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Course / Sec - MCA - 2 - B  
Univ. Roll no - 2001157

Subject Name - Computer Networks  
Subject Code - TMC-203  
Student Id - 20712068

## Question - 1

**Problem Statement :-** There is an organization A with multiple departments. Design a n/w for the HR department & the size of the department is 10 users. Also, show the Communication b/w user number 1 & user number 5 of the n/w.

**Objective :-** To understand how to create a network within an organization using a switch, PCs and Copper Straight-Through. (To create a wired LAN using switch)

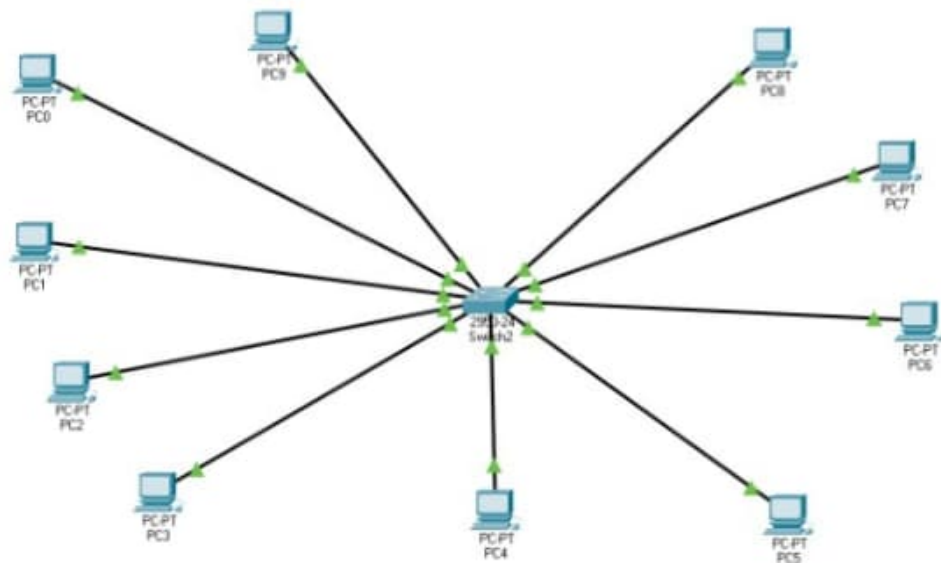
**Description of Steps :-**

Step 1 : Designing the required Network

Step 2 : Assigning IP to every PC/user

Step 3 : Confirming the network by sending message ~~1 to 5~~ from PC1 to PC5

Tanya



# Simulation Panel

## Event List

Vis.	Time(sec)	Last Device	At Device
[No captures]			

Reset Simulation

☒ Constant Delay

Captured to:  
(no captures)

## Play Controls



## Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPSec, ISAKMP, IoT, IoT TCP, LACP, LLDP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters

Show All/None

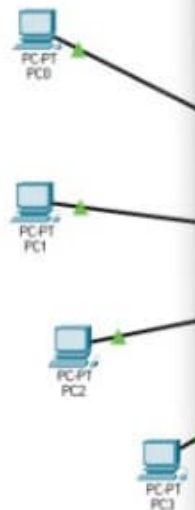
Time: 00:02:41.910 PLAY CONTROLS



Scenario 0  
New Delete  
Toggle PDU List Window

Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit D





PC6

Physical Config Desktop Programming Attributes

106

Configure Dialup Settings

run

http:

IP Configuration

Dial-up

Terminal

Command Prompt

Web Browser

PC Wireless

VPN

Traffic Generator

MIB Browser

Cisco IP Communicator

Email

PPPoE Dialer

Text Editor

Firewall

IPv4

IPv6

IPv6 Firewall

Top

(Root)

Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device
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Reset Simulation

Constant Delay

Captured to (no captures)

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TCP, LACP, LLDP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters

Show All/None

Event List

Realtime

Simulation

Destination	Type	Color	Time(sec)	Periodic	Num	Edit
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Logical Physical t: 1007, p: 360

PC/PT PC0

PC/PT PC1

PC/PT PC2

PC/PT PC3

Time: 00:03:10.277

PLAY CONTROLS

Serial DTE

Physical Config Desktop Programming Attributes

### IP Configuration

Interface: FastEthernet0

IP Configuration

☐ DHCP ☒ Static

IPv4 Address: 198.68.10.7

Subnet Mask: 255.255.255.0

Default Gateway: 0.0.0.0

DNS Server: 0.0.0.0

IPv6 Configuration

☐ Automatic ☒ Static

IPv6 Address: /

Link Local Address: FE80::2E0:8FFF:FE36:DC92

Default Gateway:

DNS Server:

802.1X

☐ Use 802.1X Security

Authentication: MD5

Username:

Password:

☐ Top

[Root]

### Simulation Panel

#### Event List

Vis.	Time(sec)	Last Device	At Device
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Reset Simulation ☒ Constant Delay Captured to: (no captures)

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPsec, ISAKMP, IoT, IoT TCP, LACP, LLDP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

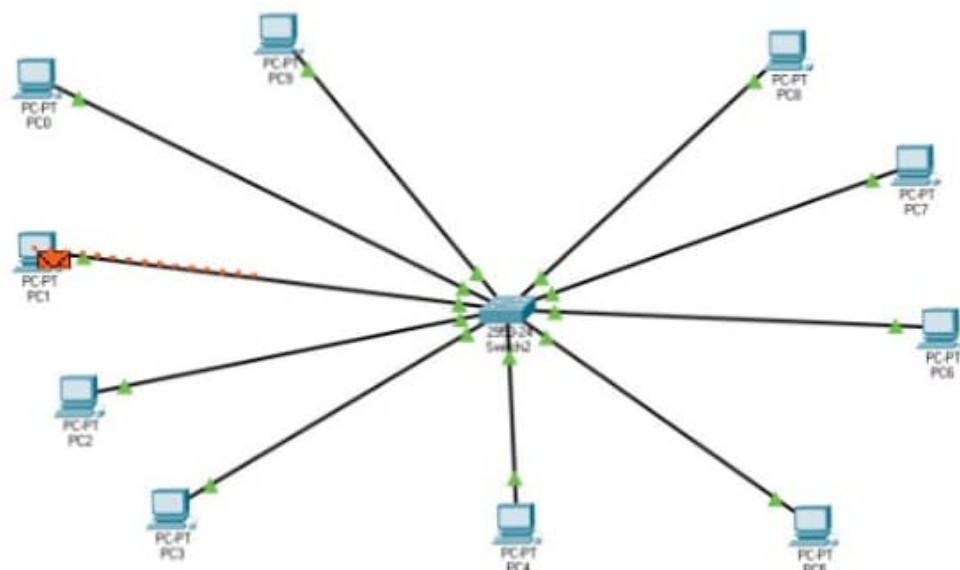
Event List Realtime Simulation

Destination Type Color Time(sec) Periodic Num Edit De



Logical Physical 321, p 614

[Root] 12:59:00



Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device
	0.000	--	PC1
	0.001	PC1	Switch2
	0.002	Switch2	PC5
	0.003	PC5	Switch2
	0.004	Switch2	PC1

Reset Simulation ☒ Constant Delay Captured to: 0.004 s

Play Controls



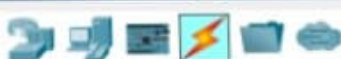
Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPSec, ISAKMP, IoT, IoT TCP, LACP, LLDP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters

Show All/None

Time: 00:04:20.404 PLAY CONTROLS:



Scenario 0

New Delete

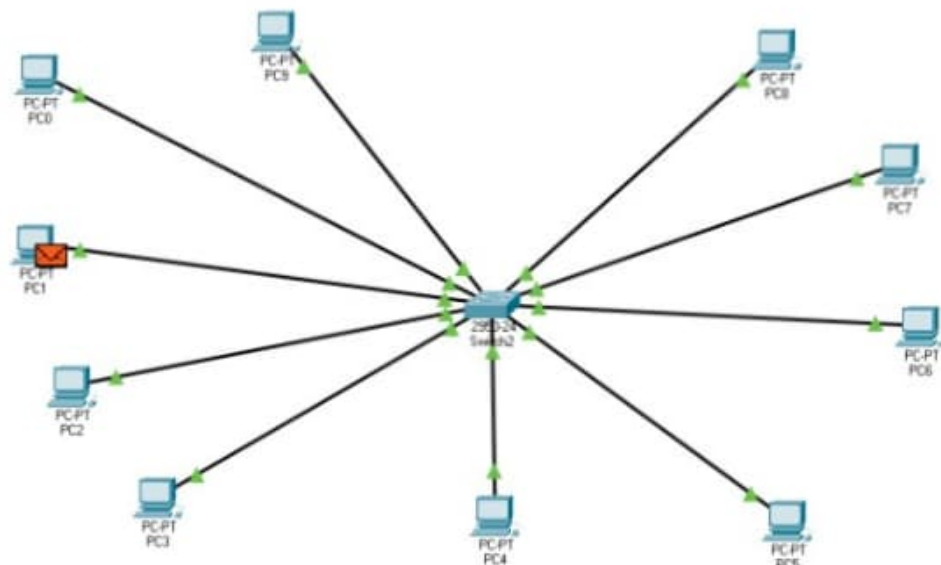
Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit
	Successful	PC1	PC5	ICMP		0.000	N	0	(edit)



