

Expt. 4 – 13/11/2024

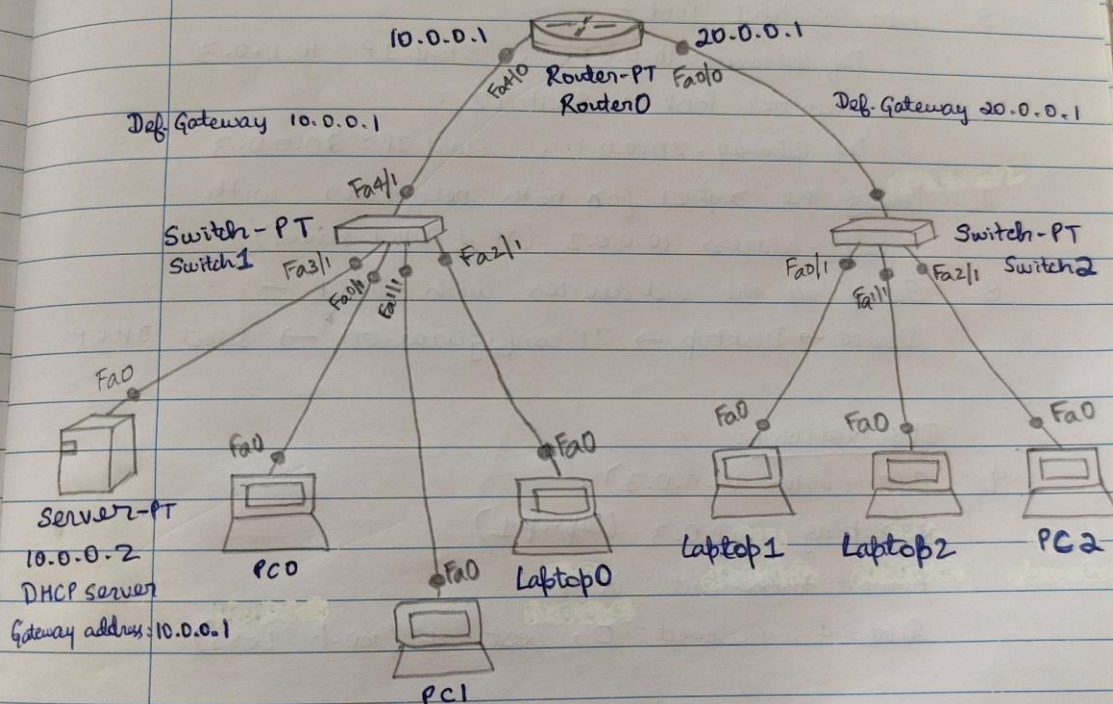
13/11

Date / /201

Expt. 4 :

Aim - To configure DHCP ^{server} within a LAN & outside LAN. ~~config~~

Topology - Part 2



Date / / 201

Procedure:

1. Return the first network (Part 1)
2. Add another network with a switch & 3 end devices
3. Add a router to connect the 2 networks
4. Edit the IP config. of ~~the~~ DHCP Server -
Change IP to 10.0.0.1
5. Edit Switch 1 pool -
Def. Gateway: 10.0.0.1, Start IP: 10.0.0.3
6. Add another pool - Switch 2:
Def. Gateway: 20.0.0.1, Start IP: 20.0.0.3
7. Config the router for both networks with
helper address 10.0.0.2 (IP of DHCP server)
8. Setup all the end-devices with DHCP -
Device → Desktop → IP configuration → Select DHCP

Observation:

9. PC0 (with 10.0.0.3):
PC0 ping 20.0.0.3 (Laptop 1)
Request timed out X 4
Sent = 4, Received = 0, Lost = 4 (100% loss)

PC > ping 10.0.0.4 (PC1)
Reply from 10.0.0.4: bytes=32 time=1ms TTL=128 X 4
Sent = 4, Received = 4, Loss = 0 (0% loss)

PC > ping 10.0.0.5 (Laptop 0)
Reply from 10.0.0.5: bytes=32 time=0ms TTL=128 X 4
Sent = 4, Received = 4, Loss = 0 (0% loss)

Date / / 201

Topology - Part 1

Procedure:

1. Connect the topology as above
2. Server → Desktop → IP config. → IP address = 10.0.0.1
Def. Gateway = 10.0.0.0
3. Config all the Server → Config → DHCP →
Switch 1, Def. Gate 10.0.0.0, Start IP 10.0.0.3
4. End Devices: Desktop → IP config. → DHCP

Observation:

5. IP address is allocated dynamically to end devices.
6. Ping from 1 end device to another was successful.
PC0 (with 10.0.0.2):
PC > ping 10.0.0.3 (PC3)
Reply from 10.0.0.3: bytes=32 time=1ms TTL=128 X 4
Sent = 4, Received = 4, Loss = 0 (0% loss)

UNANA SWEETKAR

Part1:

Cisco Packet Tracer Student - C:\Users\gauf8\Cisco Packet Tracer 6.2sv\save\cn exp44 13-11.pkt

File Edit Options View Tools Extensions Help

Logical [Root] New Cluster Move Object Set Tiled Background Viewport

Time: 00:19:17 Power Cycle Devices Fast Forward Time

Connections Automatically Choose Connection Type

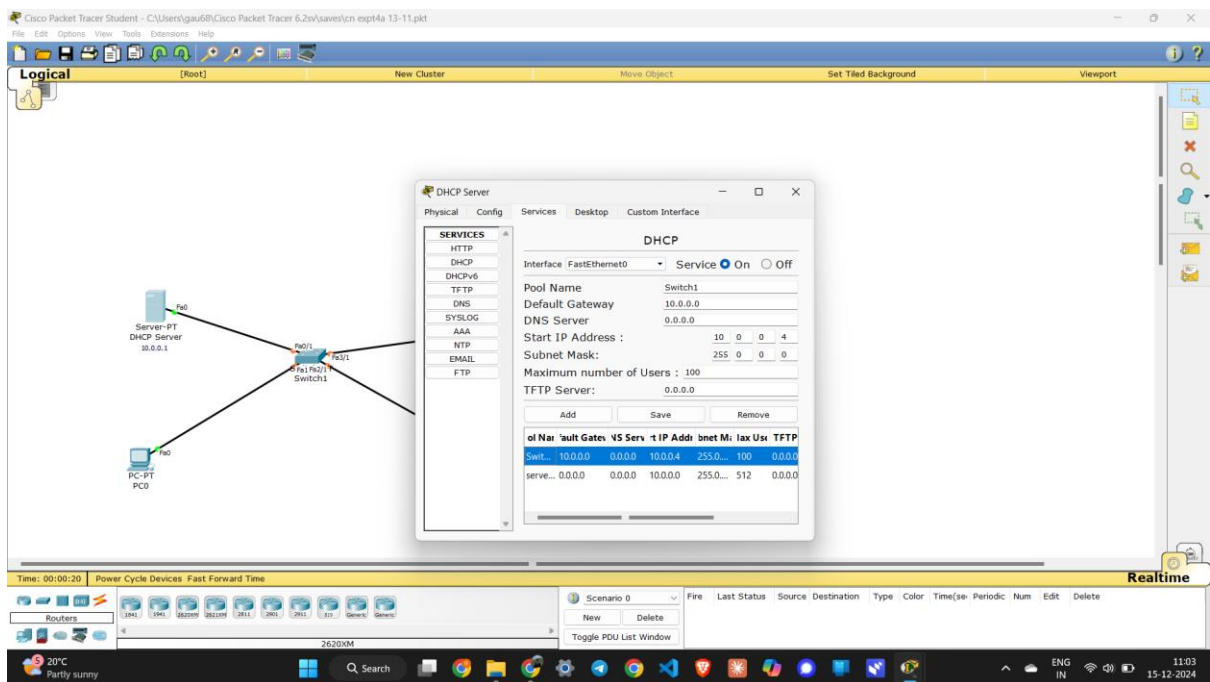
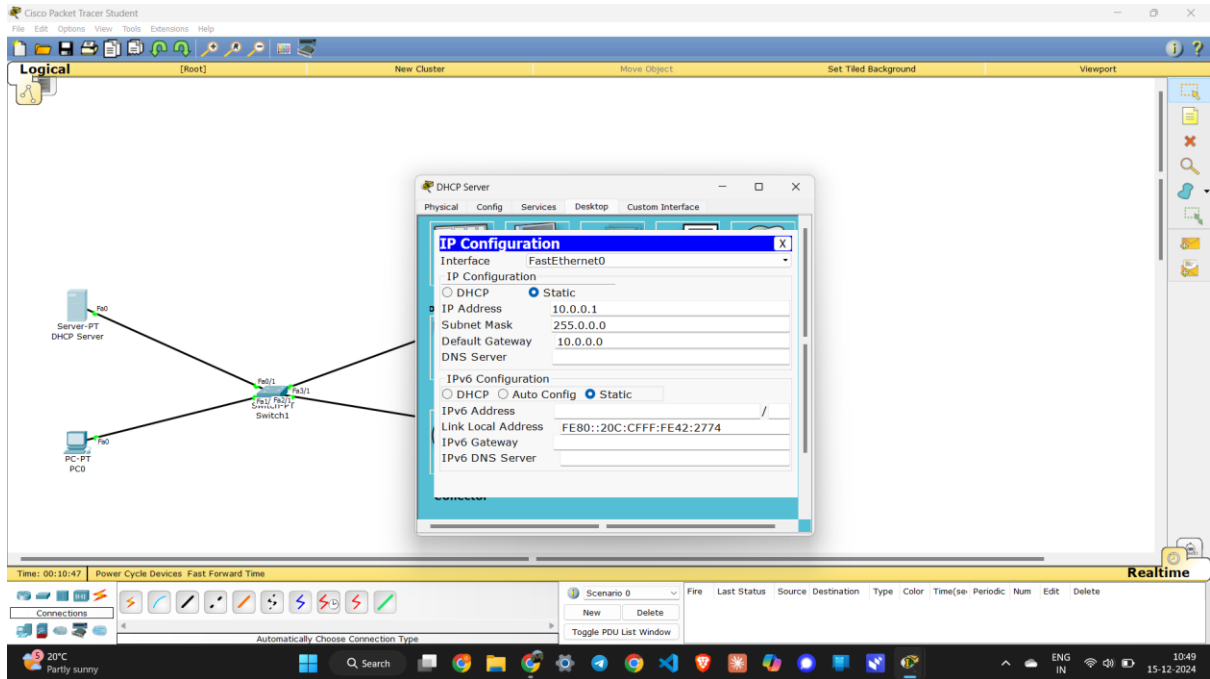
Scenario 0 New Delete

