Waqar Ahmed

20P-0750

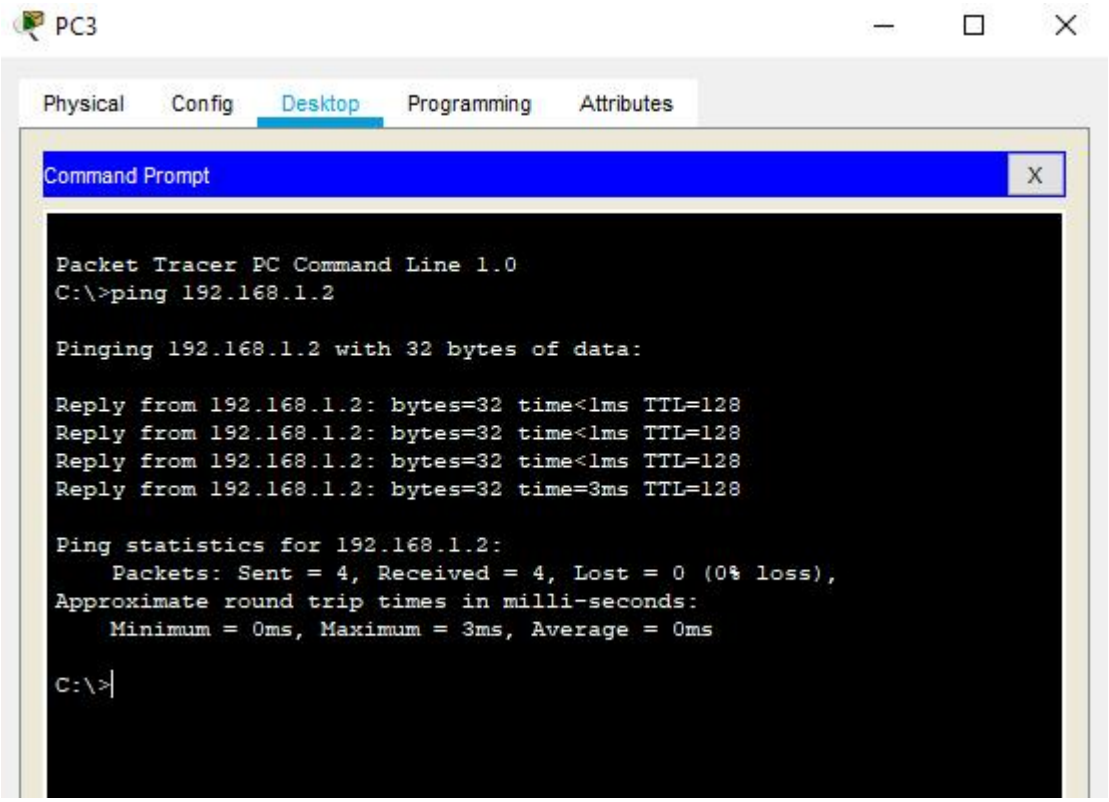
Task - 2

BCS-5A

Task 1: Using Packet Tracer connect two PCs as shown above and perform the following:

a. First Configure the PCs as shown and verify the connection using ping command.

Verifying the connection using ping command.



b. Configure PC1 as follow: IPv4: 192.168.1.1 Subnet mask: 255.255.255.0
And PC2 as: IPv4: 192.168.2.1 Subnet mask: 255.255.255.0

PC3

Physical Config Desktop Programming Attributes

IP Configuration X

Interface FastEthernet0

IP Configuration

DHCP Static

IP Address 192.168.1.1

Subnet Mask 255.255.255.0

Default Gateway 0.0.0.0

DNS Server 0.0.0.0

IPv6 Configuration

DHCP Auto Config Static

IPv6 Address /

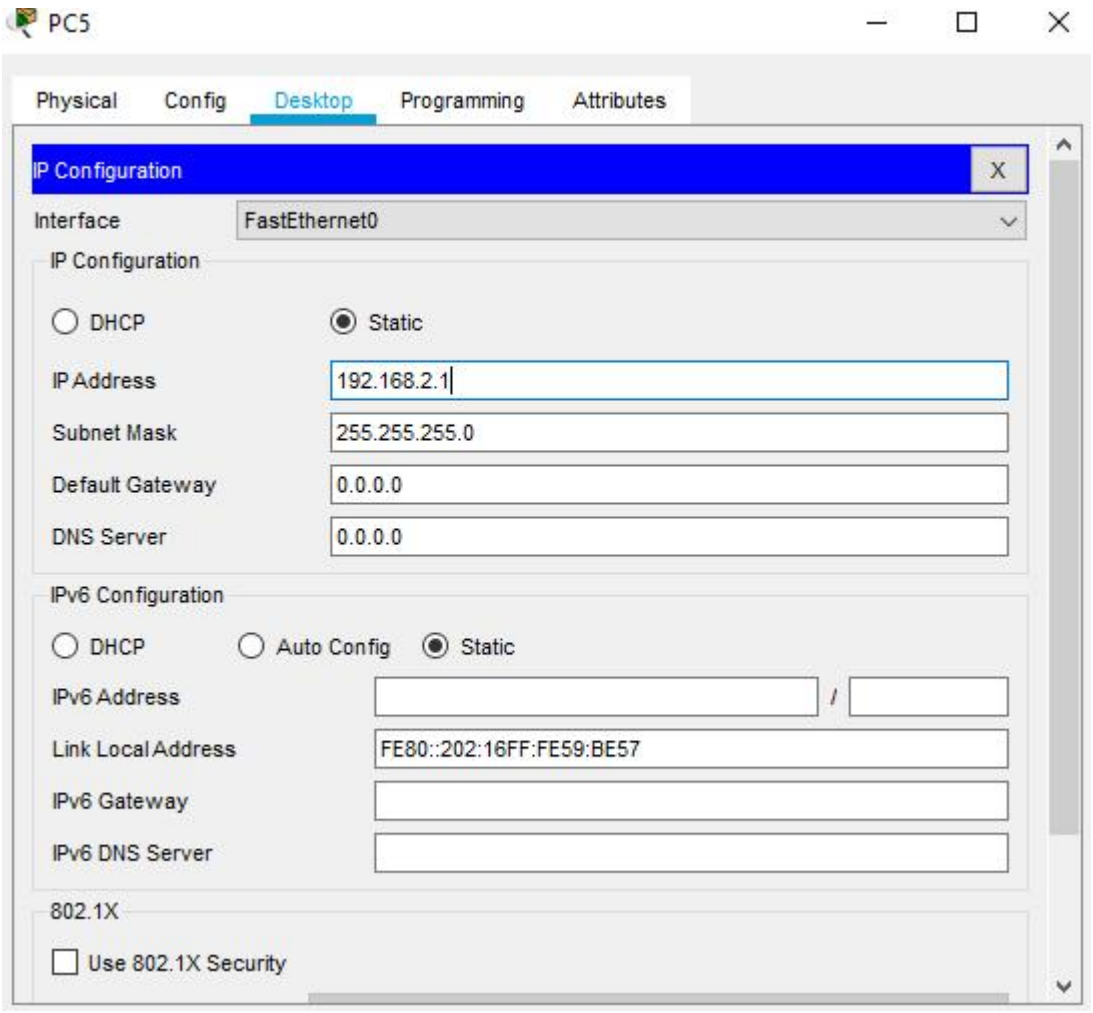
Link Local Address FE80::202:4AFF:FE52:8691

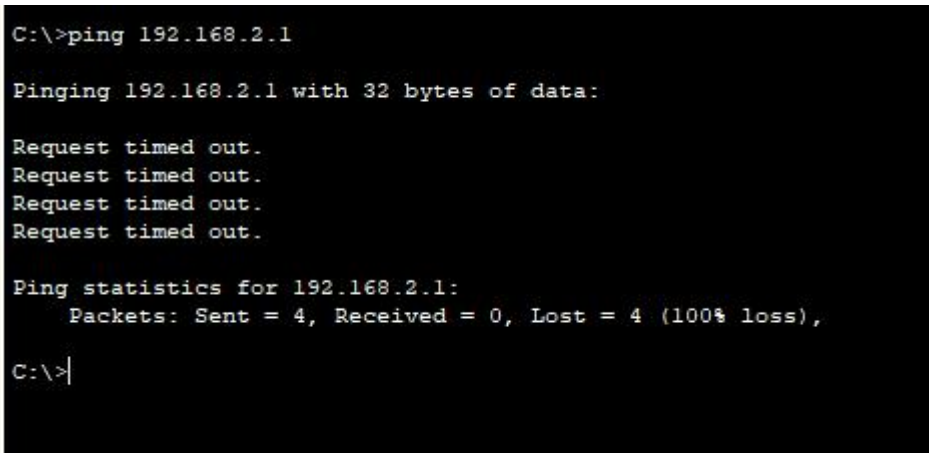
IPv6 Gateway

IPv6 DNS Server

802.1X

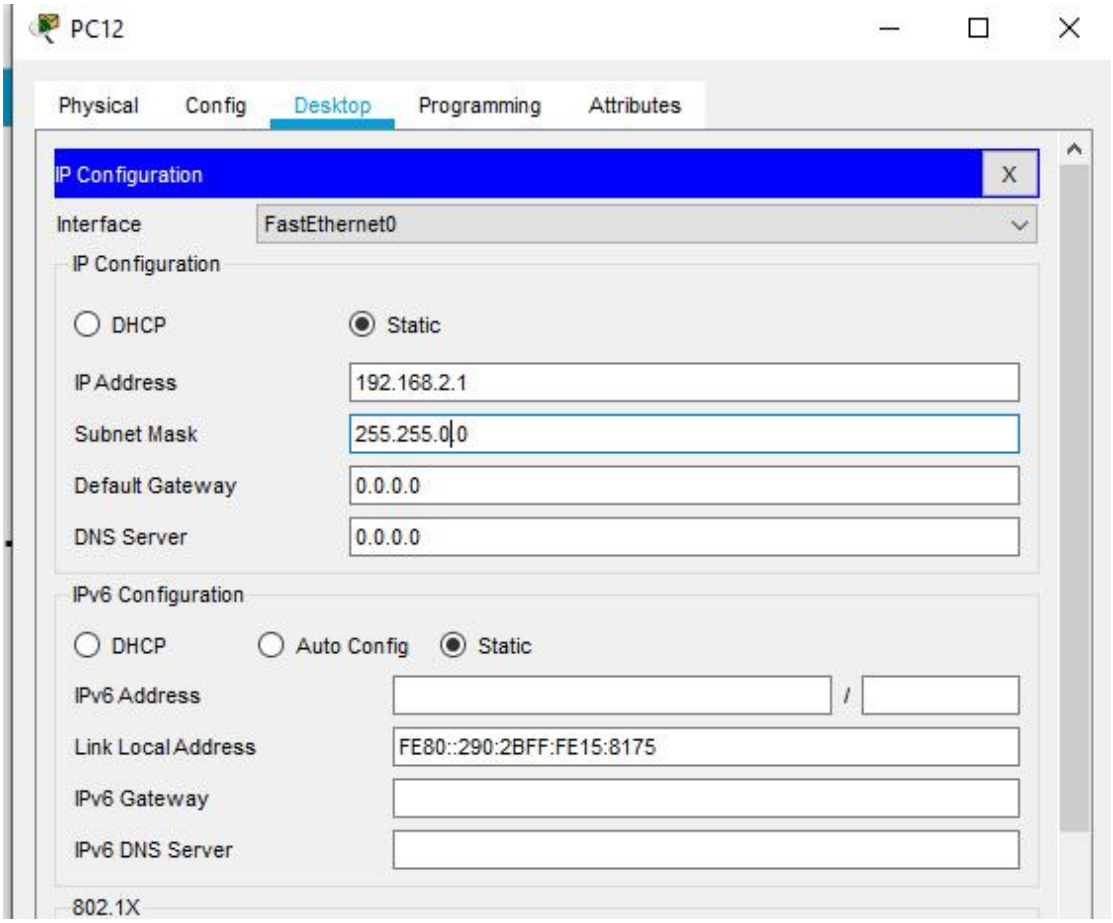
Use 802.1X Security

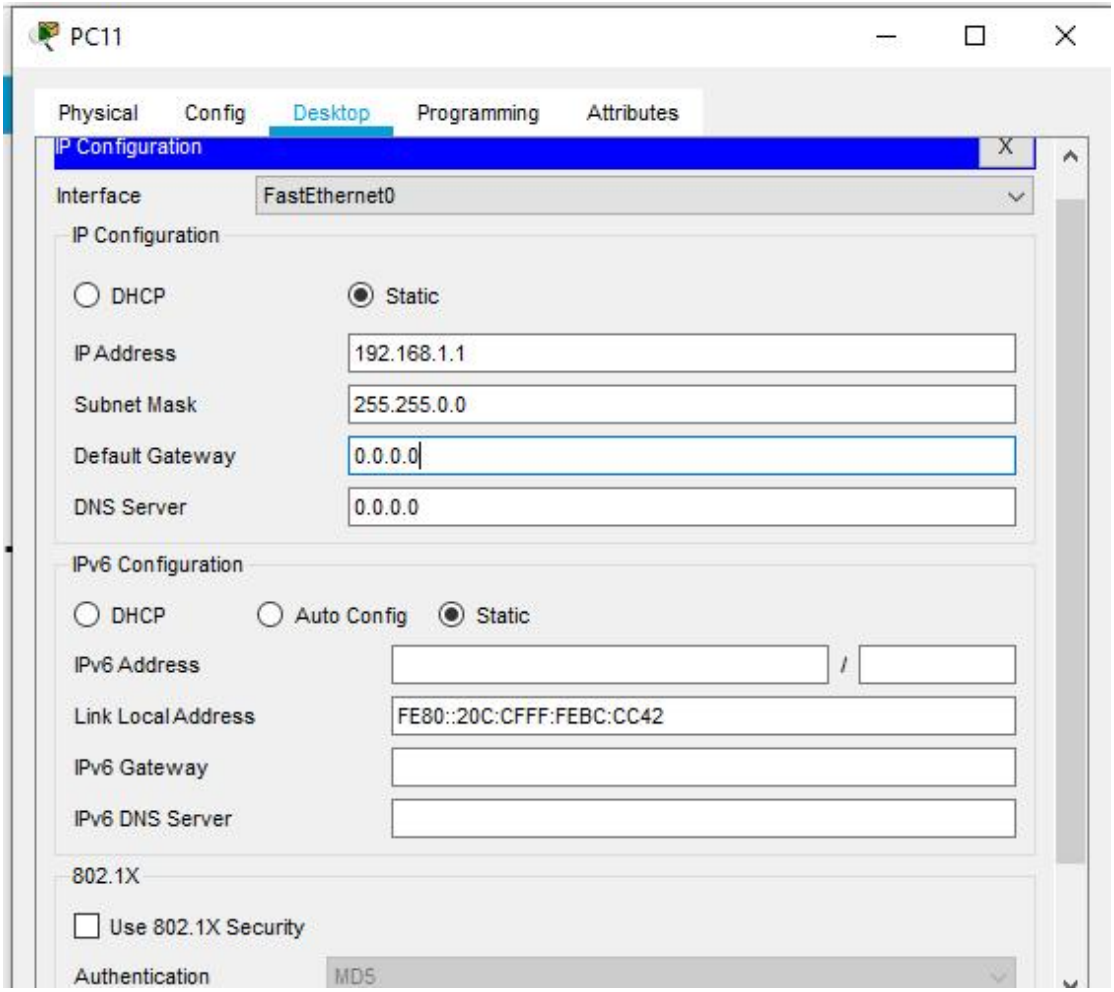


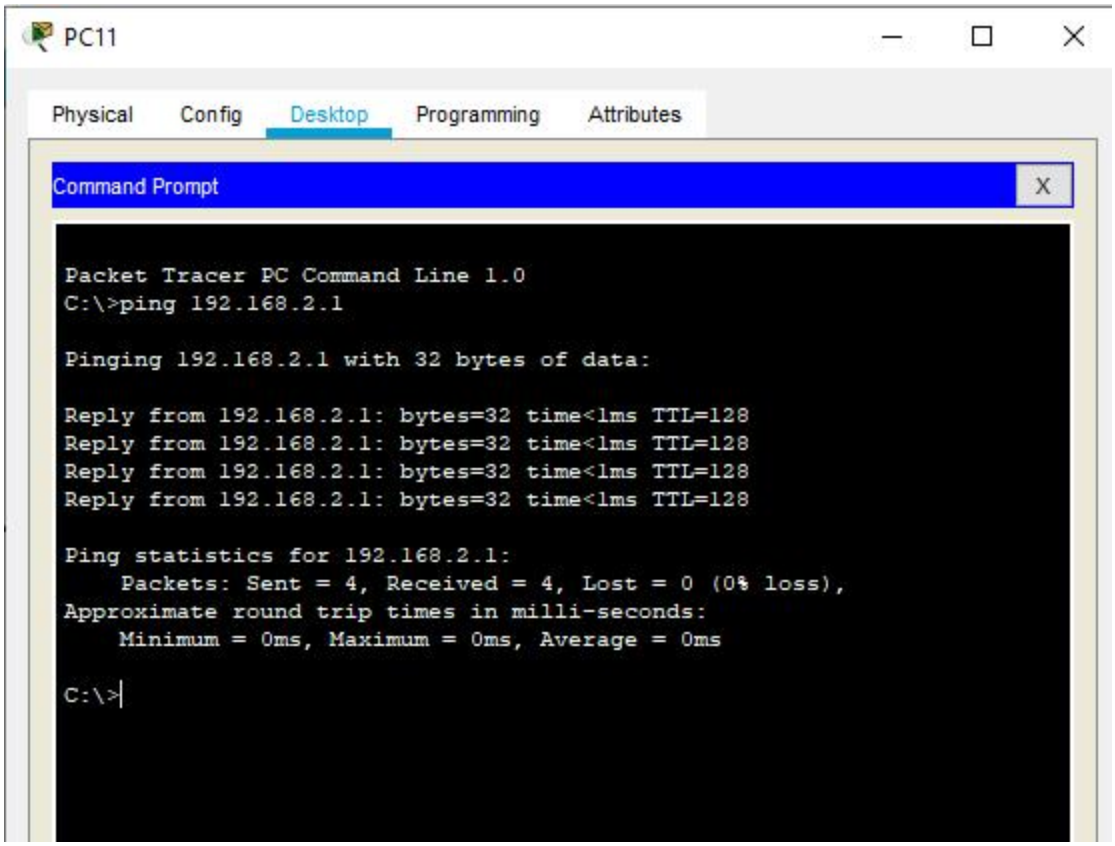


When I ping the PC5 I got the output shown above, because In a subnet mask of 255.255.255.0, the first three octets (192.168.1 or 192.168.2) define the network portion, and the last octet defines the host portion. Since PC3 and PC5 have different network portions (192.168.1 and 192.168.2), they are on different subnets.

