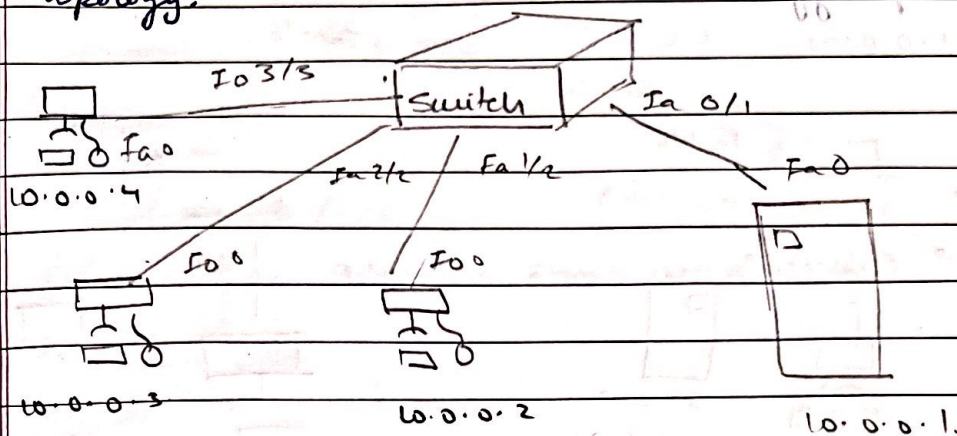


Experiment-4

Configure DHCP within a LAN & outsid

1) Within a LAN

Topology.



Procedure:

- Create a LAN network (10.0.0.0) by selecting 3 PCs as a server and connect them to a switch.
- set the server IP address to 10.0.0.1 & set the default gateway to 10.0.0.20
- Set the server to DHCP mode
- Put down the gateway & start IP address (10.0.0.2)

Result:

PC > Ping 10.0.0.4

Pinging 10.0.0.4 with 32 byte of data.

Reply from 10.0.0.4 bytes=32 time=1ms TTL=128

Reply from 10.0.0.4 bytes=32 time=1ms TTL=128

Reply from 10.0.0.4 bytes=32 time=1ms TTL=128

Reply from 10.0.0.4 bytes=32 time=1ms TTL=128

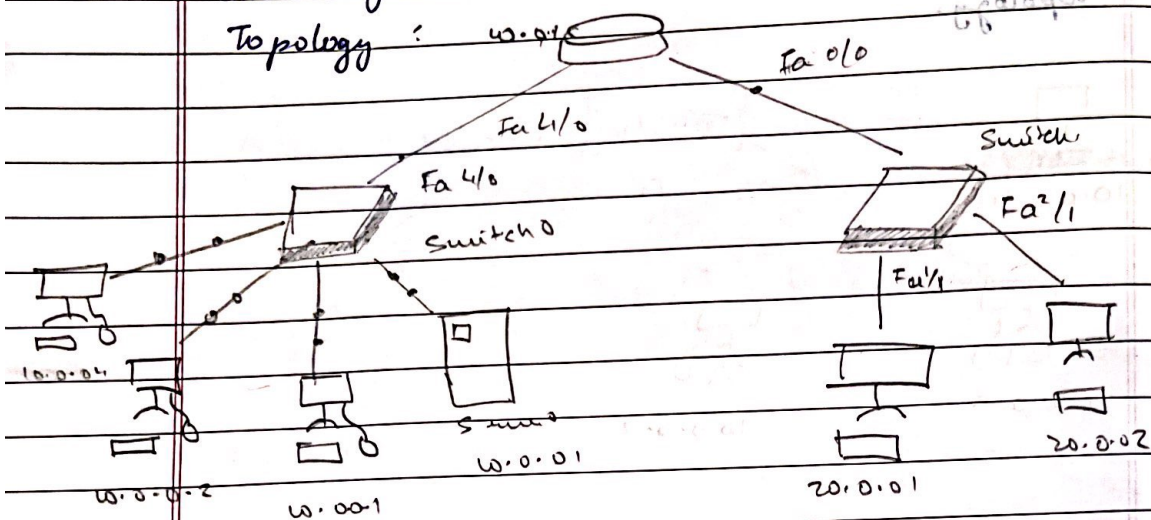
Ping statistic for 10.0.0.4
 Packet sent = 4, Received = 4, Lost = 0 (0% loss)
 minimum = 0ms, Maximum = 1ms, Avg = 0ms

②

Outside of LAN

Router

Topology :



Procedure :

→ Follow the same steps as in case of inside LAN,

by creating 10.0.0.0 network with the

default IP address - 10.0.0.1 and the gateway

10.0.0.10.

Create network with 2 PCs and a switch and

connect the 2 networks using a Router.

→ enable

→ config t

→ interface 4/0

→ ip address 10.0.0.20 255.0.0.0

→ no shut

→ exit

→ interface 5/0

→ ip address 20.0.0.20 255.0.0.0

→ no shut

→ exit

Go to the sources of service 0 and set another:
NAT pool gateway (default) to 20.0.0.10.

The following are the 2 pools

| Pool Name | Default gateway | DNSServer | Skvt20 address | Subnet mask |
|-------------|-----------------|-----------|----------------|-------------|
| Server pool | 10.0.0.10 | 0.0.0.0 | 10.0.0.2 | 255.0.0.0 |
| Server pool | 20.0.0.10 | 0.0.0.0 | 20.0.0.1 | 255.0.0.0 |

> config t

> interface fa 0/0

> ip helper address < server ip-address >

> no shut

exit

Result

PC > Ping 20.0.0.2.

Pinging 20.0.0.2 with 32 byte of data:

Request timed out

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

Reply from 20.0.0.2: bytes=32 Time=2ms TTL=127

Reply from 20.0.0.2: bytes=32 Time=1ms TTL=127

Ping statistics for 20.0.0.2:

Packets: sent=4 received=3 lost=1 (25% loss)

Approx time (in milliseconds)

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