

EXPERIMENT-4

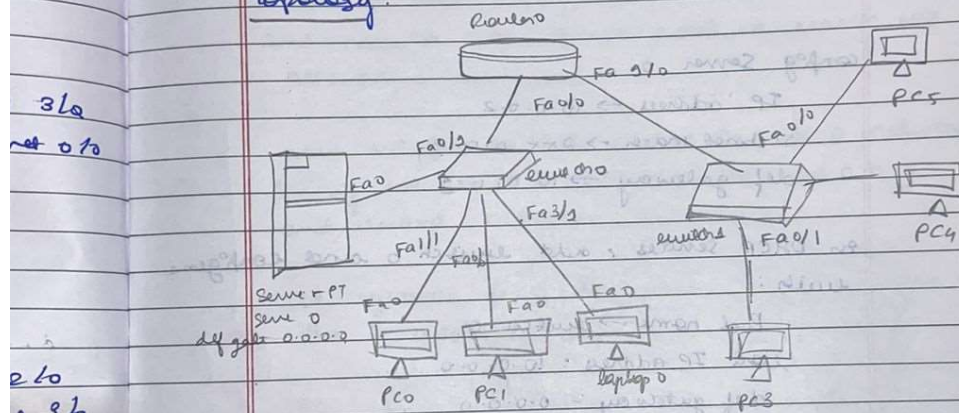
Aim: Configure DHCP within a LAN and outside LAN. Topology , Procedure and Observation:

Experiment -4

a) Configure DHCP within a LAN & outside LAN

Aim: Demonstrate DHCP within LAN and outside a LAN

Topology:



1. switch 0 connected router's interface fa0/0 using copper-shaughl-through cable from
2. PC0, PC1, PC2 are connected to switch 0 via copper-shaughl cable with IP addresses 10.0.0.2, 10.0.0.3 and 10.0.0.4 respectively
3. Server 0 is connected to switch 0 with IP address 10.0.0.2
4. PC3, PC4, PC5 are connected to switch 1 with IP address → PC3: 20.0.0.3
PC4: 20.0.0.4
PC5: 20.0.0.5

Procedure:

- Router: Place the router in the middle
- Switch: Connect two switches to router
- PC: Take 3 PCs & connect it to switch 0 and another 3 PCs to switch 1.
- Server: place & connect it to the switch 1 via cable

config Server 0.

IP address $\rightarrow 10.0.0.2$

subnet mask $\rightarrow 255.0.0.0$

def gateway $\rightarrow 10.0.0.1$

In DHCP services, add switch 0 and configure switch:

Pool name \rightarrow switch 0

local IP address: $10.0.0.0$

def gateway - $0.0.0.0$

subnet mask - $255.0.0.0$

In DHCP services, add switch 1 configure switch
poolname - switch 1

local - IP address - $10.0.0.3$

def gateway - $30.0.0.1$

subnet mask - $255.0.0.0$

\rightarrow set IP configurations of all PCs PC0 to PC7 to test to DHCP due to which each is able to get its IP address, subnet mask, default gateway

Observation:

when we have to dynamically assign IP address to another network we will do it using a router and a server when we configure and connect router 1 to switch 0 to switch 1 using, so that we will be using ip-helper add 200.10.0.0.2, and network can access pool in server of network 1.

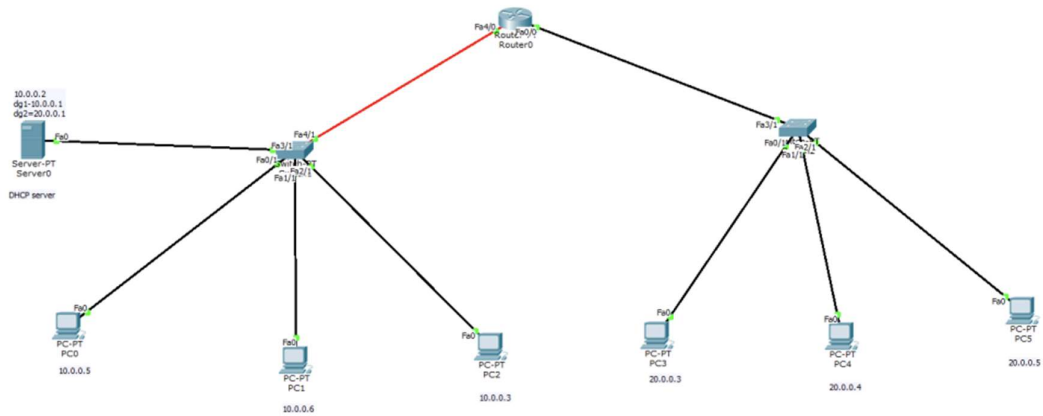
now we go to pc's and select DHCP network 1 if we will be starting from 10.0.0.8 and second network 20.0.0.8.

all systems will be dynamically assigned the IP address.

~~N~~
~~1/25~~
~~3~~

test
to IP

Screenshots:



PC0

Physical Config Desktop Custom Interface

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Packet Tracer PC Command Line 1.0
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=1ms TTL=128
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=0ms TTL=128

Ping statistics for 10.0.0.4:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

PC>
```