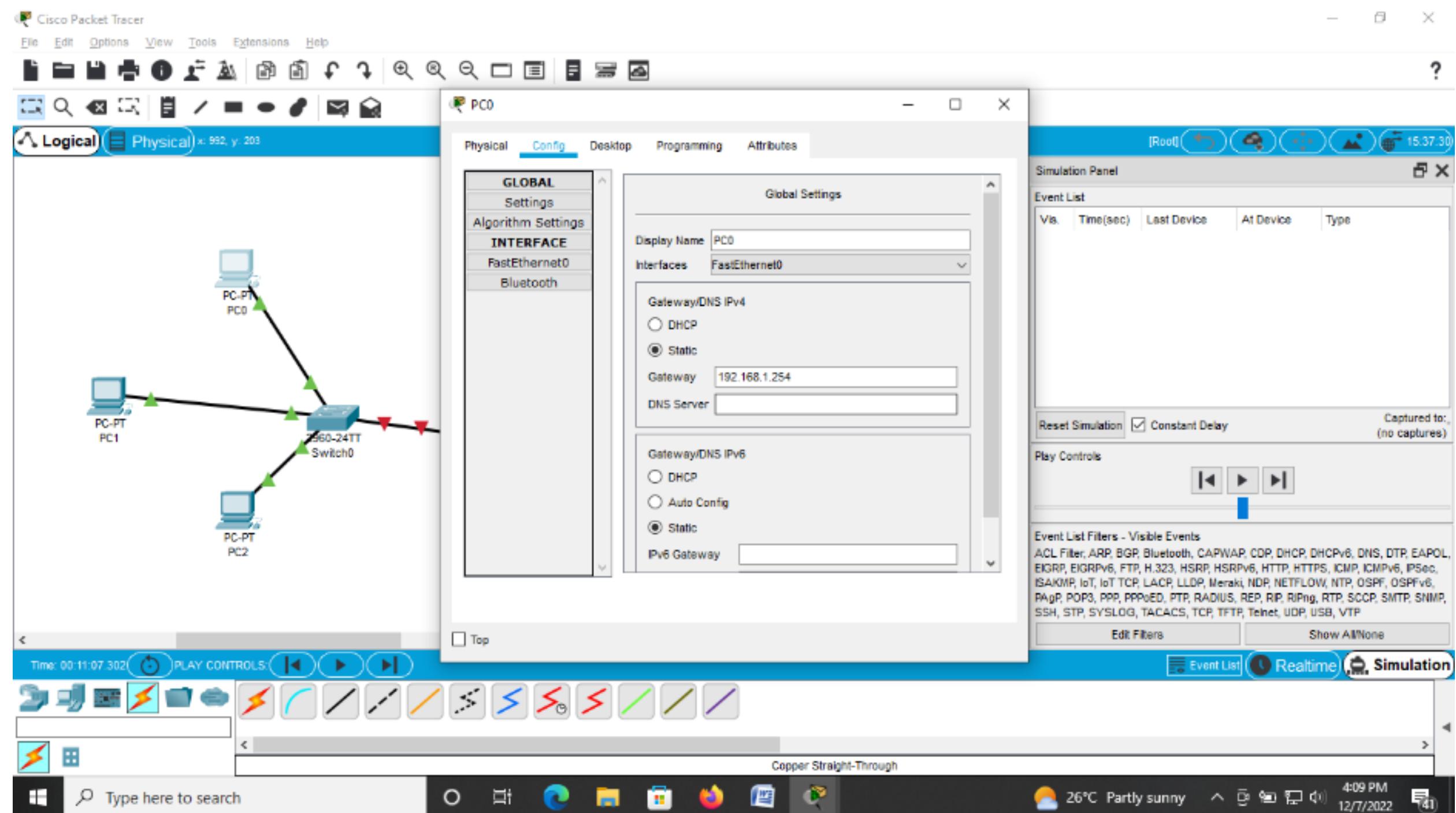
Start configure the devices

Rightclick on the PC and select configure

Class A range I will give

Gateway can be

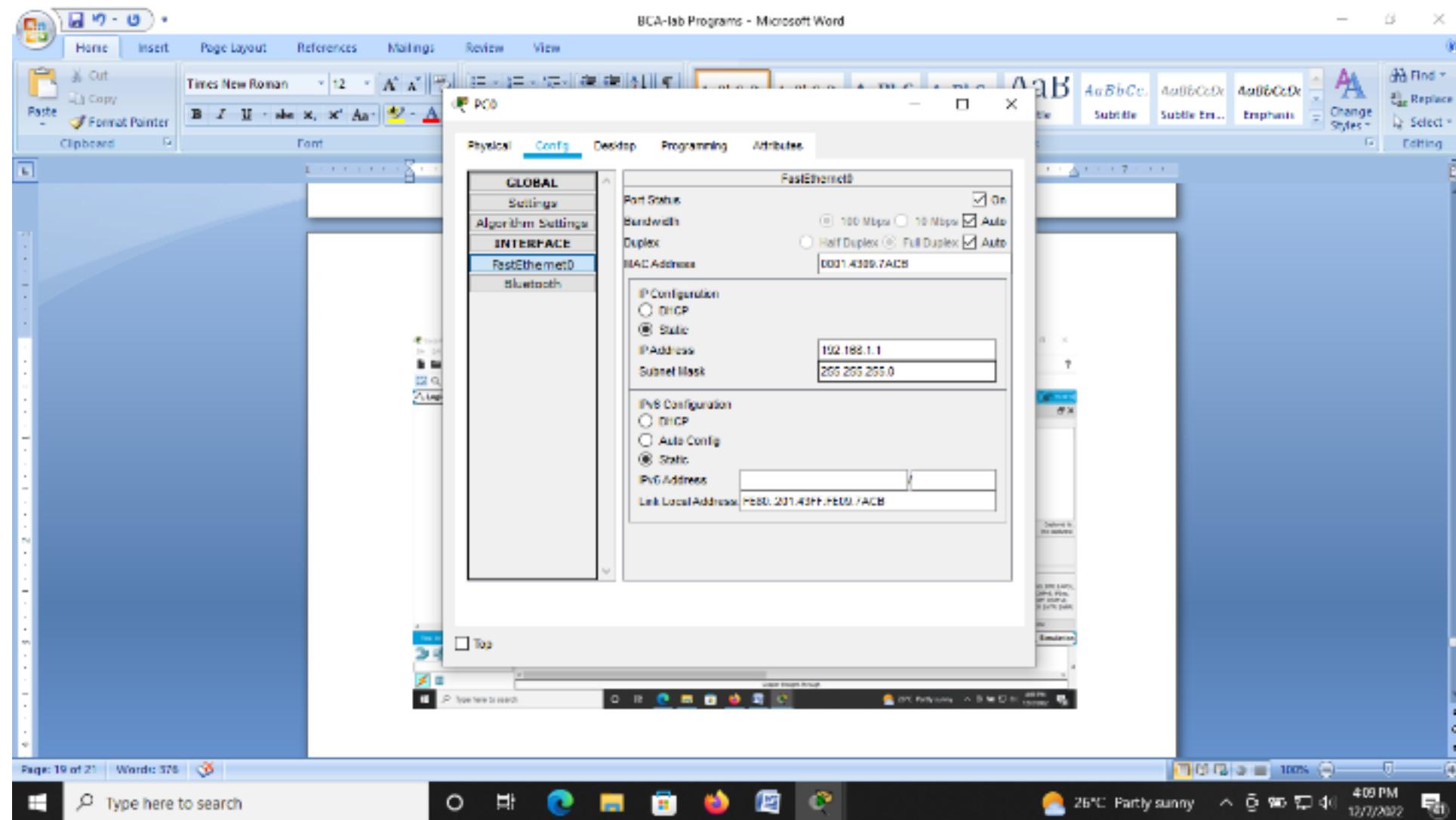
192.168.1.254



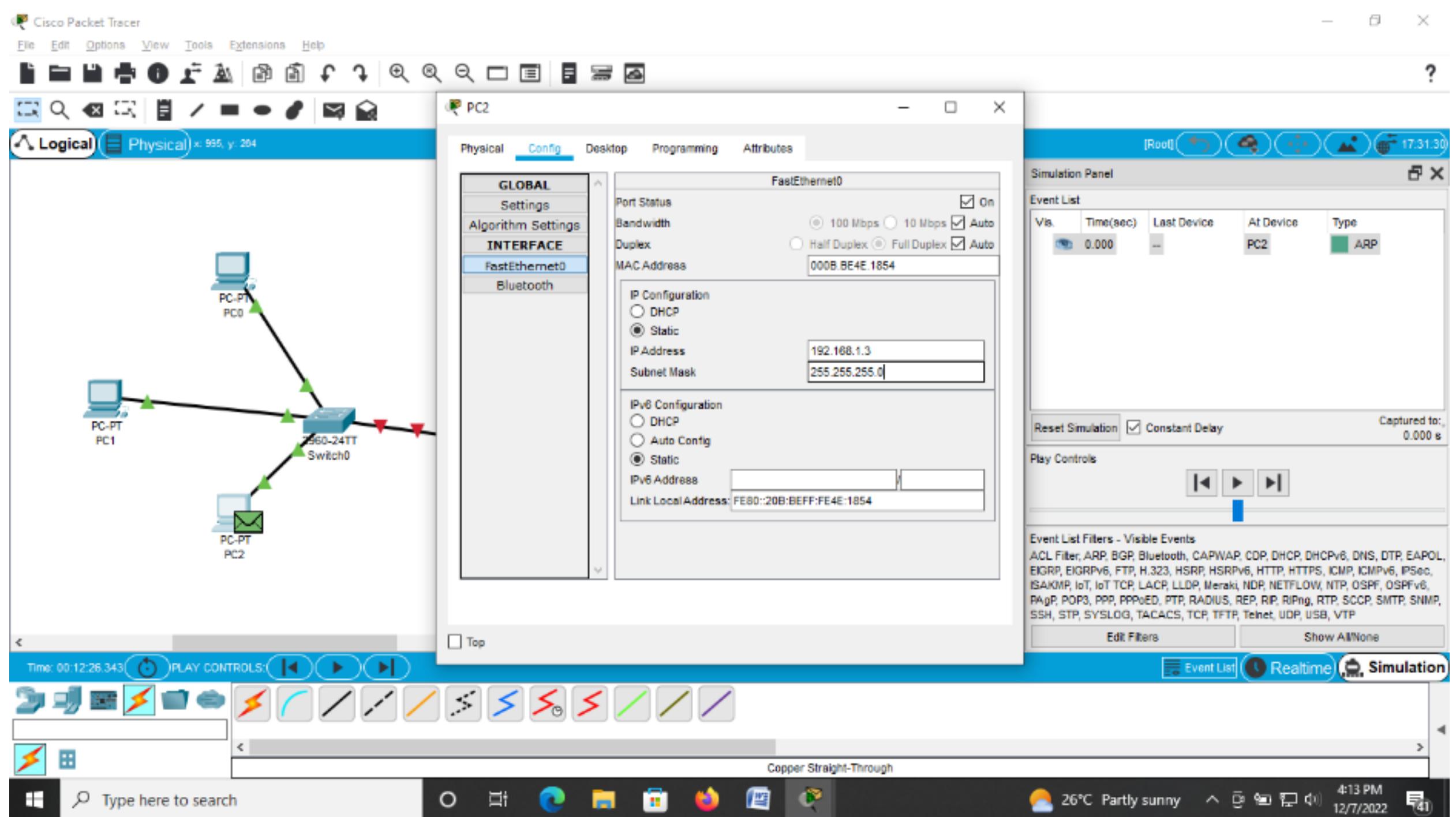
Then select fast Ethernet

IP address is 192.168.1.1

Subnet mask by default appear



Repeat the same steps to all the PC from 1 to 6



Class B range will give to another network

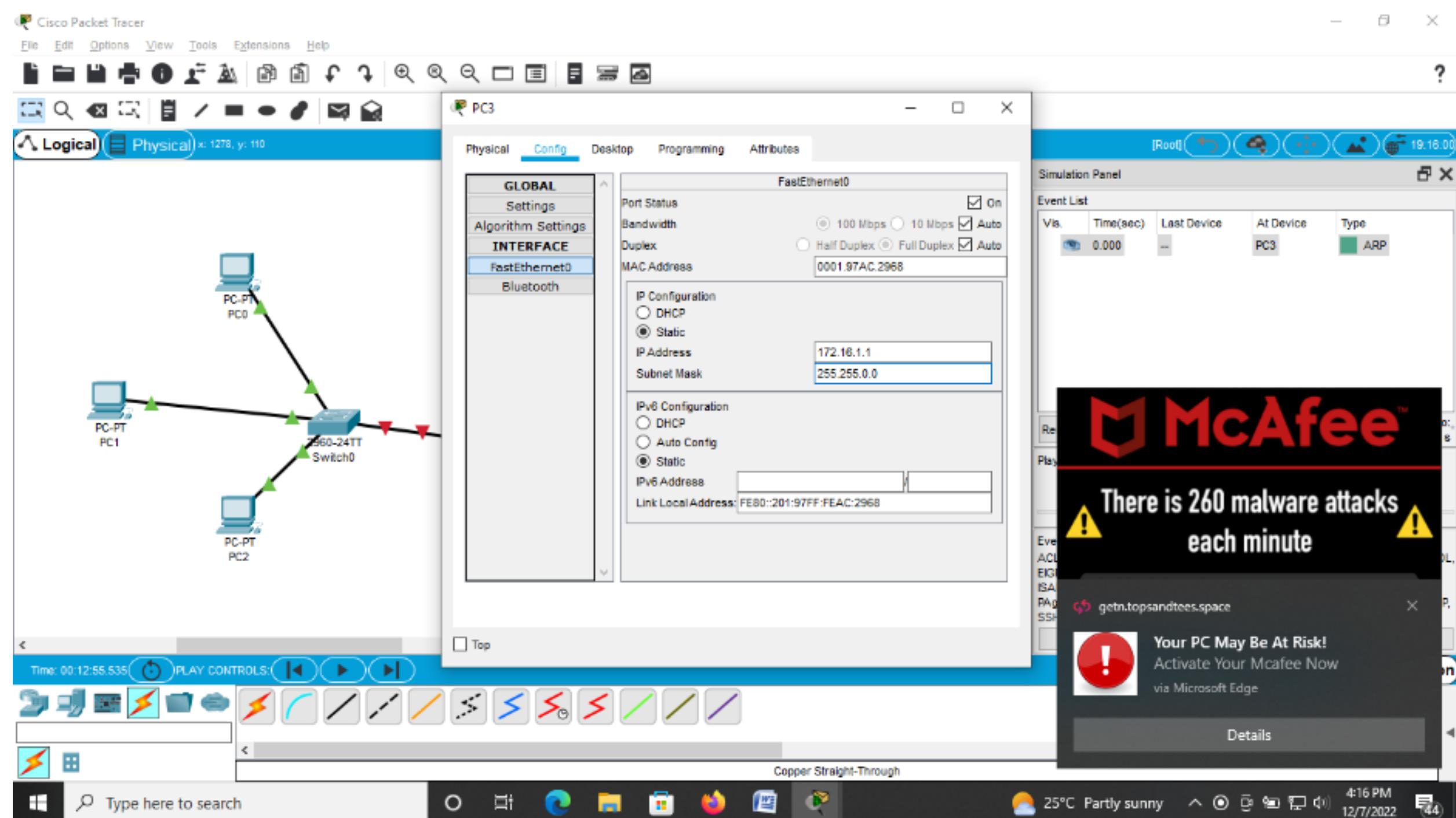
Gateway can be

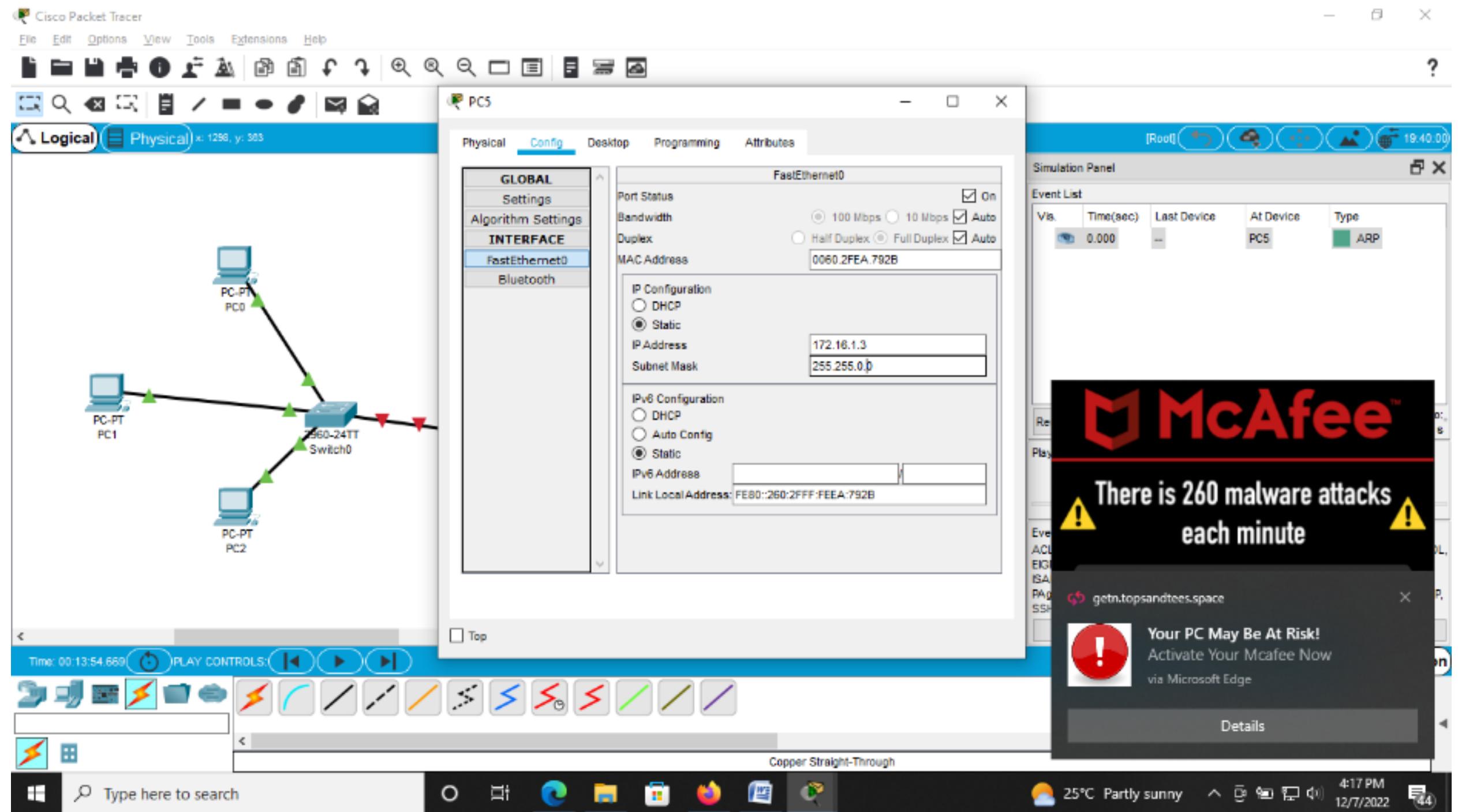
172.16.1.254

IP address is 172.16.1.1

172.16.1.2

172.16.1.3

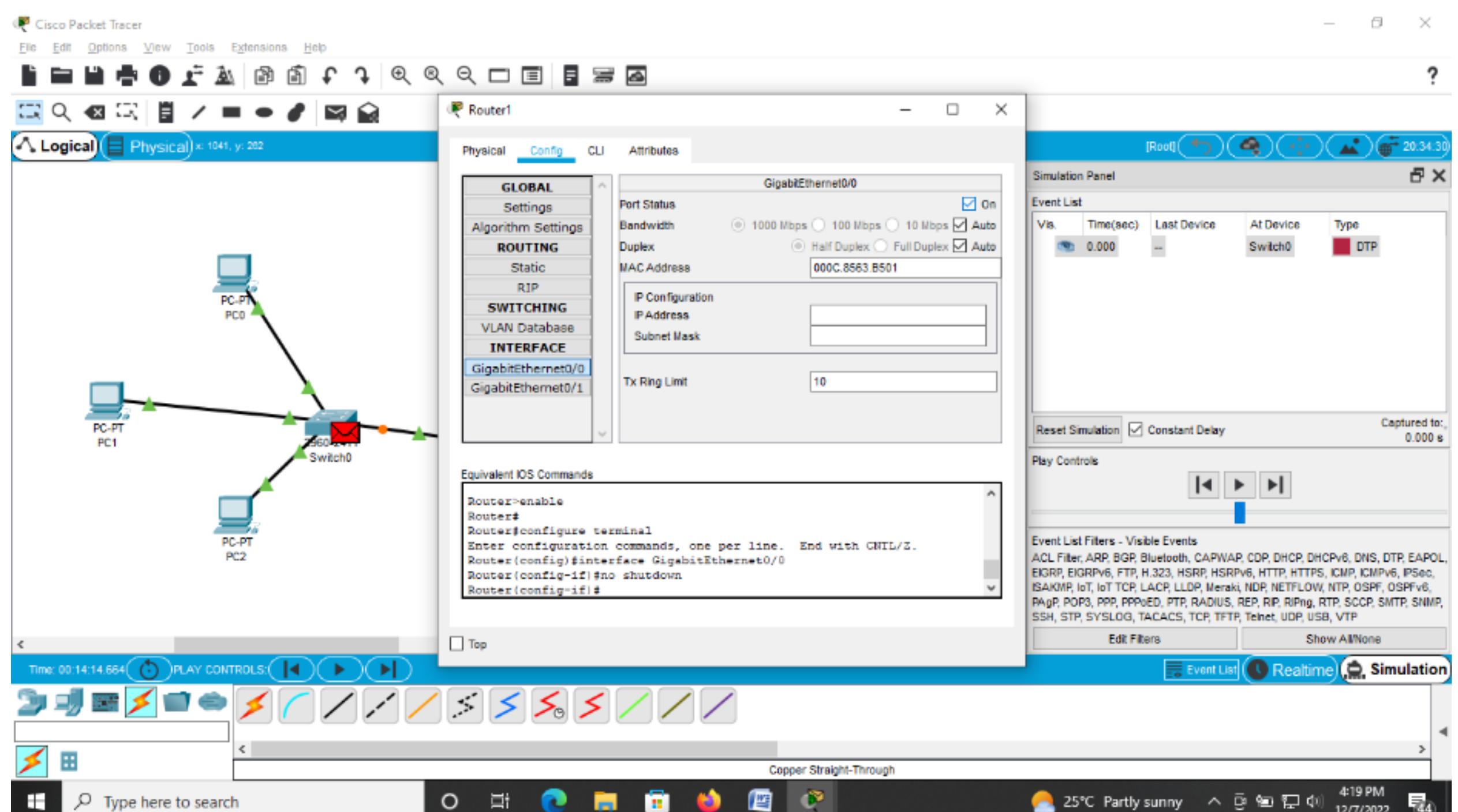
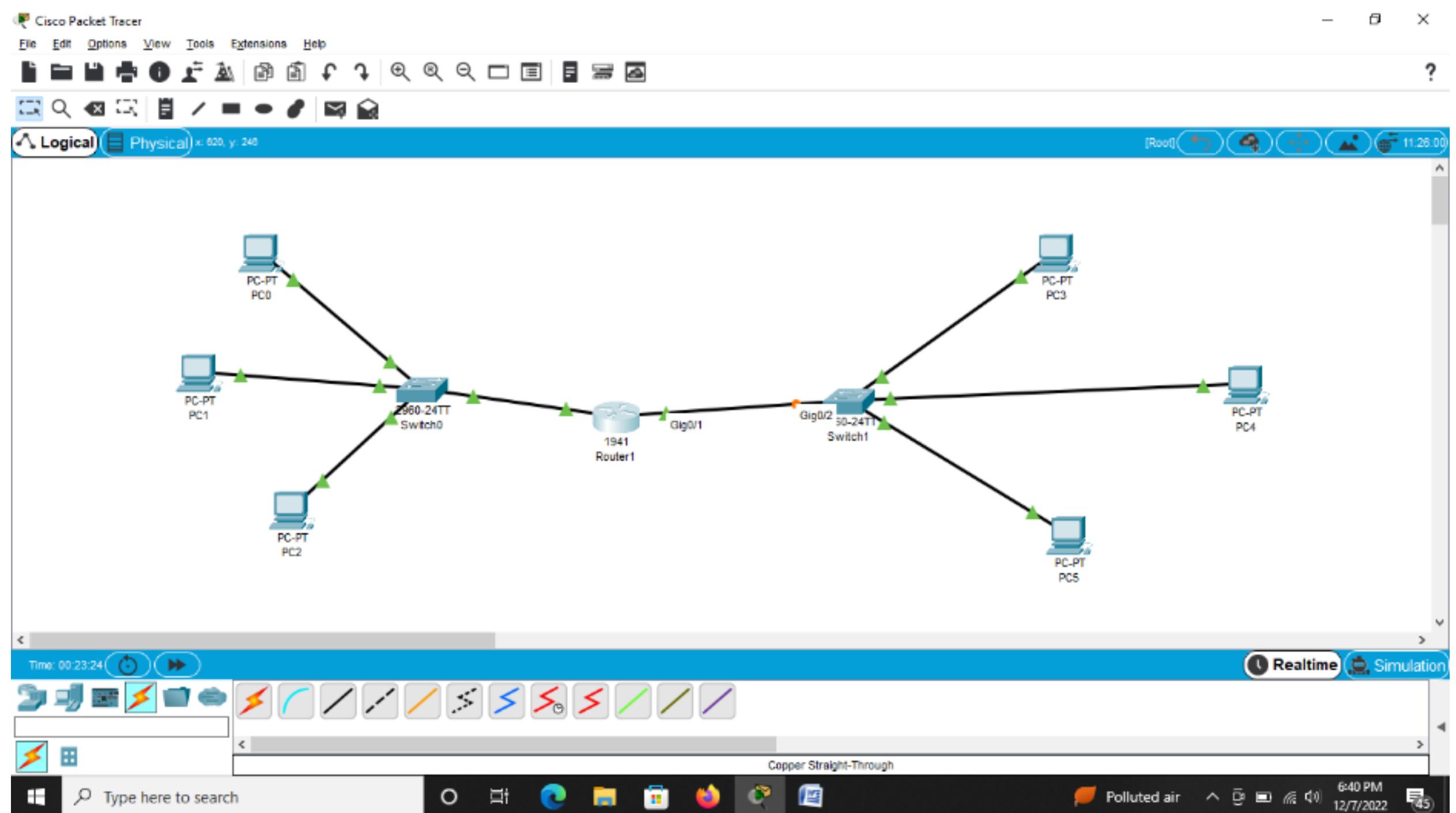




