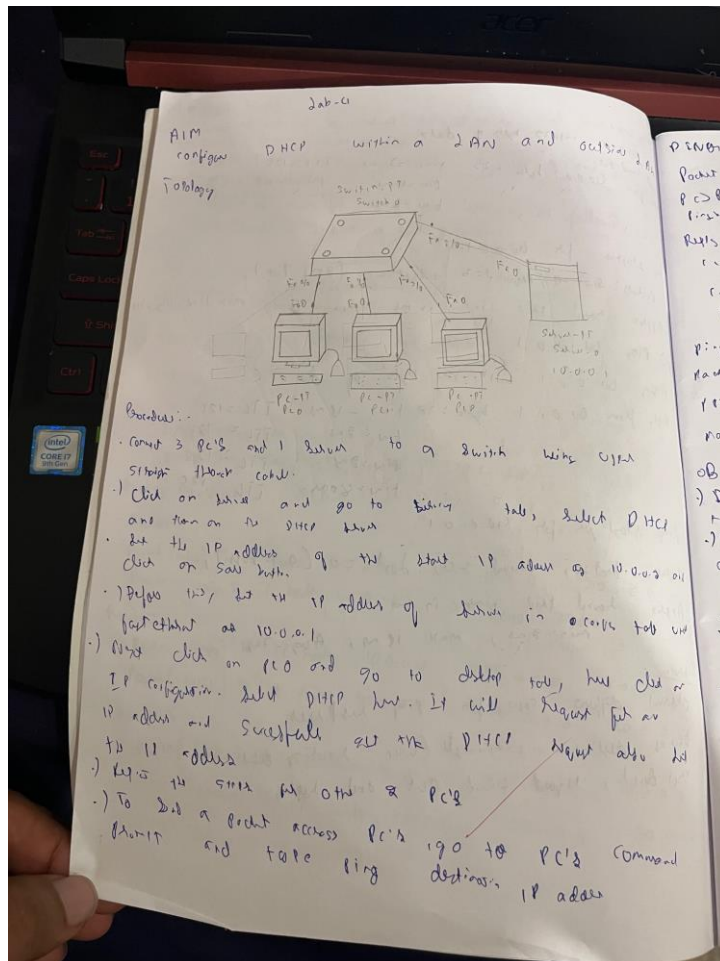


WEEK 4

Configure DHCP within a LAN and outside LAN.

OBSERVATION:



PINB

Packet from PC cannot be 10.

P > 10.0.0.0

10.0.0.0 with 255.255.255.0

Bits from 10.0.0.0, byte = 32 bits, 10.0.0.0, 10.0.0.0

bits 24-31 from 10.0.0.0

Packet: 10.0.0.0, 10.0.0.0, 10.0.0.0, 10.0.0.0

10.0.0.0, 10.0.0.0, 10.0.0.0, 10.0.0.0

10.0.0.0, 10.0.0.0, 10.0.0.0, 10.0.0.0

Observation

1) DHCP is used to dynamically assign an IP address to the devices on the network.

2) It is a client-server protocol in which the server provides a pool of unused IP addresses and other configuration parameters.

3) DHCP - Client always sends a request to the DHCP server when it starts to connect to a network.

4) The DHCP server responds to the client request by providing IP configuration information from its address pool, including the IP address, subnet mask, and default gateway.

5) The DHCP server also provides other configuration parameters such as the DNS server addresses and the lease time.

6) The DHCP server maintains a database of all the devices that have been assigned IP addresses and the lease time for each address.

7) The DHCP server can also be configured to provide other services such as the Dynamic Host Configuration Protocol (DHCP) and the Internet Protocol (IP).

8) The DHCP server can also be configured to provide other services such as the Dynamic Host Configuration Protocol (DHCP) and the Internet Protocol (IP).

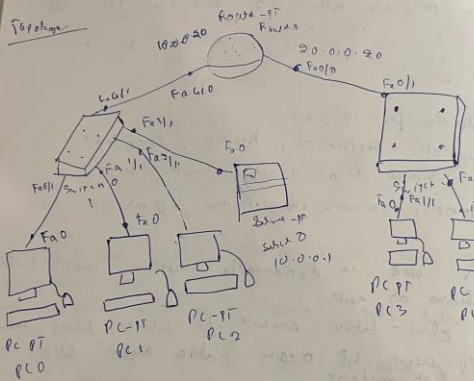
9) The DHCP server can also be configured to provide other services such as the Dynamic Host Configuration Protocol (DHCP) and the Internet Protocol (IP).

