

Experiment Title 1.3

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Branch: CSE

Semester: 4th

Subject Name: CN

UID: 20bcs2761

Section/Group: 614 b

1. Aim/Overview of the practical:

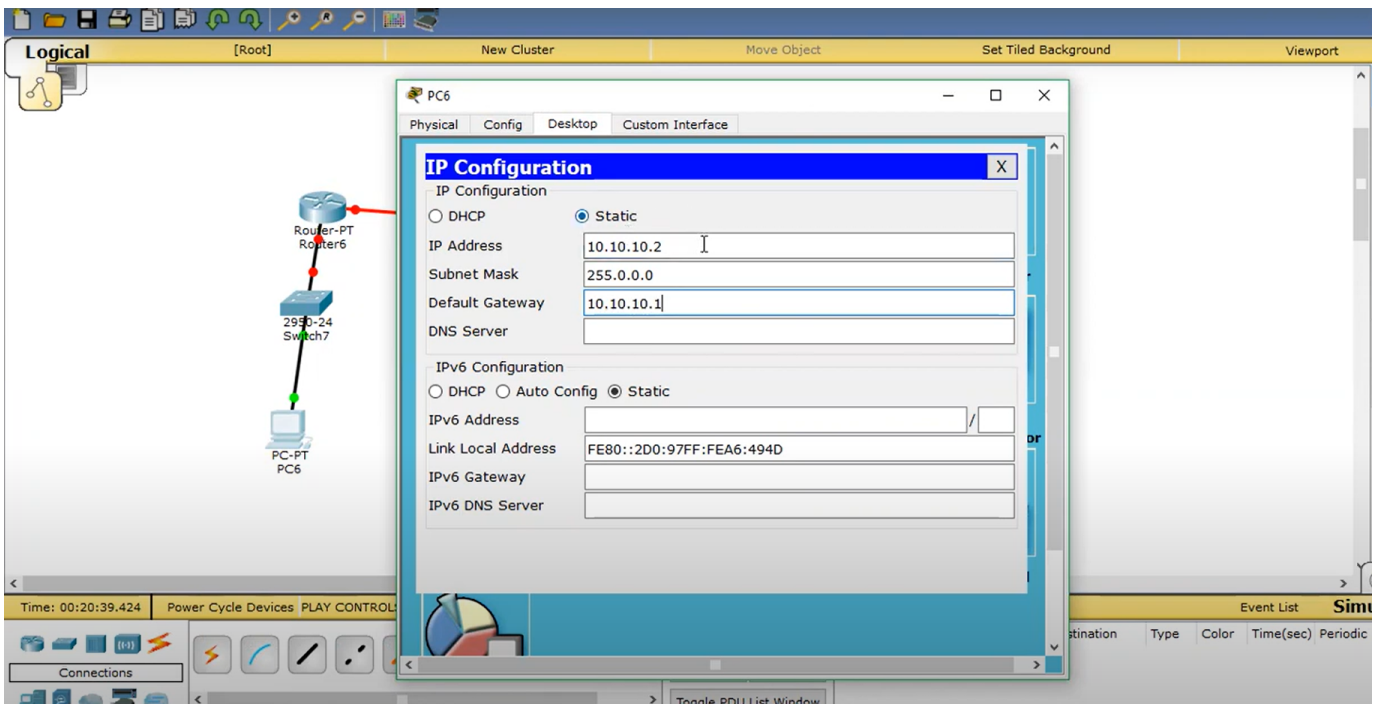
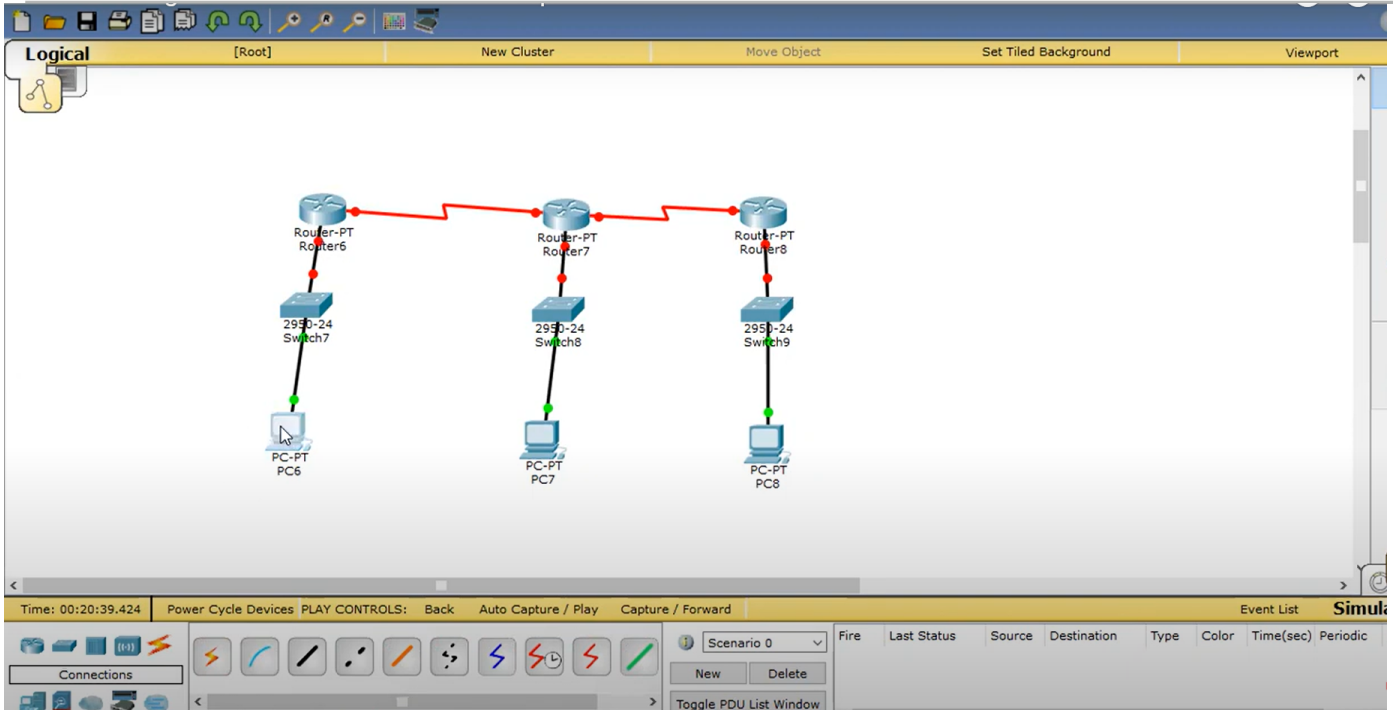
Create a network connection using packet tracer , which shows the working of Switch and Hub. Explain in detail with proper steps.

