LAB - 4

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

TOPOLOGY:-

ROUTER

10.0.0.2

Fa 0/0

Fa 0/1

SWITCH

Fa 1/1   Eth 6/1
Fa 2/1 Fa3/1

FaO   FaO   FaO   FaO

| PC- PT | PC-PT | PC-PT | Server -PT |
| PCO | PC1 | PC2 | Server-0 |

10.0.0.1
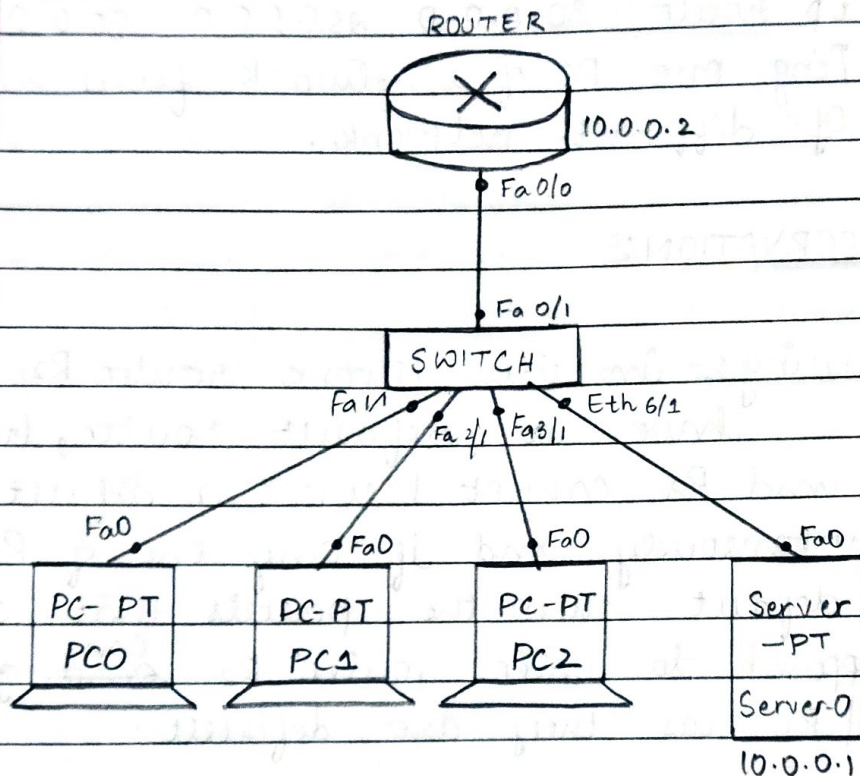
PROCEDURE:-

*) Place a generic router, generic switch, and 3 PCs 1 server into the workstation and connect them as:- Router to switch and switch to all 3 PCs and Server.

*) Open Server Config tab, set its IP address and Subnet mask, from settings tab let its gateway.

*) For Server IP address is 10.0.0.1, gateway is 10.0.0.2.

*) Open the CLI of router → no → enable → configt → interface fastethernet 0/0 → ip address 10.0.0.2 255.0.0.0 → no shut

*) 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 ~~config IP address~~ IP configuration. There change from Static to DHCP, we can notice that all the details like ip address, Subnet mask, Default Gateway and DNS Server is set by Default.

*) Do the above step for all the PCs.

OBSERVATIONS:-

LEARNING:-

The server automatically sets the IP addres, Subnet mask, and gateway to all the PCs and IP address is allocated serially in PHCP protocol.

Mon
Tue
Wed
Date 20
Page No.
Model
Thu
Fri
Sat

RESULT :-

> ping 10.0.0.4

pinging 10.0.0.4 with 32 bytes of data
Reply from 10.0.0.4: Bytes = 32 time = 0ms TTL=128
Reply from 10.0.0.4: Bytes = 32 time = 0 ms TTL=128
Reply from 10.0.0.4: Bytes = 32 time = 0ms TTL= 128
Reply from 10.0.0.4: Bytes = 32 time = 0ms TTL=128
Ping Statistics for 10.0.0.4:
Packets: ~~Serve~~ Sent = 4, Received = 4, Lost = 0
Approximate round trip times in milli-second:
Minimum = 0ms, Maximum = 0ms, Average = 0ms.

