

## LAB-05

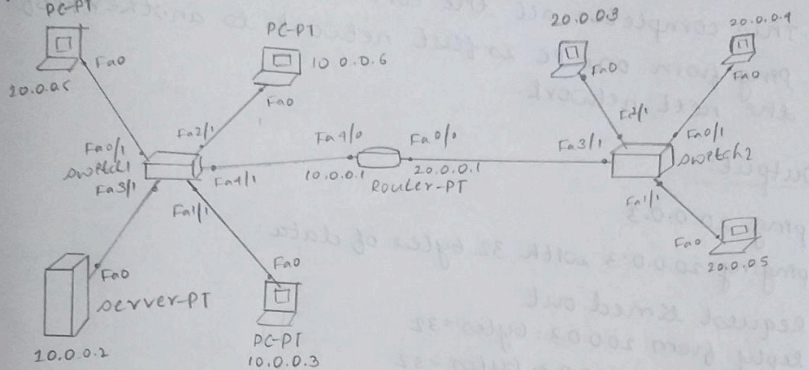
### LAB:05 EXPERIMENT: 04

13/11/2024

Question: configure DHCP within a LAN and outside LAN.

Aim: TO configure DHCP.

Topology:



Procedure:

- 1) setup the devices as shown in the above topology
- 2) TO configure server:  
Go to Desktop → GP configuration and give the  
IP address = 10.0.0.2 and default Gateway: 10.0.0.1  
10.0.0.1 is the IP address of the router for the first network  
Services → DHCP → service → on  
change default gateway, start ip address for  
the 2 switches on both networks and add these.

- 3) configure the router:

Router → CLI and following commands

- enable
- config terminal
- interface fastethernet 1/0
- ip address 10.0.0.1 255.0.0.0
- ip helper-address 10.0.0.2

Follow the commands for both the sides of router.

4. configure the PC's:

PC → Desktop → DHCP

DHCP is successfully set.

Do as above for all the PC's in the topology.

5. This completes all the connections of the topology.

6. Ping from one PC is first network to another PC of the next network.

Output:

ping 20.0.0.3

ping 20.0.0.3 with 32 bytes of data:

Request timed out

Reply from 20.0.0.3: bytes=32

Reply from 20.0.0.3: bytes=32

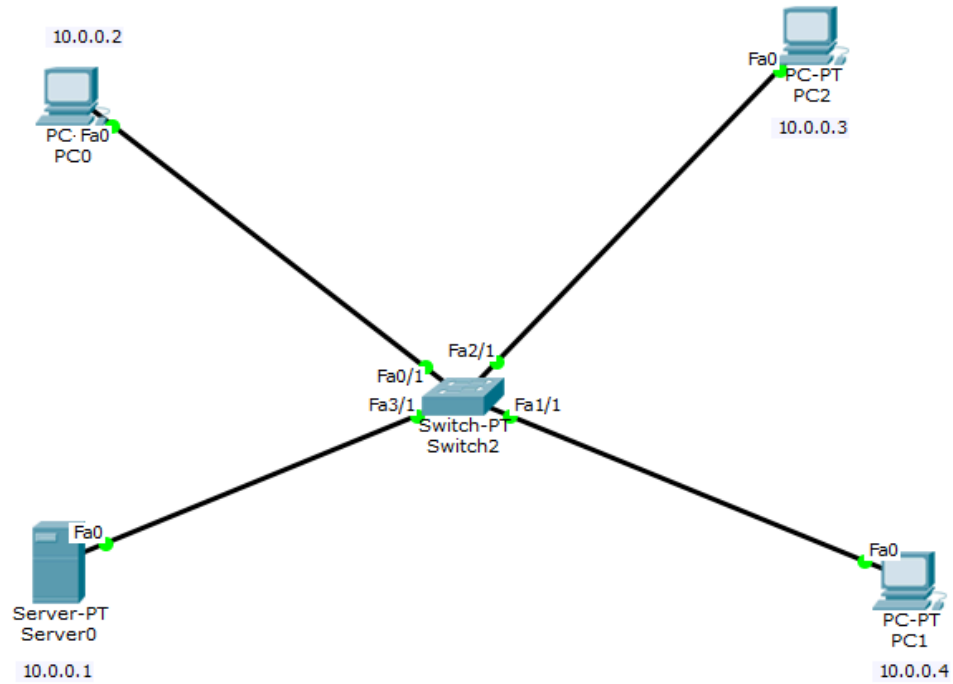
Reply from 20.0.0.3: bytes=32

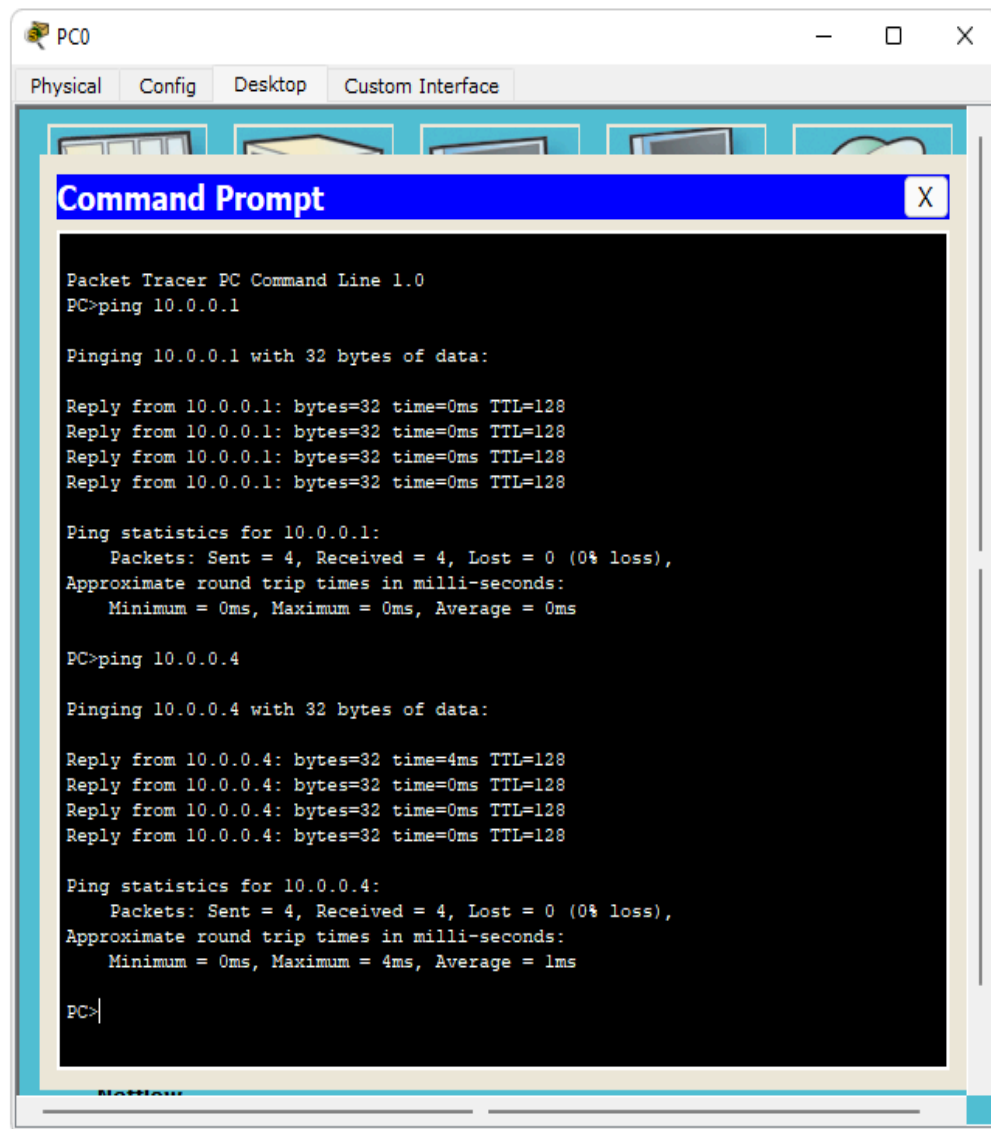
Packets: sent=4 Received=3 Lost=1 (25% loss)

