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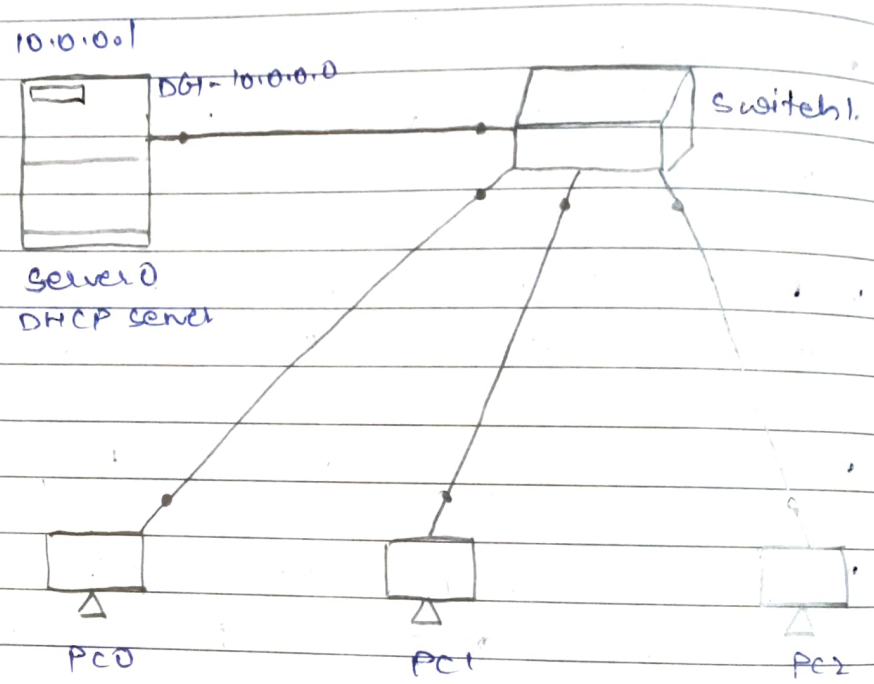
LAB-04

Design a DHCP within LAN and Outside LAN

- Objective: To design a DHCP within LAN and ~~Outside LAN~~.

- Topology:

:) within LAN



- Procedure:

1) Place 3 PC's 1 server and one switch and connect all end devices to the switch using copper straight wire.

2) Go to server pt → Desktop → IP configuration
IP address - 10.0.0.1
Default Gateway : 10.0.0.0

3) In server pt go to config → services → DHCP turn services to on

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pool name : switchone
Default gateway : 10.0.0.0
start ip : 10.0.0.3
Max no. of users : 100
click on Add.

4. Go to each PC Desktop - IP configuration and change IP configuration from static to DHCP. The ip addresses will be assigned automatically.

5. Ping from PC0 to PC3.

- Observation:

1) All connections are succesful

2) Ping 10.0.0.4
pinging 10.0.0.4 with 32 bytes of data
Packets: sent: 4, Received: 4, Lost: 0 (0% Loss).

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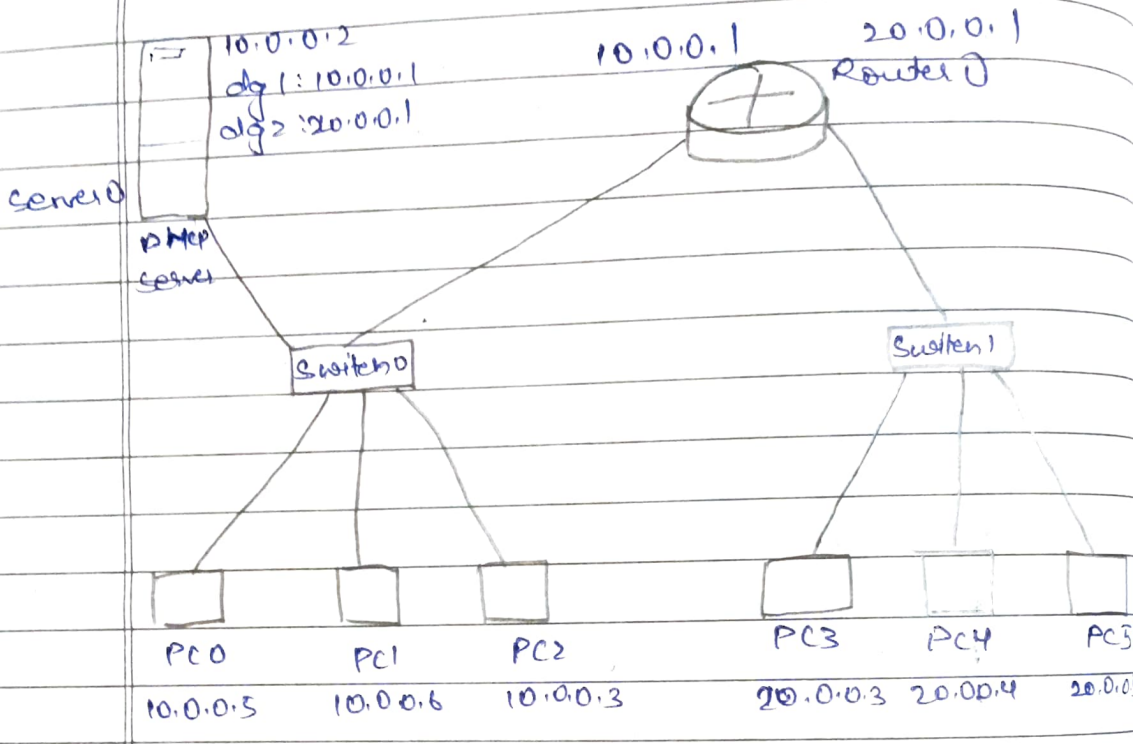
- Objective : To design a DHCP Outside LAN

- Topology :
Outside LAN



- Procedure :-

1) Place 6 pc's, 2 switch, 1 server, 1 router and connect them as shown in the figure.

2) Server → Desktop → IP configuration
IP address - 10.0.0.2
Def. gateways - 10.0.0.1

3) Config → Services → DHCP, turn services to on
Pool name : switch one
Def. gateway : 10.0.0.1
Start IP : 10.0.0.3

max users : 100
click on Add.

pool name : switchtwo
Def. gateway : 20.0.0.1
start IP : 20.0.0.3
max users : 100
click on Add

4) Go to router CLI
> enable
config terminal
interface fastethernet 4/0
ip address 10.0.0.1 255.0.0.0
ip helper-address 10.0.0.2
no shut
exit

interface fastethernet 0/0
ip address 20.0.0.1 255.0.0.0
ip helper-address 10.0.0.2
no shut
exit

All router switch connections go up

5) Go to all 6 PC's and change IP configuration from static to DHCP address will be automatically assigned.

6) Ping PC0 to PC5

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