10) The DHCP server can also be configured to provide other services such as the Dynamic Host Configuration Protocol (DHCP) and the Internet Protocol (IP).

Program 4.0

Aim: Design a LAN and connect it to a LAN and a WAN.

Topology:



Procedure:

- 1) Add a router, a switch and 2 PCs to a LAN. Network 10.0.0.0 to both switches.
- 2) Set the default IP address of switch and with the help of switch set the first 3 PCs IP address through DHCP.
- 3) Now set the router IP address with the following commands:

201.1.1.1
 Step 1: Enable
 Step 2: Config

- Interface FastEthernet 0/10
- IP address 10.0.0.20 255.0.0.0
- No shut
- Exit
- Interface FastEthernet 0/10
- IP address 20.0.0.20 255.0.0.0
- No shut
- Exit
- Exit
- Show running

1) Go to R1 and set the gateway as 10.0.0.20
 2) Again go to R2 and follow these commands
 3) Step 1: Config
 4) Step 2: Interface FastEthernet 0/10
 5) IP address 10.0.0.1
 6) No shut
 7) Exit

1) Now go to R1 and add the new route as
 2) Show ip route, but IP address as 20.0.0.20 and default
 gateway as 20.0.0.20. The cmd should be save

1) Now the two other two PCs IP address by going to R1
 2) Show the configuration and selecting the PC version
 will automatically give its IP address

HD 1080

Ping Output

Ping 90.0.0.2 with 32 bytes of ~~data~~ data.
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Rtt: Min = 0.0 ms, Max = 0.0 ms, Avg = 0.0 ms, StdDev = 0.0 ms
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Rtt: Min = 0.0 ms, Max = 0.0 ms, Avg = 0.0 ms, StdDev = 0.0 ms
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Rtt: Min = 0.0 ms, Max = 0.0 ms, Avg = 0.0 ms, StdDev = 0.0 ms

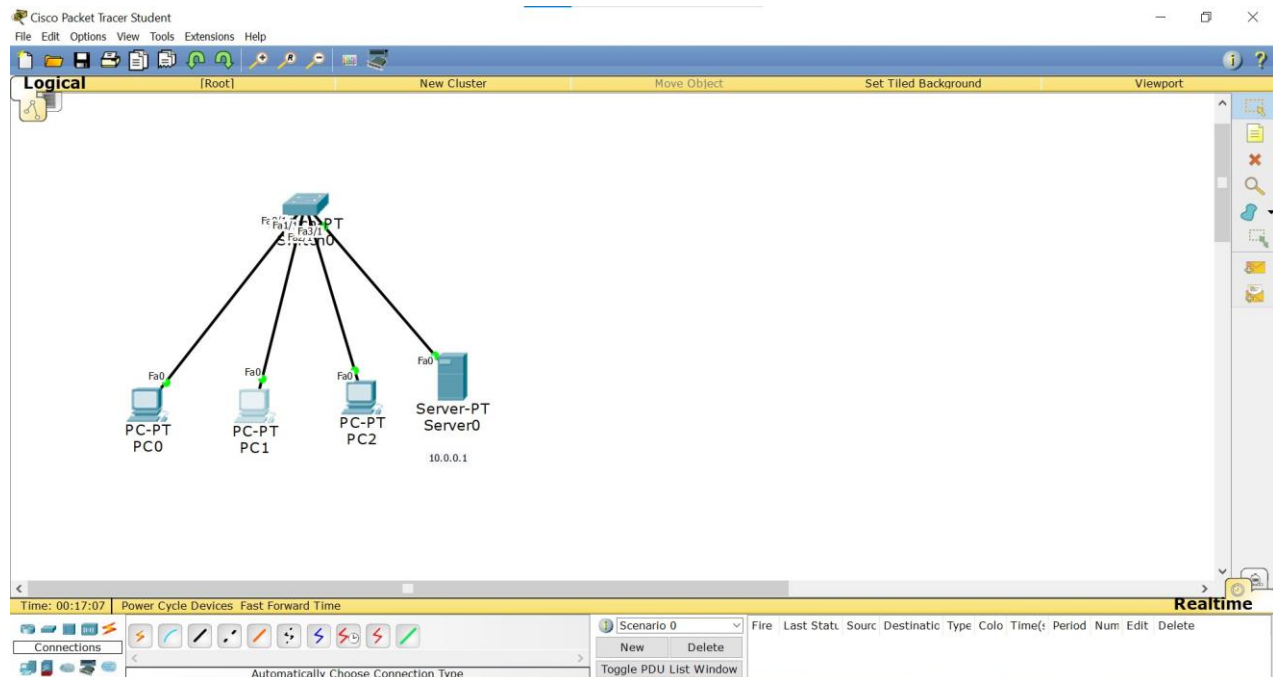
Ping Status for 90.0.0.2
Packets: Sent = 4, Received = 4, Lost = 0 (0% loss)
Approx. Round Trip Time: 0.0 ms
Minimum Round Trip Time: 0.0 ms