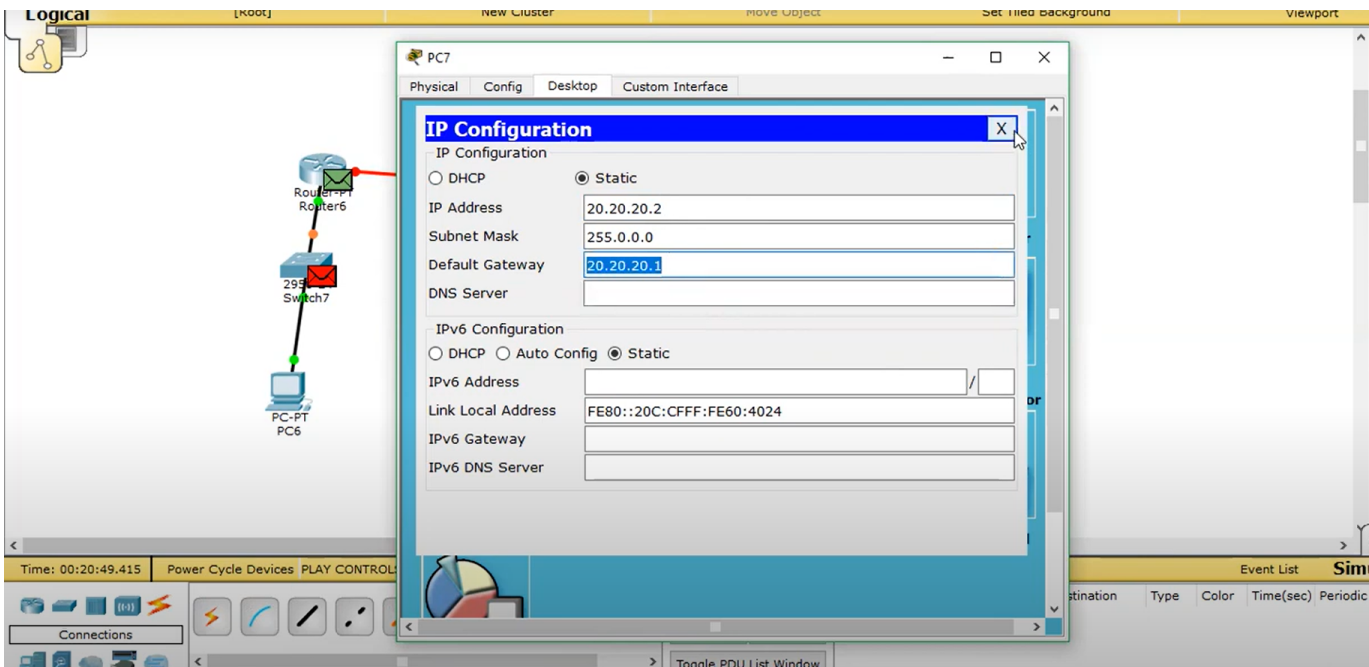
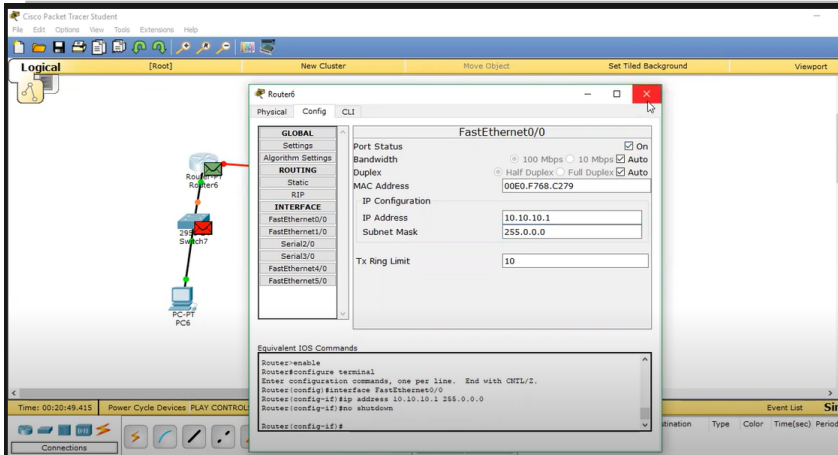
2. Task to be done/ Which logistics used:

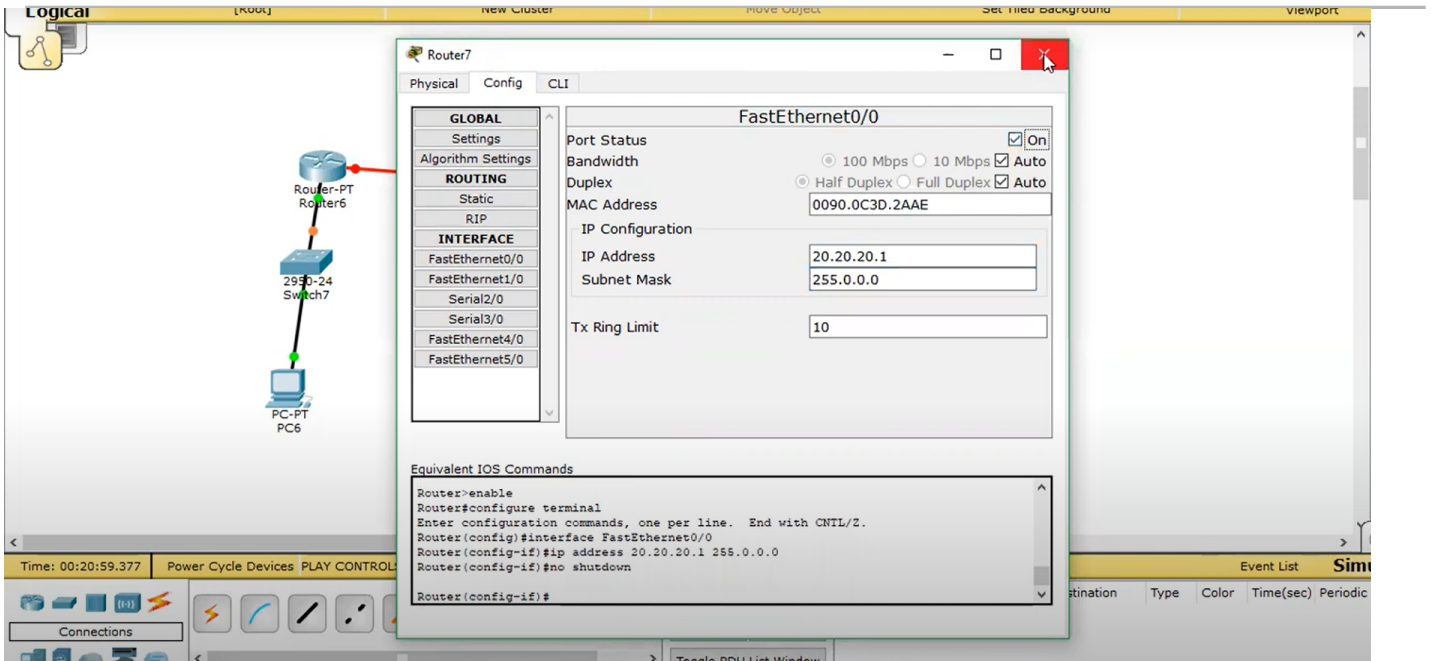
To Create a network connection using cisco packet tracer

3. Steps for experiment/practical/Code

The step by step process is shown below in pictorial form.





