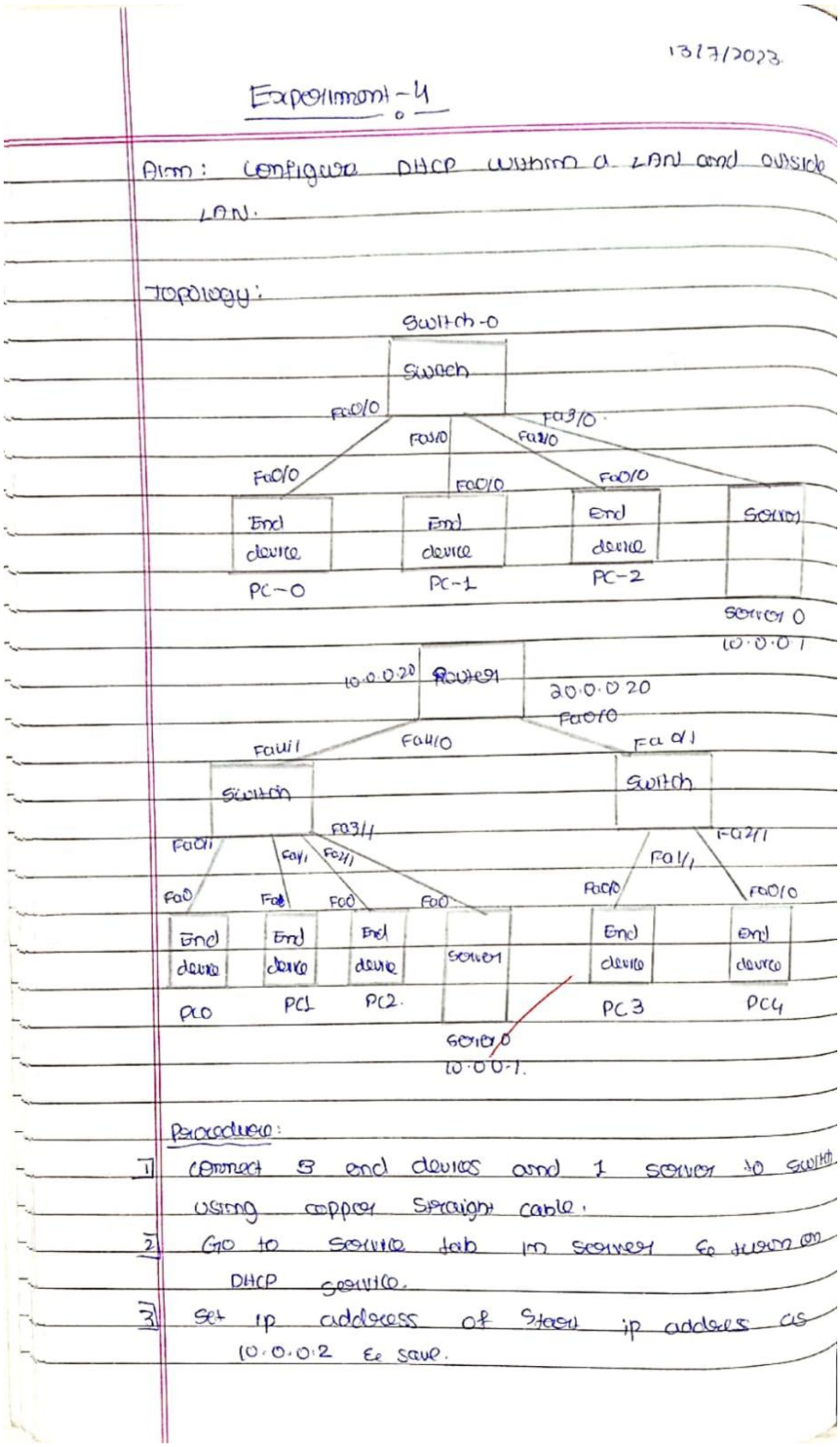
EXPERIMENT-4

Configure default route, static route to the Route



Date 13/7/2023
Page

4] Before which set ip address of server to 10.0.0.1 under fastethernet in config t. mode.

5] Click on PC0 and go to desktop tab, click ip configuration select DHCP, it will request for ip address and successfully get DHCP request. Also set the ip address.

6] Repeat same process to other two PC's.

7] Go to PC's command prompt and ping the message.

8] Add a router, a switch and 2 PC's to the logical workspace and connect the router to both switches. Connect the PC's to the newly added switch, using copper straight cable.

9] Set the server ip address of router using the following commands:

i) enable
ii) config t
iii) interface fastethernet 4/0
iv) ip address 10.0.0.20 255.0.0.0
v) no shut
vi) exit
vii) interface fastethernet 0/0.
viii) ip address 20.0.0.20 255.0.0.0.
ix) no shut
x) exit.

