

IT CN 303 - LAB

SUBMITTED BY ADITYA SINGH 2K19/EP/005

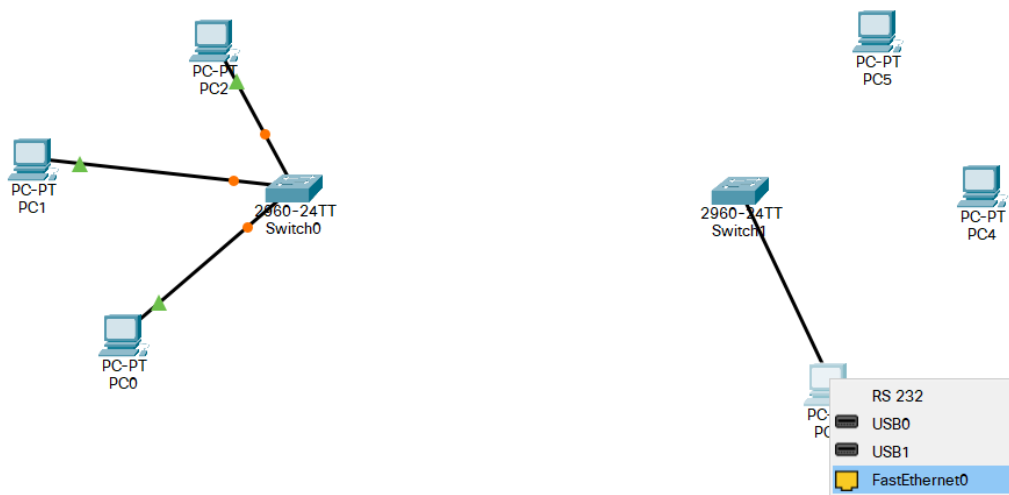
Experiment : Build an Inter-LAN communication using Cisco Packet Tracer.

Router

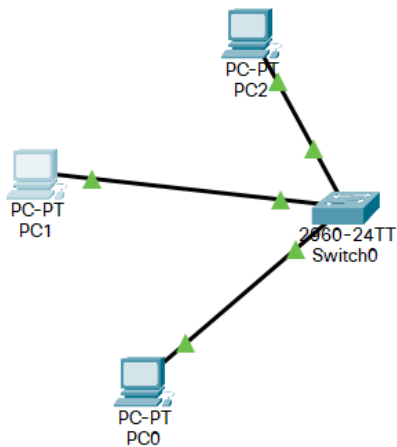
1. Connects two or more different LANs.
2. It is a layer 3 (Network Layer) device.
3. Stores routing table
4. Inevitable device on the internet.

Steps for Cisco Packet Tracer :

1. Connect PCs with Switch with FastEthernet port using copper straight-through cable.



2. Assign IP address to first switch LAN.



Physical Config **Desktop** Programming Attributes

IP Configuration

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address: 10.10.10.2

Subnet Mask:

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address:

Link Local Address: FE80::260:70FF:FE3E:7436

Default Gateway:

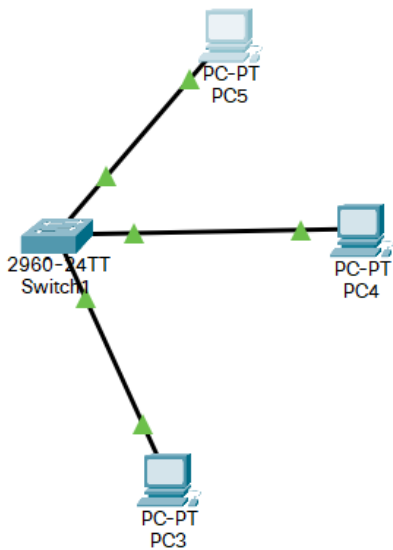
DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: MD5

3. Assign IP address to second switch LAN.



Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address: 192.168.0.1

Subnet Mask:

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address:

Link Local Address: FE80::290:2BFF:FE7:C692

Default Gateway:

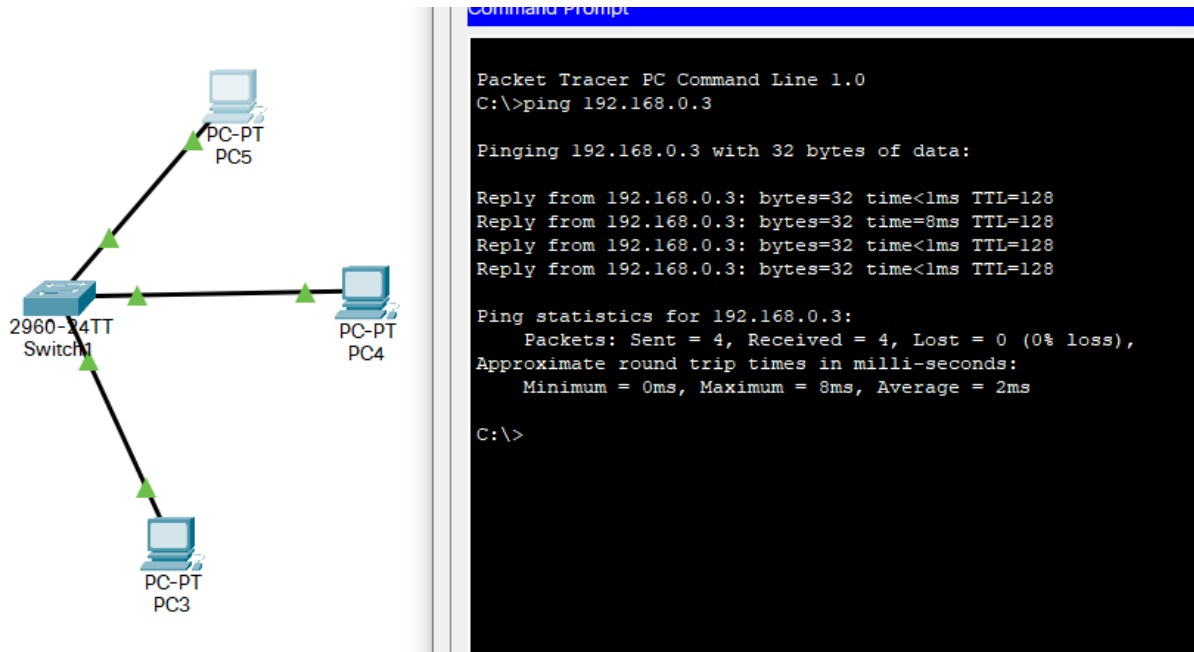
DNS Server:

802.1X

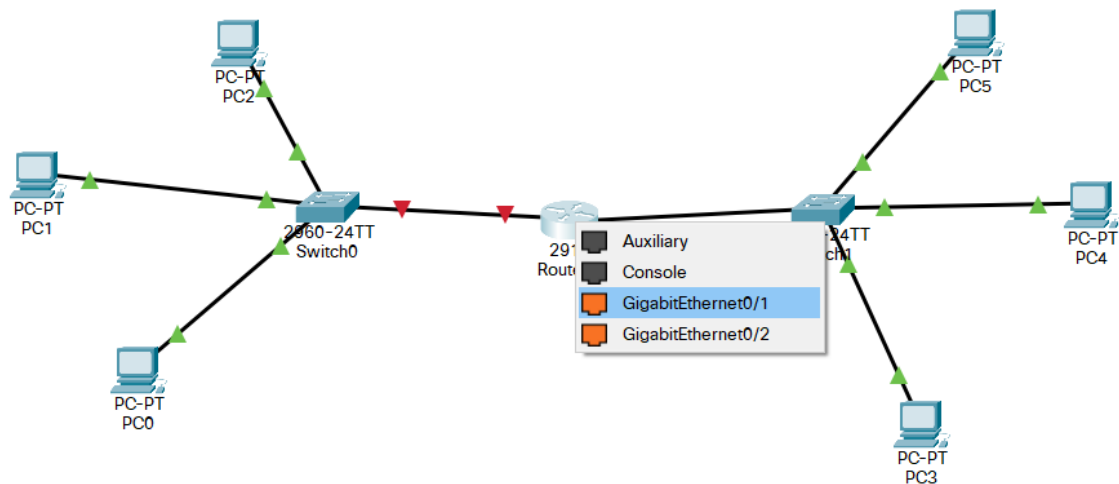
☐ Use 802.1X Security

Authentication: MD5

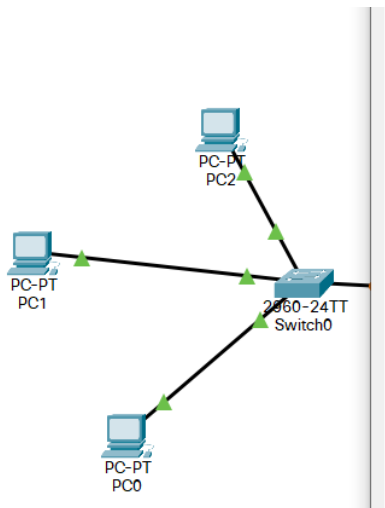
4. To verify the connection, try to ping one PC to other inside one LAN.



5. Connect a 2911 Router with GigabitEthernet Port.



6. Turn on the Router and assign individual IP addresses to their LANs.



GLOBAL

- Settings
- Algorithm Settings
- ROUTING
 - Static
 - RIP
- SWITCHING
 - VLAN Database
- INTERFACE
 - GigabitEthernet0/0
 - GigabitEthernet0/1
 - GigabitEthernet0/2

GigabitEthernet0/0

Port Status ☒ On

Bandwidth ☒ 1000 Mbps ☐ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☒ Half Duplex ☐ Full Duplex ☒ Auto

MAC Address 00D0.D392.9D01

IP Configuration

IPv4 Address 10.10.10.4

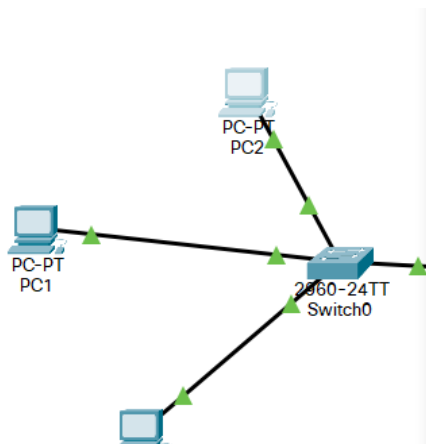
Subnet Mask 255.0.0.0

Tx Ring Limit 10

Equivalent IOS Commands

```
Router(config)#interface GigabitEthernet0/0
Router(config-if)#no shutdown
Router(config-if)#
```