For that two computers to communicate directly, they need to be on the same subnet. To achieve this, we should adjust the subnet mask of both PCs so that they share the same network portion. For example, we set the subnet mask to 255.255.0.0 for both PCs:



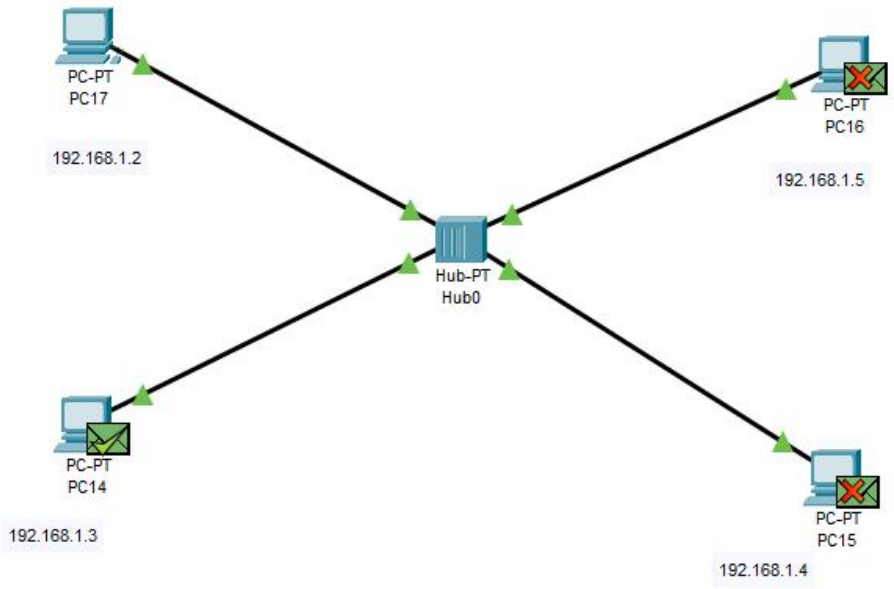

PC11
Physical
Config
Desktop
Programming
Attributes
IP Configuration
X
Interface
FastEthernet0
IP Configuration
DHCP
Static
IP Address
192.168.1.1
Subnet Mask
255.255.0.0
Default Gateway
0.0.0.0
DNS Server
0.0.0.0
IPv6 Configuration
DHCP
Auto Config
Static
IPv6 Address
/
Link Local Address
FE80::20C:CFFF:FEBC:CC42
IPv6 Gateway
IPv6 DNS Server
802.1X
Use 802.1X Security
Authentication
MD5



With this configuration, both PCs will be in the same subnet (192.168.x.x) and will be able to communicate directly without encountering a request timed out error when you ping from one to the other.

Task 2: Simulation of a Hub with End Devices in Packet Tracer

Connect end devices to a hub and observe how the hub forwards network traffic.
Verify connectivity and communication between end devices connected to the hub.



Task 3: Simulation of a Switch with End Devices in Packet Tracer