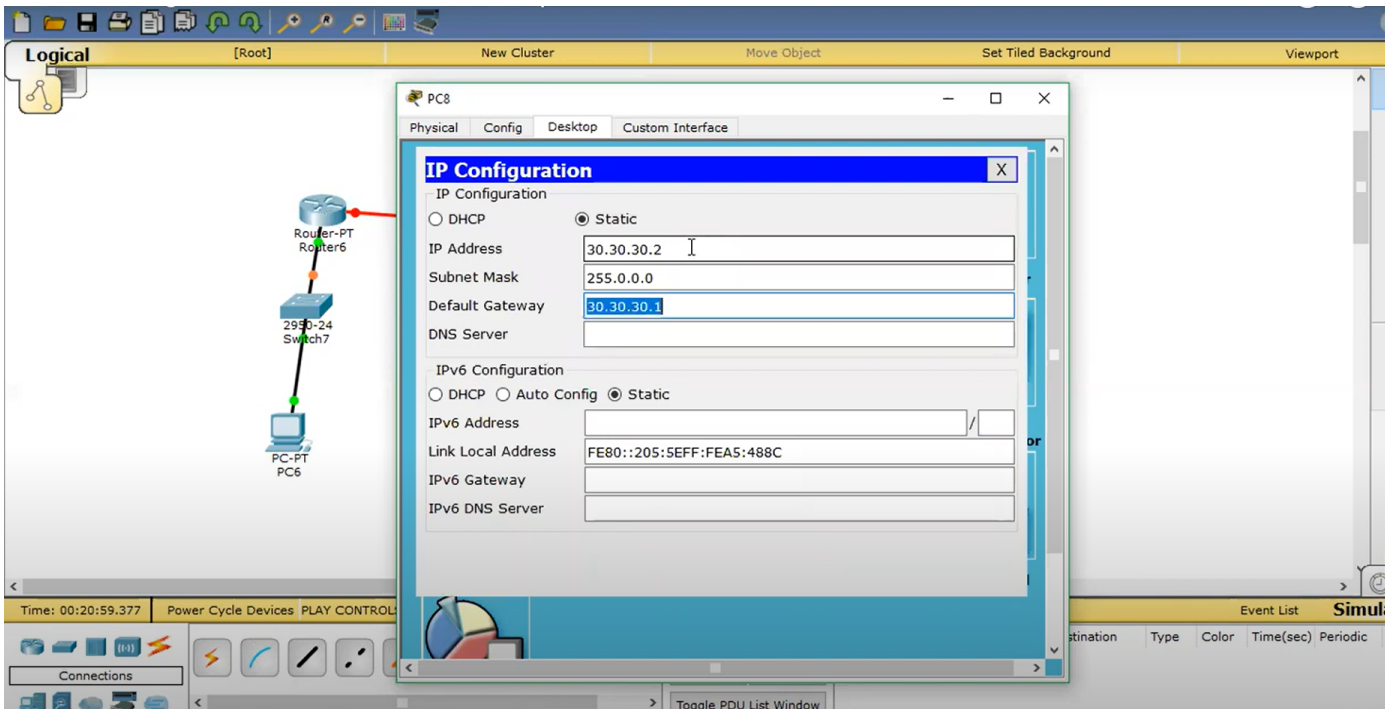


The screenshot shows the configuration window for Router7 in Packet Tracer. The 'Config' tab is active, and the 'FastEthernet0/0' interface is selected. The configuration includes:

- Port Status:** On
- Bandwidth:** 100 Mbps 10 Mbps Auto
- Duplex:** Half Duplex Full Duplex Auto
- MAC Address:** 0090.0C3D.2AAE
- IP Configuration:**
 - IP Address:** 20.20.20.1
 - Subnet Mask:** 255.0.0.0
- Tx Ring Limit:** 10

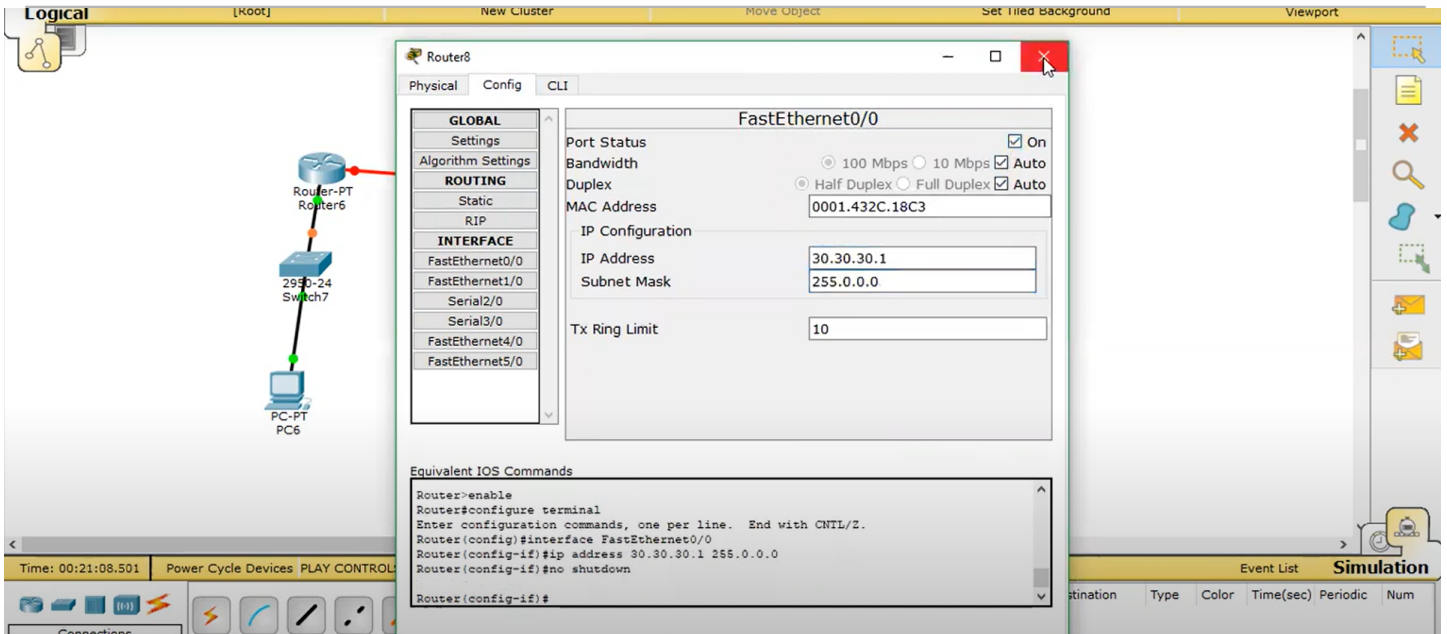
The 'Equivalent IOS Commands' section shows the following commands:

```
Router>enable
Router>configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 20.20.20.1 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#
```



