HUB

Simulation Panel — Event List

Vis.	Time(sec)	Last Device	At Device	Type	Info
	2.002	--	PC1	ICMP	
	2.002	--	PC0	ICMP	
	2.002	--	PC0	ICMP	
	2.002	Hub0	PC1	ICMP	
	2.002	Hub0	PC2	ICMP	
	2.002	--	PC0	ICMP	
	2.003	PC2	Hub0	ICMP	
	2.004	Hub0	PC0	ICMP	
	2.004	Hub0	PC1	ICMP	

Reset Simulation Constant Delay   Captured to: 11133.247 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

Edit Filters | Show All/None

PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit		Delete
	Failed	PC1	PC2	ICMP		0.000	N	0	(edit)		(delete)
	Failed	PC1	PC2	ICMP		0.000	N	1	(edit)		(delete)
	Failed	PC0	PC1	ICMP		0.000	N	2	(edit)		(delete)
	Failed	PC0	PC1	ICMP		0.000	N	3	(edit)		(delete)
	Failed	PC0	PC1	ICMP		0.000	N	4	(edit)		(delete)
	Successful	PC0	10.0.0.33	ICMP		2.000	N	5	(edit)		(delete)
	Failed	PC1	PC2	ICMP		0.000	N	6	(edit)		(delete)
	Successful	PC0	PC2	ICMP		0.000	N	7	(edit)		(delete)
	Failed	PC0	PC2	ICMP		0.006	N	8	(edit)		(delete)

