Lab - 5

Inter-Block and Outer Block Testing of Block 5 and 6

Objective:

Given Network is 195.168.101.0/24 and we have to divide it into 6 departments where each departments require 30 valid hosts. In this lab we'll configure block 5 and 6.

Procedure:

Step 1: **The network being used is 195.168.101.0/24 with subnet mask 255.255.255.0**

Step 2: Simply design 2 networks as designed in previous lab.

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

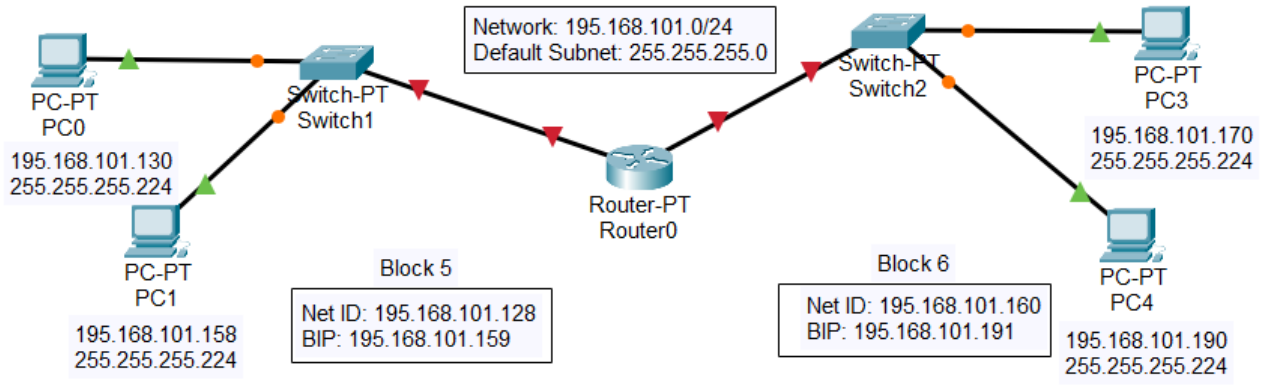

Figure 6.1: Network Design

Step 4: Use block 1 that has range 195.168.101.129 to 195.168.101.158 and subnet 255.255.255.224 for 1st network

Step 5: Similarly block 2 with range 195.168.101.161 to 195.168.101.190 and subnet 255.255.255.224 will be used for network 2

Step 6: Assign the first valid IP of block 1 i.e., 195.168.101.129 to interface Fa 0/0 of router

Step 7: Assign the first valid IP of block 2 i.e., 195.168.101.161 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