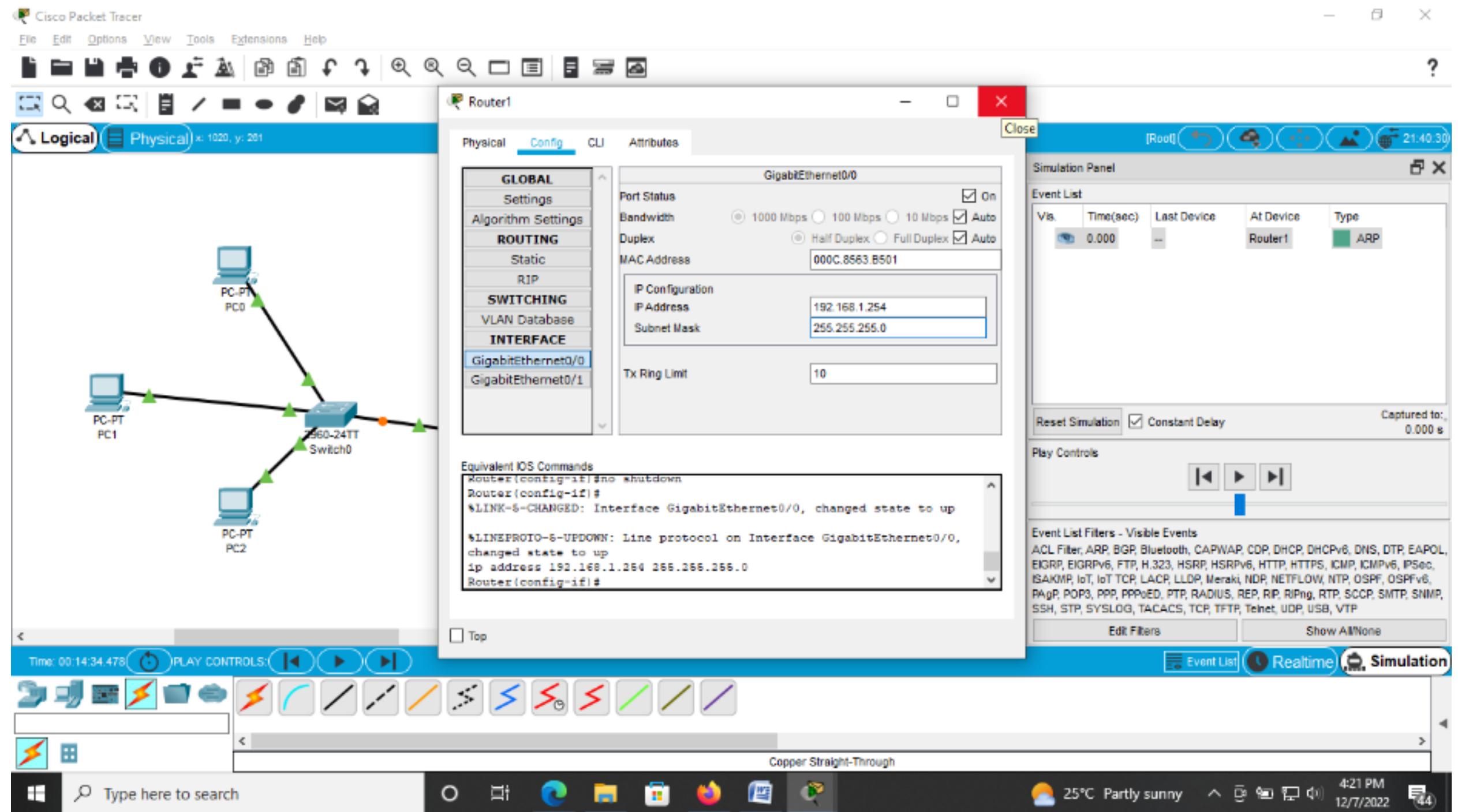
Configure the router

Config--> top-right corner select on

If the topology is correct all small icons turned into green color



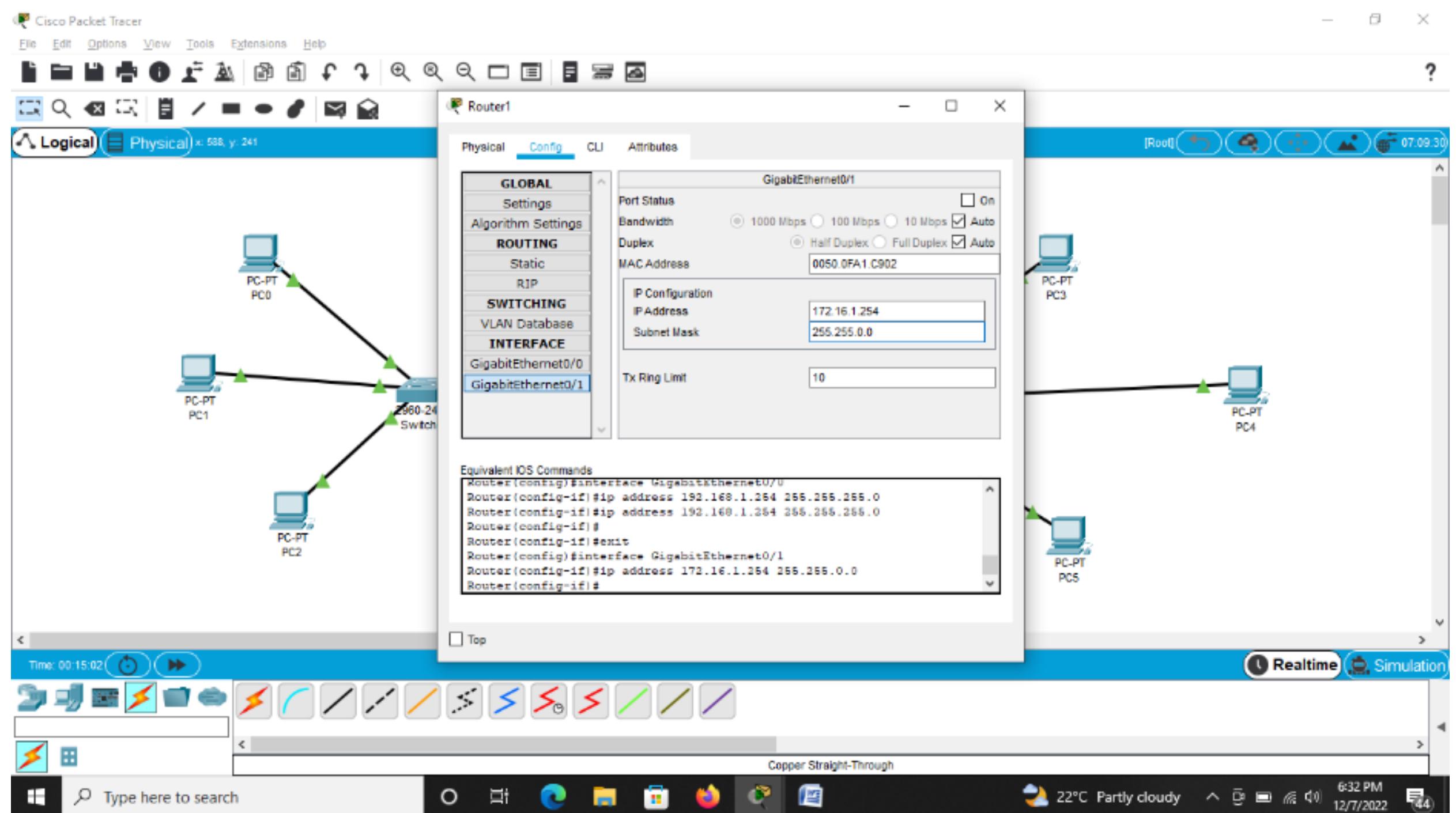
connect router to switch interface as ip address 192.168.1.254



<https://www.bing.com/videos/search?q=Connecting+two+lan+through+Cisco+packet+Tracer+-+YouTube&view=detail&mid=760A2743EB61D2CCEFEC760A2743EB61D2CCEFEC&FORM=VIRE>

Connect router to one more switch as

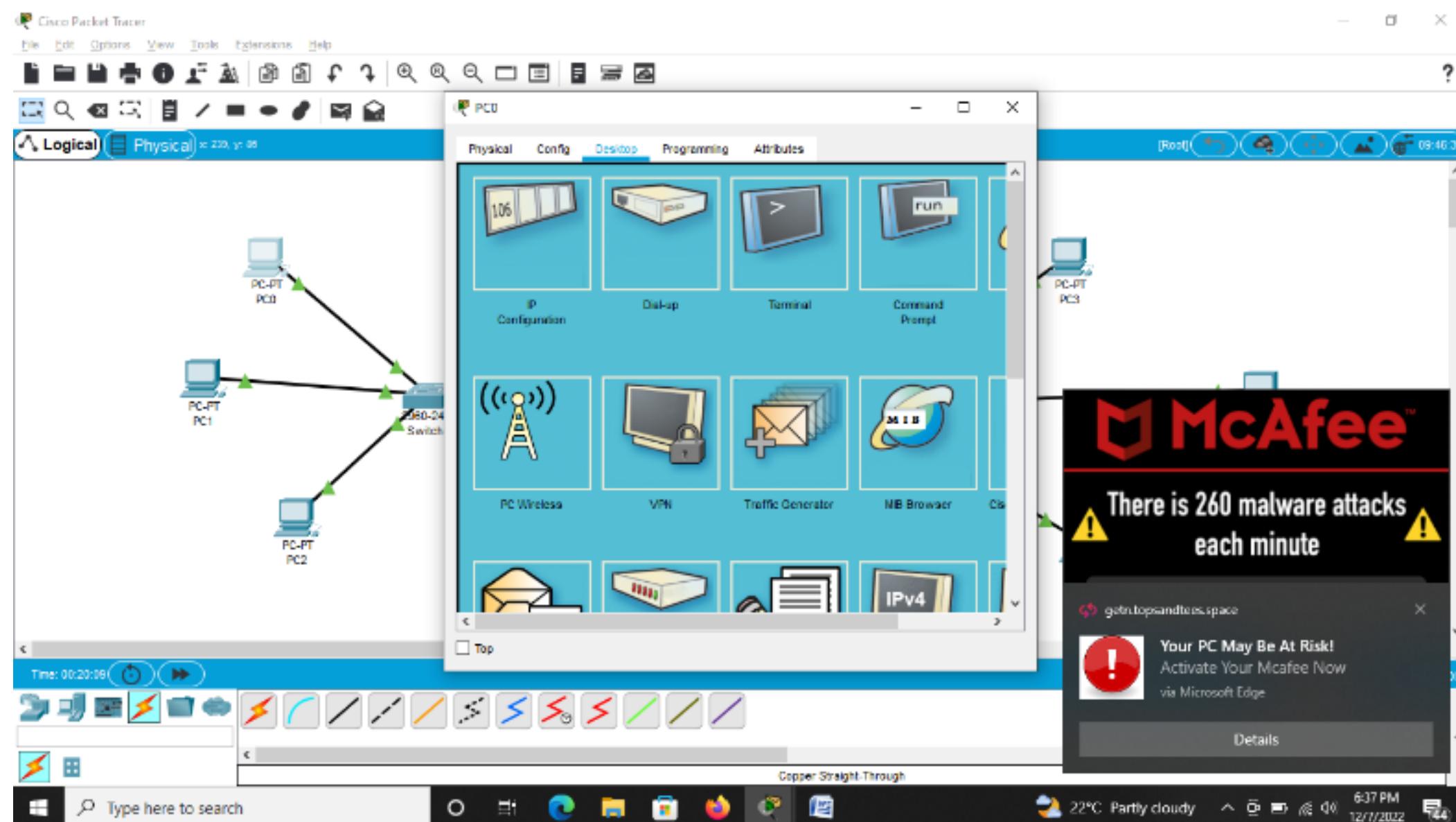
Select Ethernet gigabyte0/1 and type the ip address as shown below