Observations:

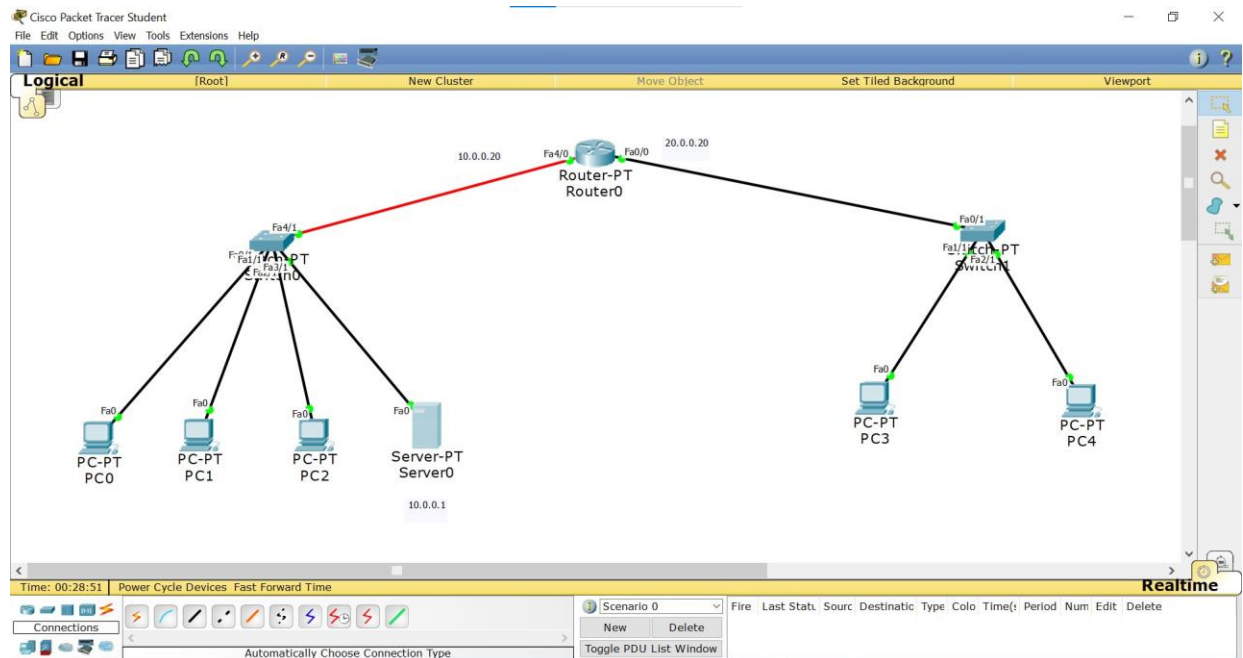
- 1) DHCP is used to assign IP address dynamically to diff devices.
- 2) To assign static IP address, a static pool is created with starting IP address and an ending IP address. If a device is connected to the network, we create a static IP pool & send it to the device. If the device is not connected, the IP address is not assigned to it. This is done by sending acknowledgment to the sender.