Logical Physical 321, 514

[Root] 12:49:00



Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device
	0.000	--	PC1

Reset Simulation

☒ Constant Delay

Captured to: 0.000 s

Play Controls



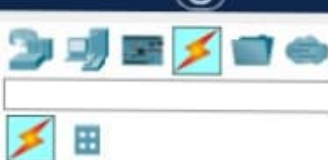
Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPSec, ISAKMP, IoT, IoT TCP, LACP, LLDP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters

Show All/None

Time: 00:04:20.400 PLAY CONTROLS



Play (Hands Free) (Alt+P)



Serial DTE

Scenario 0

New

Delete

Toggle PDU List Window

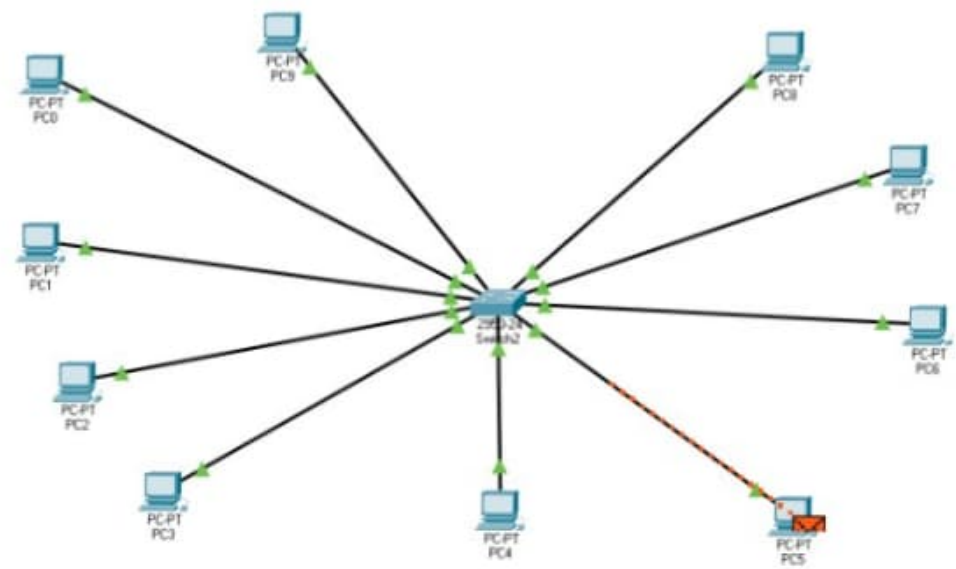
Event List

Realtime

Simulation

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	De
	In Progress	PC1	PC5	ICMP		0.000	N	0	(edit)	(de





Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device
	0.000	-	PC1
	0.001	PC1	Switch2
	0.002	Switch2	PC5

Reset Simulation ☒ Constant Delay Captured to 0.002

Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPSec, ISAKMP, IoT, IoT TCP, LACP, LLDP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Serial DCE

Scenario 0

New Delete

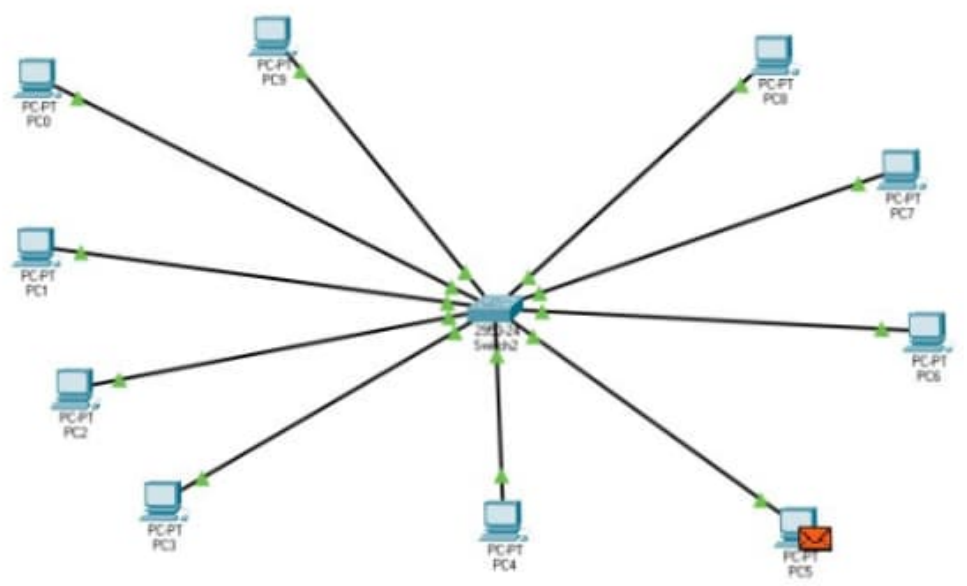
Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	De
	In Progress	PC1	PC5	ICMP		0.000	N	0	(edit)	(de