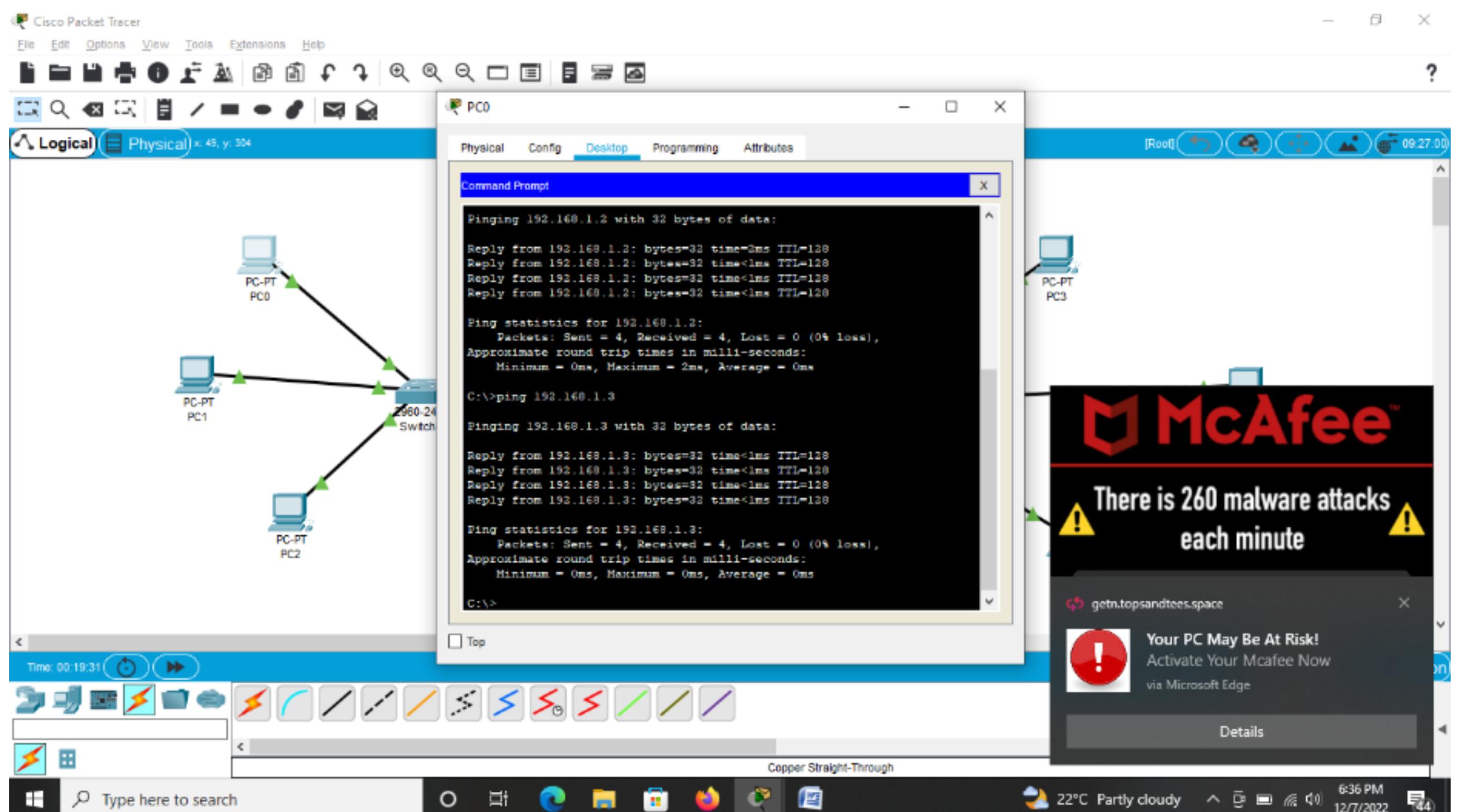
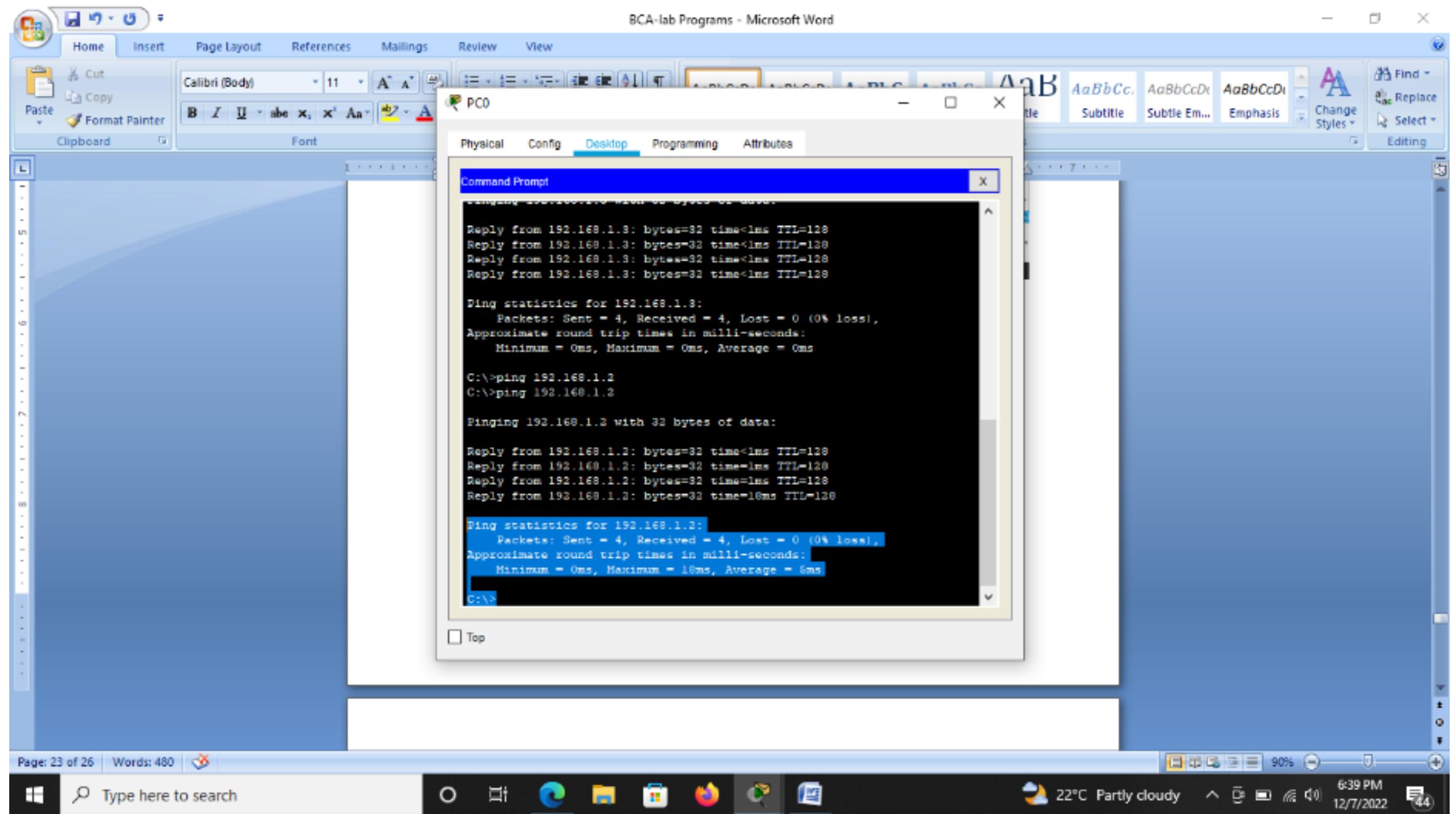


Click on the top of pc1

Select desktop—> command prompt—>run

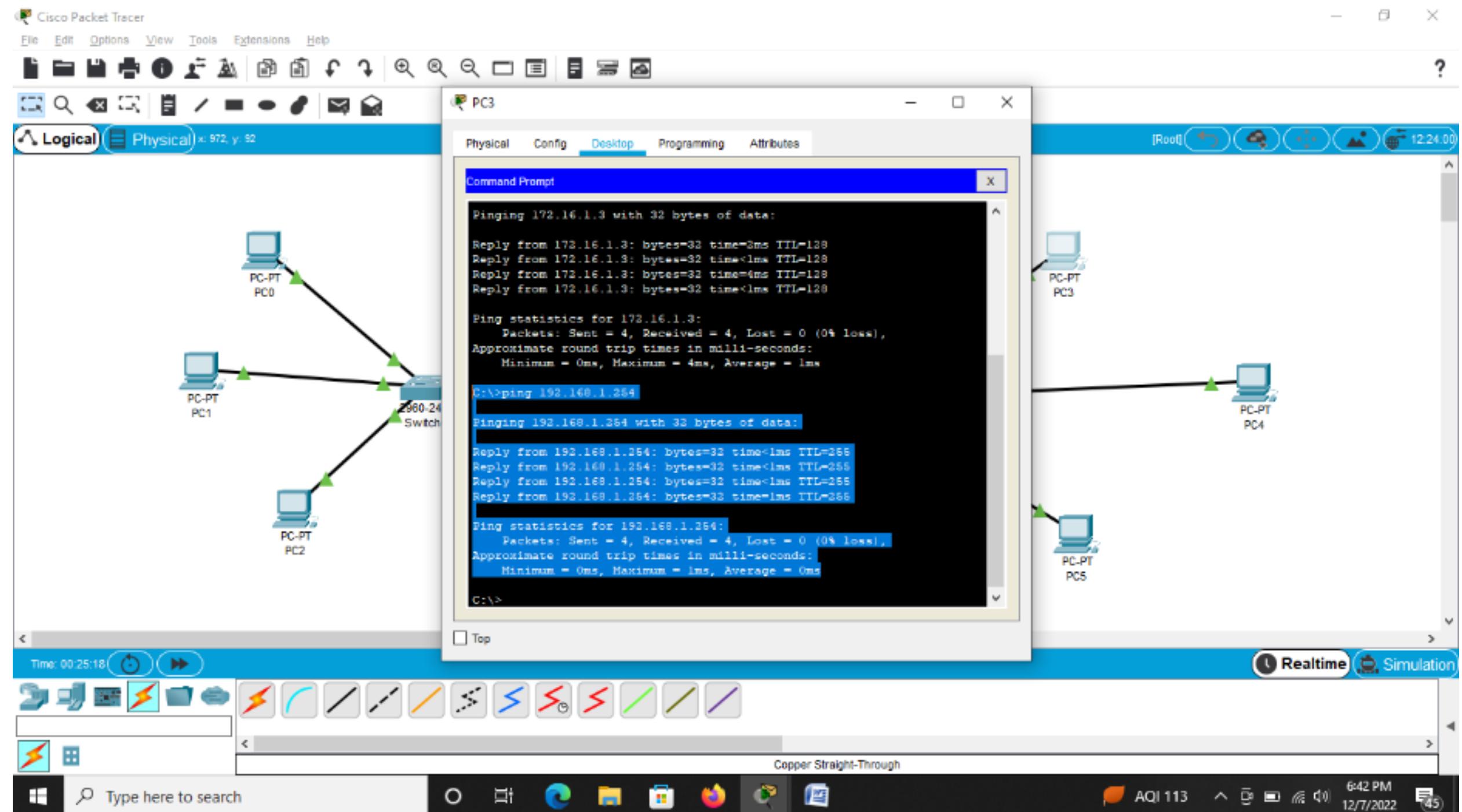
C:\>ping 192.168.1.2





Lan connection is working from one network to another network

OUTPUT:



Program 16: Configure VPN using Packet Tracer/GNS3

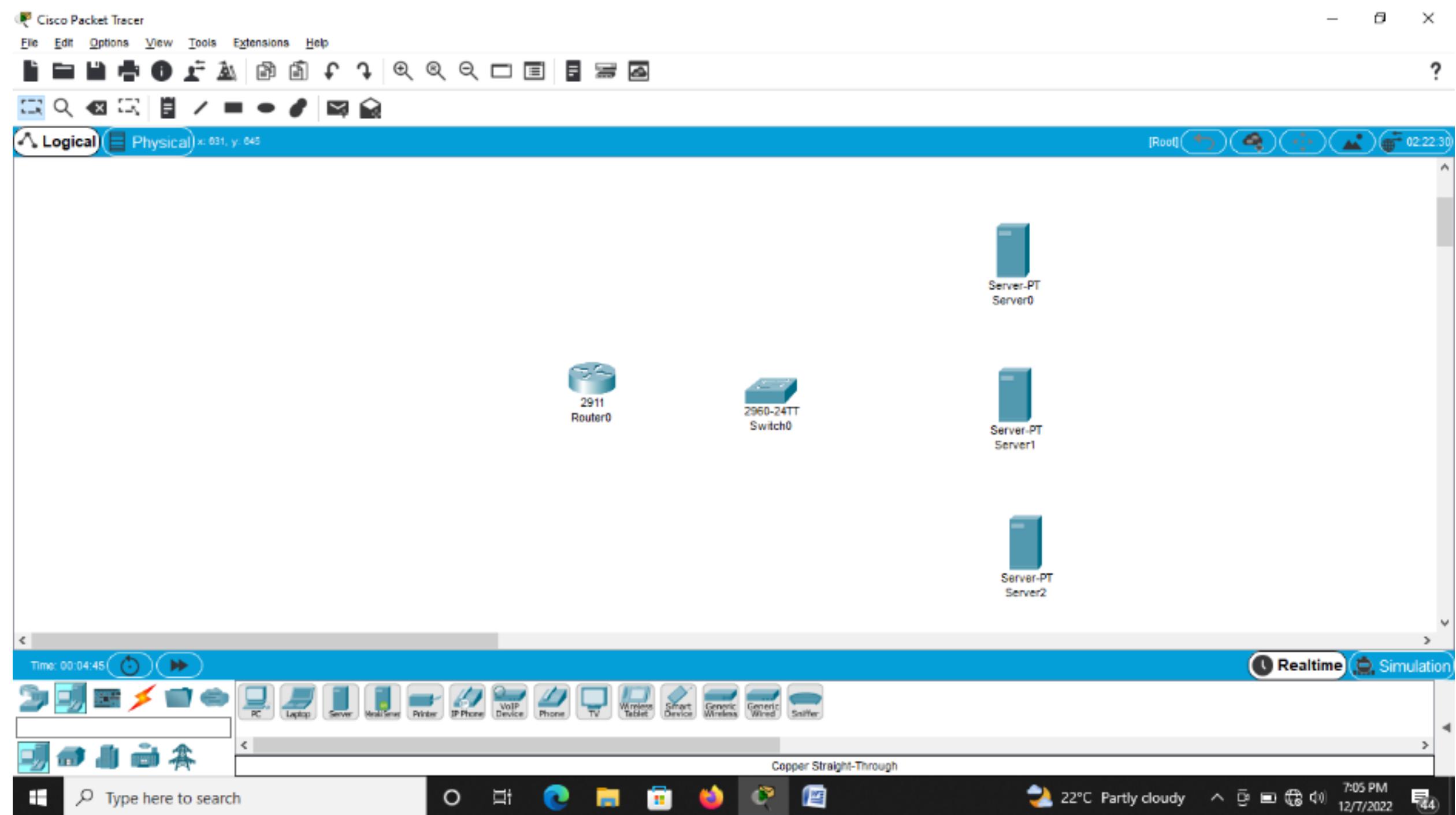
Components needed is

1 router (2911)

1 switch

3 servers

1PC



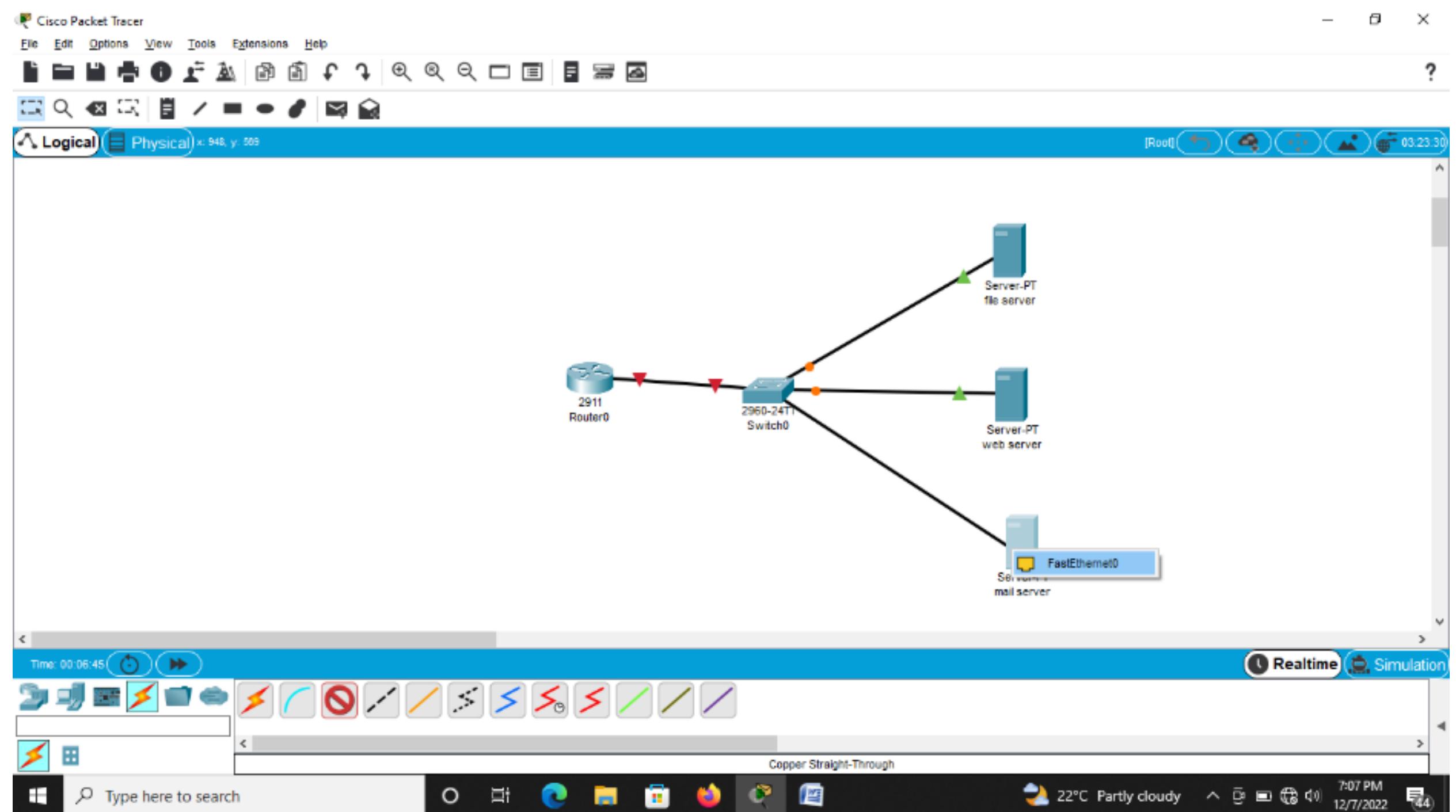
Connect all the devices and rename the server name as

File server

Web server

Mail server

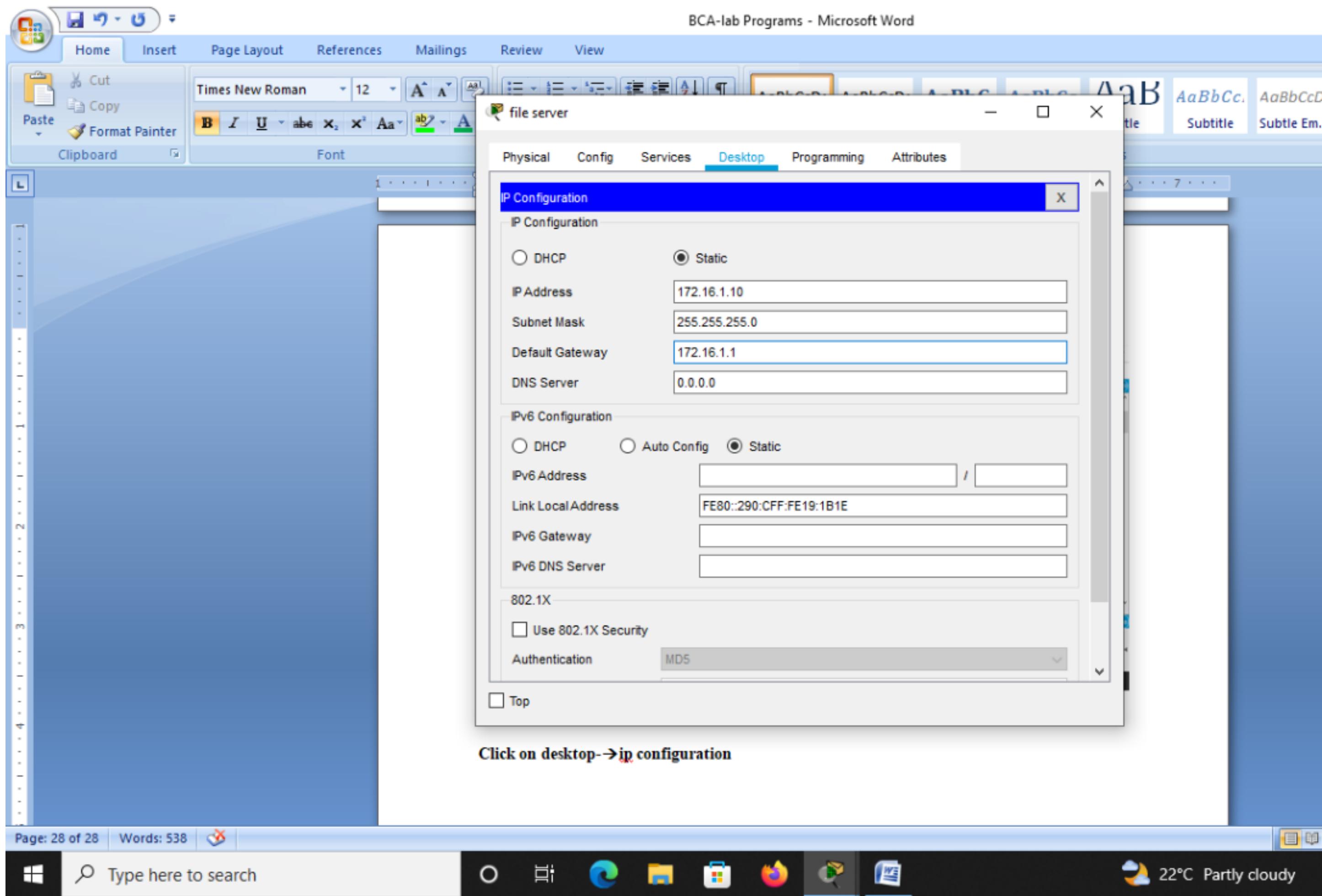
Connectivity



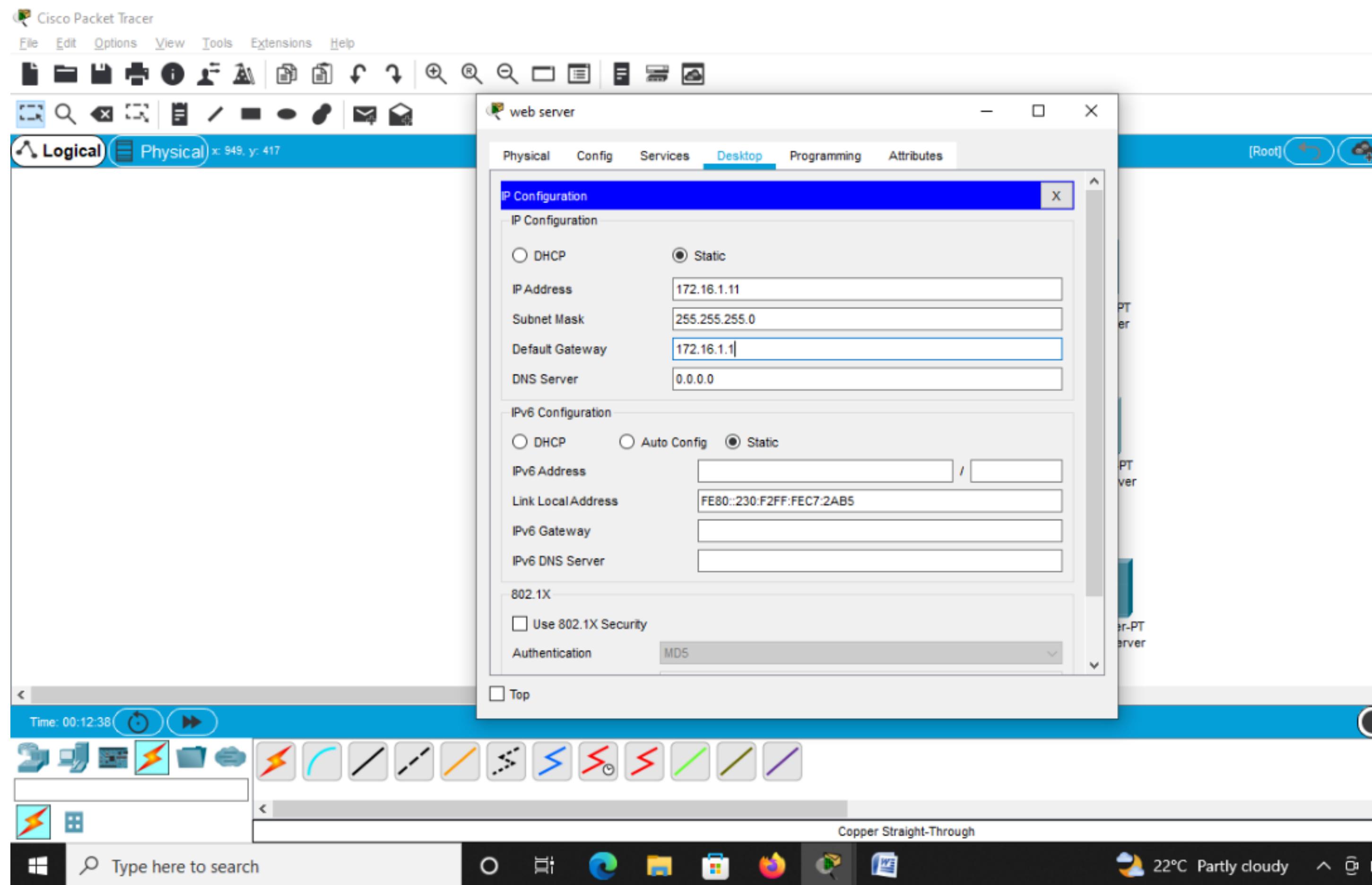
On the server

Click on desktop->ip configuration

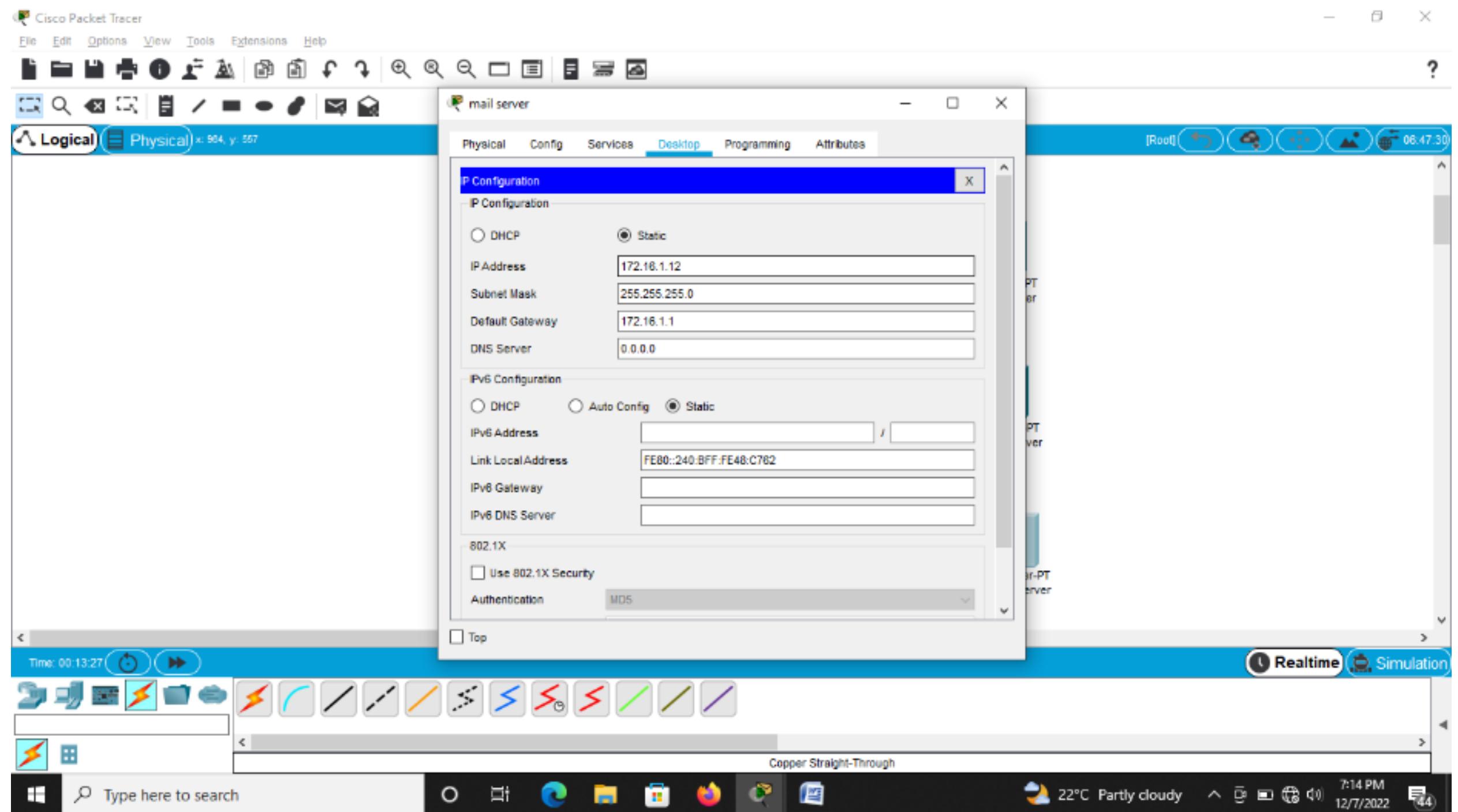
1st server



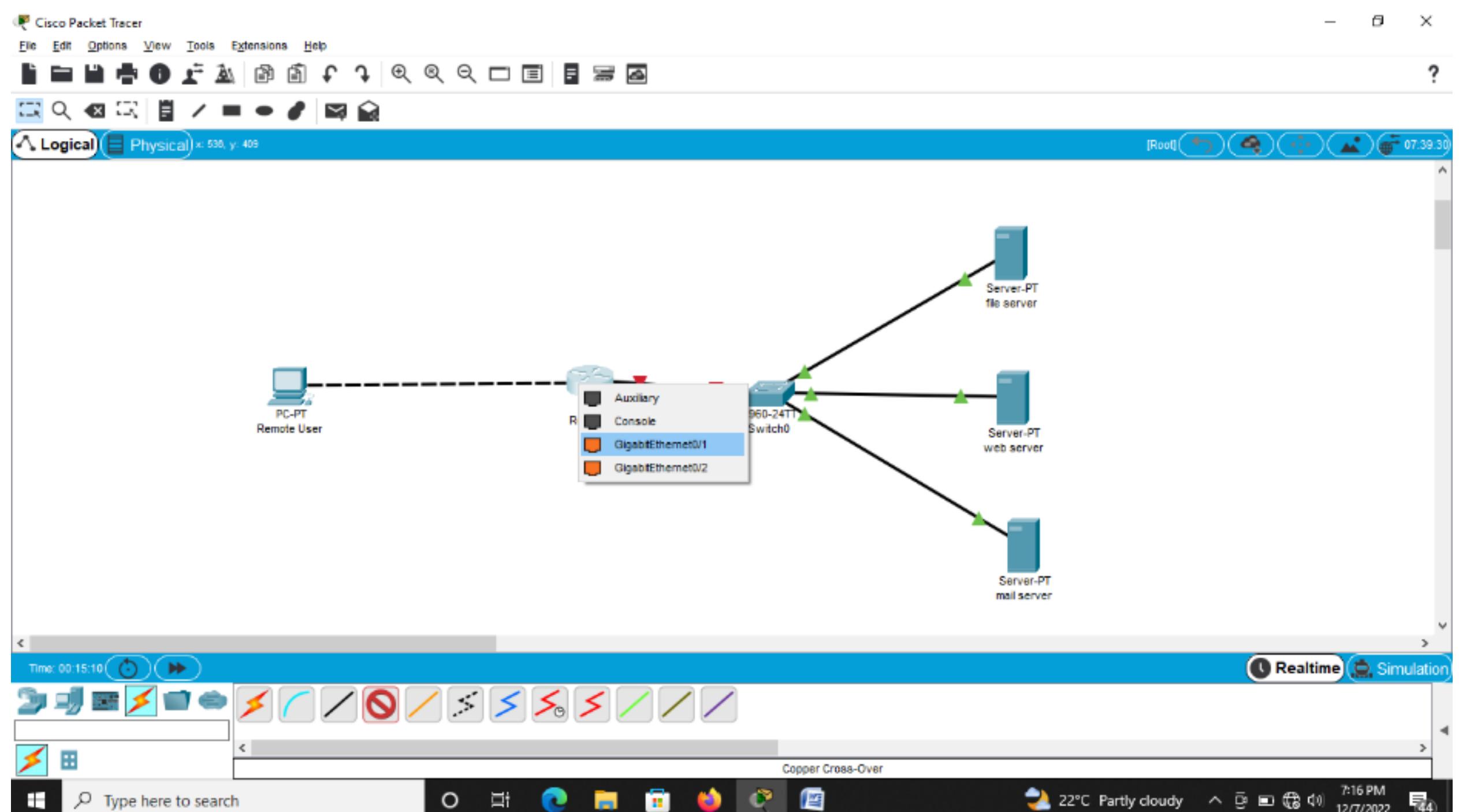
2nd server



3rd server

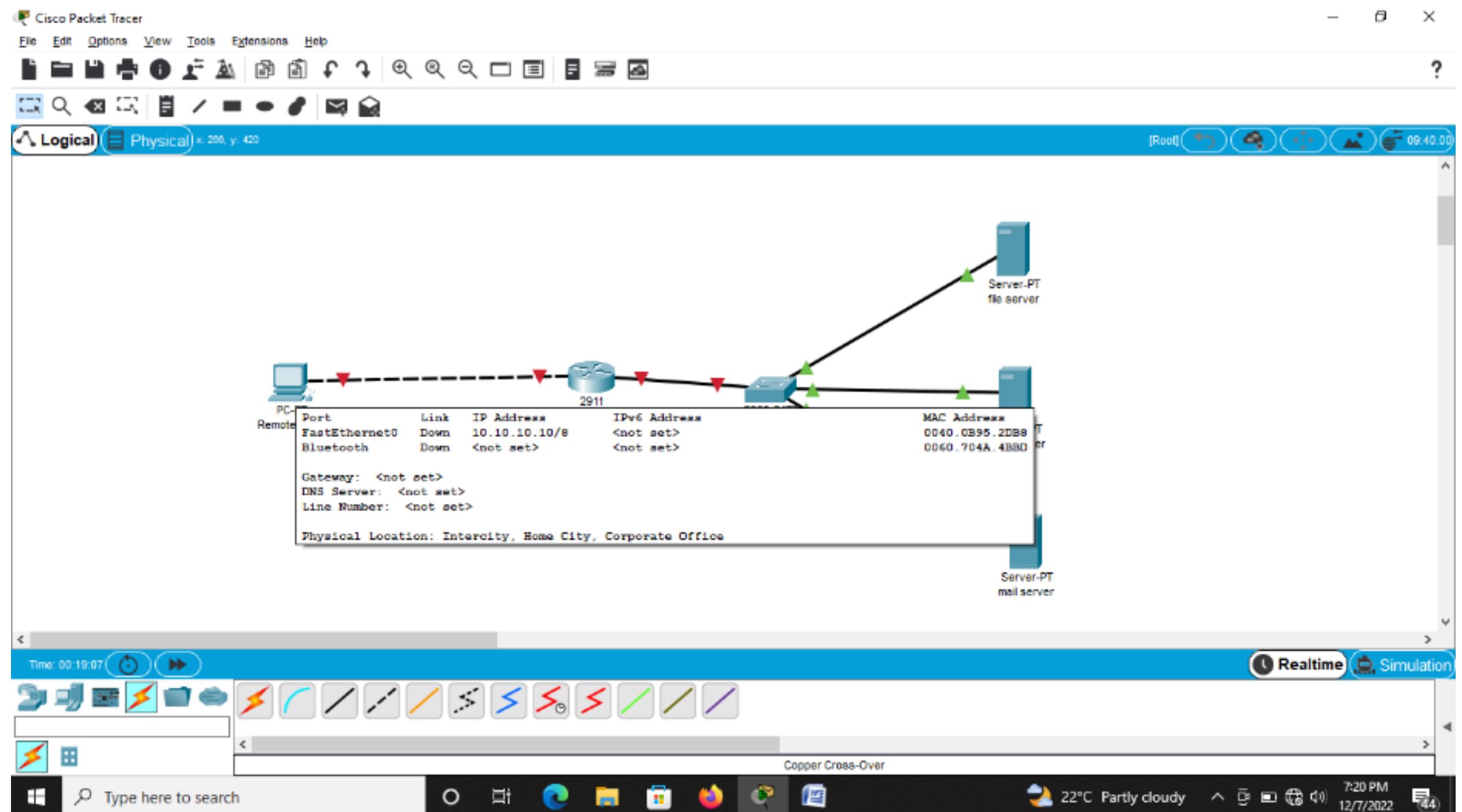


Take a PC and connect to router



