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Subject: CN

Roll No: 46

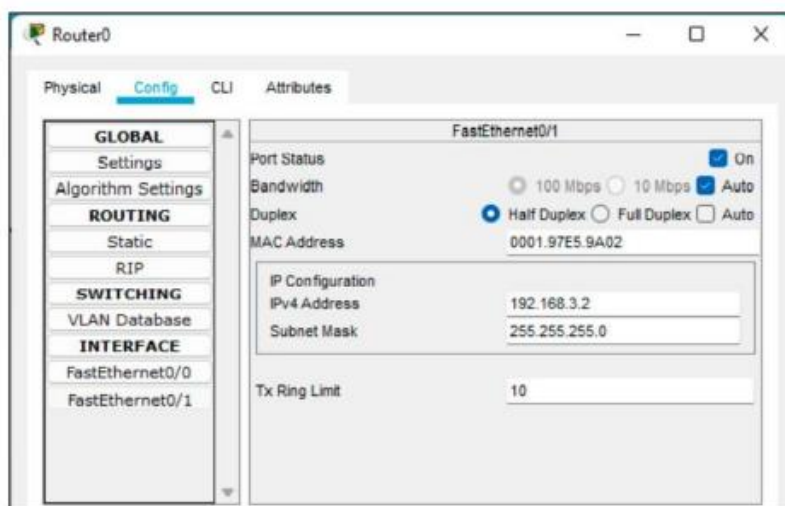
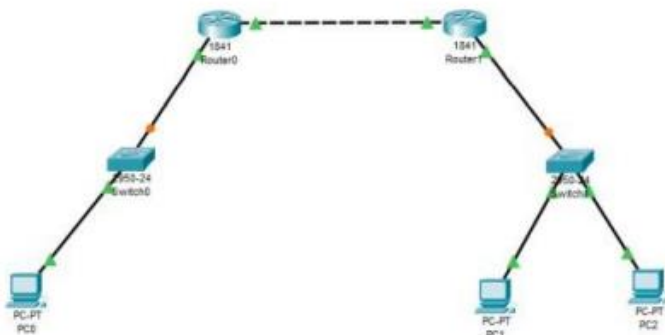
Division: TE4

Batch: D

Experiment: 7

Aim: Design VPN and Configure RIP/OSPF using Packet tracer

Implementation: Create the following network and set IP Addresses.



Router1

Physical **Config** CLI Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

FastEthernet0/0

FastEthernet0/1

FastEthernet0/0

Port Status ☒ On

Bandwidth ☐ 100 Mbps ☐ 10 Mbps ☒ Auto

Duplex ☒ Half Duplex ☐ Full Duplex ☐ Auto

MAC Address 00D0.BAC5.7D01

IP Configuration

IPv4 Address 192.168.3.3

Subnet Mask 255.255.255.0

Tx Ring Limit 10

Equivalent IOS Commands

Enter configuration commands, one per line. End with CTRL/Z.

```
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/1
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
```

☐ Top

PC0

Physical Config **Desktop** Programming Attributes

IP Configuration

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address 192.168.1.100

Subnet Mask 255.255.255.0

Default Gateway 192.168.1.1

DNS Server 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address

Link Local Address FE80:200:A3FF:FE21:D05A

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Username

☐ Top

PC1

Physical Config **Desktop** Programming Attributes

IP Configuration

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address 192.168.2.100

Subnet Mask 255.255.255.0

Default Gateway 192.168.2.1

DNS Server 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address

Link Local Address FE80:200:3EFF:FE27:6261

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Username

☐ Top

PC2

Physical Config **Desktop** Programming Attributes

IP Configuration

Interface FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address 192.168.2.101

Subnet Mask 255.255.255.0

Default Gateway 192.168.2.1

DNS Server 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address

Link Local Address FE80:200:BDFF:FE61:75E3

Default Gateway

DNS Server

802.1X

☐ Use 802.1X Security

Authentication MD5

Username

☐ Top

Sending the packet

The image displays two screenshots of the Cisco Packet Tracer interface, illustrating the process of sending a packet in a network simulation.

Top Screenshot: The network topology shows a central router (R1) connected to two switches (S1 and S2). S1 is connected to PC1, and S2 is connected to PC2. A packet is shown being sent from PC1 towards S1. The Event List on the right shows the packet's journey, with the last event being "PC1" at time 0.000.

Bottom Screenshot: The network topology is the same, but the packet has now reached PC2. The Event List on the right shows the packet's journey, with the last event being "PC2" at time 30.000. The Packet Detail panel at the bottom shows the packet's status as "Successful" and its destination as "PC2".

Event List (Top Screenshot):

Time (sec)	Last Device	All Device	Type
0.000	Router1	Router1	RPV1
0.000	Router1	Router1	RPV1
0.000	Switch1	Switch1	STP
0.000	PC1	PC1	ICMP
0.000	PC1	PC1	ARP
0.001	Router1	Router1	CDP
0.001	Router1	Router1	CDP
0.001	PC1	Switch1	ARP
0.001	Router1	Switch1	ARP
0.001	Router1	Router1	RPV1
0.001	Switch1	Router1	STP
0.001	Router1	Router1	CDP
0.001	Router1	Router1	CDP
0.002	Router1	Router1	ARP
0.004	Router1	Router1	ARP

