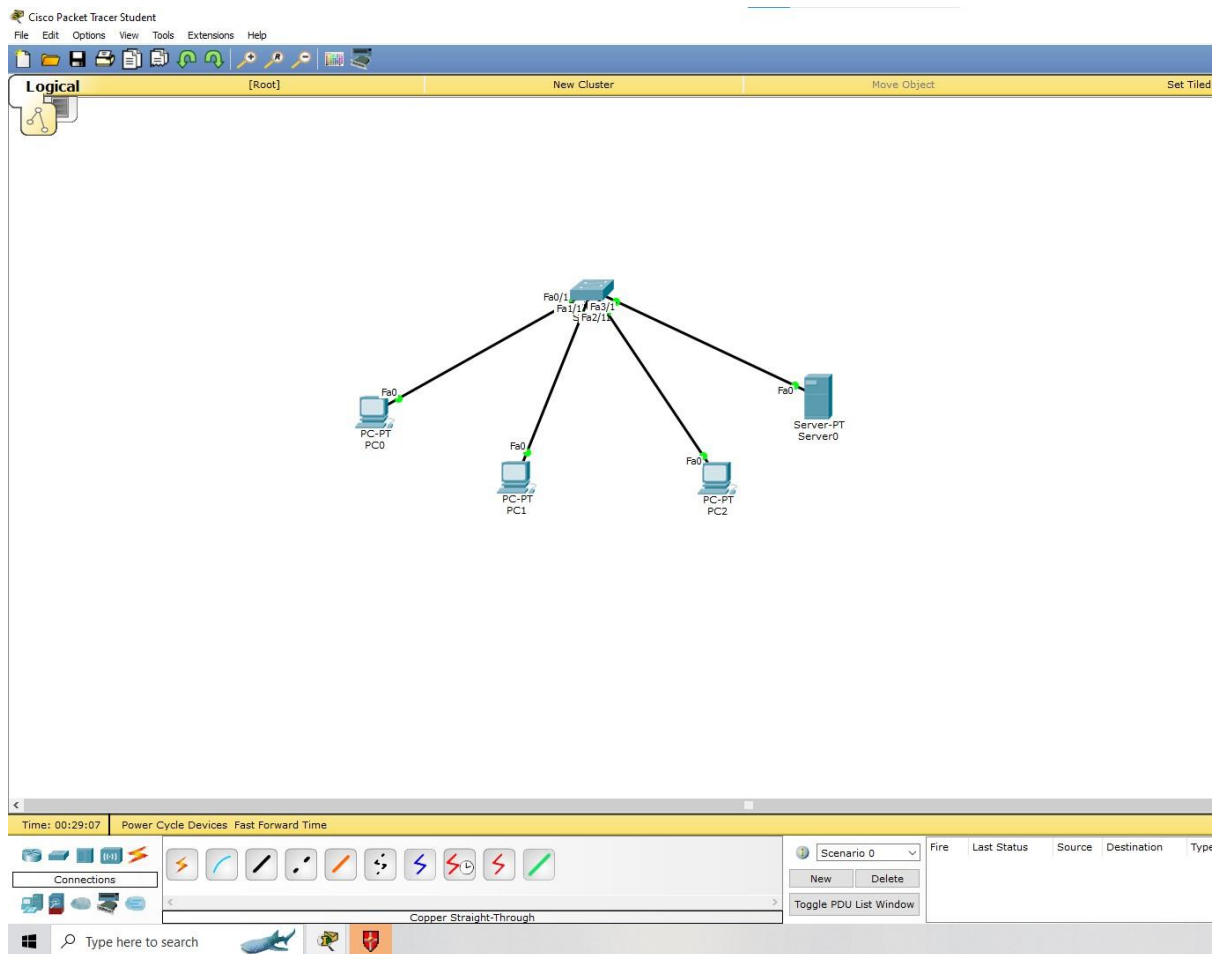


## CN LAB 4

**AIM:** Configure DHCP within a LAN and outside LAN.

## SCREENSHOTS



Server0

Physical Config Services Desktop Custom Interface

**SERVICES**

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP

**DHCP**

Interface: FastEthernet0 Service: ☒ On ☐ Off

Pool Name: serverPool

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

Start IP Address : 10 0 0 2

Subnet Mask: 255 0 0 0

Maximum number of Users : 512

TFTP Server: 0.0.0.0

Add Save Remove

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP
server...	0.0.0.0	0.0.0.0	10.0.0.2	255.0.0.0	512	0.0.0.0