The screenshot shows the configuration window for PC8 in Packet Tracer. The 'Config' tab is active, and the 'IP Configuration' window is open. The configuration includes:

- IP Configuration:**
 - DHCP Static
 - IP Address:** 30.30.30.2
 - Subnet Mask:** 255.0.0.0
 - Default Gateway:** 30.30.30.1
 - DNS Server:** (empty)
- IPv6 Configuration:**
 - DHCP Auto Config Static
 - IPv6 Address:** (empty)
 - Link Local Address:** FE80::205:5EFF:FEA5:488C
 - IPv6 Gateway:** (empty)
 - IPv6 DNS Server:** (empty)



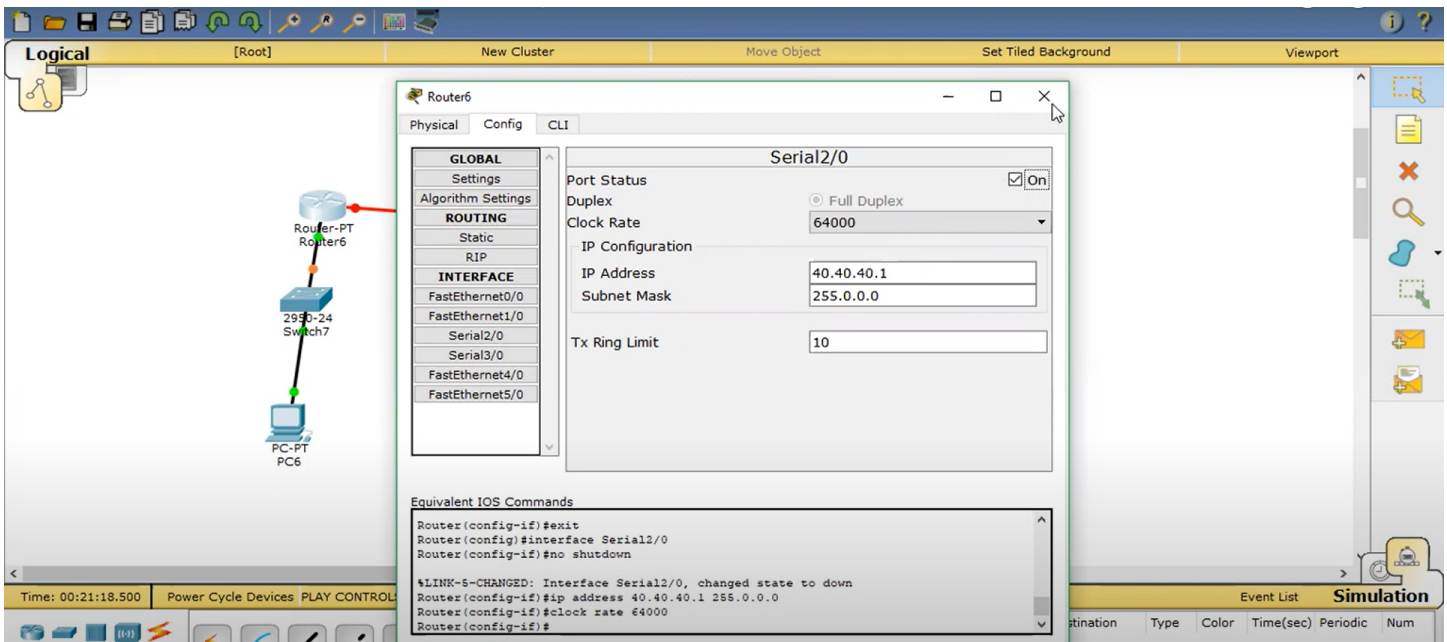
The screenshot shows the configuration window for Router8 in Packet Tracer. The 'Config' tab is active, and the 'FastEthernet0/0' interface is selected. The configuration includes:

- Port Status:** On
- Bandwidth:** 100 Mbps
- Duplex:** Full Duplex
- MAC Address:** 0001.432C.18C3
- IP Configuration:**
 - IP Address: 30.30.30.1
 - Subnet Mask: 255.0.0.0
- Tx Ring Limit:** 10

The 'Equivalent IOS Commands' section shows the following commands:

```
Router#enable
Router#configure terminal
Enter configuration commands, one per line. End with CNTRL/Z.
Router(config)#interface FastEthernet0/0
Router(config-if)#ip address 30.30.30.1 255.0.0.0
Router(config-if)#no shutdown
Router(config-if)#
```

The simulation time is 00:21:08.501. The status bar shows 'Power Cycle Devices' and 'PLAY CONTROL' buttons.



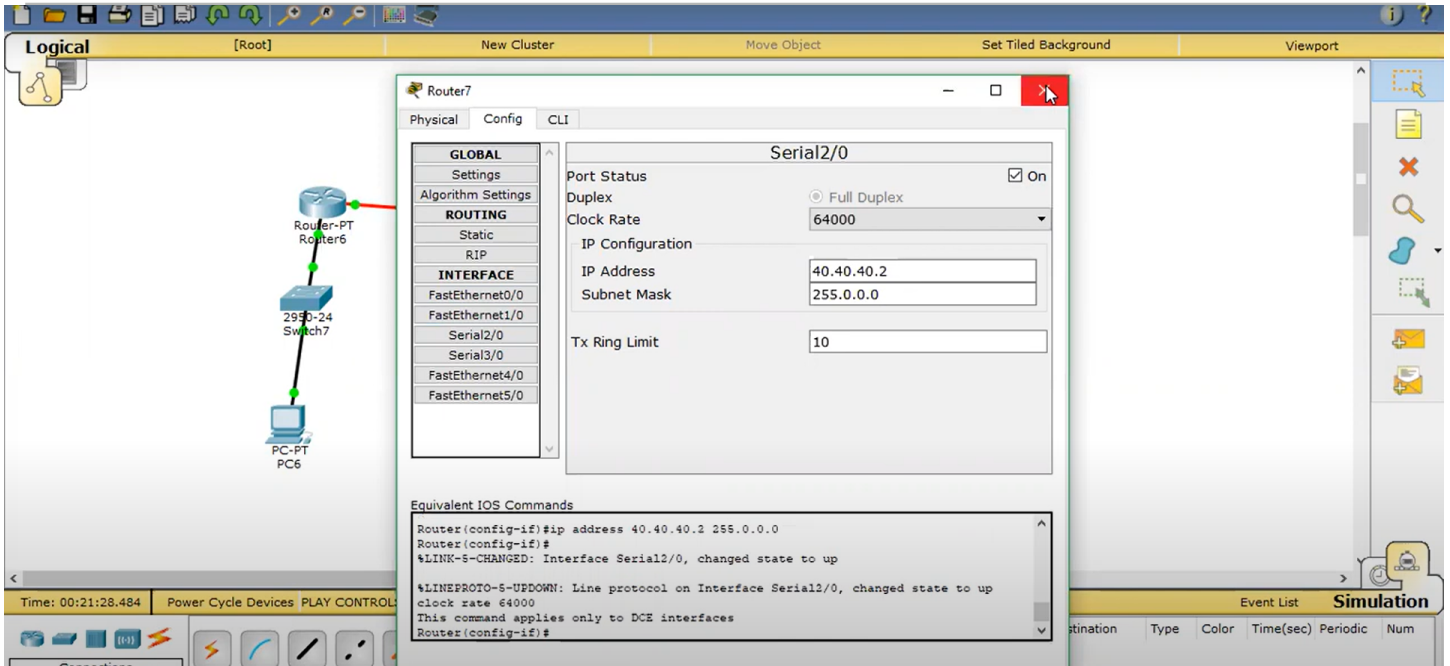
The screenshot shows the configuration window for Router6 in Packet Tracer. The 'Config' tab is active, and the 'Serial2/0' interface is selected. The configuration includes:

- Port Status:** On
- Duplex:** Full Duplex
- Clock Rate:** 64000
- IP Configuration:**
 - IP Address: 40.40.40.1
 - Subnet Mask: 255.0.0.0
- Tx Ring Limit:** 10

The 'Equivalent IOS Commands' section shows the following commands:

```
Router(config-if)#exit
Router(config)#interface Serial2/0
Router(config-if)#no shutdown
%LINK-5-CHANGED: Interface Serial2/0, changed state to down
Router(config-if)#ip address 40.40.40.1 255.0.0.0
Router(config-if)#clock rate 64000
Router(config-if)#
```

The simulation time is 00:21:18.500. The status bar shows 'Power Cycle Devices' and 'PLAY CONTROL' buttons.



Router7 Config CLI

Serial2/0

Port Status On

Duplex Full Duplex

Clock Rate **64000**

IP Configuration

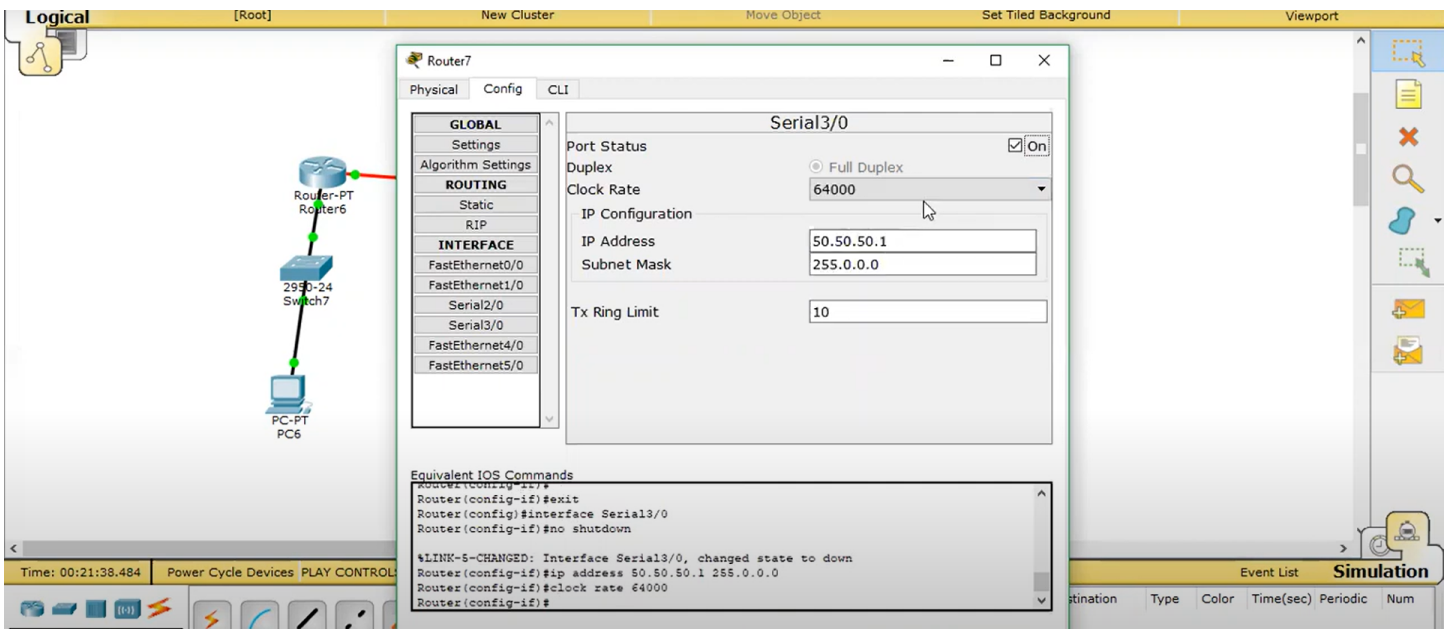
IP Address **40.40.40.2**

Subnet Mask **255.0.0.0**

Tx Ring Limit **10**

Equivalent IOS Commands

```
Router (config-if)#ip address 40.40.40.2 255.0.0.0
Router (config-if)#
%LINK-5-CHANGED: Interface Serial2/0, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
clock rate 64000
This command applies only to DCE interfaces
Router (config-if)#
```



