

13/11/2024

Week-5(Experiment 4)

Observation Book:

13/11/2024 LAB-05

Question: Configure DHCP within LAN and outside LAN.

Aim: To Configure DHCP.

Topology:

Router-PT (Router 0)
Fa 4/0 10.0.0.1
Fa 0/0 20.0.0.1

Switch1-PT (Switch 1)
Fa 0/1 10.0.0.1
Fa 3/1 10.0.0.1

Switch2-PT (Switch 2)
Fa 0/1 10.0.0.1
Fa 3/1 10.0.0.1

PC-PT (PC1) 10.0.0.4
PC2 10.0.0.6
PC3 10.0.0.5
PC4 20.0.0.5
PC5 20.0.0.4
PC6 20.0.0.3

def gateway
switch1 ← 10.0.0.1
switch2 ← 20.0.0.1

Procedure:

- configure as shown above (according to the topology).
- server → Desktop → IP configuration
 - In static mode → setup the IP address as 10.0.0.2
 - and default gateway as 10.0.0.1
- server → Desk Services → DHCP
 - create switch1 (pool) and set default gateway as 10.0.0.1
 - start IP address → 10.0.0.3
 - Maximum number of user : 100 and Add
- Similarly create switch2 with gateway as 20.0.0.1

→ setup the IP addresses of the PC's by DHCP
PC → Desktop → ^{IP} Configuration → DHCP (dynamically IP addresses are allocated).

similar for all the rest PCs.

→ Configuration of Router:

Router → CLI ↓

Router > enable

Router # config terminal

Router (config) # interface fastethernet 4/0

Router (config-if) # ip address 10.0.0.1 255.0.0.0

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

Router (config-if) # no shutdown

Exit.

Similarly for fastethernet 0/0.

→ Once the configuration is complete, we can ping the devices of different networks.

OBSERVATION :-

On pinging from one end device to other.

→ ping 20.0.0.4

pinging 20.0.0.4 with 32 bytes of data: (from PC1)

Request timed out

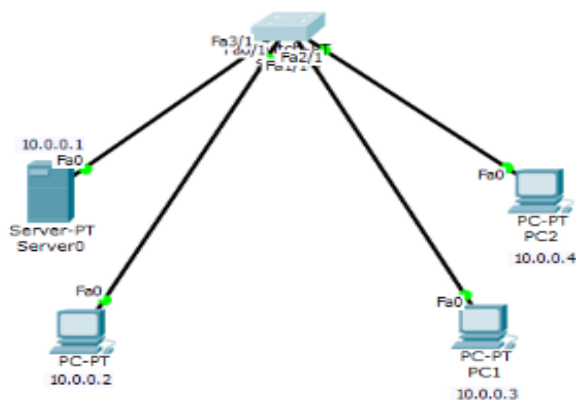
Request timed out

lost = 4

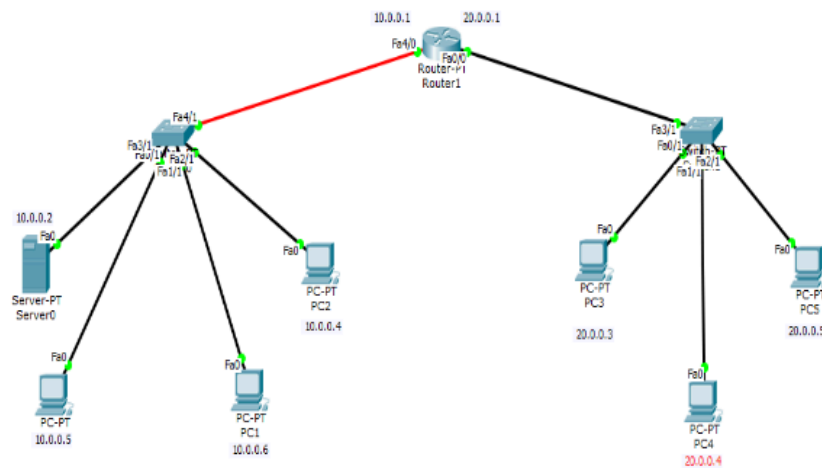
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Topology:

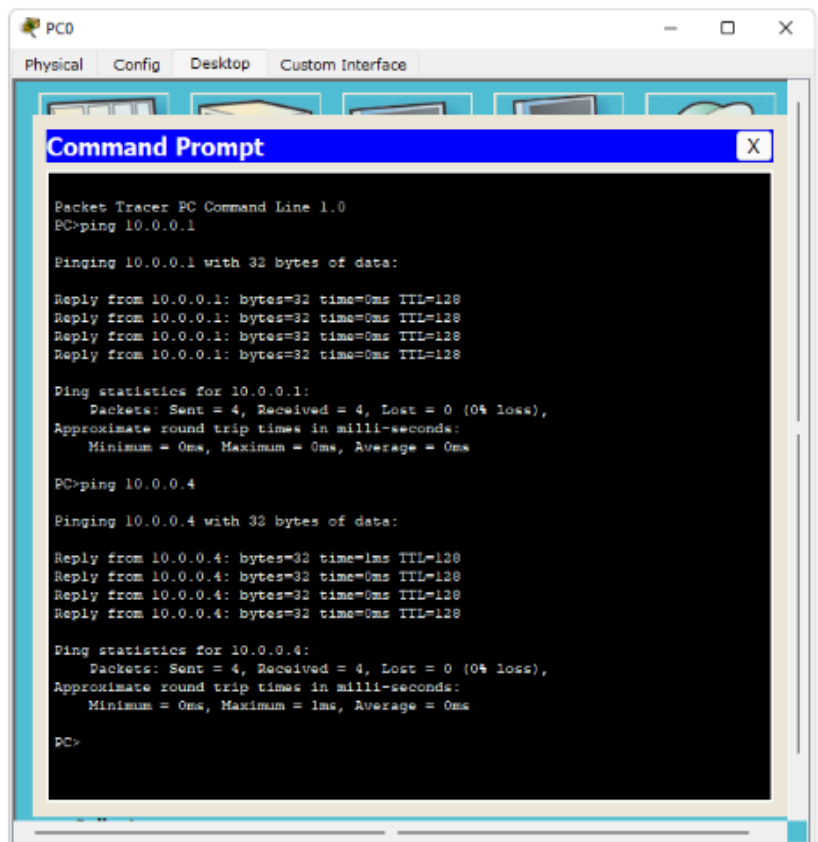
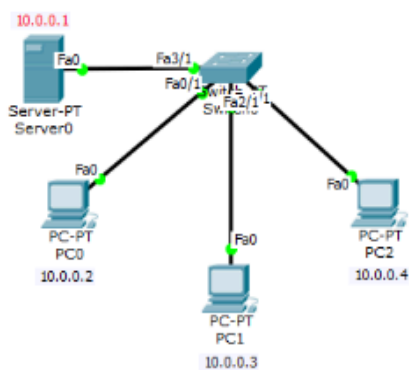
(within Lan)



(outside Lan)



OUTPUT:
(within Lan)



(outside Lan)