Set the IP to the pc as 10.10.10.10

And router as 10.10.10.11



Assign ip to the router

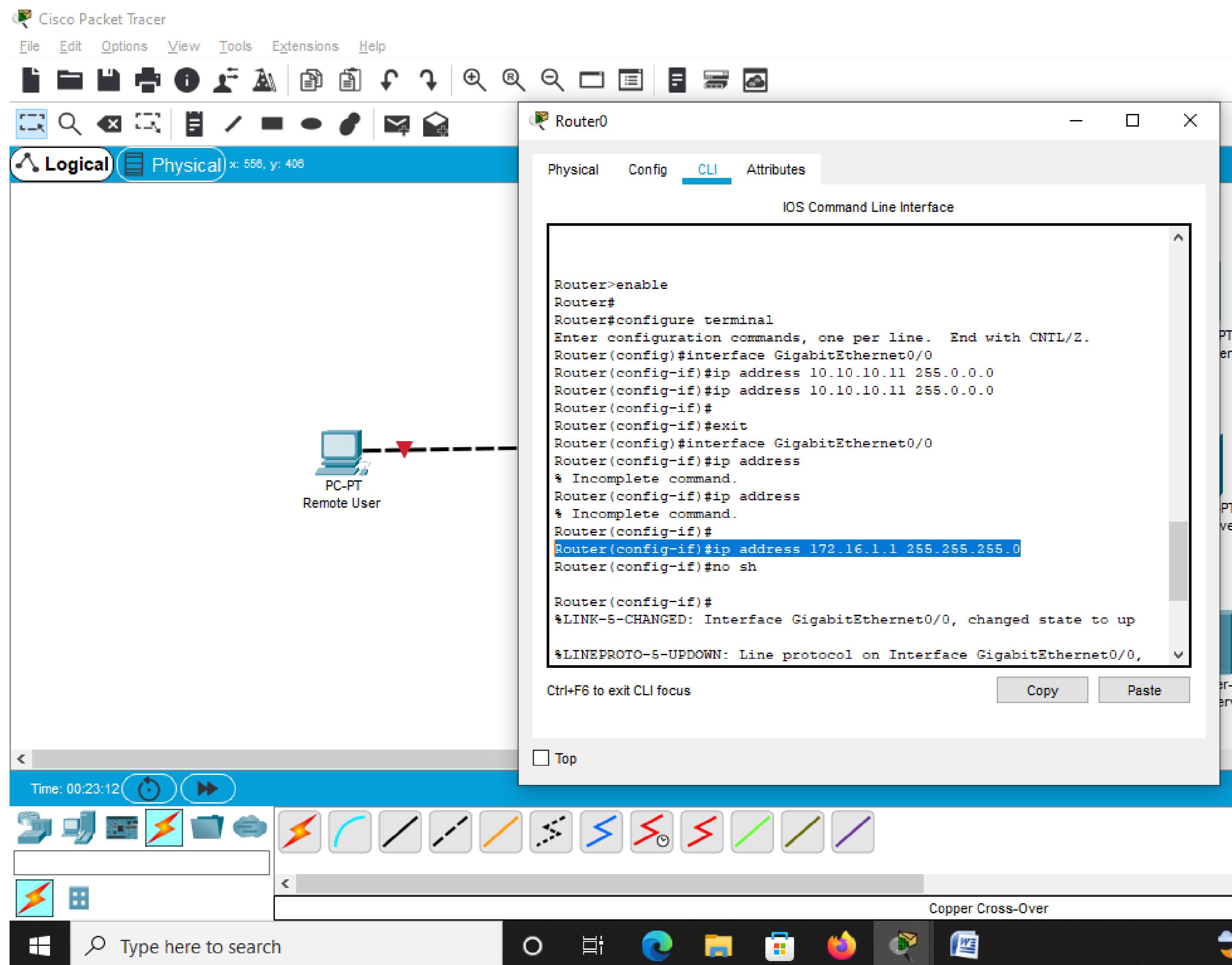
Follow the steps

Click on the router

Select $\text{\texttt{cli}}$

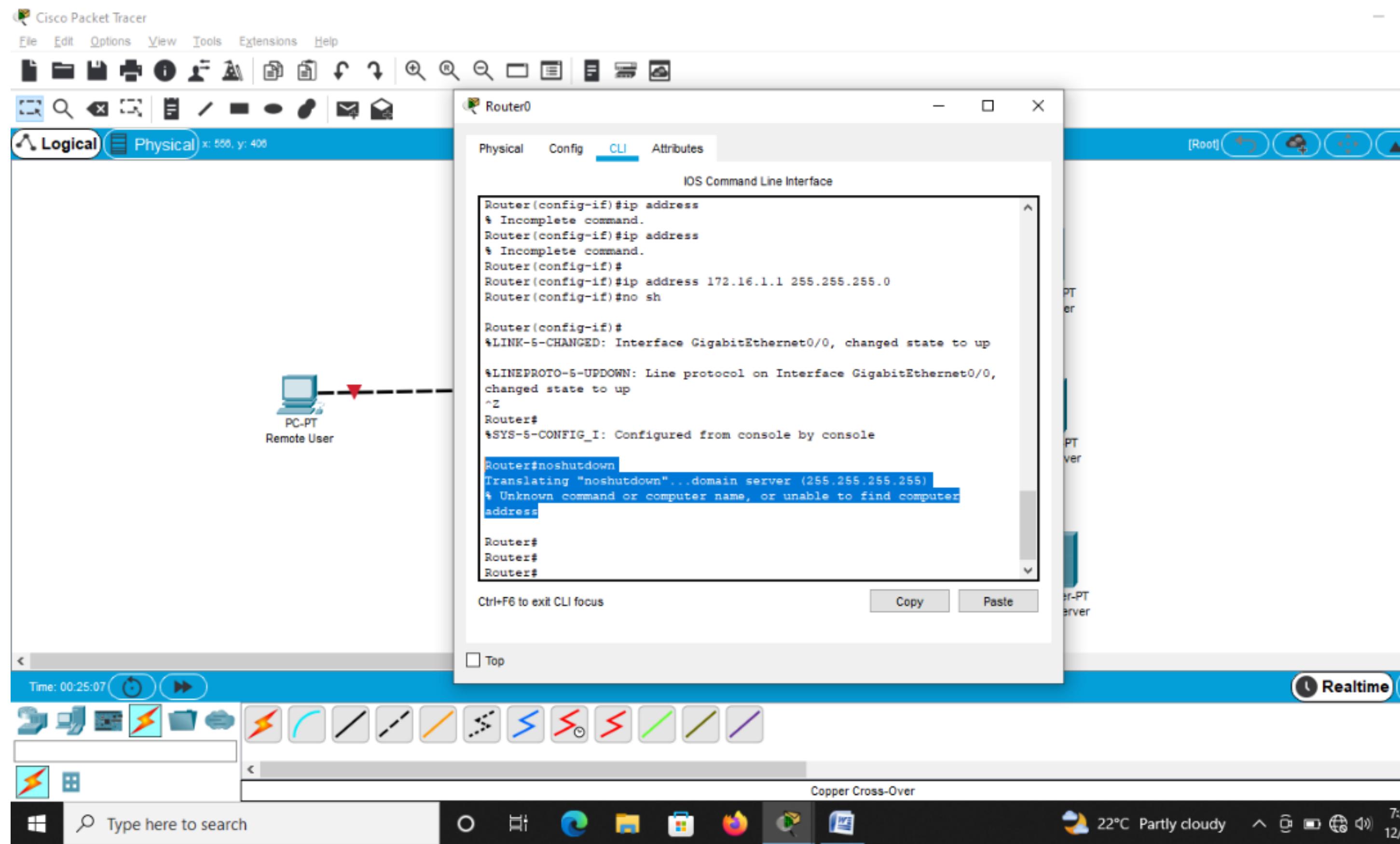
Give ip address and subnet mask address

Type as: ip address 172.16.1.1 255.255.255.0

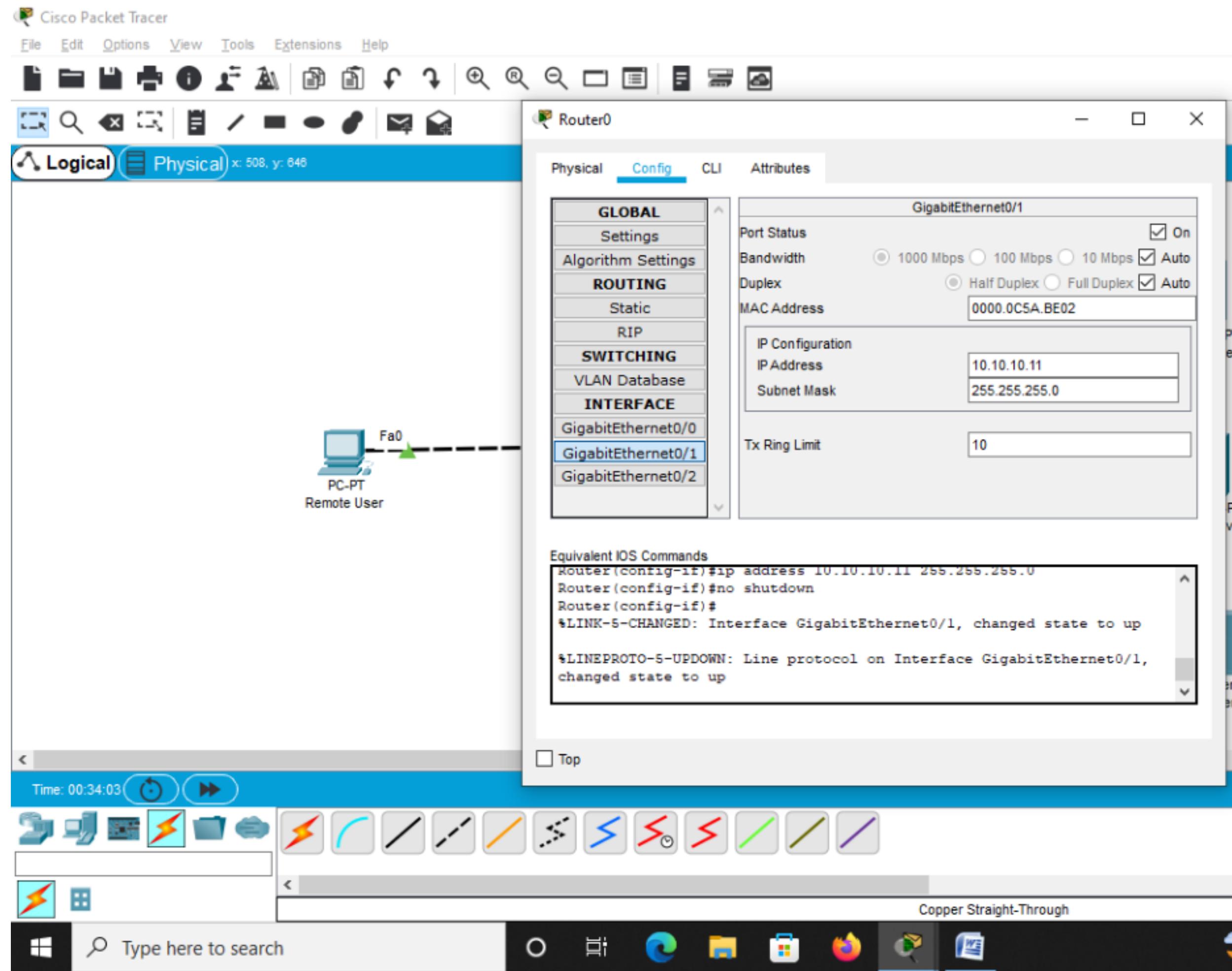


Then type