Router7 Config CLI

Serial3/0

Port Status On

Duplex Full Duplex

Clock Rate **64000**

IP Configuration

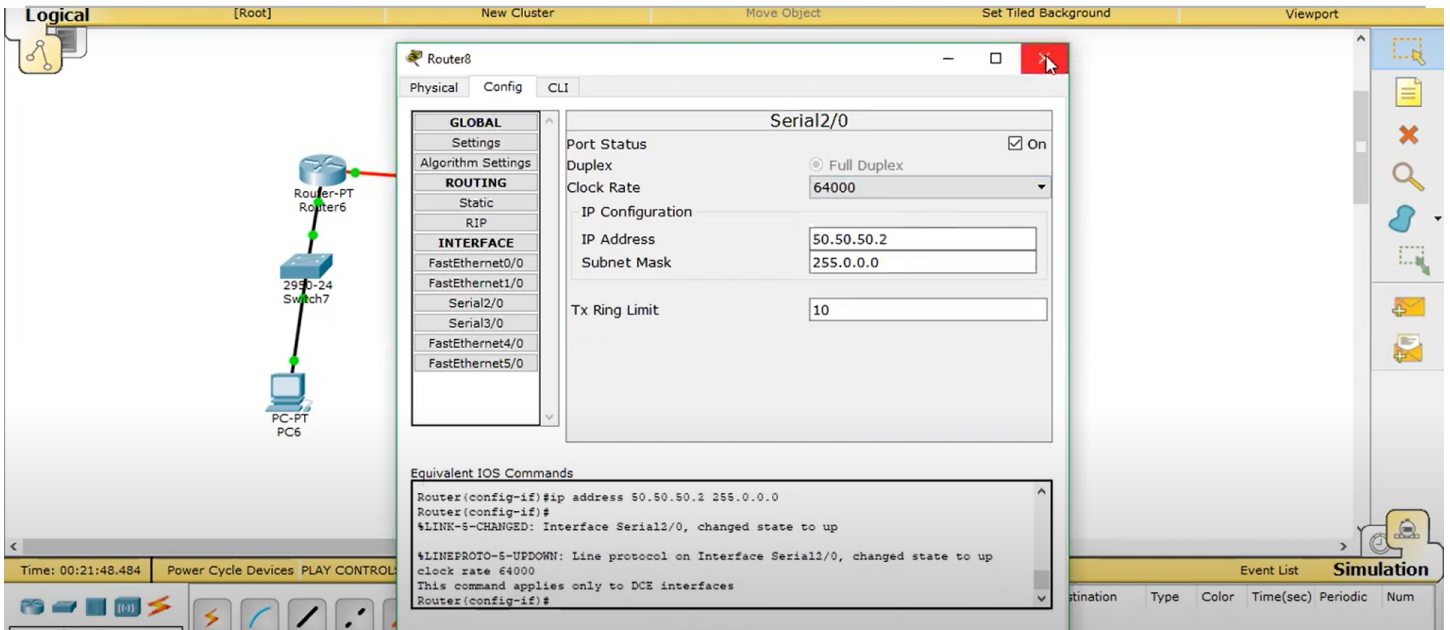
IP Address **50.50.50.1**

Subnet Mask **255.0.0.0**

Tx Ring Limit **10**

Equivalent IOS Commands

```
Router (config-if)#
Router (config-if)#exit
Router (config)#interface Serial3/0
Router (config-if)#no shutdown
Router (config-if)#ip address 50.50.50.1 255.0.0.0
Router (config-if)#clock rate 64000
Router (config-if)#
```



Router8 Config CLI

Serial2/0

Port Status On

Duplex Full Duplex

Clock Rate 64000

IP Configuration

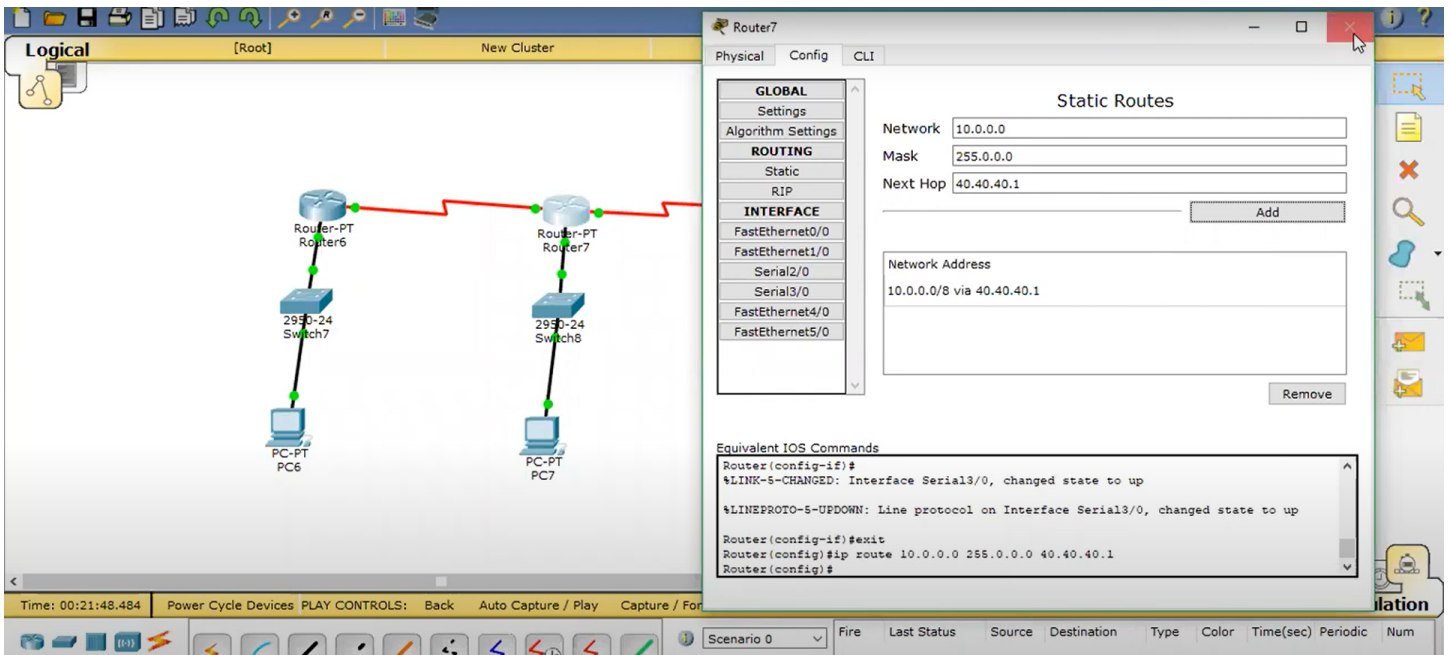
IP Address 50.50.50.2

Subnet Mask 255.0.0.0

Tx Ring Limit 10

Equivalent IOS Commands

```
Router(config-if)#ip address 50.50.50.2 255.0.0.0
Router(config-if)#
$LINK-5-CHANGED: Interface Serial2/0, changed state to up
$LINEPROTO-5-UPDOWN: Line protocol on Interface Serial2/0, changed state to up
clock rate 64000
This command applies only to DCE interfaces
Router(config-if)#
```



