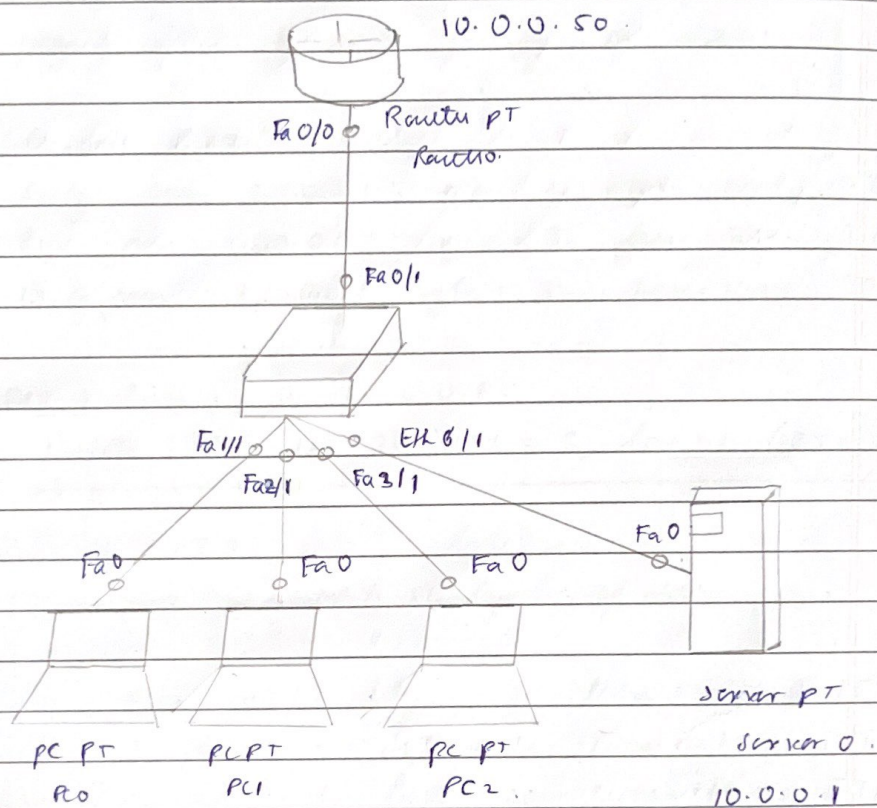


28/11/22

Experiment 4Title: Configuring DHCP within a LAN in a packet tracer.Aim: - Configuring DHCP within a LAN in a packet tracer.Topology -

procedure : - \* place a generic router, a generic switch, a server and 3 PCs in the work space as shown in topology.

- \* Connect the PCs to the switch using copper straight through.
- \* Connect the server to the switch and the switch to the router using copper straight through.
- \* Place a note below the server and keep its IP address as 10.0.0.1.
- \* Configure the IP address of the server as 10.0.0.1.
- \* For Make the gateway of server as 10.0.0.50.
- \* Open CLI of router and enter following commands to establish connection between them.
  - enable
  - config t
  - interface fastEthernet 0/0
  - ip address 10.0.0.50 255.0.0.0
  - no shut.

\* The light will turn green for router and will turn amber for switch.

\* After some time the amber color changes to green.

\* Click on the server →

→ open the services tab.

→ Click on DHCP

→ turn the switch on.

→ set default gateway as 10.0.0.50

→ DNS server = 10.0.0.1 (IP address).

→ TFTP server = 10.0.0.1 (IP address).  
(of server)

→ Start IP address → 10.0.0.2

→ click on save.



- \* Click on each PC and go to desktop tab
- \* click on ~~the~~ IP configuration
- \* click DHCP
- \* if no error it will show successful
- \* repeat for other two PCs as well.

Simulation mode - Add a simple PDU by selecting the PC and click on auto capture from right panel.

Real time mode - select the PC P10 and go to its command prompt and ping PC1 once the message has been successfully sent repeat this with PC2.

Results :-

PC > ping 10.0.0.3

pinging 10.0.0.3 with 32 bytes of data :

Reply from 10.0.0.3 : bytes = 32 time = 0ms TTL = 128

Reply from 10.0.0.3 : bytes = 32 time = 0ms TTL = 128

Reply from 10.0.0.3 : bytes = 32 time = 1ms TTL = 128

Reply from 10.0.0.3 : bytes = 32 time = 3ms TTL = 128

ping statistics for 10.0.0.3 :

packets : sent = 4, received = 4, lost = 0 (0% loss)

PC > ping 10.0.0.4

pinging 10.0.0.4 with 32 bytes of data :

Reply from 10.0.0.4 : bytes = 32 time = 0ms TTL = 128

Reply from 10.0.0.4 : bytes = 32 time = 0ms 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 statistics for 10.0.0.4:

packets: sent = 4, received = 4, lost = 0 (0% loss)

Learnings: The server automatically sets the IP address and subnet, and gateway to all the PCs and IP address is allocated serially in DHCP protocol.