SWITCH

PDU List Window

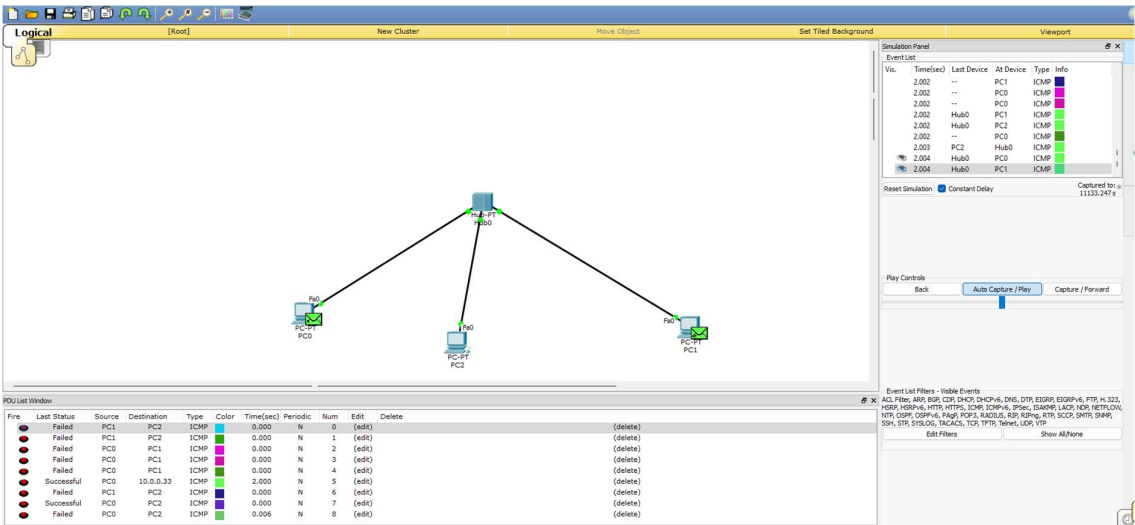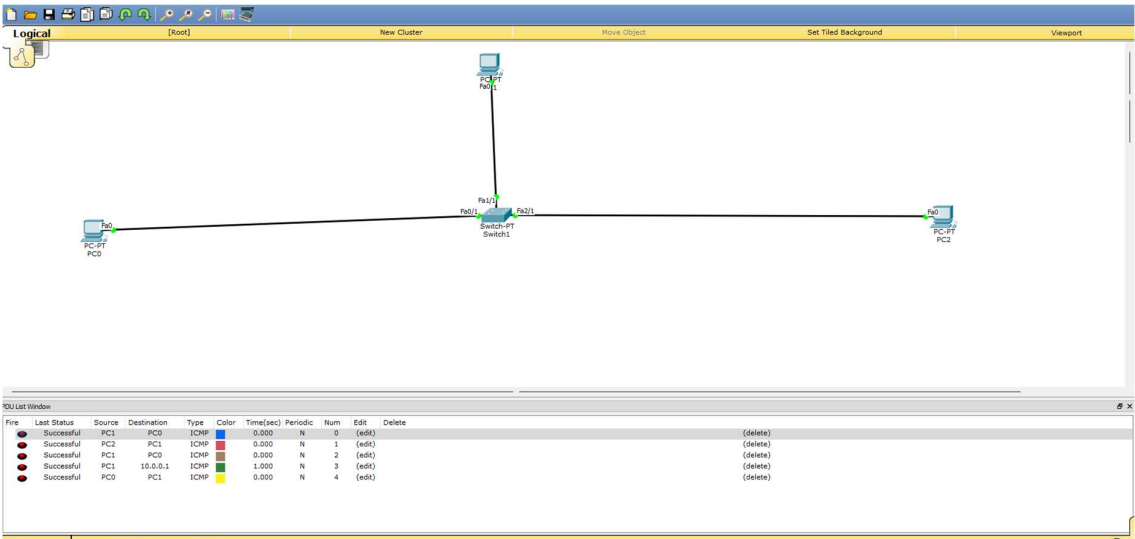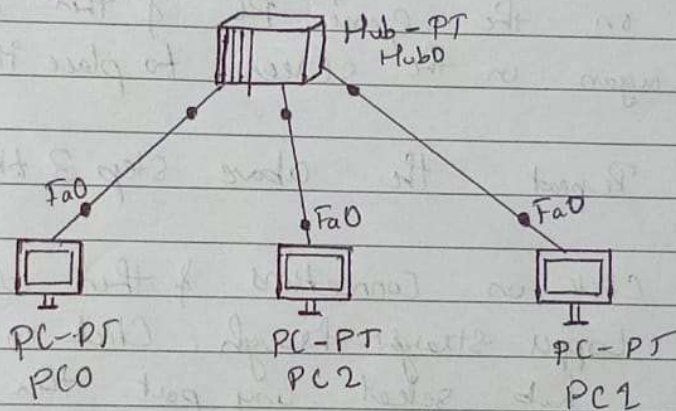| Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit		Delete
	Successful	PC1	PC0	ICMP		0.000	N	0	(edit)		(delete)
	Successful	PC2	PC1	ICMP		0.000	N	1	(edit)		(delete)
	Successful	PC1	PC0	ICMP		0.000	N	2	(edit)		(delete)
	Successful	PC1	10.0.0.1	ICMP		1.000	N	3	(edit)		(delete)
	Successful	PC0	PC1	ICMP		0.000	N	4	(edit)		(delete)

LAB-1

Aim: To demonstrate the transmission of a simple PDU between devices connected using a hub and a switch

Topology:

End devices used: Generic PC

IP address   PC0 = 10.0.0.1

PC1 =   10.0.0.2

PC2 = 10.0.0.33

Connection   used: Copper   Straight-through

Star topology is used

A Simple PDU is used

Configuration:

→ Click on Hubs and click on the first generic hub & then go to the screen click again to place it

→ Click on end devices, then click on the Generic PC & then click again on the screen to place it.

→ Repeat the above step 3 times.

→ Click on Connections & then click on Copper straight-through. Click on the hub select any port then click on any PC use FastEthernet0 port

→ Do the above step for all the 3 PC's

→ Right Click on the PC's go to config then FastEthernet0 & set IP addresses

Observation:

→ Hub is an unintelligent device

→ In the simulation, the message from PC0 travels to both PC1 and PC2 through the hub although the destination (IP address) was PC2.

→ The hub broadcasts the message to all the systems connected to it.

→ Unlike hub, switch is an intelligent device

→ When PC0 tries to send PDU to PC2 via the switch it gets sent to only PC2 and not to PC1

→ The acknowledgement from PC2 is sent only to PC0 and not to PC1

→ The switch transfers the message only to the required destination.