Router7 Config CLI

Static Routes

Network 10.0.0.0

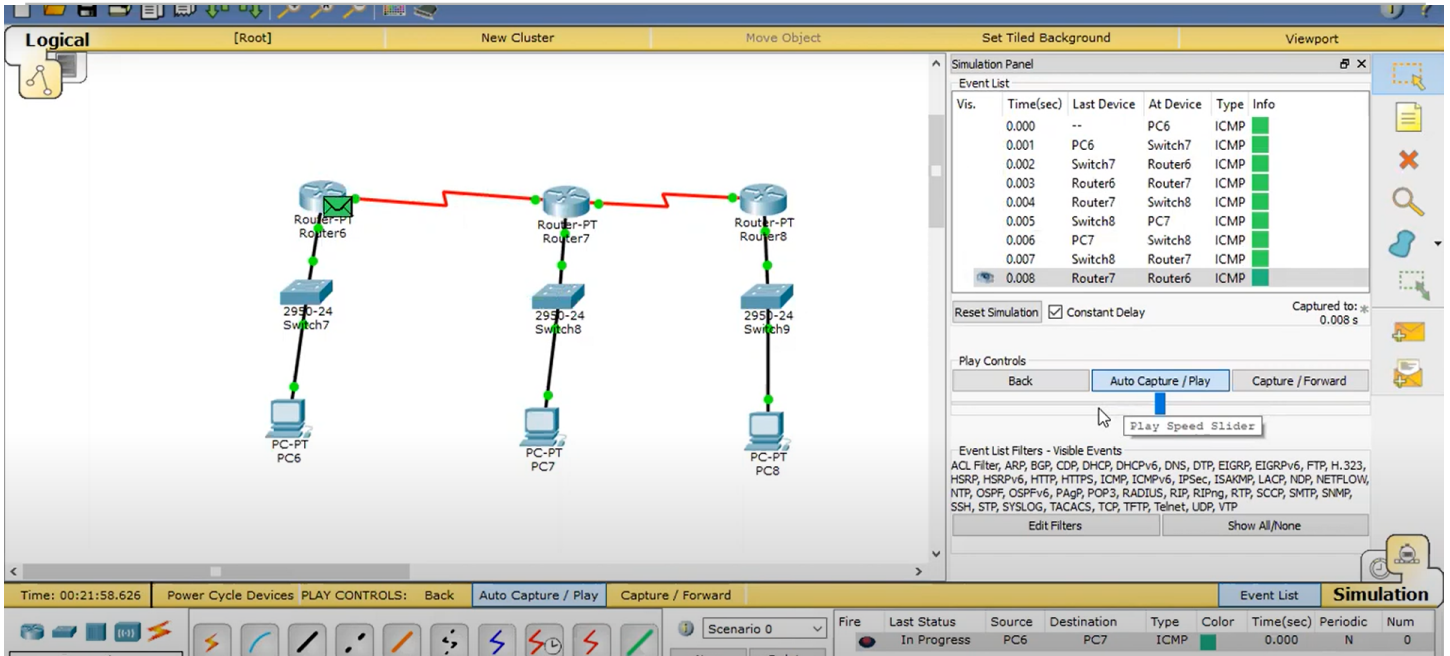
Mask 255.0.0.0

Next Hop 40.40.40.1

Network Address 10.0.0.0/8 via 40.40.40.1

Equivalent IOS Commands

```
Router(config-if)#
$LINK-5-CHANGED: Interface Serial3/0, changed state to up
$LINEPROTO-5-UPDOWN: Line protocol on Interface Serial3/0, changed state to up
Router(config-if)#exit
Router(config)#ip route 10.0.0.0 255.0.0.0 40.40.40.1
Router(config)#
```



Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device	Type	Info
	0.000	--	PC6	ICMP	
	0.001	PC6	Switch7	ICMP	
	0.002	Switch7	Router6	ICMP	
	0.003	Router6	Router7	ICMP	
	0.004	Router7	Switch8	ICMP	
	0.005	Switch8	PC7	ICMP	
	0.006	PC7	Switch8	ICMP	
	0.007	Switch8	Router7	ICMP	
	0.008	Router7	Router6	ICMP	

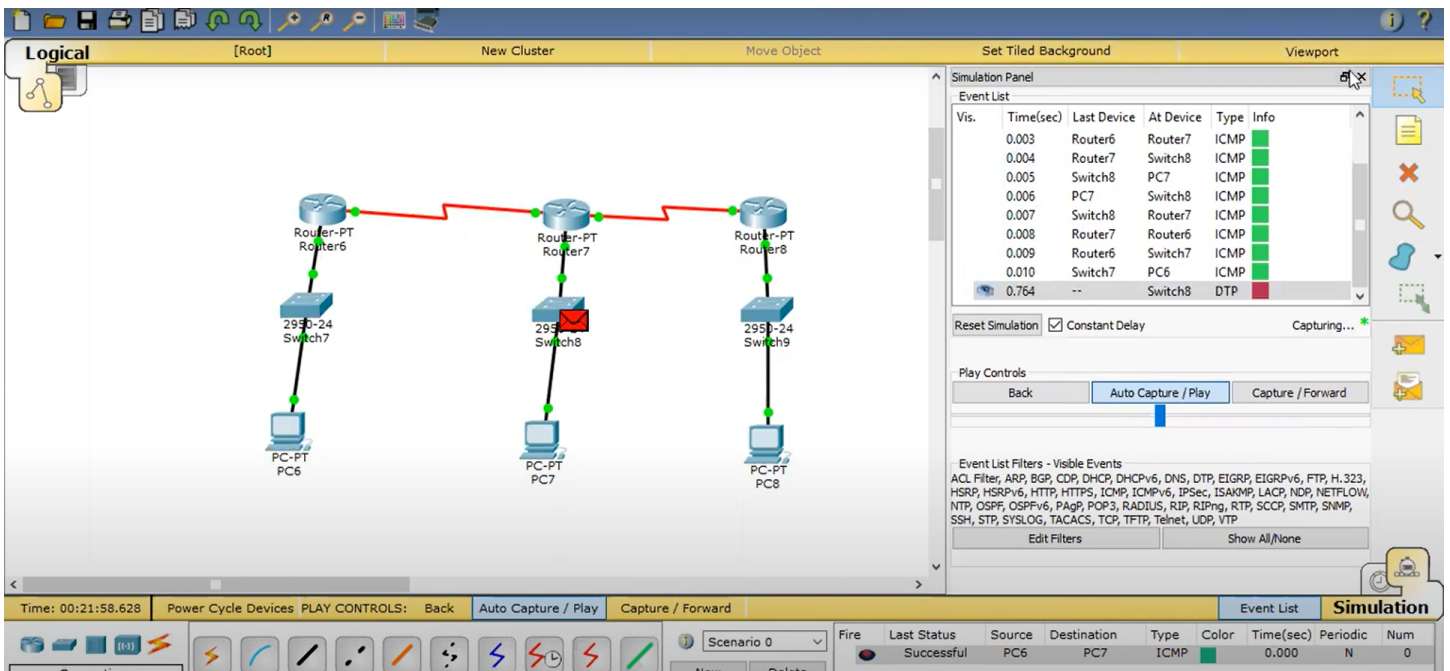
Reset Simulation Constant Delay Captured to: 0.008 s

Play Controls: Back Auto Capture / Play Capture / Forward

Event List Filters - Visible Events
ACL Filter, ARP, BGP, CDP, DHCP, DHCPv6, DNS, DTP, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, LACP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgp, POP3, RADIUS, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, VTP

Time: 00:21:58.626 Power Cycle Devices PLAY CONTROLS: Back Auto Capture / Play Capture / Forward

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num
	In Progress	PC6	PC7	ICMP		0.000	N	0



Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device	Type	Info
	0.003	Router6	Router7	ICMP	
	0.004	Router7	Switch8	ICMP	
	0.005	Switch8	PC7	ICMP	
	0.006	PC7	Switch8	ICMP	
	0.007	Switch8	Router7	ICMP	
	0.008	Router7	Router6	ICMP	
	0.009	Router6	Switch7	ICMP	
	0.010	Switch7	PC6	ICMP	
	0.764	--	Switch8	DTP	