10] Now, goto the server and set gateway as 10.0.0.2

11] Go to router CLI and follow the below commands to enable DHCP in the new network.

i) config t
ii) interface fastethernet - 0/0

iii) ip helper-address 10.0.0.1

iv) no shut.

12] Change server pool and set Start ip address to 200.0.1.

13] Repeat step 2 on other two PC's.

Output:

PC > ping 10.0.0.3

pinging 10.0.0.3 with 32 bytes of data.

Reply from 10.0.0.3 : bytes=32 time=0ms TTL = 128

Reply from 10.0.0.3 : bytes=32 time=0ms TTL = 128

Reply from 10.0.0.3 : bytes=32 time=1ms TTL = 128

Reply from 10.0.0.3 : bytes=32. time 0ms TTL = 128

Ping Statistics from 10.0.0.3:

Packets : Sent = 4, Received = 4, lost = 0 (0% loss)

Approximate round trip times in milli-seconds

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

Output : -2

PC > ping 20.0.0.2

pinging 20.0.0.2 with 32 bytes of data

Request timed out.

Reply from 20.0.0.2 : bytes=32 time=0ms TTL = 128 ms

Reply from 20.0.0.2 : bytes=32 time=0ms TTL = 127 ms

Reply from 20.0.0.2 : bytes=32 time=0ms TTL = 128 ms

ping Statistics for 20.0.0.2 :

Packets Sent = 4, Received = 3, lost = 1 (25% loss)

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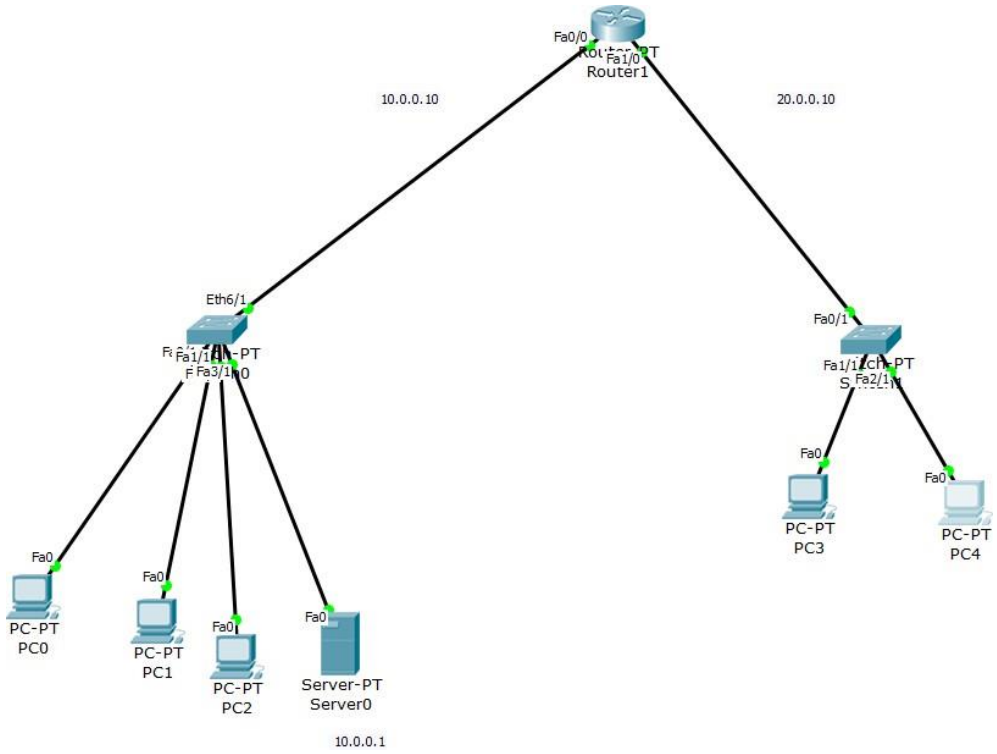
Approximate round trip time in milli-second
Minimum = 0ms, Maximum = 0ms, Average = 0ms

Observation:

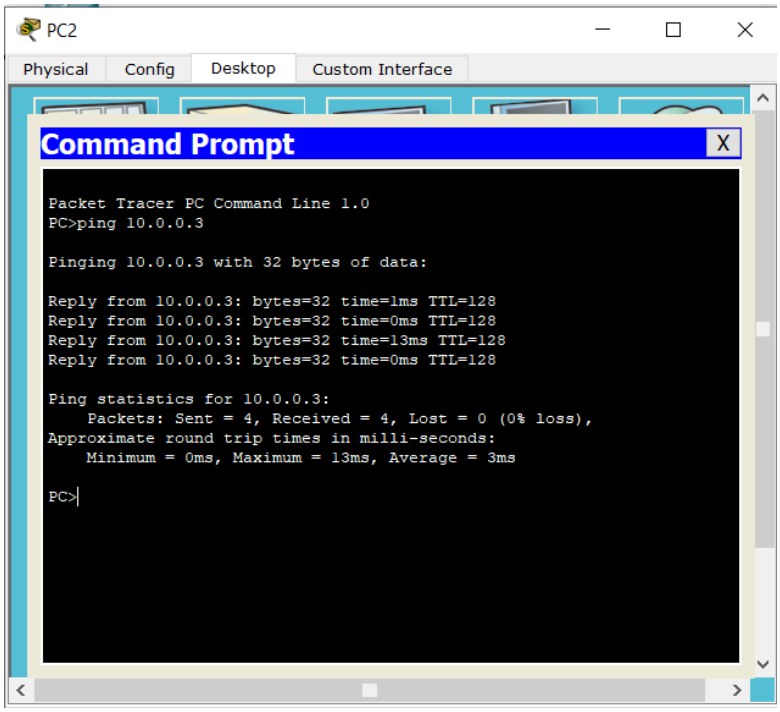
* The Dynamic Host configuration Protocol (DHCP) is a network management protocol used on IP networks for automatically assigning IP addresses and other communication to devices connected to the network.
* DHCP automatically assign an IP address to any device or node.
* It is a client server protocol where the server manages a pool of unique IP address
* It responds to all client request by providing IP configuration information from address pools, previously specified by a network administrator.

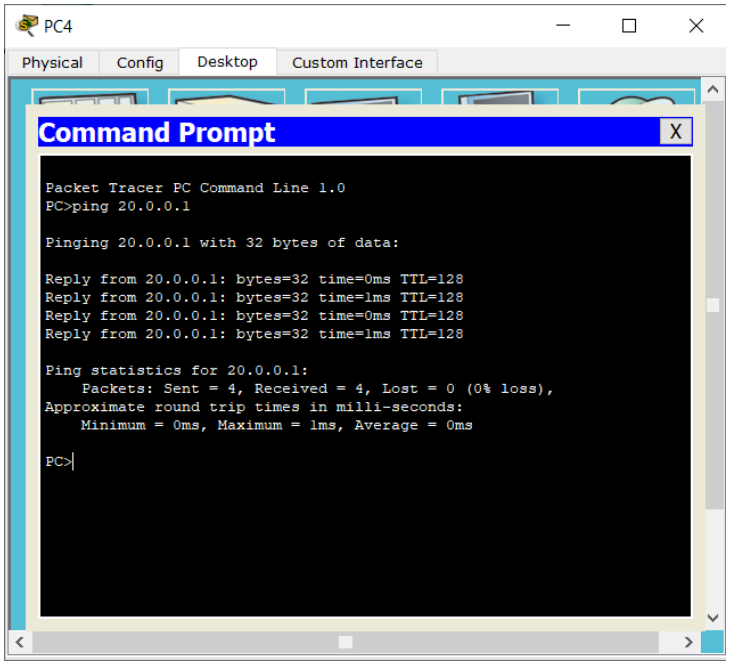
(10)

Topology:


Fa0/0
Fa1/0
Router1
10.0.0.10
20.0.0.10
Eth6/1
Fa0/1
Fa1/1
Fa3/1
Fa2/1
Fa0
PC-PT
PC0
PC-PT
PC1
PC-PT
PC2
Server-PT
Server0
10.0.0.1
PC-PT
PC3
PC-PT
PC4

Result:


PC2
Physical
Config
Desktop
Custom Interface
Command Prompt
X
Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.3
Pinging 10.0.0.3 with 32 bytes of data:
Reply from 10.0.0.3: bytes=32 time=1ms TTL=128
Reply from 10.0.0.3: bytes=32 time=0ms TTL=128
Reply from 10.0.0.3: bytes=32 time=13ms TTL=128
Reply from 10.0.0.3: bytes=32 time=0ms TTL=128
Ping statistics for 10.0.0.3:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 13ms, Average = 3ms
PC>


PC4
Physical
Config
Desktop
Custom Interface
Command Prompt
X
Packet Tracer PC Command Line 1.0
PC>ping 20.0.0.1
Pinging 20.0.0.1 with 32 bytes of data:
Reply from 20.0.0.1: bytes=32 time=0ms TTL=128
Reply from 20.0.0.1: bytes=32 time=1ms TTL=128
Reply from 20.0.0.1: bytes=32 time=0ms TTL=128
Reply from 20.0.0.1: bytes=32 time=1ms TTL=128
Ping statistics for 20.0.0.1:
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
Minimum = 0ms, Maximum = 1ms, Average = 0ms
PC>