



Usman Institute of Technology

Department of Computer Science Fall 2022

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Course: DCCN (CS-222)

Course Instructor: Engr. Fauzan Saeed

Date: 7-Dec-2022

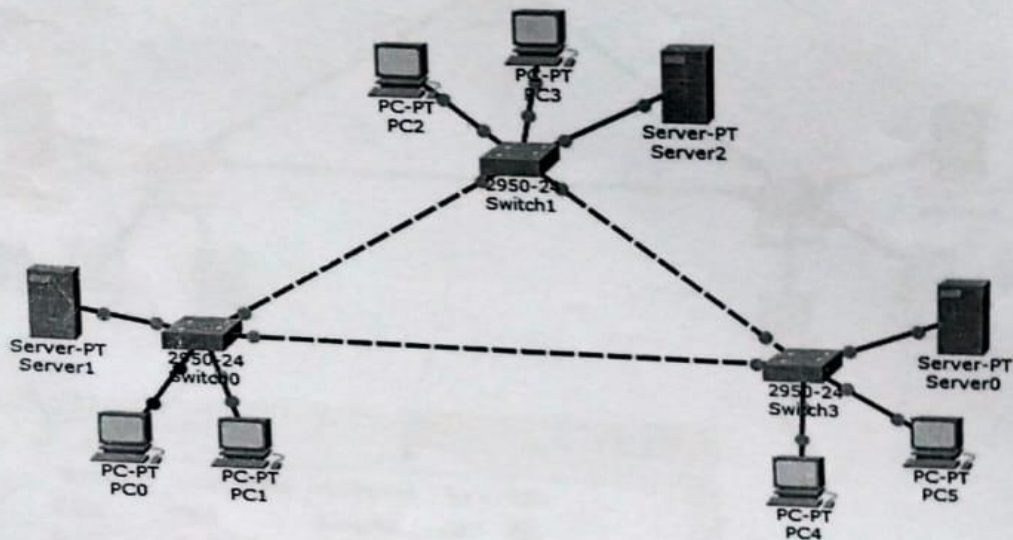
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x2
Fauzan

Lab Tasks:

Spanning Tree Protocol:

With Spanning Tree Protocol disabled,



Event List					
Vis.	Time(sec)	Last Device	At Device	Type	Info
	0.000	--	PC1	ICMP	
	0.000	--	PC1	ARP	
	0.009	--	Switch3	ARP	
	0.010	Switch3	Switch0	ARP	
	0.016	--	PC4	ARP	
	0.017	PC4	Switch3	ARP	
	0.017	--	Switch0	ARP	
	0.018	Switch0	Switch3	ARP	
	0.035	--	Switch3	ARP	