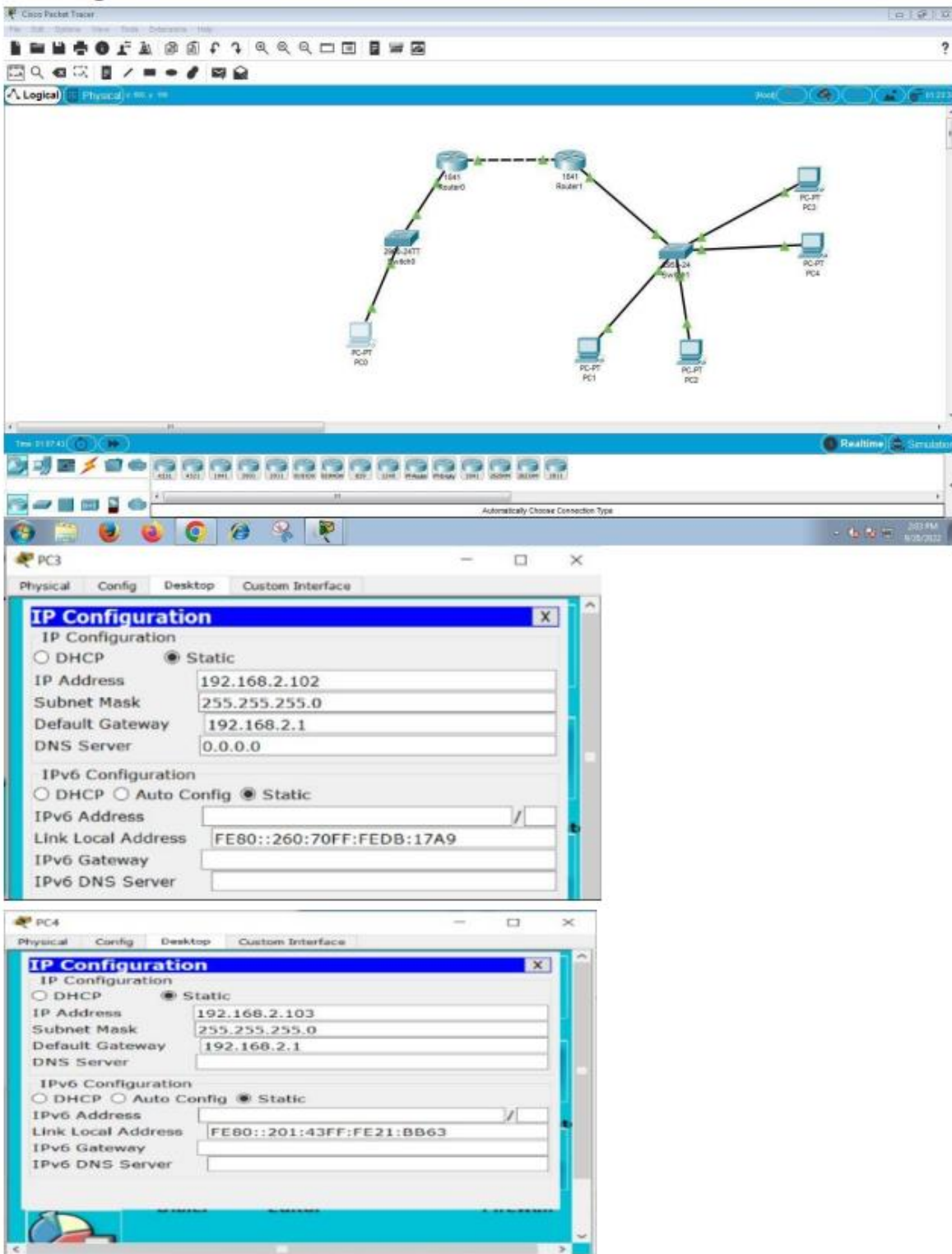
Event List (Bottom Screenshot):

Time (sec)	Last Device	All Device	Type
20.000	Switch1	PC1	STP
20.001	Switch1	Switch1	STP
20.001	Switch1	Router1	STP
20.001	Switch1	PC1	STP
20.001	Switch1	PC1	STP
30.000	Router1	Router1	CDP
30.000	Router1	Router1	CDP
30.001	Switch1	Switch1	CDP
30.001	Switch1	Switch1	CDP
30.001	Router1	Router1	CDP
30.001	Router1	Router1	CDP
30.001	Router1	Router1	CDP
30.001	Router1	Router1	CDP
30.001	Router1	Router1	CDP
30.002	Switch1	PC1	CDP

Packet Detail (Bottom Screenshot):

Time (sec)	Source	Destination	Type	Color	Time (sec)	Periodic	Num	ES	State
0.000	PC1	PC2	ICMP	Green	0.000	0	0	0	Initial

Creating a VLAN :



```
Switch1
Physical Config CLI
IOS Command Line Interface

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed
state to up
%LINK-5-CHANGED: Interface FastEthernet0/4, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4, changed
state to up
%LINK-5-CHANGED: Interface FastEthernet0/5, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/5, changed
state to up

Switch>enable
Switch#config t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 20
Switch(config-vlan)#name sales
Switch(config-vlan)#exit
Switch(config)#vlan 30
Switch(config-vlan)#name purchase
Switch(config-vlan)#exit
Switch(config)#
```

```
state to up

Switch>enable
Switch#config t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#vlan 20
Switch(config-vlan)#name sales
Switch(config-vlan)#exit
Switch(config)#vlan 30
Switch(config-vlan)#name purchase
Switch(config-vlan)#exit
Switch(config)#int fa0/2
Switch(config-if)#switchport access vlan 20
Switch(config-if)#exit
Switch(config)#int fa0/3
Switch(config-if)#switchport access vlan 20
Switch(config-if)#exit
Switch(config)#int fa0/4
Switch(config-if)#switchport access vlan 30
Switch(config-if)#exit
Switch(config)#int fa0/5
Switch(config-if)#switchport access vlan 30
Switch(config-if)#exit
Switch(config)#
```

Conclusion : Thus we have successfully implemented VLAN and RIP protocol