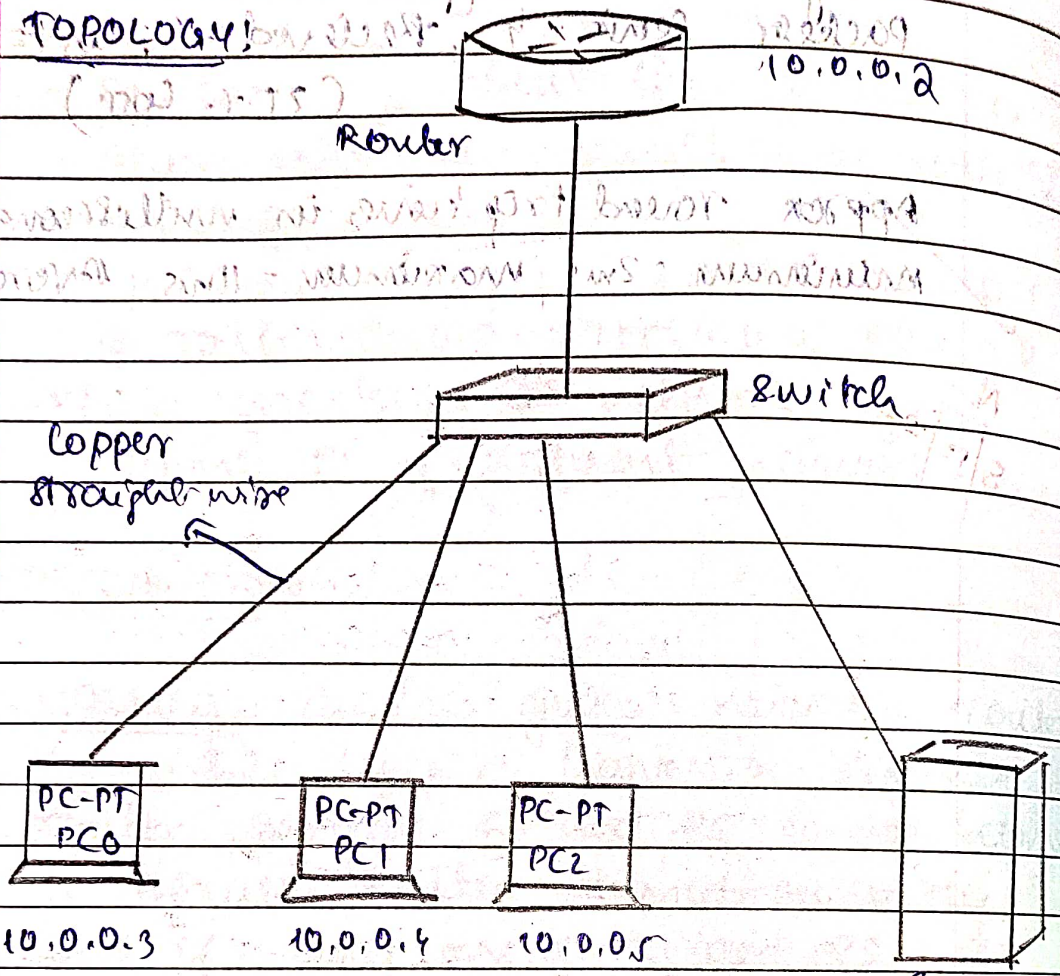
Lab-4

Thursday
Date 01/12/22
Page

AIM: Configuring DHCP within a LAN in a packet tracer.

TOPOLOGY:



PROCEDURE

→ A Generic router, A Generic switch, 3 PCs and a server is placed in workstation

→ The PCs are connected to Switch through copper straight wires

→ The switch is connected to Router and Server is connected to switch

→ Open the server config tab and set the IP address to 10.0.0.1 and subnet mask from the settings

Date __/__/__
Page _____

tab. Set the gateway to 10.0.0.2.
→ Open the CLI tab in the router
no → enable → config → interface fastethernet 4/0 → ip address 10.0.0.2 255.0.0.0 → no shut
→ For the server, go to the services tab and select DHCP from the panel list.
→ On services set default gateway to 10.0.0.2 and change DNS and TFTP to 10.0.0.1
→ In start IP address set IP as 10.0.0.3 and set Max no of users
→ Save the changes in services tab.
→ Click on a PC go to the Desktop tab and select IP configuration. Now change the static from Static to DHCP.
→ IP Address, subnet mask, Gateway and DNS are shown here by default.
→ Do the same for all the PCs present.

→ Click on a PC, open command prompt and ping a IP address you would like to send packets to.

OBSERVATIONS:

LEARNING: The server automatically sets the IP address subnet-mask and IP address is allocated serially in DHCP protocol.