7. Assign default gateway to each PC of LAN same as IP of assigned Router.



IP Configuration

☐ DHCP ☒ Static

IPv4 Address 10.10.10.1

Subnet Mask 255.0.0.0

Default Gateway 10.10.10.4

DNS Server 0.0.0.0

IPv6 Configuration

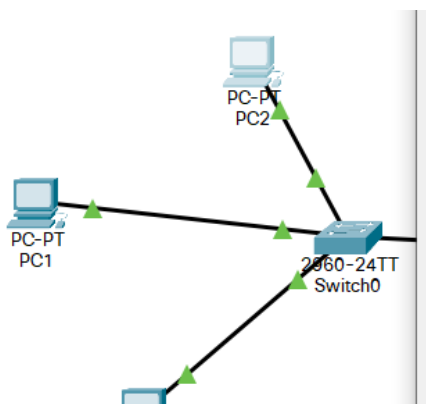
☐ Automatic ☒ Static

IPv6 Address

Link Local Address FE80::203:E4FF:FE2C:3145

Default Gateway

8. Ping one PC of one LAN to another PC of the second LAN.



```
Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
  Minimum = 0ms, Maximum = 0ms, Average = 0ms

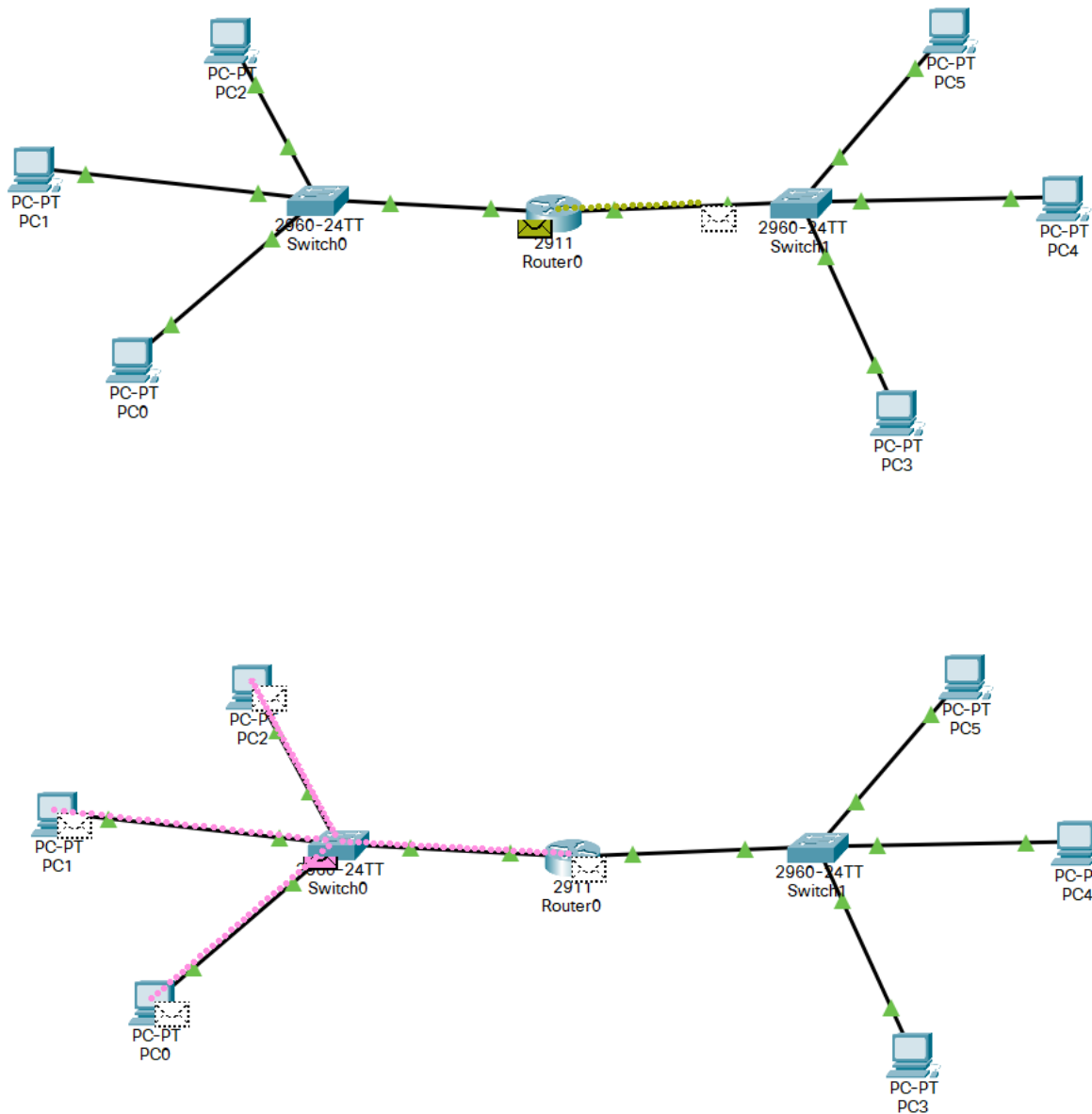
C:\>ping 192.168.0.3

Pinging 192.168.0.3 with 32 bytes of data:


Reply from 192.168.0.3: bytes=32 time<1ms TTL=127
Reply from 192.168.0.3: bytes=32 time<1ms TTL=127
Reply from 192.168.0.3: bytes=32 time<1ms TTL=127
Reply from 192.168.0.3: bytes=32 time<1ms TTL=127

Ping statistics for 192.168.0.3:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
      Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

9. Run Simulation by sending a packet message.



10. Message is delivered successfully.

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC1	PC3	ICMP		0.000	N	0	(edit)	