IOS Command Line Interface

```
        --- 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 fastethernet 0/0
Router(config-if)#ip maddress 10.0.0.2 255.0.0.0
                    ^
% Invalid input detected at '^' marker.

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
```
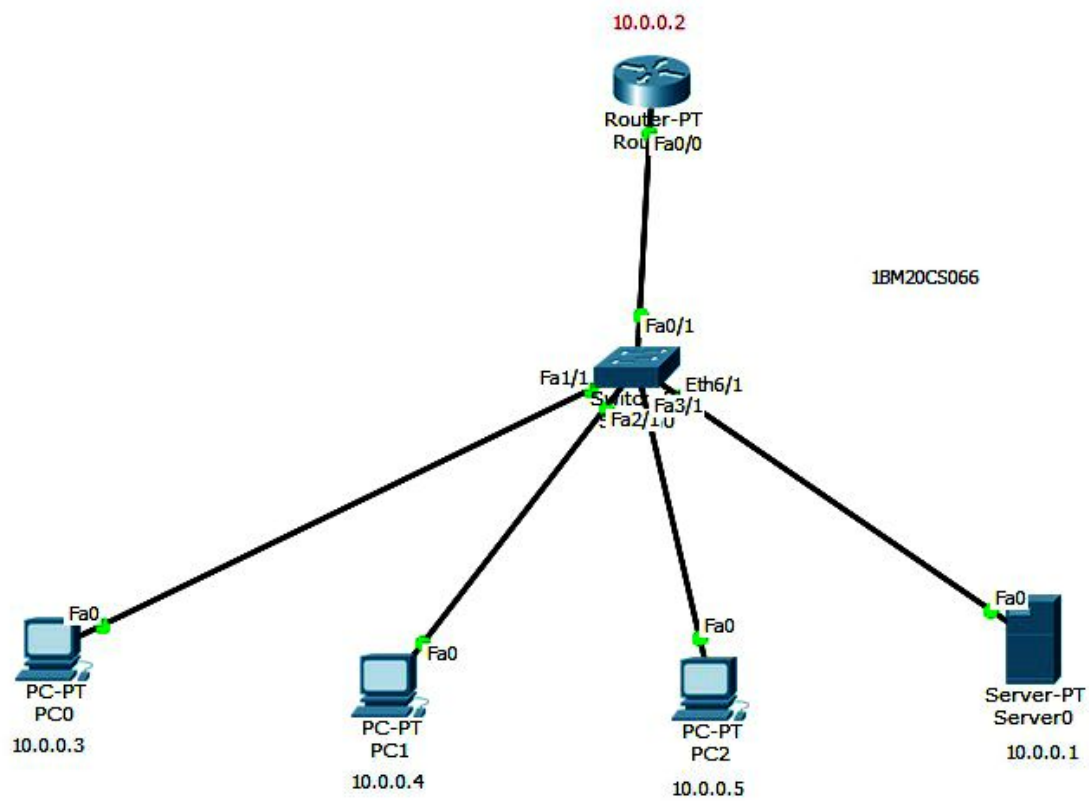
Copy   Paste

10.0.0.2

Router-PT
Rou Fa0/0

1BM20CS066

Fa0/1

Fa1/1   Eth6/1
Switch Fa3/1
Fa2/1.0

Fa0   Fa0   Fa0   Fa0

PC-PT   PC-PT   PC-PT   Server-PT
PC0   PC1   PC2   Server0

10.0.0.3   10.0.0.4   10.0.0.5   10.0.0.1

Command Prompt ☒

```
Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.4

Pinging 10.0.0.4 with 32 bytes of data:

Reply from 10.0.0.4: bytes=32 time=0ms TTL=128
Reply from 10.0.0.4: bytes=32 time=0ms TTL=128
Reply from 10.0.0.4: bytes=32 time=0ms TTL=128
Reply from 10.0.0.4: bytes=32 time=0ms TTL=128

Ping statistics for 10.0.0.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms

PC>
```

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	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 :	512
TFTP Server:	10.0.0.1

Add	Save	Remove

ool Nam	lefault Gateway	DNS Server	tart IP Addres	ubnet Mas	Max User	TFTF
server...	10.0.0.2	10.0.0.1	10.0.0.3	255.0.0.0	512	10.0.0.1