How to activate DHCP — Procedure

Date __/__/__
Page

RESULT:

PC > ping 10.0.0.5

Pinging 10.0.0.5 with 32 bytes of data:

Pinging 10.0.0.5 : bytes=32 time=1ms TTL=

Reply from 10.0.0.5 : bytes=32 time=1ms TTL=

Reply from 10.0.0.5 bytes=32 time=0ms TTL=

Reply from 10.0.0.5 bytes=32 time=0ms TTL=

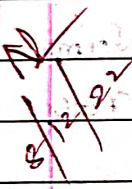
Reply from 10.0.0.5 bytes=32 time=0ms TTL=

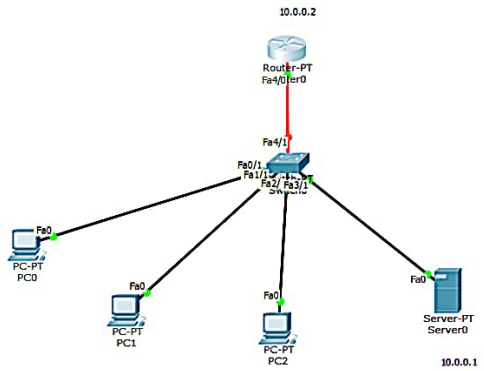
Ping statistics for 10.0.0.5

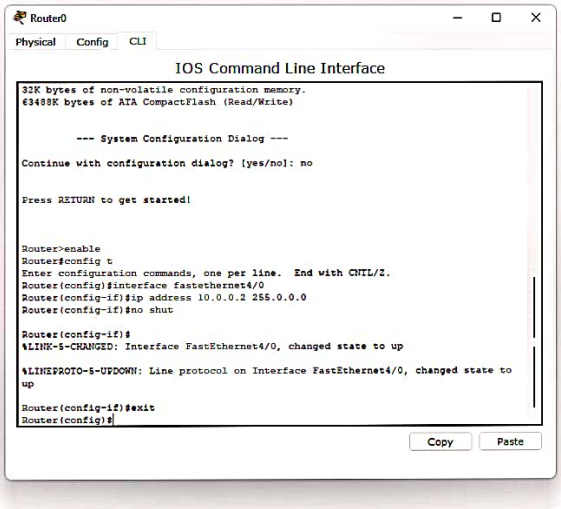
Packets : Sent=4, Received=4, Lost=0 (0%

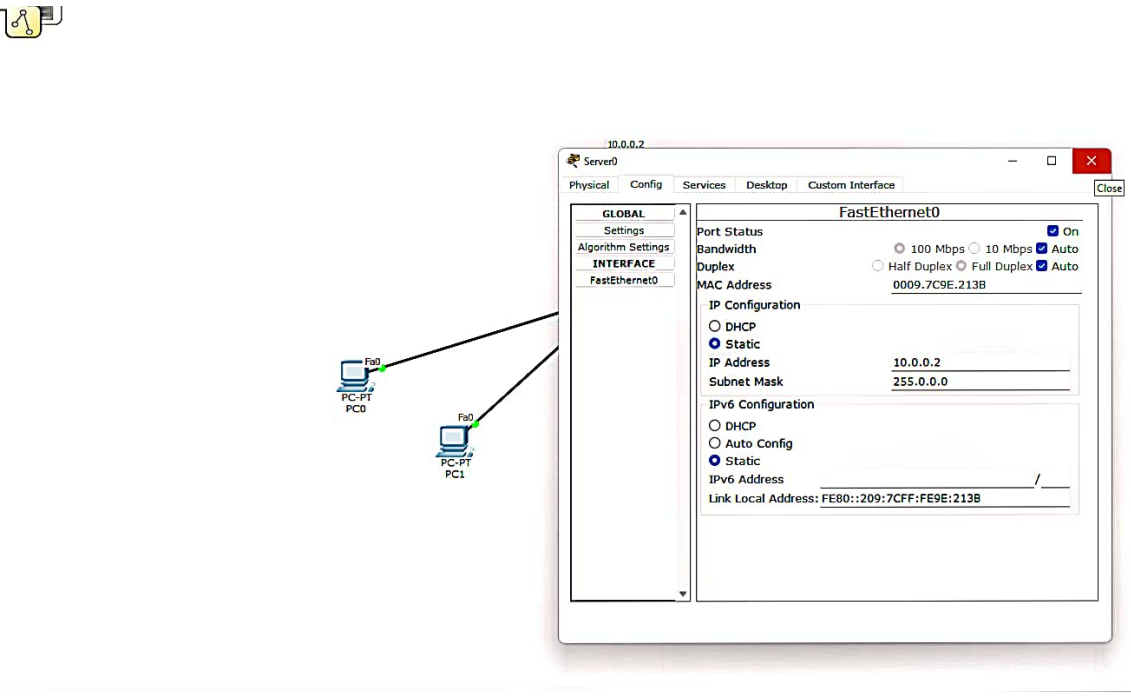
Approx round trip in milliseconds:

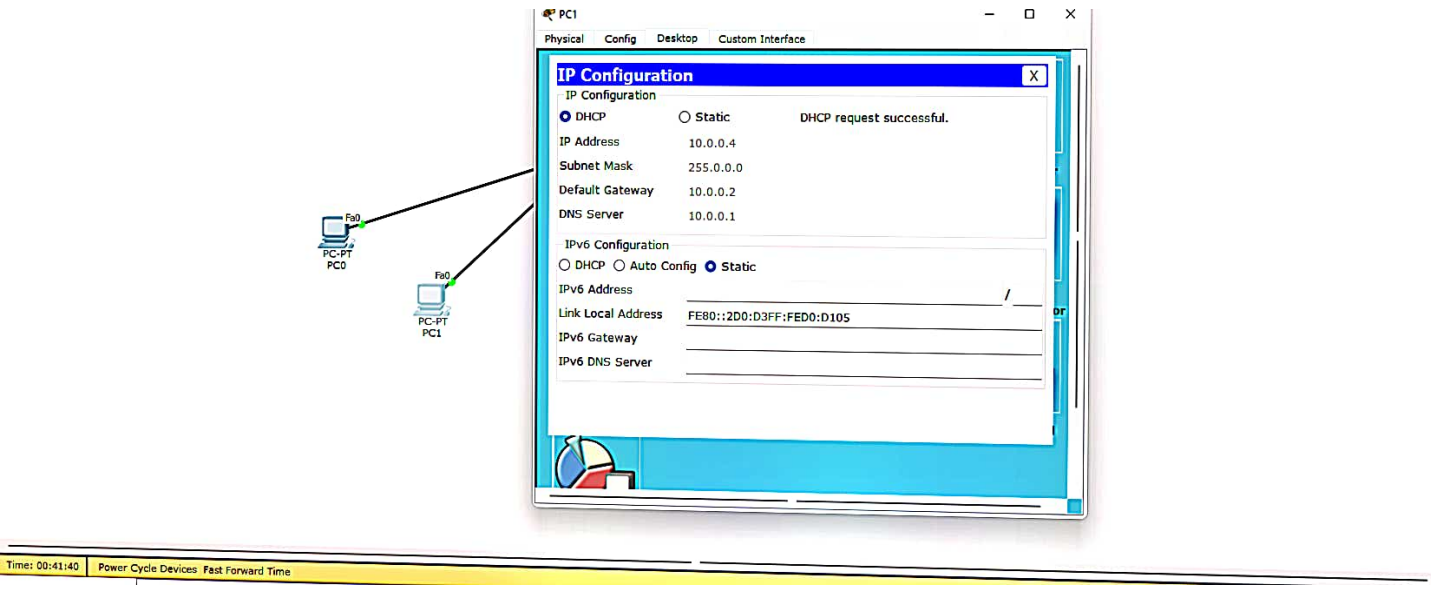
Minimum=0ms, Maximum=1ms, Avg=0ms

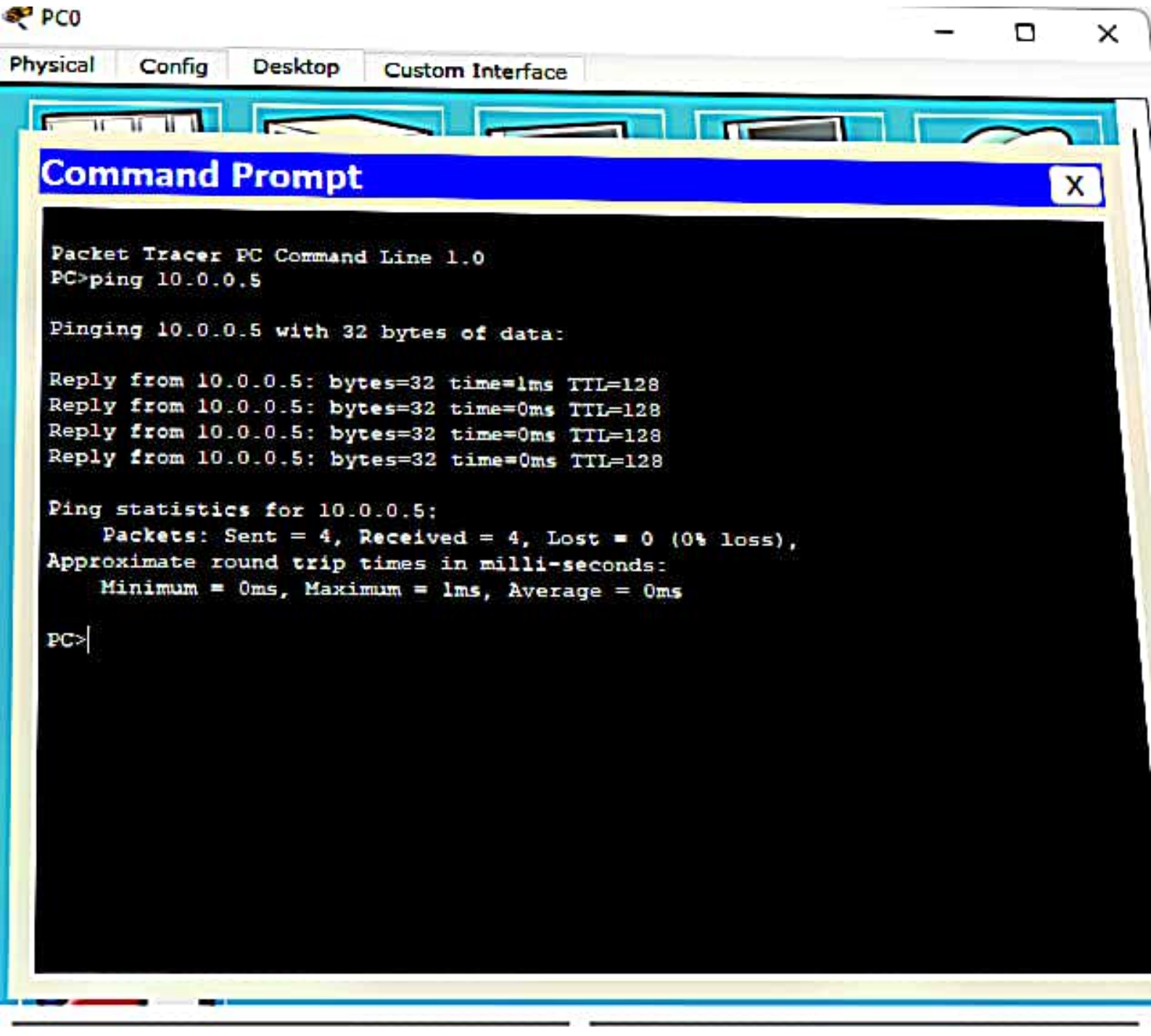



10.0.0.2
Router-PT
Fa4/0
Fa4/1
Fa0/1
Fa2/
Fa3/1
Fa0
PC-PT
PC0
Fa0
PC-PT
PC1
Fa0
PC-PT
PC2
Fa0
Server-PT
Server0
10.0.0.1


Router0
Physical
Config
CLI
IOS Command Line Interface
32K bytes of non-volatile configuration memory.
63488K bytes of ATA CompactFlash (Read/Write)
--- System Configuration Dialog ---
Continue with configuration dialog? [yes/no]: no
Press RETURN to get started!
Router>enable
Router#config t
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface fastethernet4/0
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 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)#
Copy
Paste


10.0.0.2
Server0
Physical
Config
Services
Desktop
Custom Interface
Close
GLOBAL
Settings
Algorithm Settings
INTERFACE
FastEthernet0
FastEthernet0
Port Status
On
Bandwidth
100 Mbps
10 Mbps
Auto
Duplex
Half Duplex
Full Duplex
Auto
MAC Address
0009.7C9E.213B
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::209:7CFF:FE9E:213B
Fa0
PC-PT
PC0
Fa0
PC-PT
PC1


PC1
Physical
Config
Desktop
Custom Interface
IP Configuration
X
IP Configuration
DHCP
Static
DHCP request successful.
IP Address
10.0.0.4
Subnet Mask
255.0.0.0
Default Gateway
10.0.0.2
DNS Server
10.0.0.1
IPv6 Configuration
DHCP
Auto Config
Static
IPv6 Address
Link Local Address
FE80::2D0:D3FF:FED0:D105
IPv6 Gateway
IPv6 DNS Server
Fa0
PC-PT
PC0
Fa0
PC-PT
PC1
Time: 00:41:40
Power Cycle Devices
Fast Forward Time


PC0
Physical
Config
Desktop
Custom Interface
Command Prompt
X
Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.5
Pinging 10.0.0.5 with 32 bytes of data:
Reply from 10.0.0.5: bytes=32 time=1ms 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, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 1ms, Average = 0ms
PC>