TOPOLOGY:

PROGRAM 4.1:

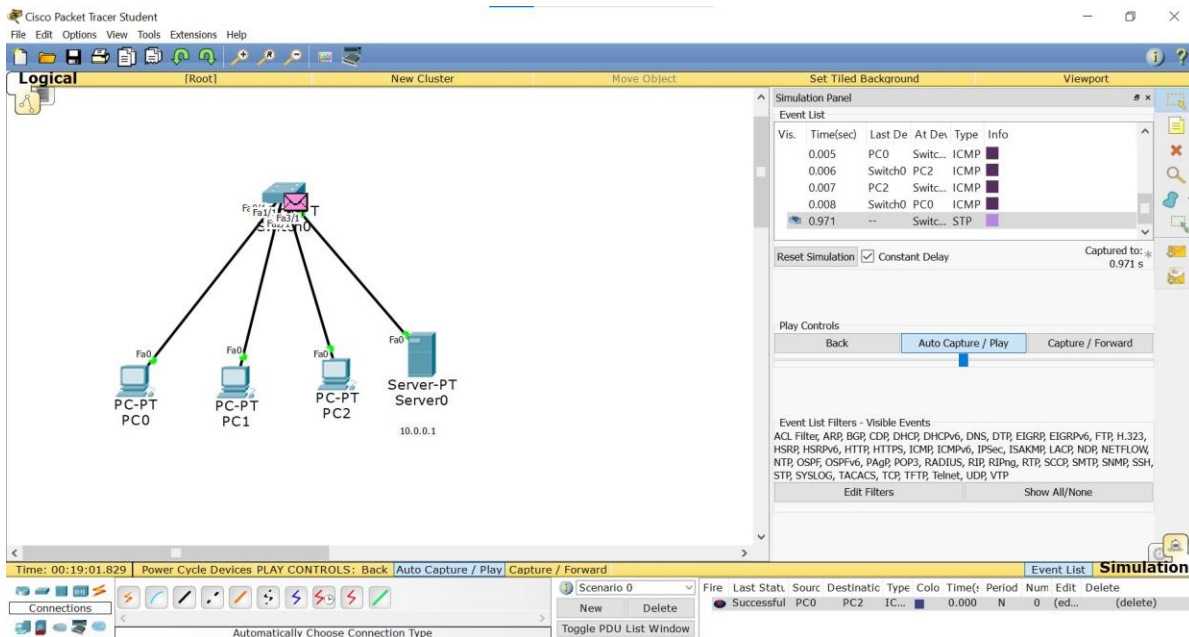
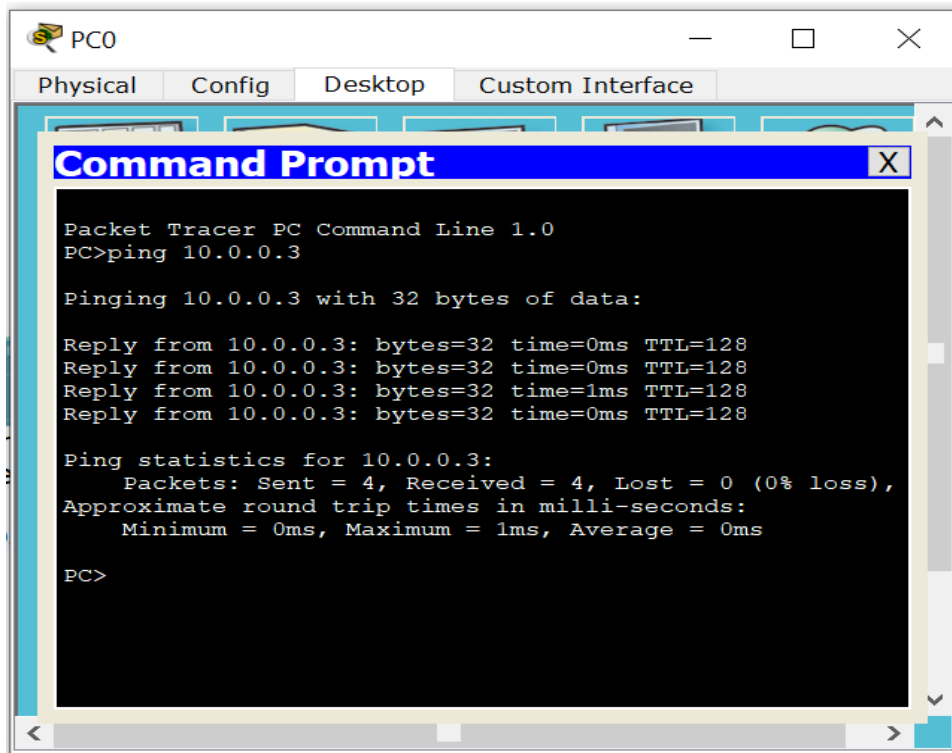


PROGRAM 4.2:



OUTPUT:

PROGRAM 4.1:



PROGRAM 4.2:

