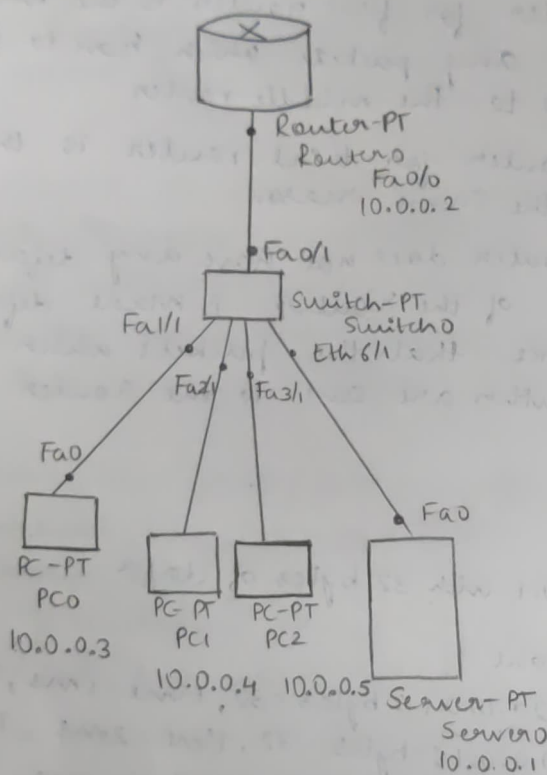


1/12/22

LAB-4

## ATM: Configuring DHCP within a LAN in a packet tracer

### TOPOLOGY:



### PROCEDURE:

- Place a generic router, generic switch, <sup>1</sup>Server and 3 generic PC's into the workstation and connect them as: Router to switch and switch to all 3 PC's and 1 server
  - Open server config tab, set its IP address and subnet mask as 10.0.0.1 and 255.0.0.0 and from settings tab set the gateway as 10.0.0.2
  - Open the CLI of router → no → enable → config t → interface fastethernet 0/0 → ip address 10.0.0.2 255.0.0.0 → no shut → exit
  - Go to the services tab of server and select DHCP from the left panel. On the services, set default gateway as 10.0.0.2 and change DNS and TFTP to 10.0.0.1
- In start IP address change it to the value from where you want to start the IP pool. Save the changes.

- Select the PC, go to the Desktop tab and select IP configuration. There change from static to DHCP. We can notice that all details like IP address, subnet mask, default gateway and DNS server is set by default.
- Do the above step for all the PC's

### OBSERVATIONS:

### LEARNING OUTCOME:

The server automatically sets the IP address, subnet mask and gateway to all the PC's and IP address is allocated serially in DHCP protocol.

### RESULT:

ping 10.0.0.5

Pinging 10.0.0.5 with 32 bytes of data:

Reply from 10.0.0.5: bytes=32, time=0ms TTL=128

Reply from 10.0.0.5: bytes=32, time=0ms TTL=128

Reply from 10.0.0.5: bytes=32, time=0ms TTL=128

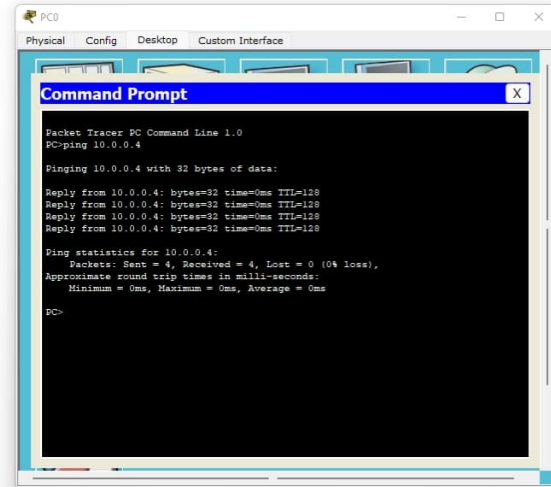
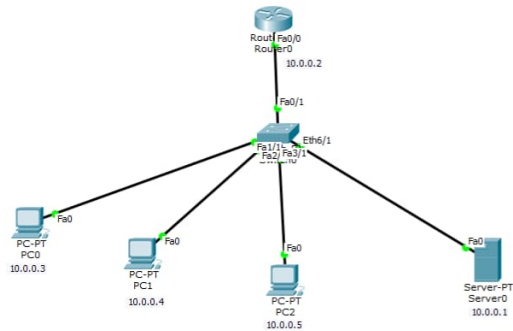
Reply from 10.0.0.5: bytes=32, time=0ms TTL=128

Ping statistics for 10.0.0.5:

Packets: Sent=4, Received=4, Loss=0 (0% Loss)

Approximate round trip times in ms:

Minimum=0ms, Maximum=4ms, Average=1ms



**SERVICES**

HTTP

DHCP

DHCPv6

TFTP

DNS

SYSLOG

AAA

NTP

EMAIL

FTP

DHCP

Interface FastEthernet0 ▾   Service ☒ On   ☐ Off

Pool Name serverPool

Default Gateway 10.0.0.2

DNS Server 10.0.0.1

Start IP Address : 10 0 0 3

Subnet Mask: 255 0 0 0

Maximum number of Users : 8

TFTP Server: 10.0.0.1

Add

Save

Remove

Pool Name	Default Gateway	DNS Server	Start IP Address	Subnet Mask	Max User	TFTP Server
server...	10.0.0.2	10.0.0.1	10.0.0.3	255.0.0.0	8	10.0.0.1

## IOS Command Line Interface

63488K bytes of ATA CompactFlash (Read/Write)

--- System Configuration Dialog ---

Continue with configuration dialog? [yes/no]: n

Press RETURN to get started!

Router>enable

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#interface FastEthernet0/0

Router(config-if)#ip address 10.0.0.2 255.0.0.0

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)#