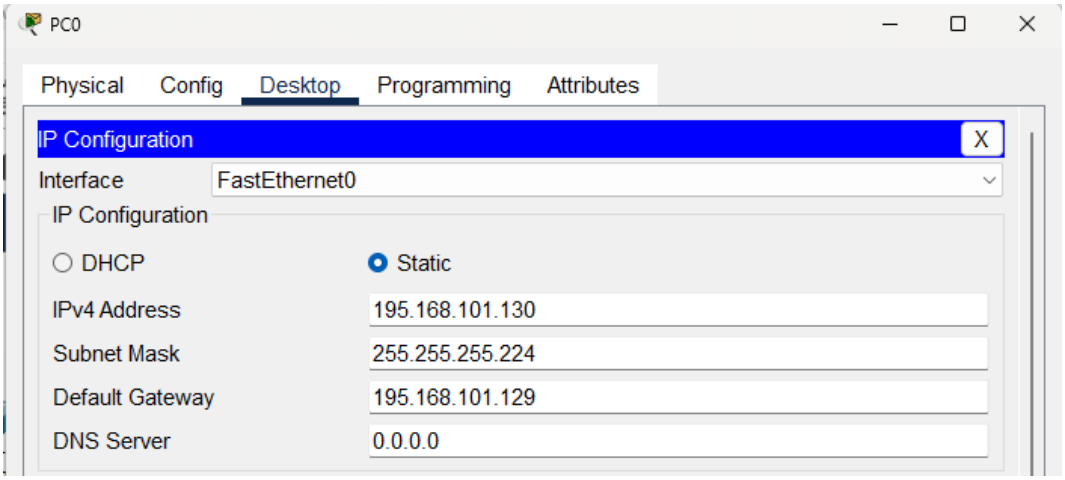

Figure 6.2: Configuring PC

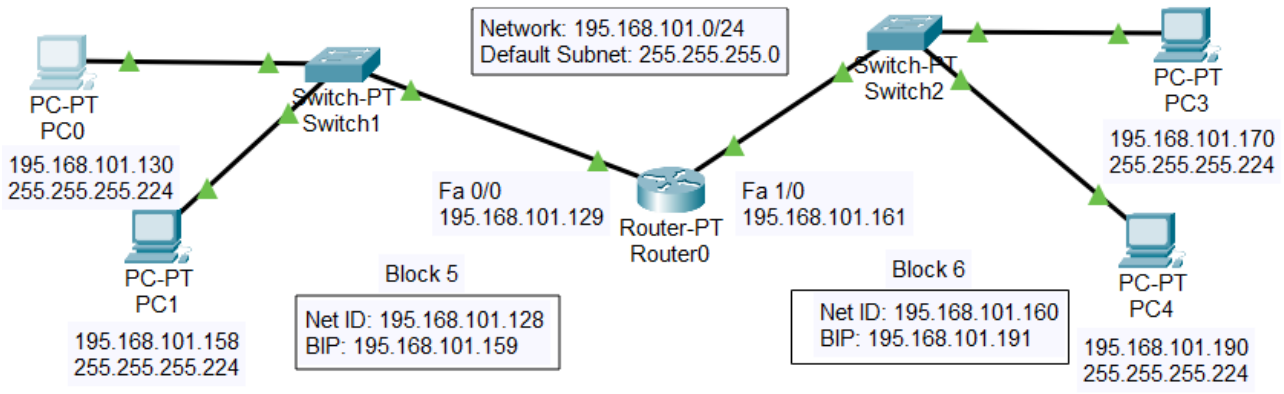

Figure 6.3: Configured network according to block range

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 195.168.1.158" then press enter

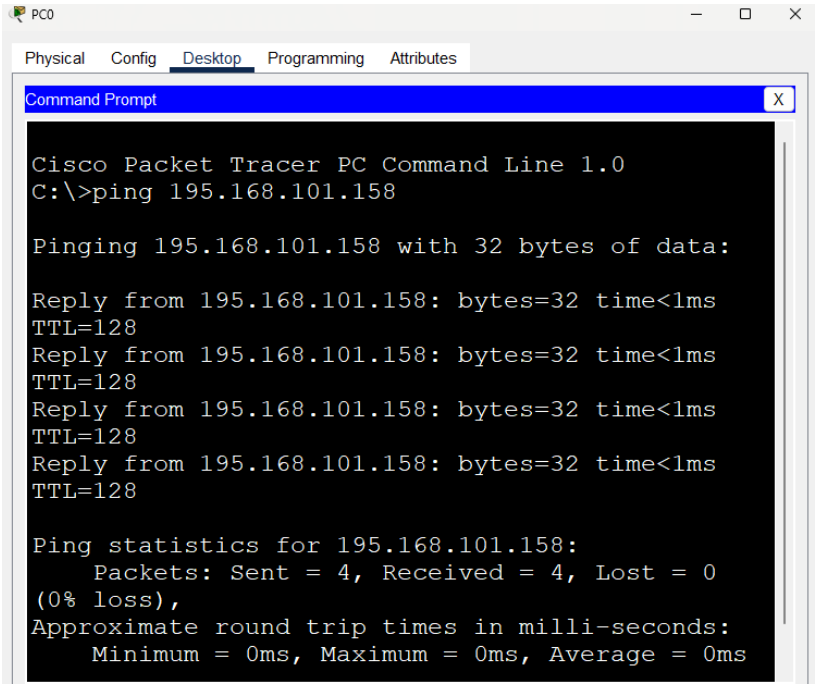

Figure 6.4: Ping from one host to other within block 1

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 4) then go to simulation and observe

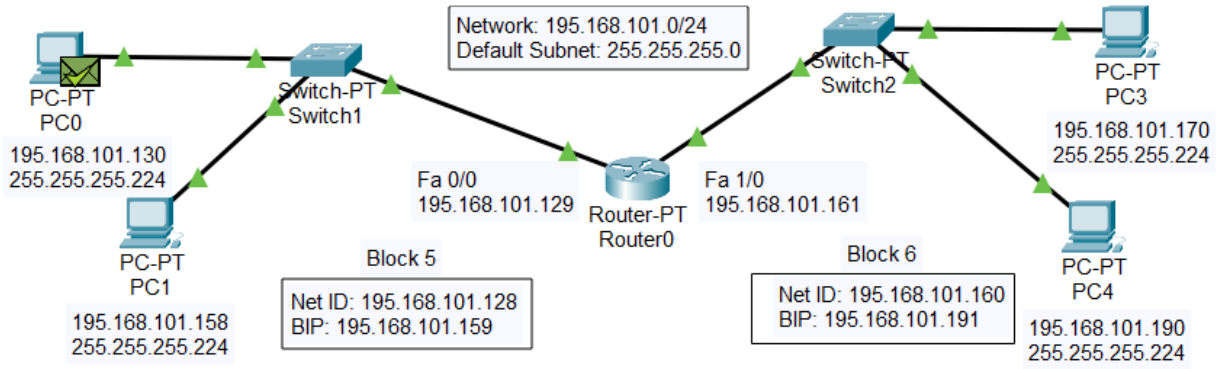

Figure 6.5: Acknowledgment of PDU

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

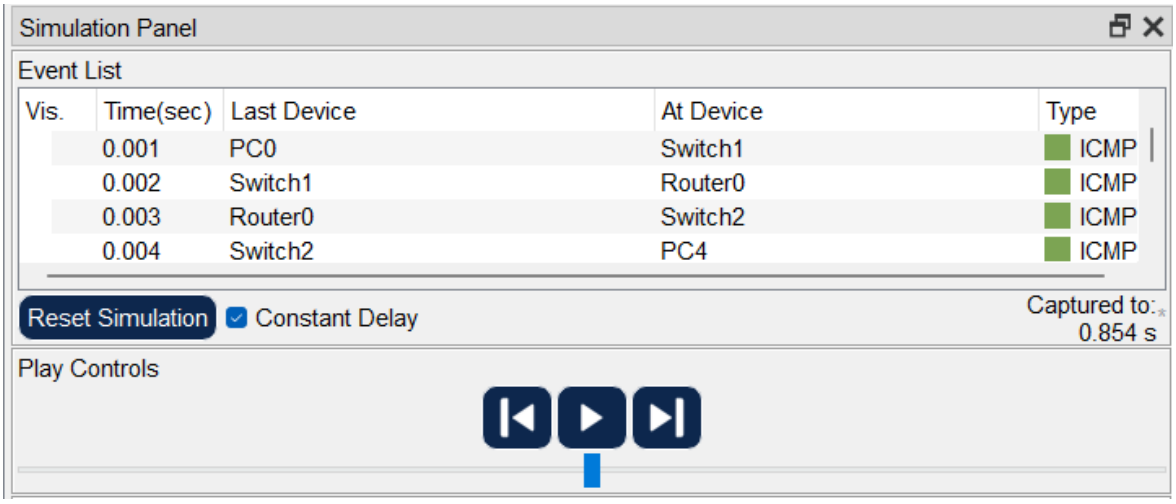

Figure 6.6: Simulation Panel