

## EXPERIMENT-4

### Question 4:

Configure DHCP within a LAN and outside LAN.

### Observation:

LAB 05  
EXPERIMENT 04  
13/03/2024

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 → IP configuration and give the  
IP address = 10.0.0.1 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 PCs:

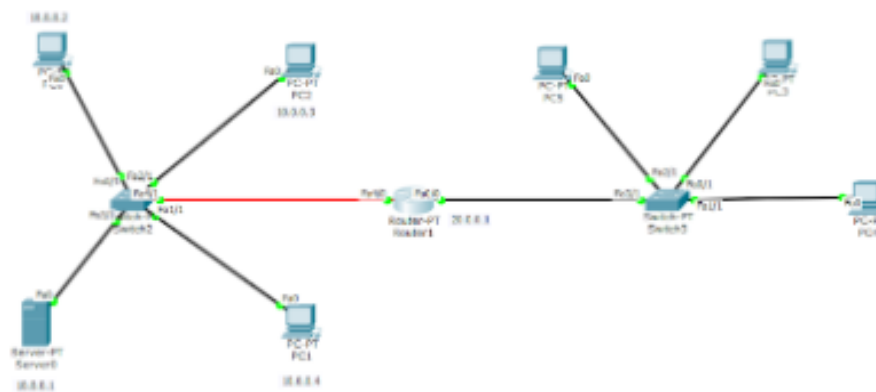
PC -> DHCP -> DHCP  
 DHCP is successfully set.  
 PC is above for all the PCs in the topology  
 & this completes all the connections of the topology  
 & ping from one PC to other network to another PC  
 the net network.

Output:

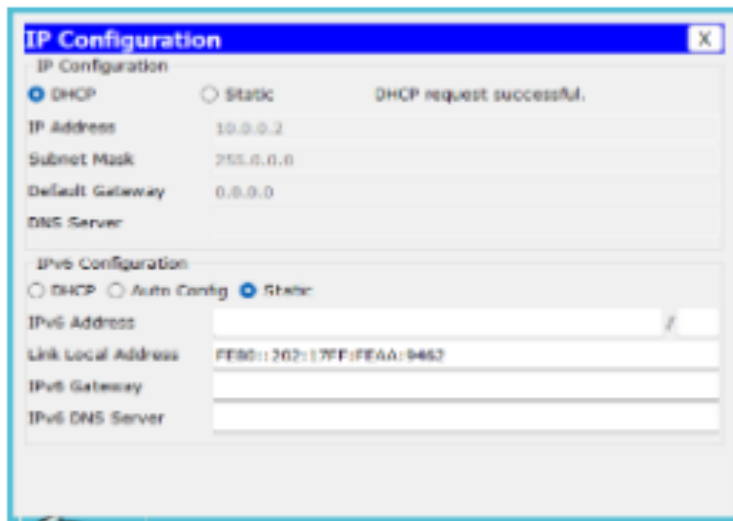
ping 20.0.0.3  
 ping 20.0.0.3 with 32 bytes of data:  
 request timed out  
 Reply from 20.0.0.3: bytes=32  
 Reply from 20.0.0.3: bytes=32  
 Reply from 20.0.0.3: bytes=32  
 Packets: sent=4 received=3 lost=1 (25.00%)

*Q.4.4*

Screenshot of the topology:



Screenshot of the output:



```
PC>ping 10.0.0.2

Pinging 10.0.0.2 with 32 bytes of data:

Reply from 10.0.0.2: bytes=32 time=0ms TTL=128
Reply from 10.0.0.2: bytes=32 time=0ms TTL=128
Reply from 10.0.0.2: bytes=32 time=0ms TTL=128
Reply from 10.0.0.2: bytes=32 time=0ms TTL=128

Ping statistics for 10.0.0.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms
```