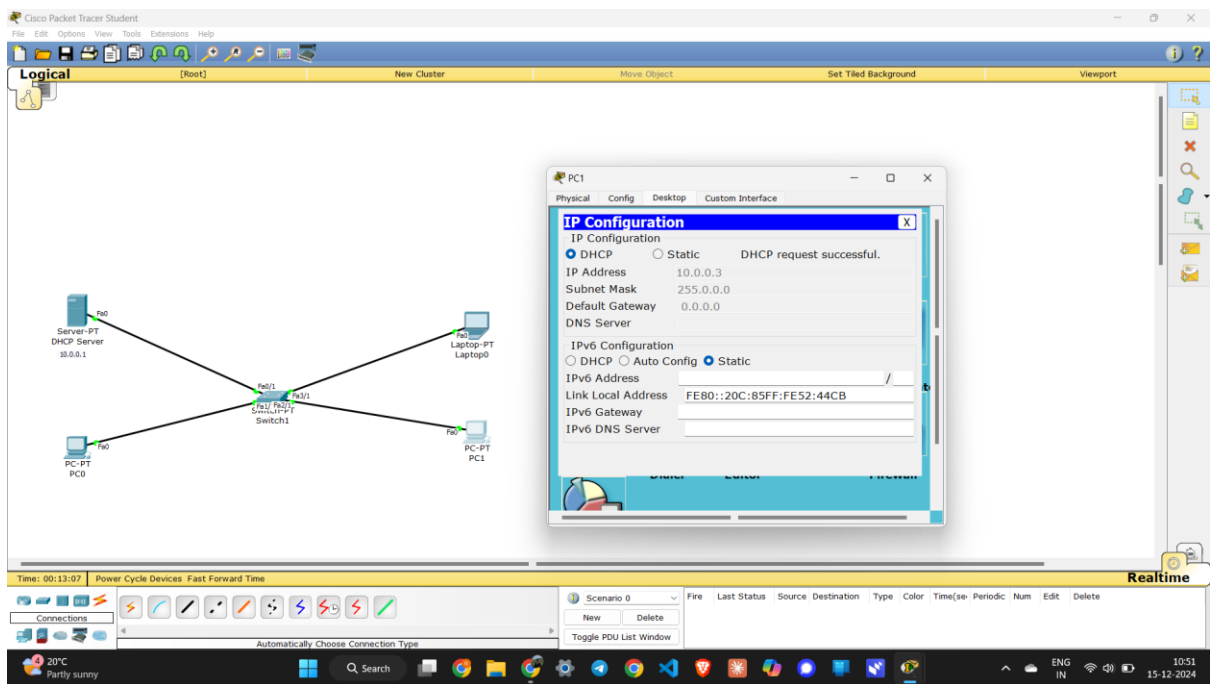
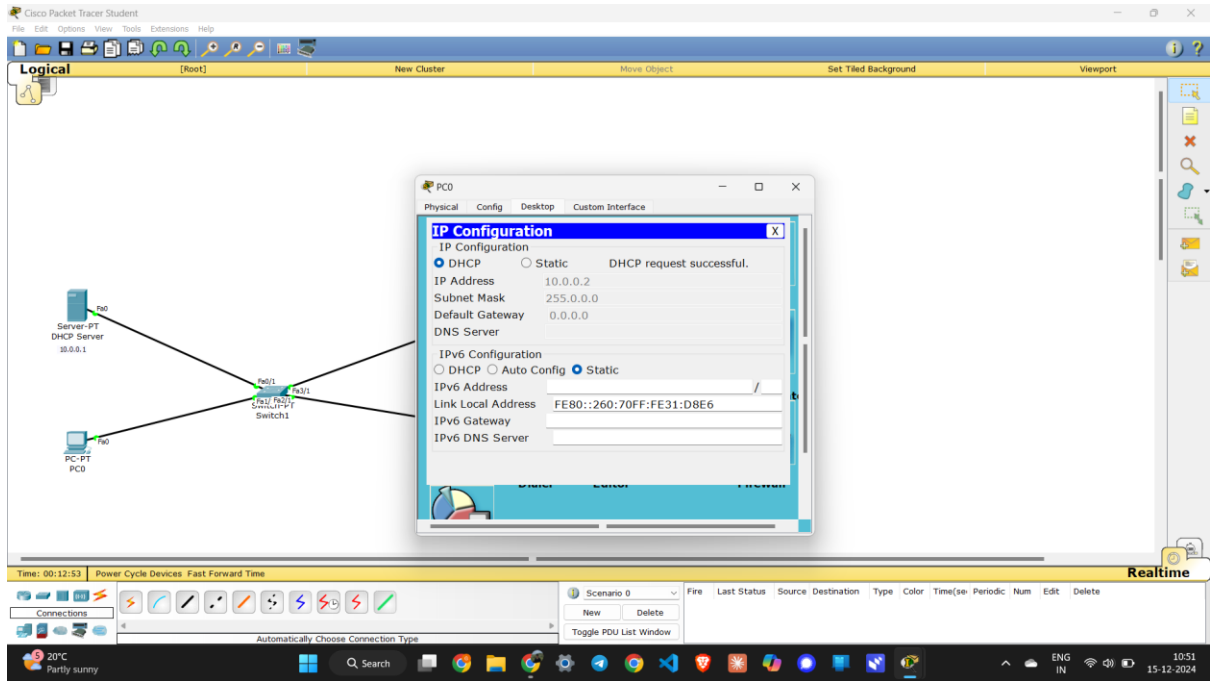
Fire Last Status Source Destination Type Color Time(se) Periodic Num Edit Delete

Toggle PDU List Window

BSE smicap 0.29%

ENG IN 10:57 15-12-2024





Cisco Packet Tracer Student

File Edit Options View Tools Extensions Help

Logical [Root] New Cluster Move Object Set Tiled Background Viewport

Time: 00:13:23 Power Cycle Devices Fast Forward Time

Connections

Automatically Choose Connection Type

20°C Partly sunny

Scenario 0

New Delete

Toggle PDU List Window

Fire Last Status Source Destination Type Color Time(se- Periodic Num Edit Delete

Realtime

10:51 15-12-2024

IP Configuration

IP Configuration

☒ DHCP ☐ Static DHCP request successful.

IP Address 10.0.0.4

Subnet Mask 255.0.0.0

Default Gateway 0.0.0.0

DNS Server

IPv6 Configuration

☐ DHCP ☐ Auto Config ☒ Static

IPv6 Address

Link Local Address FE80::202:17FF:FEB9:A3E7

IPv6 Gateway

IPv6 DNS Server

Cisco Packet Tracer Student - C:\Users\gau68\Cisco Packet Tracer 6.20\sa\en exp4 Part1 13-11.pkt

File Edit Options View Tools Extensions Help

Logical [Root] New Cluster Move Object Set Tiled Background Viewport

Time: 00:03:28 Power Cycle Devices Fast Forward Time

Connections

Automatically Choose Connection Type

20°C Partly sunny

Scenario 0

New Delete

Toggle PDU List Window

Fire Last Status Source Destination Type Color Time(se- Periodic Num Edit Delete

Realtime

12:50 15-12-2024

Command Prompt

Packet Tracer PC Command Line 1.0

PC>ping 10.0.0.2

Pinging 10.0.0.2 with 32 bytes of data:

Reply from 10.0.0.2: bytes=32 time=3ms TTL=128

Reply from 10.0.0.2: bytes=32 time=1ms TTL=128

Reply from 10.0.0.2: bytes=32 time=1ms TTL=128

Reply from 10.0.0.2: bytes=32 time=1ms TTL=128

Ping statistics for 10.0.0.2:

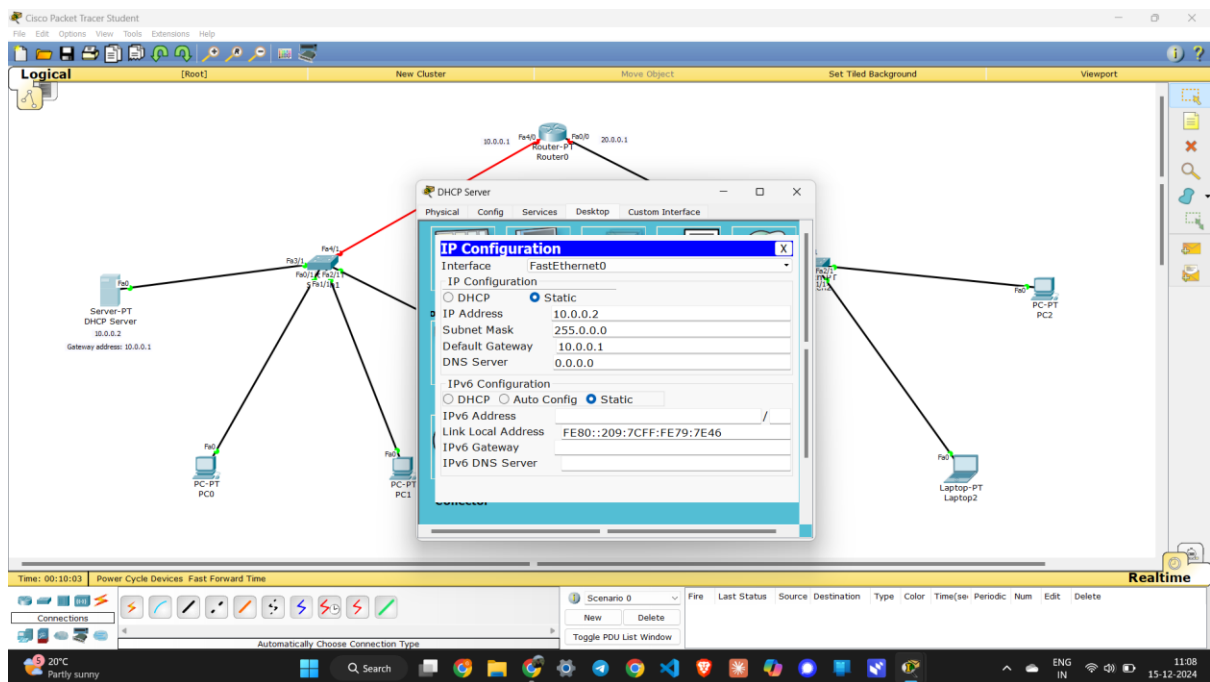
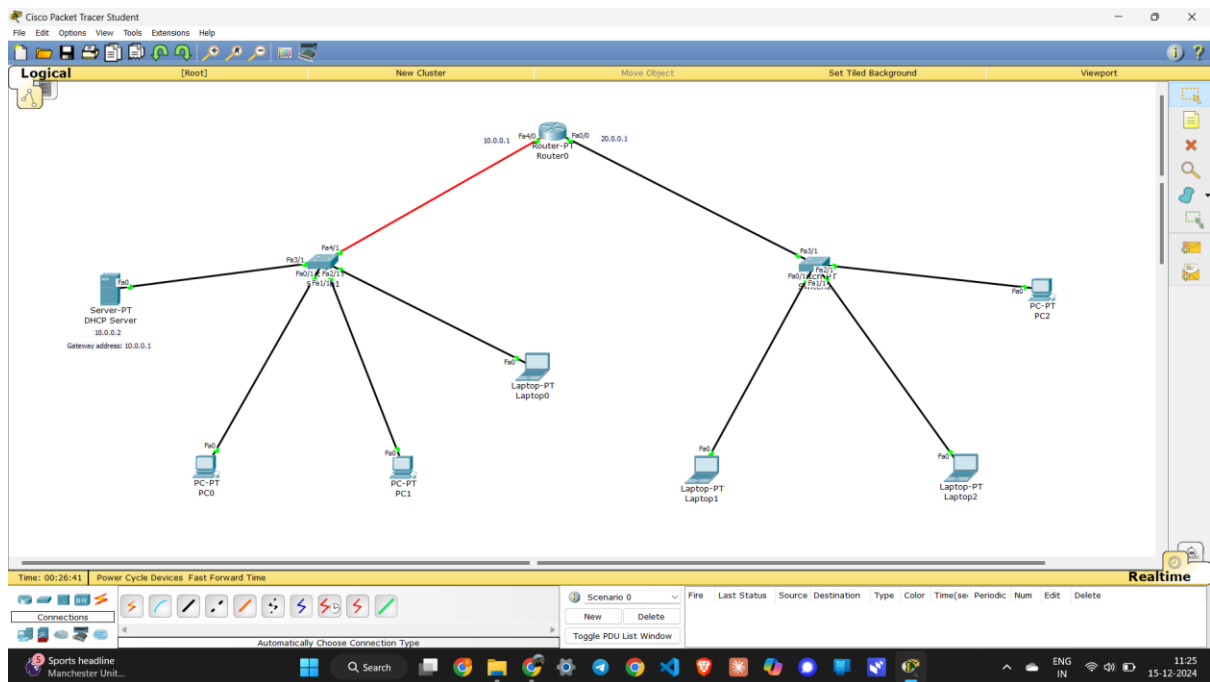
Round-trip times: 4, Received = 4, Lost = 0 (0% loss),

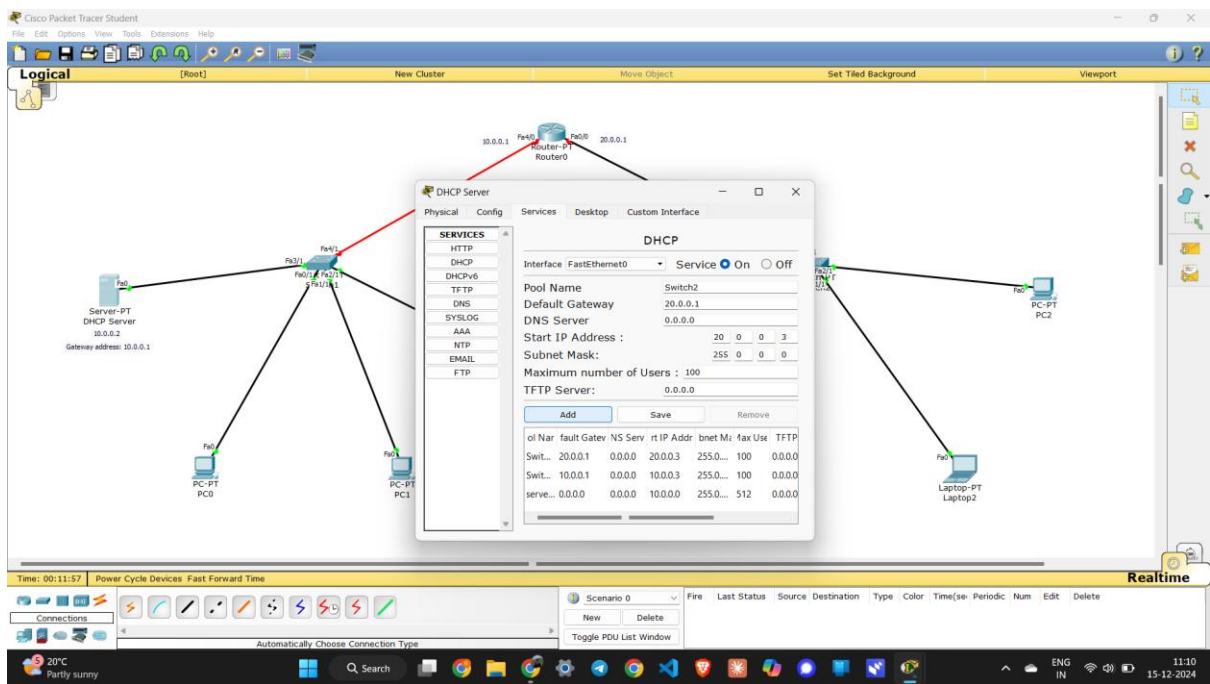
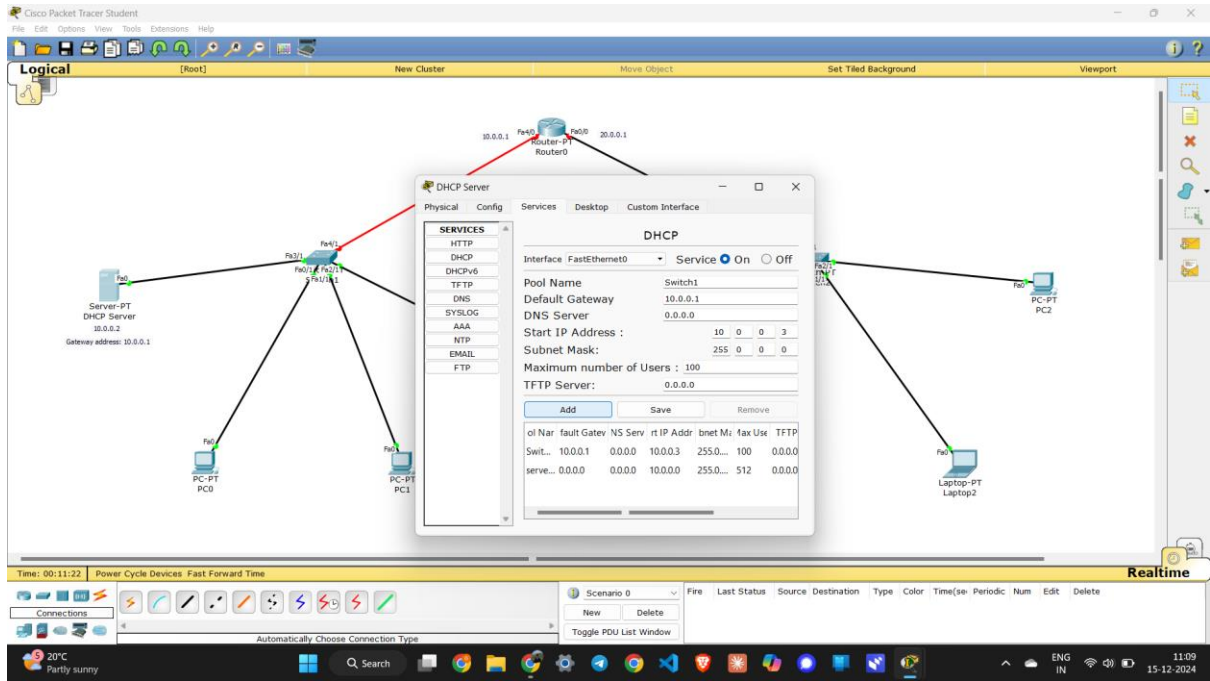
Approximate round trip times in milli-seconds:

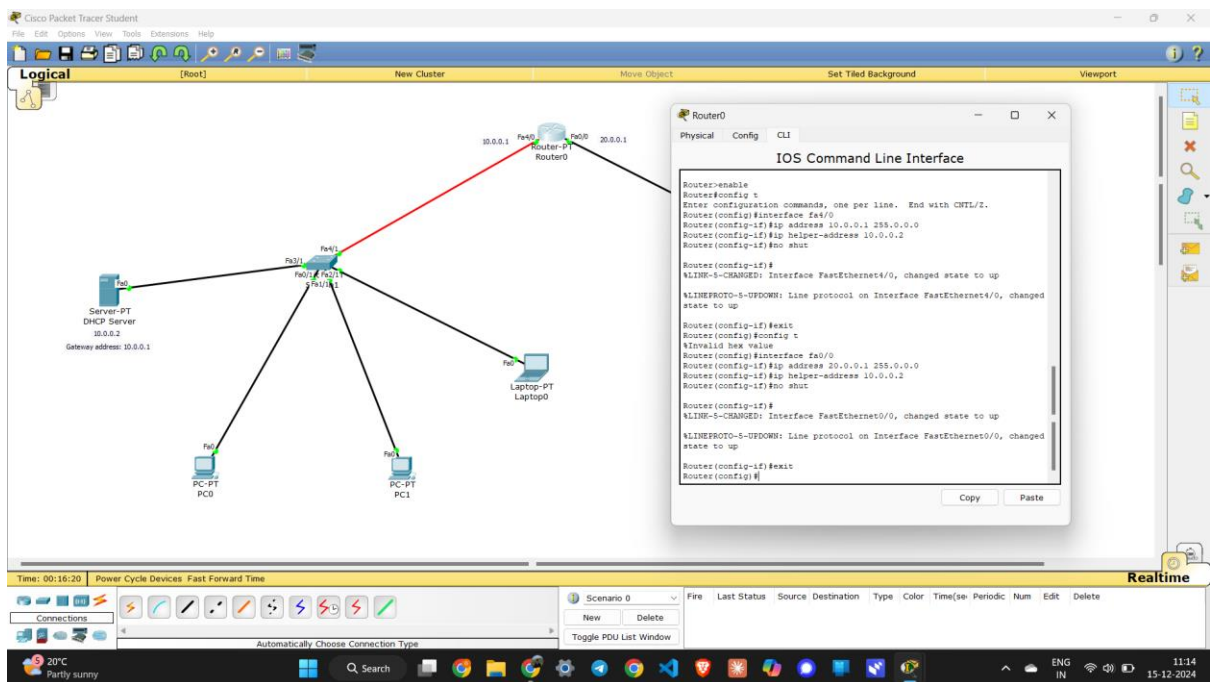
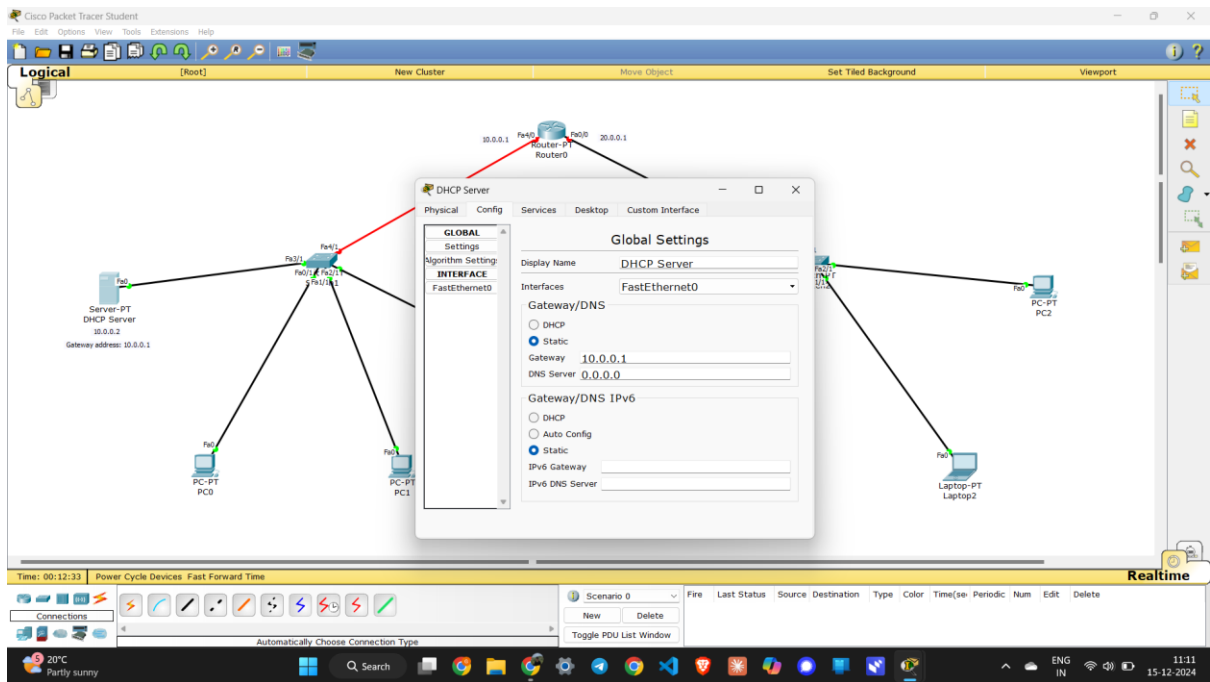
Minimum = 0ms, Maximum = 3ms, Average = 1ms

PC>

Part2:









Router0



Physical

Config

CLI

IOS Command Line Interface

```
Router>enable
Router#config t
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface fa4/0
Router(config-if)#ip address 10.0.0.1 255.0.0.0
Router(config-if)#ip helper-address 10.0.0.2
Router(config-if)#no shut

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet4/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet4/0, changed
state to up

Router(config-if)#exit
Router(config)#config t
%Invalid hex value
Router(config)#interface fa0/0
Router(config-if)#ip address 20.0.0.1 255.0.0.0
Router(config-if)#ip helper-address 10.0.0.2
Router(config-if)#no shut

Router(config-if)#
%LINK-5-CHANGED: Interface FastEthernet0/0, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/0, changed
state to up

Router(config-if)#exit
Router(config)#
```

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