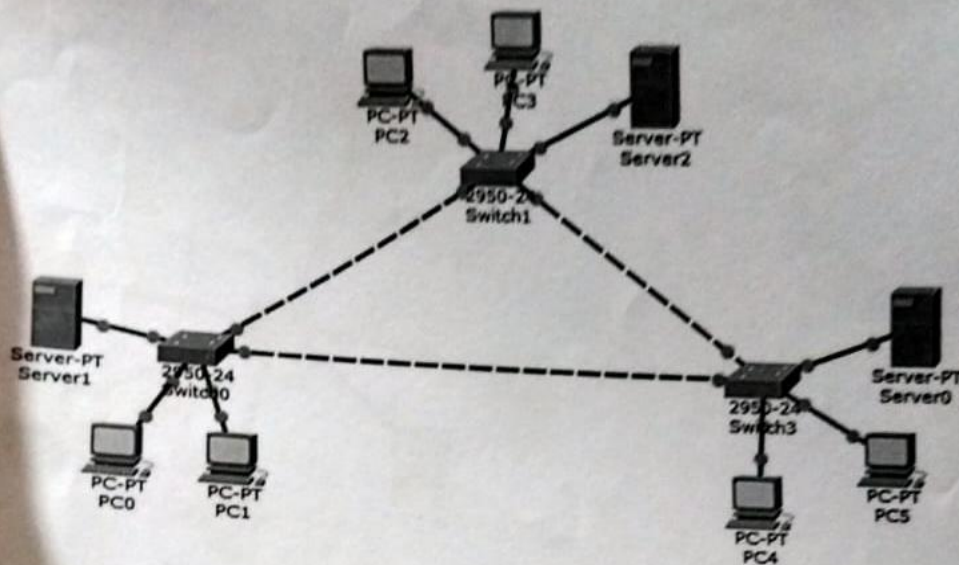
Reset Simulation ☒ Constant Delay

Captured to: *
0.209 s

Without STP, broadcast storm will be formed and message will travel in loop which can make your network down.

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With STP,



Simulation Panel						
Event List						
Vis.	Time(sec)	Last Device	At Device	Type	Info	
	0.001	PC0	Switch0	ARP		
	0.002	Switch0	Switch1	ARP		
	0.002	Switch0	Server1	ARP		
	0.002	Switch0	PC1	ARP		
	0.003	Switch1	Switch3	ARP		
	0.003	Switch1	Server2	ARP		
	0.003	Switch1	PC3	ARP		
	0.003	Switch1	PC2	ARP		
	0.003	Server1	Switch0	ARP		

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num
	Successful	PC0	PC5	ICMP		0.000	N	0

Go to Settings to activate Windows.

With spanning tree enabled, the message will be delivered successfully because STP will stop message to loop around and will stop the transferring of message on reaching destination.

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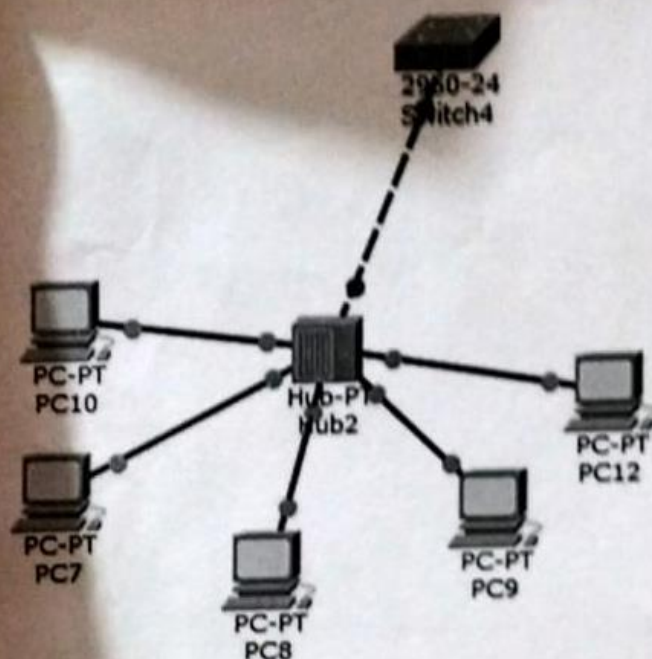
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Lab Task 2:

Port Security



Configuration,

```
Switch>en
Switch#config
Configuring from terminal, memory, or network [terminal]? t
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#int fa0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport port-security ?
    mac-address    Secure mac address
    maximum        Max secure addresses
    violation      Security violation mode
    <cr>
Switch(config-if)#switchport port-security
Switch(config-if)#switchport port-security maximum 4
Switch(config-if)#switchport port-security violation shutdown
Switch(config-if)#exit
Switch(config)#exit
Switch#
```

```
Switch#sh port-security int fa0/1
Port Security           : Enabled
Port Status             : Secure-up
Violation Mode          : Shutdown
Aging Time              : 0 mins
Aging Type              : Absolute
SecureStatic Address Aging : Disabled
Maximum MAC Addresses   : 4
Total MAC Addresses     : 0
Configured MAC Addresses : 0
Sticky MAC Addresses    : 0
Last Source Address:Vlan : 0000.0000.0000:0
Security Violation Count : 0
```