Program-5

Configure DHCP within a LAN and outside LAN

Topology, Procedure and Observation:

EXP-4 - LAB-5 & 6

Aim: To configure DHCP within LAN and outside a LAN

Topology :

10.0.0-1   20.0.0.1

switch - P0

switch   P1

Serve
PC0   PC1   PC2   PC3   PC4   PC5

PROCEDURE :

1) Connect the devices as shown above.

2) Click on Server.

under desktop → IP configuration → enter IP address (10.0.0.2),
Subnet mask, Default Gateway (10.0.0.1)

Under Services → DHCP → Turn on service, change pool name
(switch 1), default getaway (10.0.0.1). Start IP address →
10.0.0.3., max no. of users : 100 and add.

Create another server pool.

poolname (switch 2), default Gateway (20.0.0.1)
DNS Server 0.0.0.0 start IP - 20.0.0.3,
max no.of users : 100 and add.

3) Click on Router → CLI

router > enable

router # config terminal

Router (config) # Interface fastethernet 4/0

Router (config) # ip address 10.0.0.3 255.0.0.0

Router (config-if) # ip address (helper) 10.0.0.2

Router (config-if) # no shutdown

Configure the same for fastethernet 0/0 router.

4) Setting up the end devices (PC's and laptop)

Click on PC → Desktop → IP configuration → DHCP.

(server automatically sets up the IP, subnet & default Gateway)

Similarly do for all remaining end devices.

5) Pinging from one network to other is possible.

from PC0.

OUTPUT:

Ping 20.0.0.3

Pinging 20.0.0.3 with 32bytes of data.

Request timed out.

Reply from 20.0.0.3 : bytes : 32 time : 1ms TTL = 128

Reply from 20.0.0.3 : bytes: 32 time : 0ms TTL = 128

Reply from 20.0.0.3 : bytes: 32 time : 0ms TTL=128

Ping statistics

Packets: Sent=4, Received = 3, Lost = 1 (25% loss)

Screenshots: