Lab - 3

Inter-Block and Outer Block Testing

Objective:

We are going to make segments/blocks of a network and then perform communication within and outside those blocks

Procedure:

Step 1: **The network being used is 192.168.2.0/26 with subnet mask 255.255.255.192**

Step 2: Simply design 2 networks as one designed in Lab-1.

Step 3: Connect these networks to a Router using straight cable

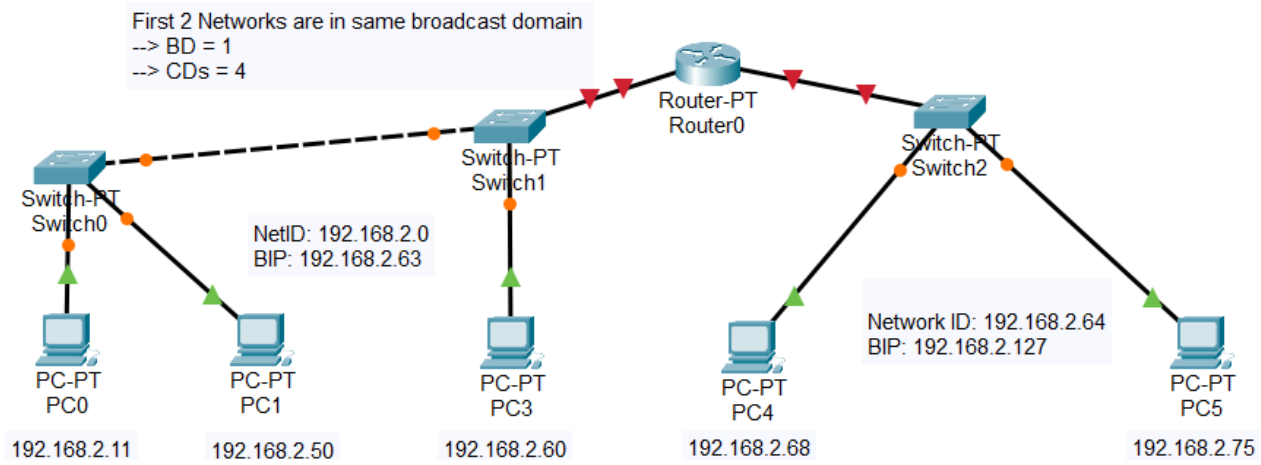

Figure 3.1: Network Design

Step 4: Use block 1 that has range 192.168.2.1 to 192.168.2.62 and subnet 255.255.255.192 for 1st network

Step 5: Similarly block 2 with range 192.168.2.65 to 192.168.2.126 and subnet 255.255.255.192 will be used for network 2

Step 6: Assign the first valid IP of block 1 i.e., 192.168.2.1 to interface Fa 0/0 of router

Step 7: Assign the first valid IP of block 2 i.e., 192.168.2.65 to interface Fa 1/0 of router

Step 8: Assign IP, Subnet mask and gateway (IP of respective interface of router) to the hosts in both networks

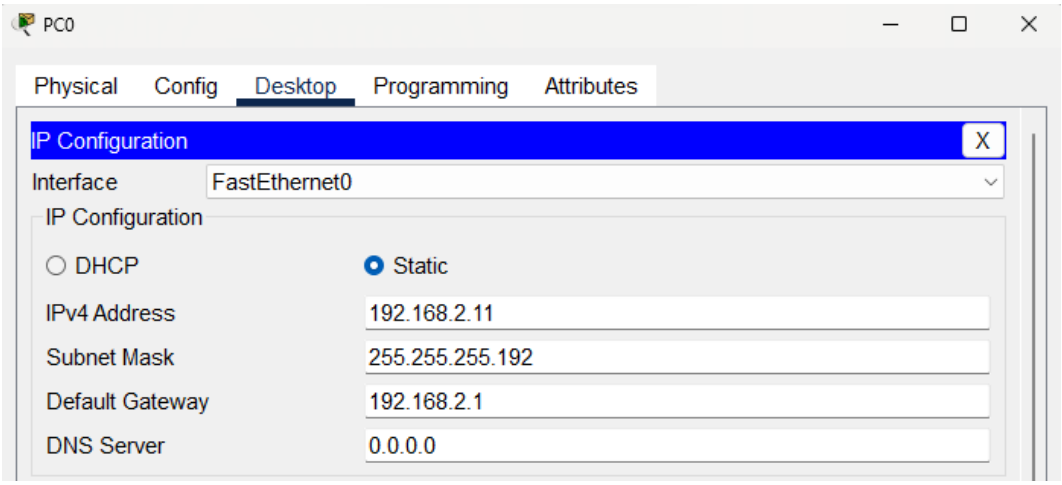

Figure 3.2: Configuring PC

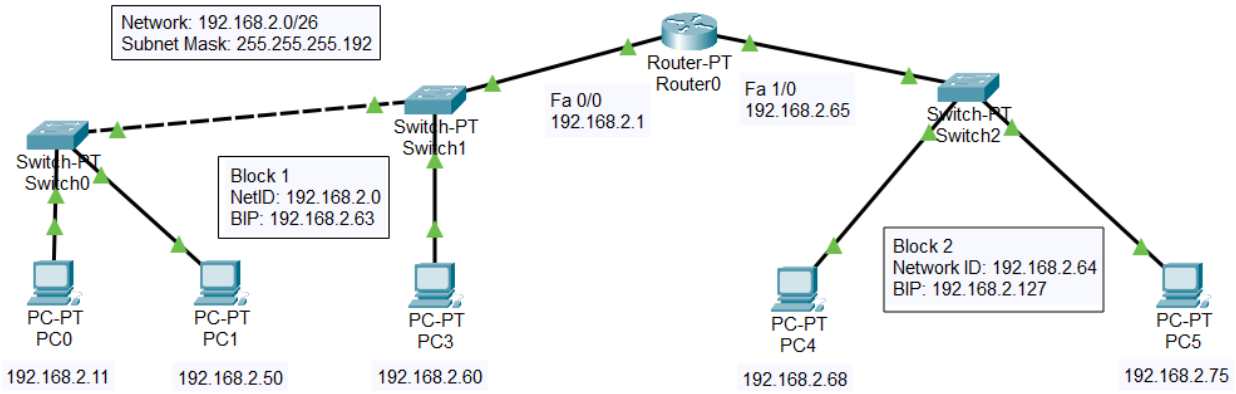

Figure 3.3: Configured network according to block range

Step 9: Test that communication within the block is working well by ping method

Step 10: Single click on PC0 and go to Desktop > Command Prompt then type command "ping 192.168.2.60" then press enter

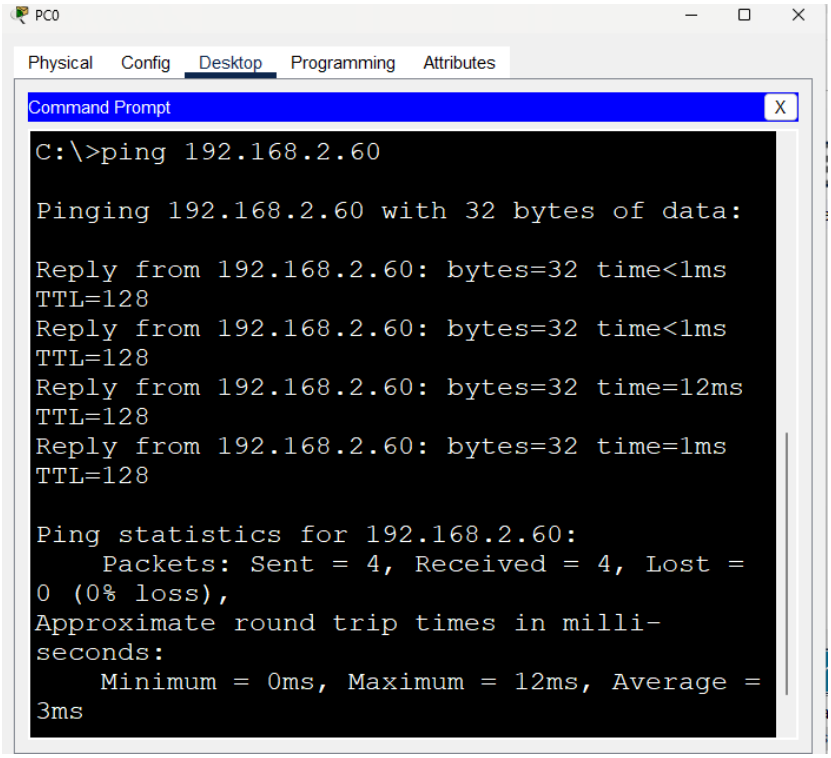

Figure 3.4: Ping from one host to other within block 1

Step 11: Test that communication outside the block is working well by Simple PDU

Step 12: Drag and drop a Simple PDU to PC0 and then to PC4 (in Block 2) then go to simulation and observe

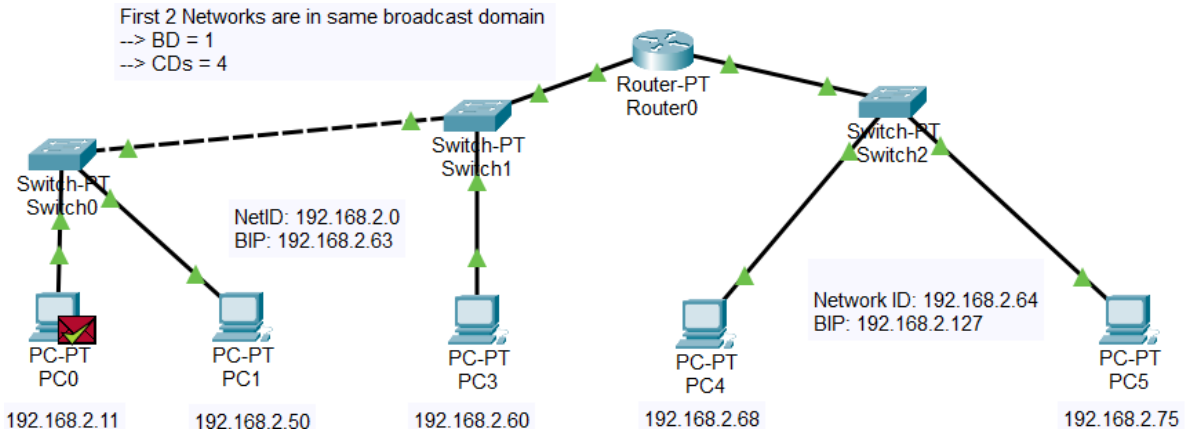

Figure 3.5: Acknowledgment of PDU

Step 13: Go to simulation and observe the path of PDU to see that network is working well

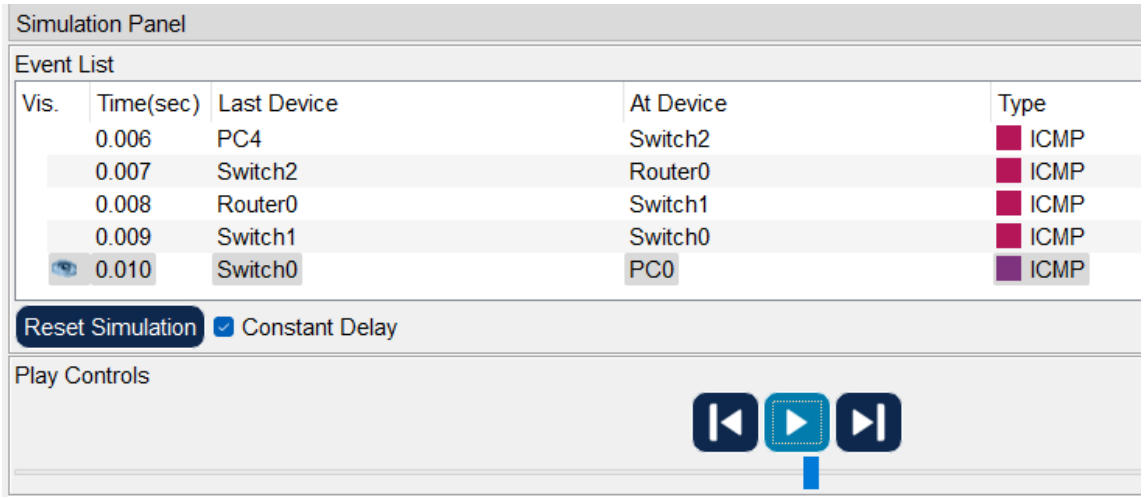

Figure 1.6: Simulation Panel