PC2

Physical Config Desktop Custom Interface

**GLOBAL**

Settings

Algorithm Settings

**INTERFACE**

FastEthernet0

**FastEthernet0**

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 0001.6499.A4D4

IP Configuration

☒ DHCP

☐ Static

IP Address 10.0.0.2

Subnet Mask 255.0.0.0

IPv6 Configuration

☐ DHCP

☐ Auto Config

☒ Static

IPv6 Address

Link Local Address: FE80::201:64FF:FE99:A4D4

PC1

Physical Config Desktop Custom Interface

**GLOBAL**

Settings

Algorithm Settings

**INTERFACE**

FastEthernet0

**FastEthernet0**

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 00E0.F95C.706E

IP Configuration

☒ DHCP

☐ Static

IP Address 10.0.0.3

Subnet Mask 255.0.0.0

IPv6 Configuration

☐ DHCP

☐ Auto Config

☒ Static

IPv6 Address

Link Local Address: FE80::2E0:F9FF:FE5C:706E

PC0

Physical Config Desktop Custom Interface

**GLOBAL**

Settings

Algorithm Settings

**INTERFACE**

FastEthernet0

**FastEthernet0**

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 0000.0C63.9171

IP Configuration

☒ DHCP

☐ Static

IP Address 10.0.0.5

Subnet Mask 255.0.0.0

IPv6 Configuration

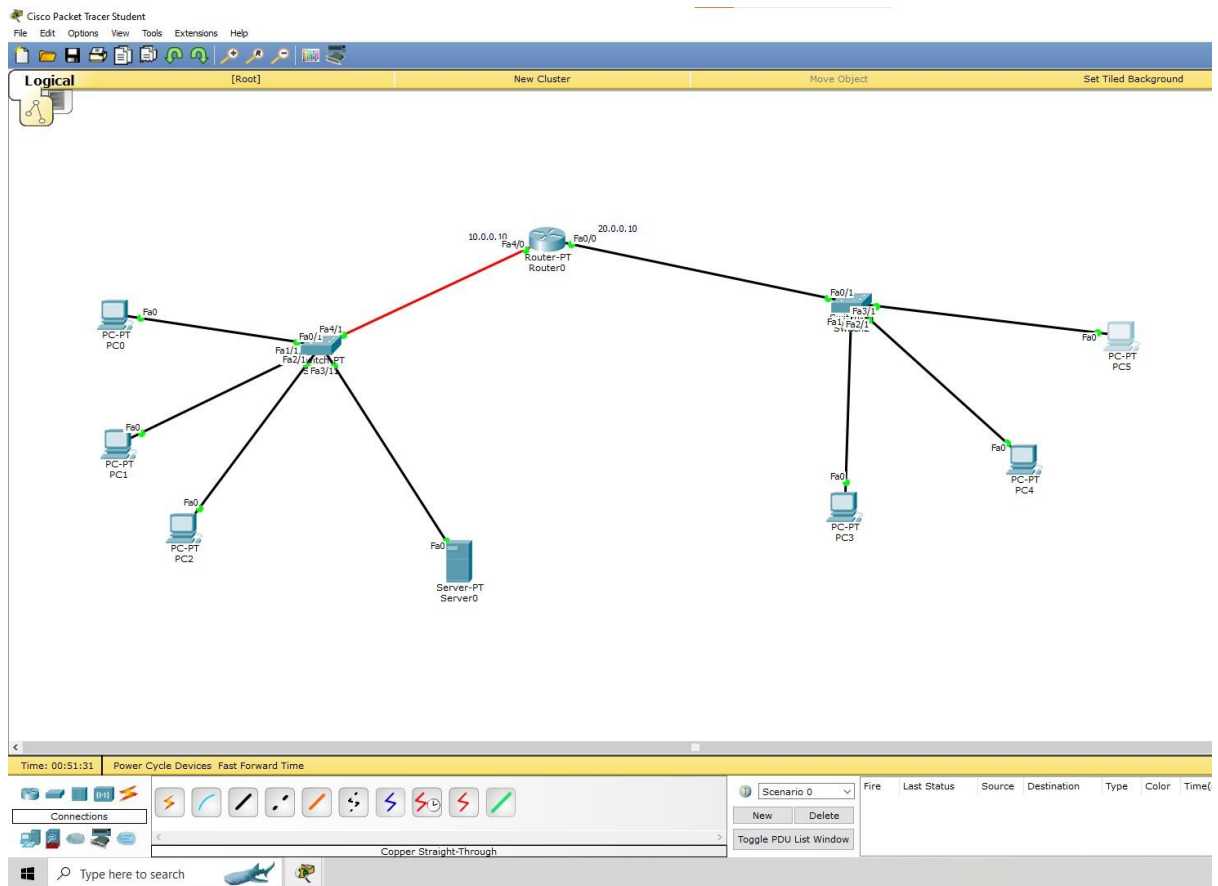
☐ DHCP

☐ Auto Config

☒ Static

IPv6 Address

Link Local Address: FE80::200:CFF:FE63:9171



Server0

Physical Config Services Desktop Custom Interface

**SERVICES**

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP

**DHCP**

Interface: FastEthernet0 Service: ☒ On ☐ Off

Pool Name: serverPool

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

Start IP Address : 10 0 0 2

Subnet Mask: 255 0 0 0

Maximum number of Users : 512

TFTP Server: 0.0.0.0

Add Save Remove

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP
server...	10.0.0.10	0.0.0.0	20.0.0.11	255.0.0.0	512	0.0.0.0
server...	0.0.0.0	0.0.0.0	10.0.0.2	255.0.0.0	512	0.0.0.0

PC3

Physical Config Desktop Custom Interface

**GLOBAL**

Settings

Algorithm Settings

**INTERFACE**

FastEthernet0

**FastEthernet0**

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 0001.C78E.4509

IP Configuration

☒ DHCP

☐ Static

IP Address 20.0.0.12

Subnet Mask 255.0.0.0

IPv6 Configuration

☐ DHCP

☐ Auto Config

☒ Static

IPv6 Address

Link Local Address: FE80::201:C7FF:FE8E:4509



PC4

Physical Config Desktop Custom Interface

**GLOBAL**

Settings

Algorithm Settings

**INTERFACE**

FastEthernet0

**FastEthernet0**

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 0006.2A7B.9913

IP Configuration

☒ DHCP

☐ Static

IP Address 20.0.0.13

Subnet Mask 255.0.0.0

IPv6 Configuration

☐ DHCP

☐ Auto Config

☒ Static

IPv6 Address

Link Local Address: FE80::206:2AFF:FE7B:9913

PC5

Physical Config Desktop Custom Interface

**GLOBAL**

Settings

Algorithm Settings

**INTERFACE**

FastEthernet0

**FastEthernet0**

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 0090.2BA2.55A7

IP Configuration

☒ DHCP

☐ Static

IP Address 20.0.0.14

Subnet Mask 255.0.0.0

IPv6 Configuration

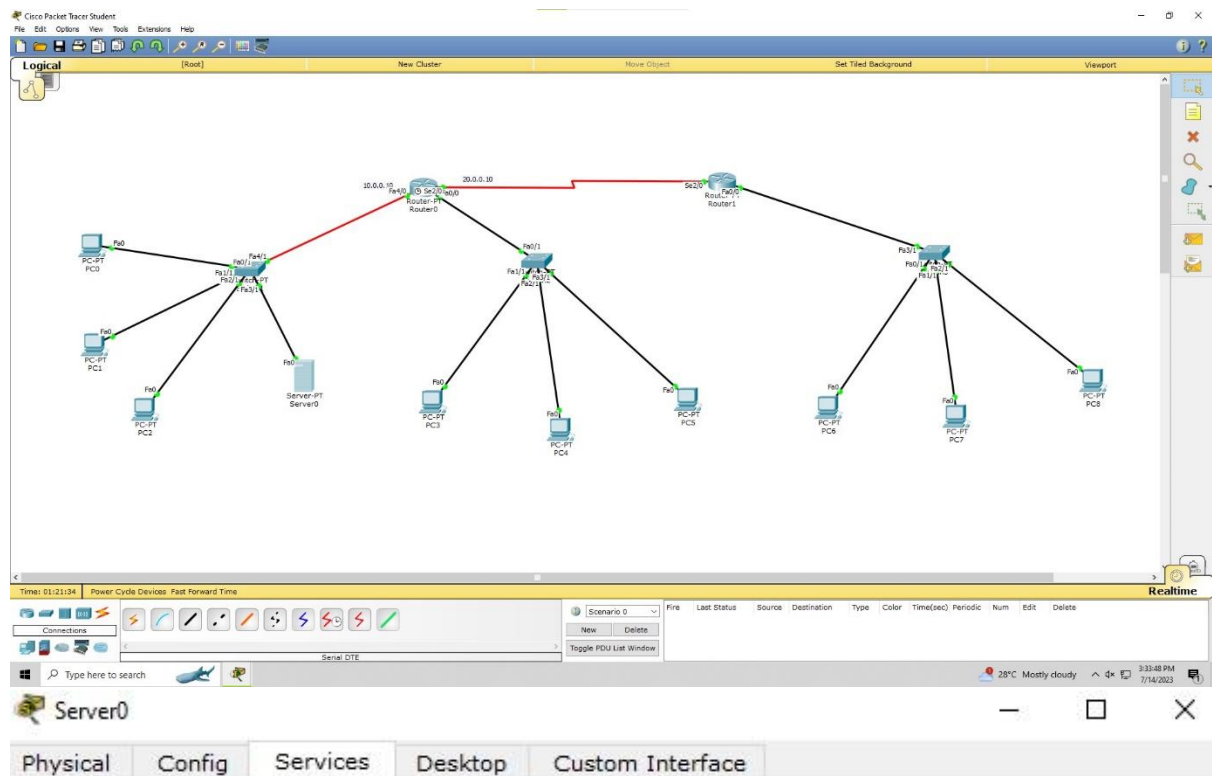
☐ DHCP

☐ Auto Config

☒ Static

IPv6 Address

Link Local Address: FE80::290:2BFF:FEA2:55A7



### SERVICES

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP

### DHCP

Interface: **FastEthernet0** Service: ☒ On ☐ Off

Pool Name: **serverPool**

Default Gateway: **0.0.0.0**

DNS Server: **0.0.0.0**

Start IP Address : **10** **0** **0** **2**

Subnet Mask: **255** **0** **0** **0**

Maximum number of Users : **512**

TFTP Server: **0.0.0.0**

ool Nam	efault Gatawa	DNS Server	tart IP Address	ubnet Mas	Max User	TFTP
server...	0.0.0.0	0.0.0.0	40.0.0.2	255.0.0.0	512	0.0.0.0
server...	10.0.0.10	0.0.0.0	20.0.0.11	255.0.0.0	512	0.0.0.0
server...	0.0.0.0	0.0.0.0	10.0.0.2	255.0.0.0	512	0.0.0.0

PC6

Physical Config Desktop Custom Interface

**GLOBAL**

Settings

Algorithm Settings

**INTERFACE**

FastEthernet0

**FastEthernet0**

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 0010.11DE.34A3

IP Configuration

☒ DHCP

☐ Static

IP Address 40.0.0.2

Subnet Mask 255.0.0.0

IPv6 Configuration

☐ DHCP

☐ Auto Config

☒ Static

IPv6 Address

Link Local Address: FE80::210:11FF:FEDE:34A3

PC7

Physical Config Desktop Custom Interface

**GLOBAL**

Settings

Algorithm Settings

**INTERFACE**

FastEthernet0

**FastEthernet0**

Port Status ☒ On

Bandwidth ☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 00E0.A3C4.22D7

IP Configuration

☒ DHCP

☐ Static

IP Address 40.0.0.3

Subnet Mask 255.0.0.0

IPv6 Configuration

☐ DHCP

☐ Auto Config

☒ Static

IPv6 Address

Link Local Address: FE80::2E0:A3FF:FEC4:22D7

PC8

Physical Config Desktop Custom Interface

**GLOBAL**

Settings

Algorithm Settings

**INTERFACE**

FastEthernet0

**FastEthernet0**

Port Status ☒ On

Bandwidth ☐ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address 0001.C9CB.237A

IP Configuration

☒ DHCP

☐ Static

IP Address 40.0.0.4

Subnet Mask 255.0.0.0

IPv6 Configuration


☐ DHCP

☐ Auto Config

☒ Static

IPv6 Address

Link Local Address: FE80::201:C9FF:FECB:237A

 Router1

Physical Config CLI

### IOS Command Line Interface

```
Router1>
%LINK-0-0-DOWN: Line protocol on interface FastEthernet0/0, changed state to
up

Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#ip route 10.0.0.0 255.0.0.0 30.0.0.1
Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

S    10.0.0.0/8 [1/0] via 30.0.0.1
C    30.0.0.0/8 is directly connected, Serial2/0
C    40.0.0.0/8 is directly connected, FastEthernet0/0
Router#configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#ip helper-address 10.0.0.1
Router(config-if)#exit
Router(config)#
```

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