

15/02/24

LAB-5

DATE:

PAGE:

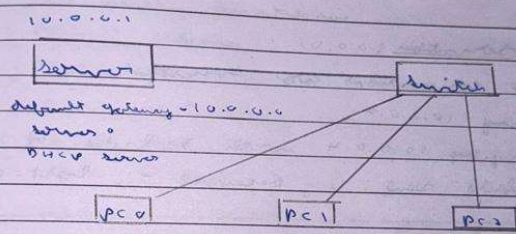
Design DHCP within LAN and outside LAN

Objective:

To design DHCP within LAN

Topology:

i) within LAN



Procedure:

- 1) Power 3 PC's and 1 server and one switch and connect all end devices to the switch using copper straight wires
- 2) Go to server -> pt -> desktop -> IP configuration
ip address - 10.0.0.1
default gateway: 10.0.0.0
- 3) In server -> go to config -> services -> turn services on
pool name: switch
default gateway: 10.0.0.0

Start ip: 10.0.0.3
Mask no. of subnets: 100
Subnet mask

- 4) Go to each PC desktop - IP configuration and change IP configuration from static DHCP. The IP address will be assigned automatically.

- 5) Ping PC0 to PC3

Observation:

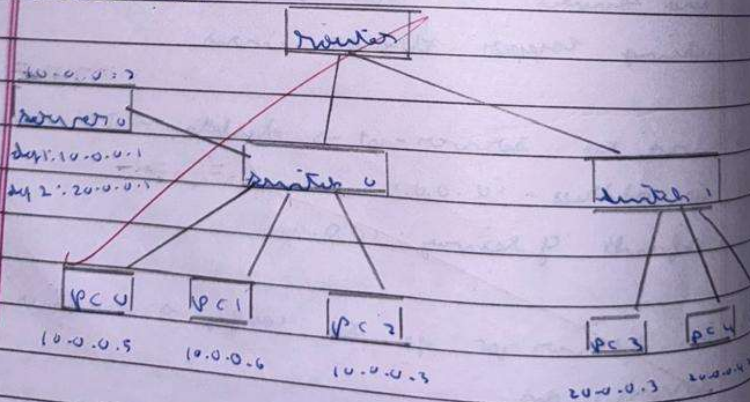
- 1) All connections are successful
- 2) Ping 10.0.0.4

Pinging 10.0.0.4 with 32 bytes of data:
Packets sent: 4, Received 4, Lost = 0 (0% loss)

Objective: To design DHCP outside LAN

Topology:

outside LAN



Procedure:

- 1) Place PC's

- 2) Router → IP address

- 3) Config → Pool

- 4) Go to → enable

Procedure:

1) Place 6 PCs, 2 switches, 1 server, 1 router and connect them as shown in the figure.

2) Server → desktop → IP configuration
 IP address: 10.0.0.2
 default gateway: 10.0.0.1

3) Config → services → DHCP,
 Pool name: switch1
 default gateway: 10.0.0.1
 start IP: 10.0.0.3
 max users: 100
 click add

Pool name: switch2
 default gateway: 20.0.0.1
 start IP: 20.0.0.3
 max users: 100
 click add

4) Go to router CLI

> enable

config terminal

interface fastethernet 0/0

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 interfaces connections go up

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

6) Link PC0 to PC5

Observation:

- 1) All connections are successful
- 2) All 6 PC's get assigned DHCP IP address

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Configure

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To

Router

Perise

Router

Topol

10.0

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10.0

Pro

(i) con

or

(ii) con

