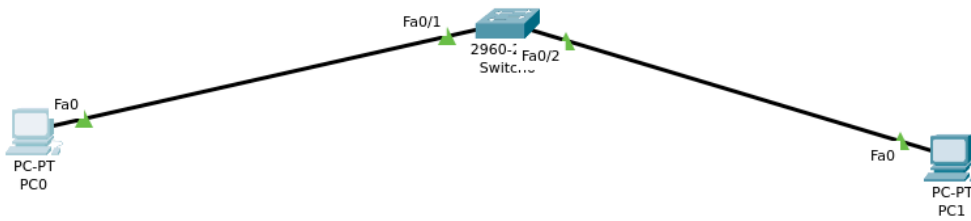


Q5-7)

Network with 2 systems and a switch:



Assigning IP addresses:

PC0:

The screenshot shows the configuration window for PC0, specifically the 'Config' tab. The left sidebar has a tree view with 'GLOBAL' expanded, showing 'Settings', 'Algorithm Settings', and 'INTERFACE'. Under 'INTERFACE', 'FastEthernet0' is selected. The main area displays the configuration for 'FastEthernet0'.

**FastEthernet0 Configuration:**

- Port Status: ☒ On
- Bandwidth: ☒ 100 Mbps ☐ 10 Mbps ☒ Auto
- Duplex: ☐ Half Duplex ☒ Full Duplex ☒ Auto
- MAC Address: 0006.2AAD.DC3A
- IP Configuration:
  - ☐ DHCP
  - ☒ Static
  - IPv4 Address: 192.168.1.2
  - Subnet Mask: 255.255.255.0
- IPv6 Configuration:
  - ☐ Automatic
  - ☒ Static
  - IPv6 Address: [Empty field]
  - Link Local Address: FE80::206:2AFF:FEAD:DC3A

At the bottom left, there is a 'Top' button.

PC1:

PC1

Physical

Config

Desktop

Programming

Attributes

GLOBAL

Settings

Algorithm Settings

INTERFACE

FastEthernet0

Bluetooth

FastEthernet0

Port Status

☒ On

Bandwidth

☒ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex

☐ Half Duplex ☒ Full Duplex ☒ Auto

MAC Address

0060.2F93.E561

IP Configuration

☐ DHCP ☒ Static

IPv4 Address

192.168.2.2

Subnet Mask

255.255.255.0

IPv6 Configuration

☐ Automatic ☒ Static

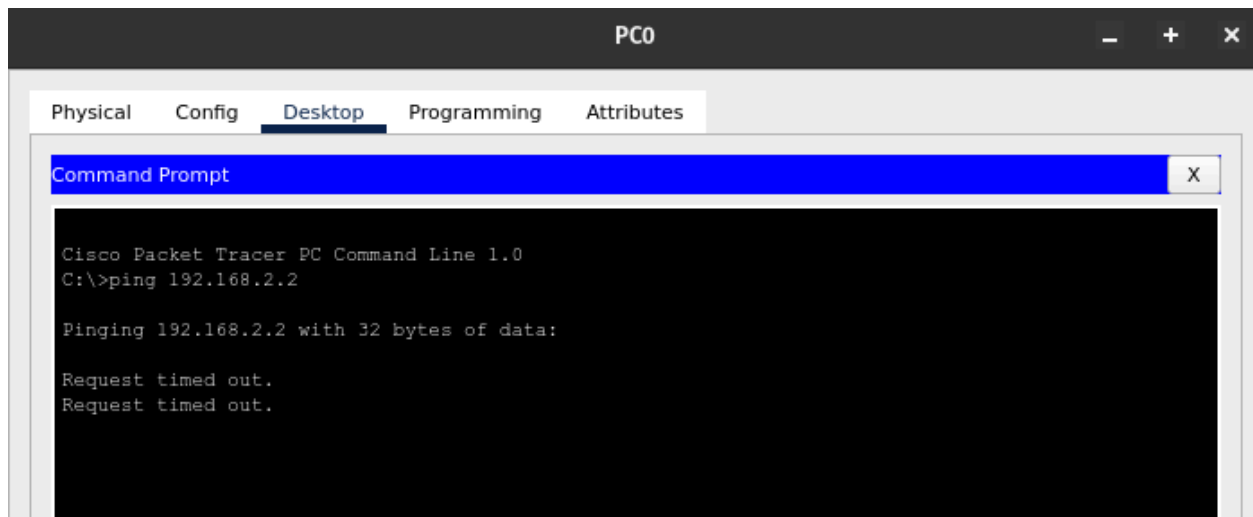
IPv6 Address

Link Local Address

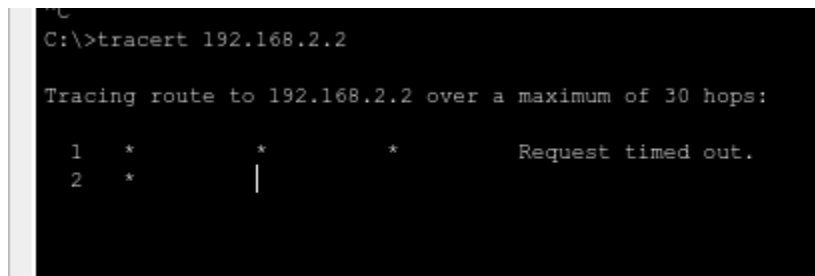
FE80::260:2FFF:FE93:E561

☐ Top

Pinging:



Ping doesn't happen. Why?



Tracert also doesn't happen.

This means that the problem is with the IP address. This is because, both are in different subnets as the subnet mask is 255.255.255.0

Two ways to change:

- 1) Change IP address of PC1 to 192.168.1.3
- 2) Change subnet mask to 255.255.0.0

Method 1:

IP Configuration

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address: 192.168.1.3

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

PC1 IP has changed

```
C:\>ping 192.168.1.3

Pinging 192.168.1.3 with 32 bytes of data:

Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time<1ms TTL=128
Reply from 192.168.1.3: bytes=32 time=7ms TTL=128

Ping statistics for 192.168.1.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 7ms, Average = 1ms

C:\>
```

Ping now works correctly

Method 2:

Interface	FastEthernet0/24
IP Configuration	
<input type="radio"/> DHCP	<input checked="" type="radio"/> Static
IPv4 Address	192.168.1.2
Subnet Mask	255.255.0.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0
IPv6 Configuration	

Interface	FastEthernet0/24
IP Configuration	
<input type="radio"/> DHCP	<input checked="" type="radio"/> Static
IPv4 Address	192.168.2.2
Subnet Mask	255.255.0.0
Default Gateway	0.0.0.0
DNS Server	0.0.0.0
IPv6 Configuration	

```
C:\>ping 192.168.2.2

Pinging 192.168.2.2 with 32 bytes of data:

Reply from 192.168.2.2: bytes=32 time<1ms TTL=128
Reply from 192.168.2.2: bytes=32 time<1ms TTL=128
Reply from 192.168.2.2: bytes=32 time<1ms TTL=128
Reply from 192.168.2.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.2.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\>
```

PING now works.

It is best to change IP address over subnet mask.