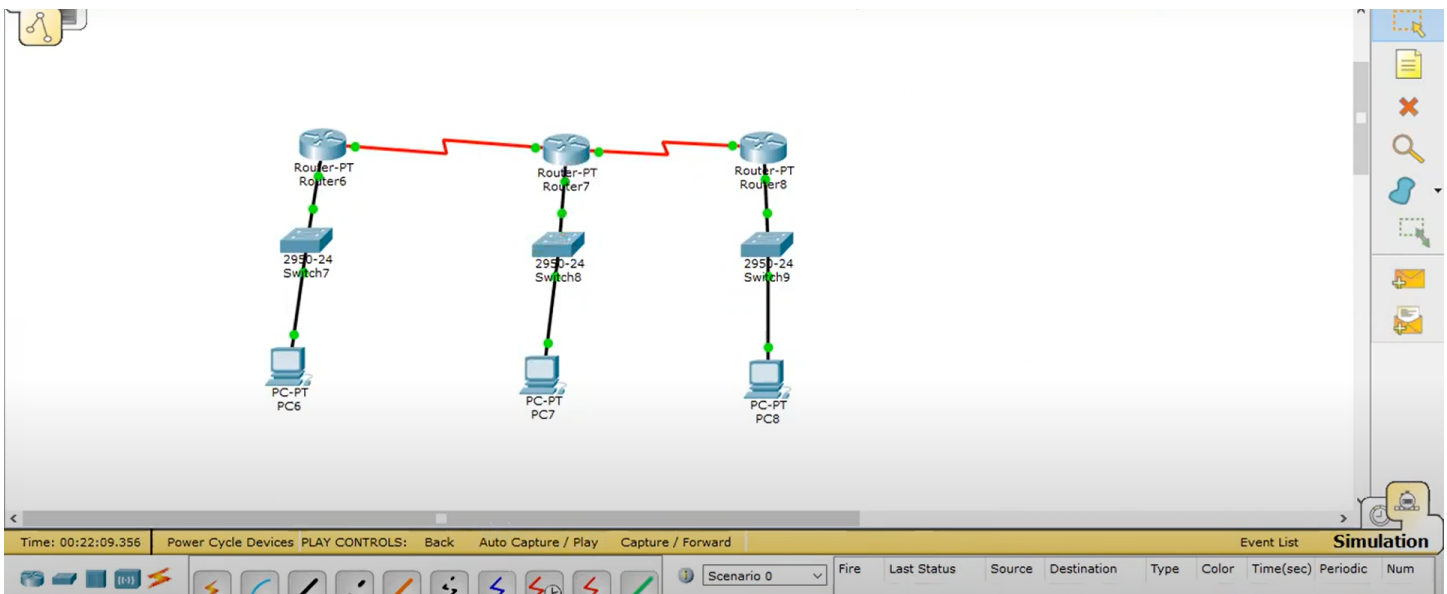
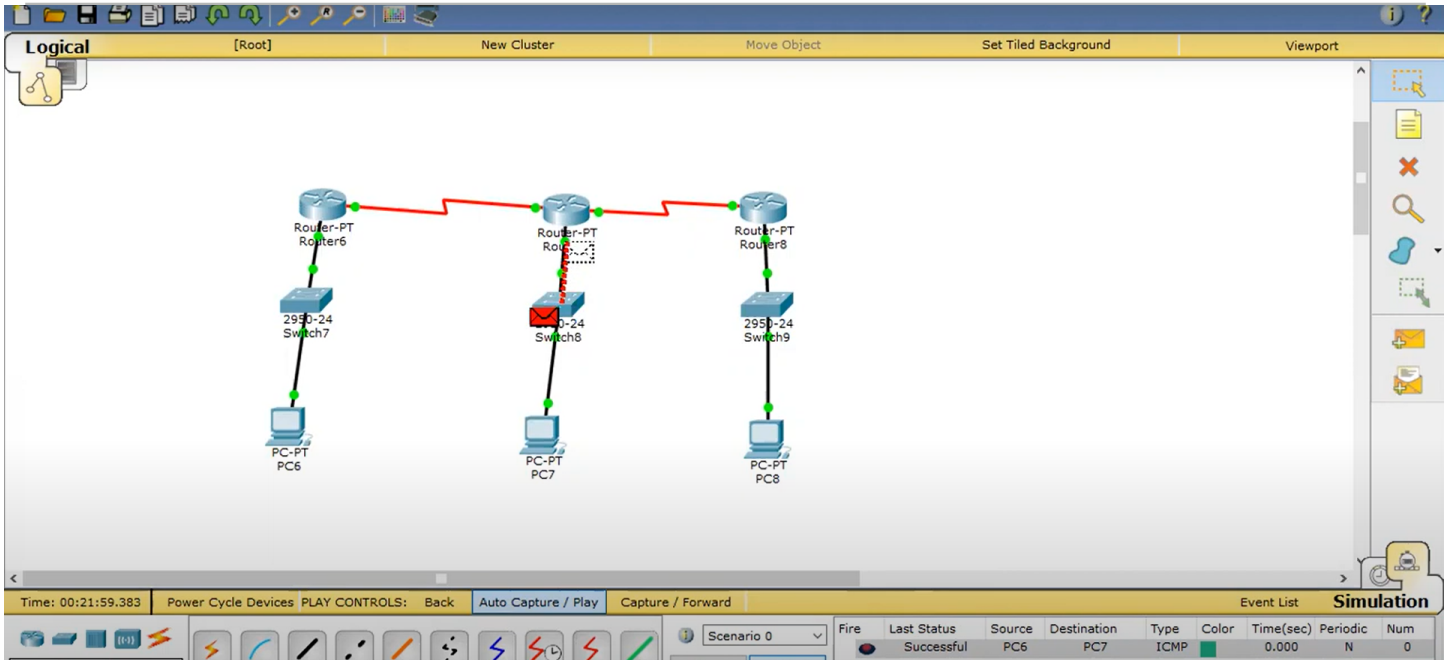
Reset Simulation Constant Delay Capturing...

Play Controls: Back Auto Capture / Play Capture / Forward

Event List Filters - Visible Events
ACL Filter, ARP, BGP, CDP, DHCP, DHCPv6, DNS, DTP, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, LACP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgp, POP3, RADIUS, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, VTP

Time: 00:21:58.628 Power Cycle Devices PLAY CONTROLS: Back Auto Capture / Play Capture / Forward

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num
	Successful	PC6	PC7	ICMP		0.000	N	0



4. Result/Output/Writing Summary:

Learning outcomes (What I have learnt):

1.I learnt how the data is transferred through different network.

-
- 2.
 - 3.
 - 4.
 - 5.

Evaluation Grid (To be created as per the SOP and Assessment guidelines by the faculty):

Sr. No.	Parameters	Marks Obtained	Maximum Marks
1.			
2.			
3.			