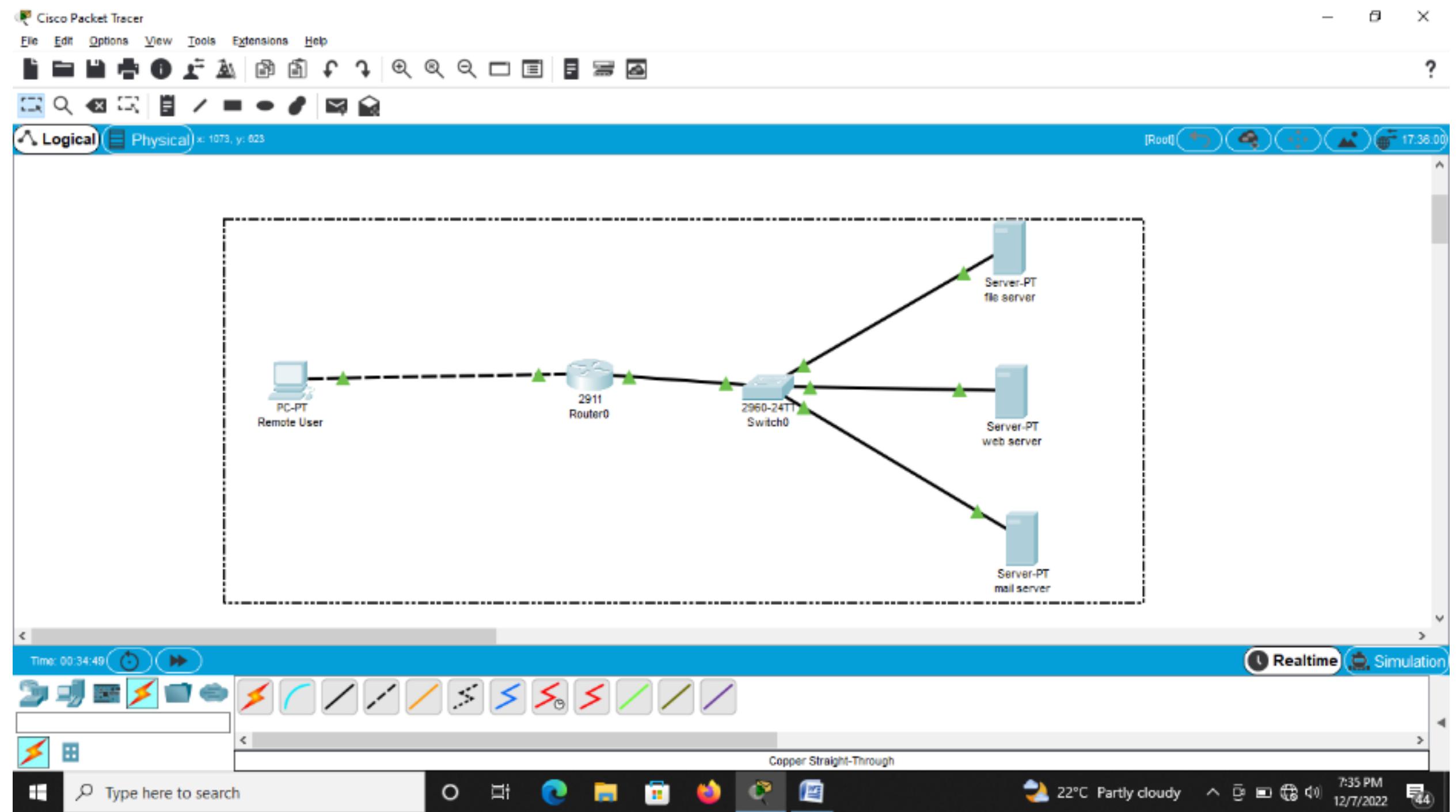
no shutdown



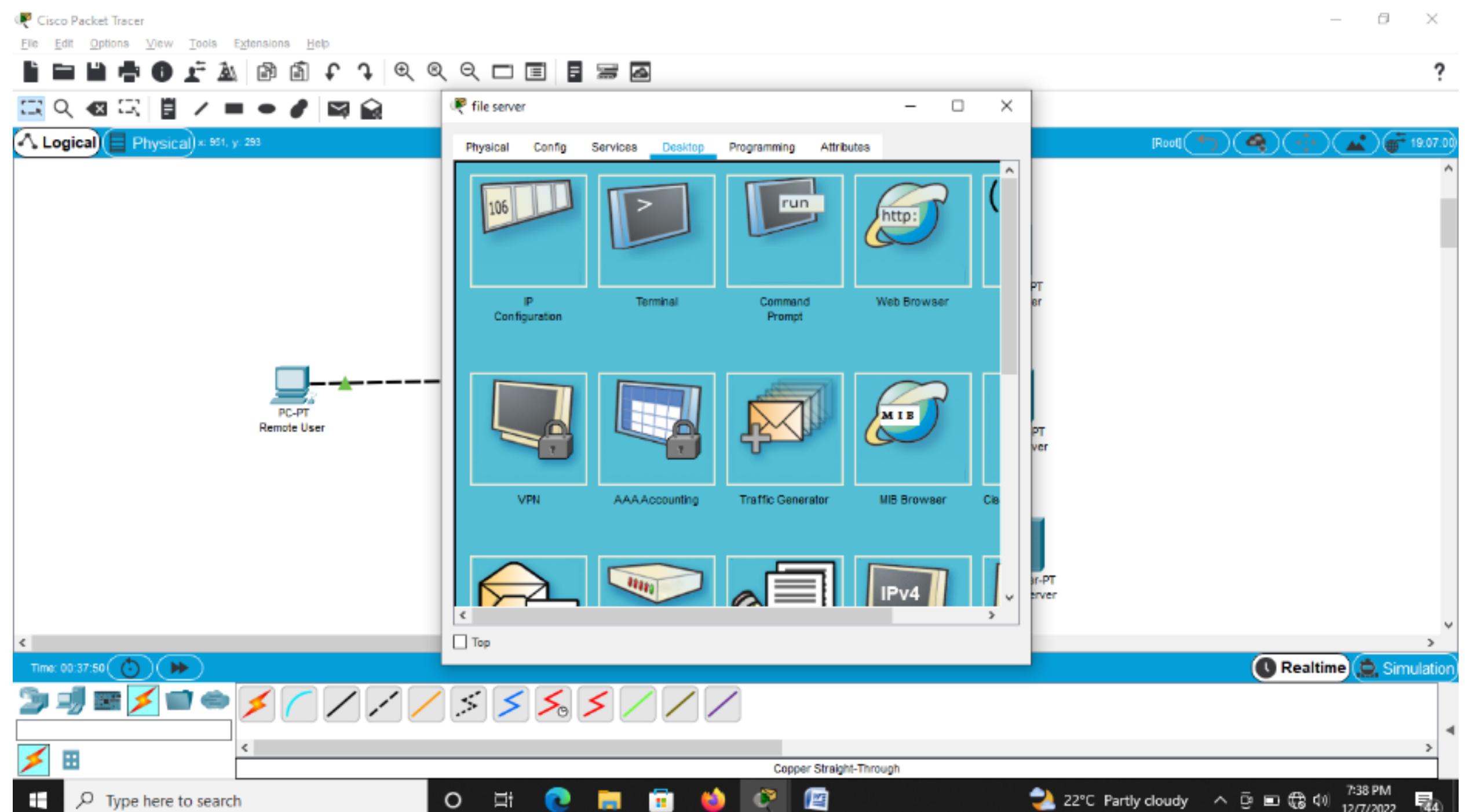
Configure pC to router

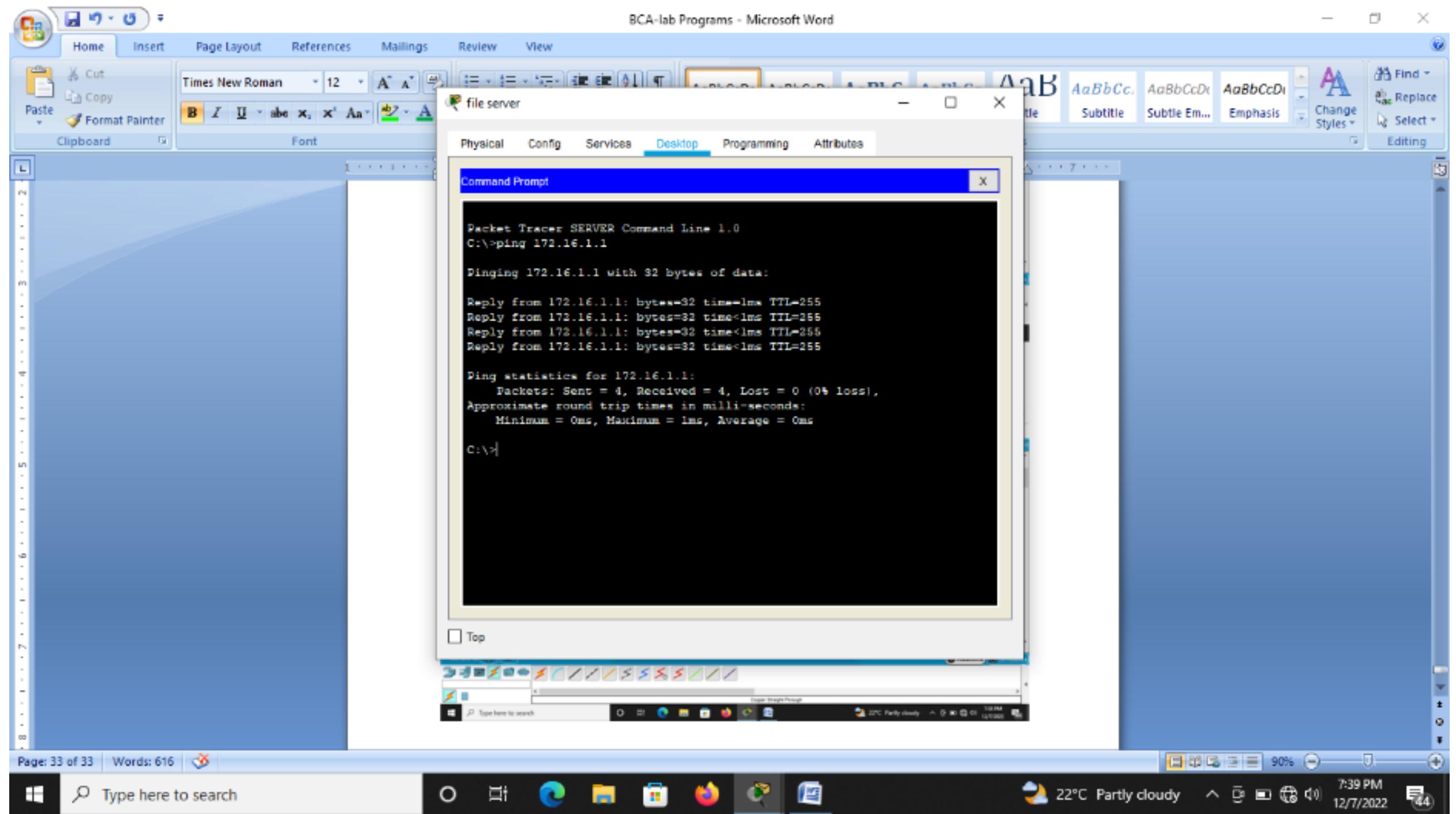


All the links are active state green color

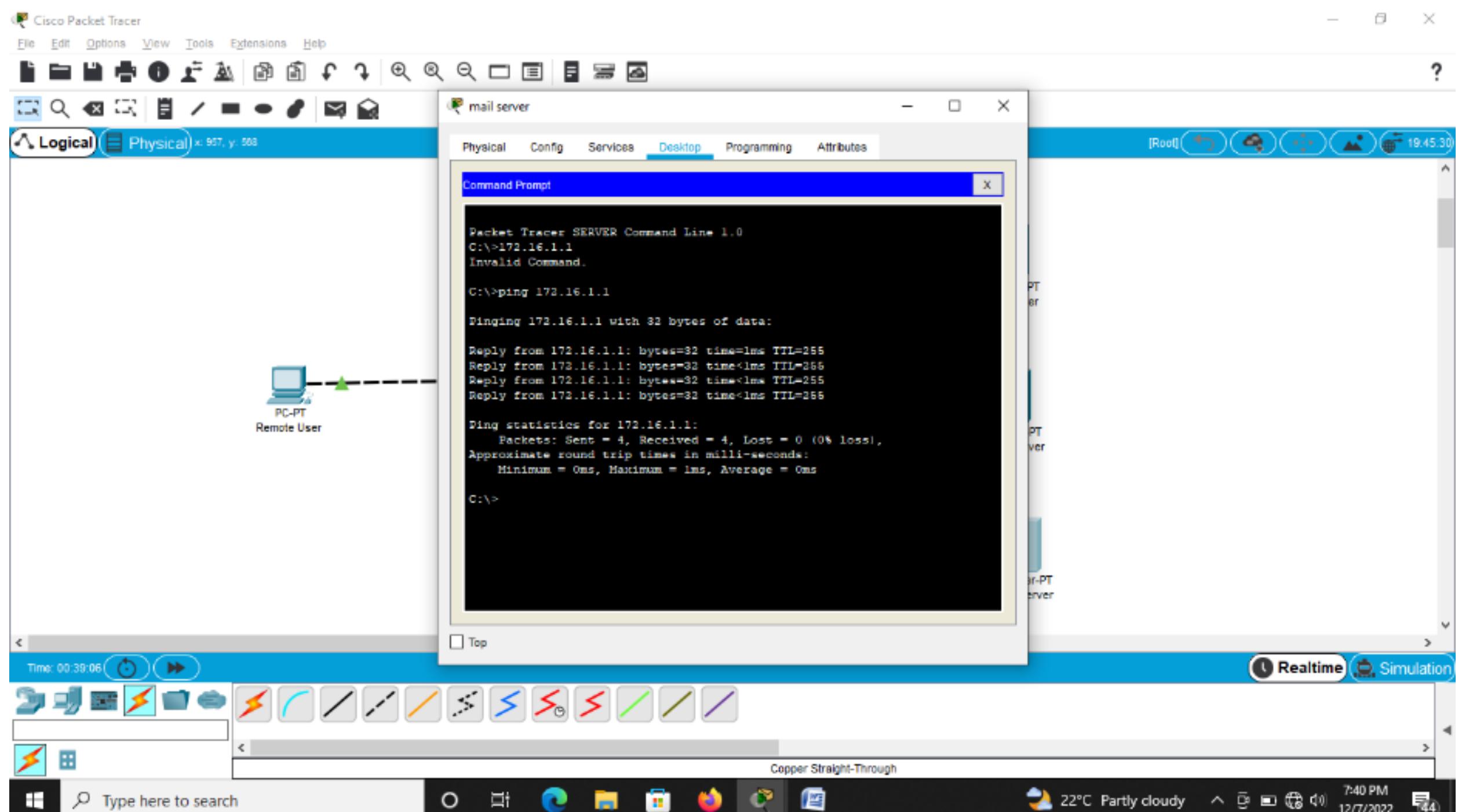


Check the working condition from each server to gateway as





Check all the server connectivity to gate way



Ping from pc to router

OUTPUT