Logical Physical n: 321, p: 614

[Root] 12:53:30



Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device
	0.000	--	PC1
	0.001	PC1	Switch2
<input checked="" type="checkbox"/>	0.002	Switch2	PC5

Reset Simulation ☒ Constant Delay Captured to 0.002

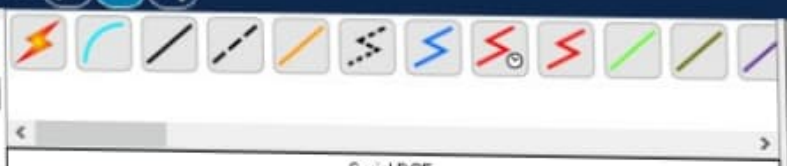
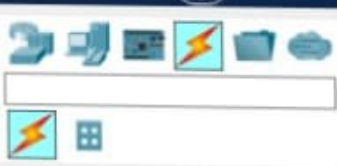
Play Controls

Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPSec, ISAKMP, IoT, IoT TCP, LACP, LLDP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PaGP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPng, RTP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters Show All/None

Time: 00:04:20.402 PLAY CONTROLS



Scenario 0

New Delete

Toggle PDU List Window

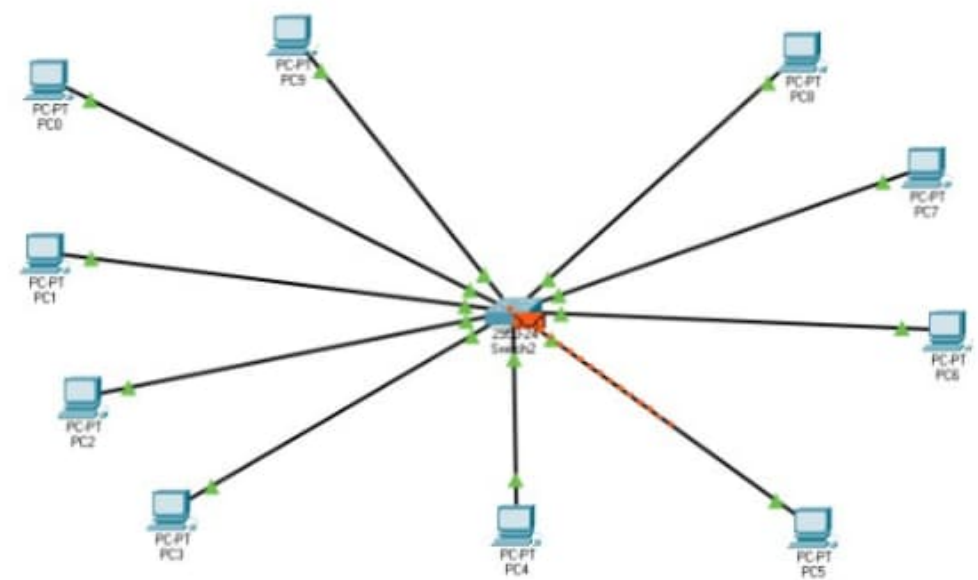
Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit
<input checked="" type="checkbox"/>	In Progress	PC1	PC5	ICMP		0.000	N	0	(edit)





Logical Physical to 321, p. 614

[Root] 12:56



Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device
	0.000	-	PC1
	0.001	PC1	Switch2
	0.002	Switch2	PC5
<input checked="" type="checkbox"/>	0.003	PC5	Switch2

Reset Simulation

☒ Constant Delay

Captured 0.003

Play Controls



Event List Filters - Visible Events

ACL Filter, ARP, BGP, Bluetooth, CAPWAP, CDP, DHCP, DHCPv6, DNS, DTP, EAPOL, EIGRP, EIGRPv6, FTP, H.323, HSRP, HSRPv6, HTTP, HTTPS, ICMP, ICMPv6, IPSec, ISAKMP, IoT, IoT TCP, LACP, LLDP, NDP, NETFLOW, NTP, OSPF, OSPFv6, PAgP, POP3, PPP, PPPoE, PTP, RADIUS, REP, RIP, RIPng, RTSP, SCCP, SMTP, SNMP, SSH, STP, SYSLOG, TACACS, TCP, TFTP, Telnet, UDP, USB, VTP

Edit Filters

Show All/None

Time: 00:04:20.403 PLAY CONTROLS



Scenario 0

New Delete

Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit
<input checked="" type="checkbox"/>	In Progress	PC1	PC5	ICMP		0.000	N	0	(edit)