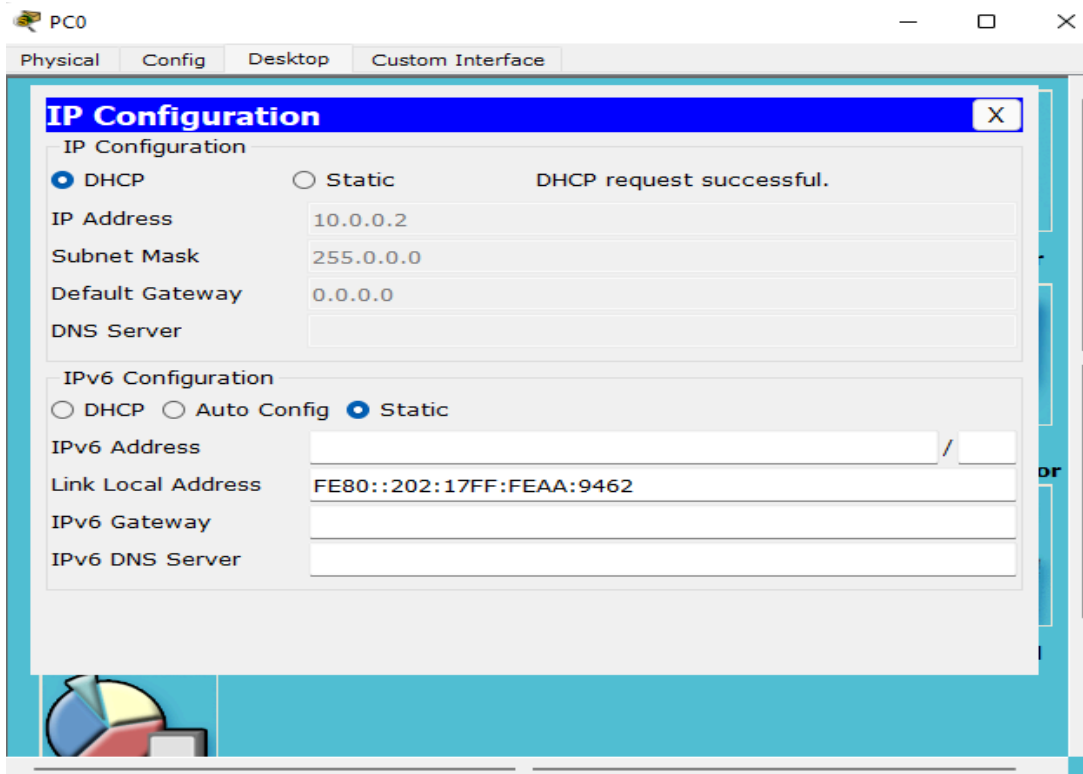
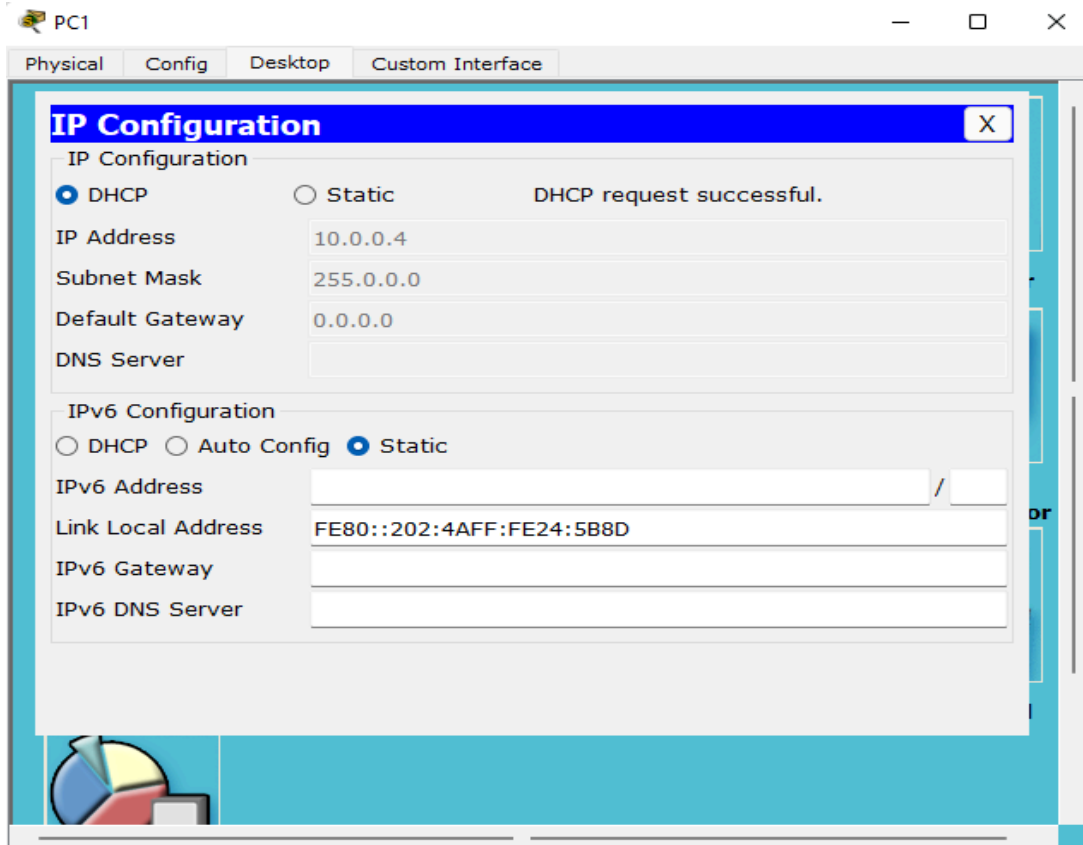
*the*  
13/11/24

TOPOLOGY:

DHCP WITHIN A LAN







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 0

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
switch1	10.0.0.0	0.0.0.0	10.0.0.3	255.0.0.0	100	0.0.0.0
server...	0.0.0.0	0.0.0.0	10.0.0.0	255.0.0.0	512	0.0.0.0

PC2

Physical Config Desktop Custom Interface

**IP Configuration**

IP Configuration

☒ DHCP ☐ Static DHCP request successful.

IP Address: 10.0.0.3

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::290:21FF:FE84:7B0

IPv6 Gateway:

IPv6 DNS Server:

## DHCP OUTSIDE A LAN

