

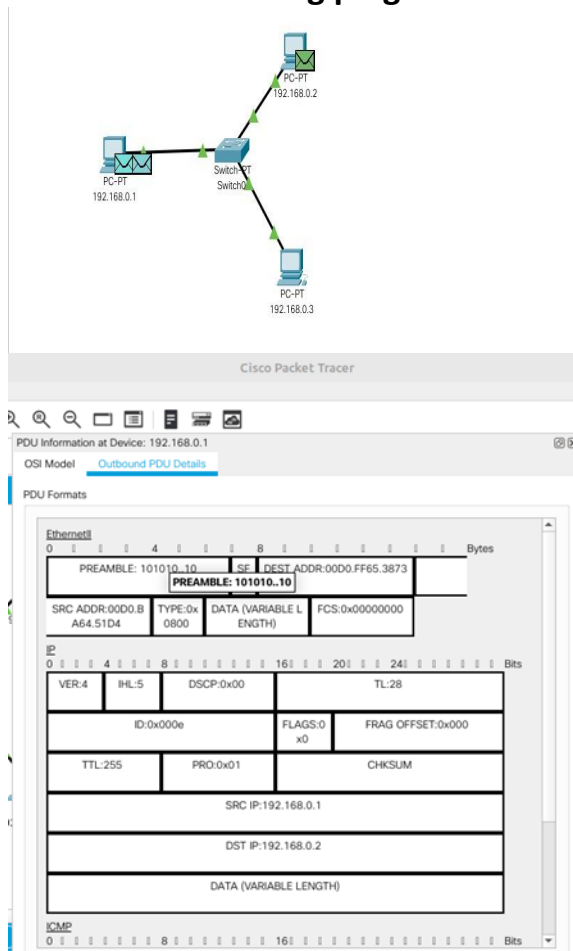
Date: 25/06/2025

Lab Practical #04:

Installation of Network Simulator (Packet Tracer) and Implement different LAN topologies.

Practical Assignment #04:

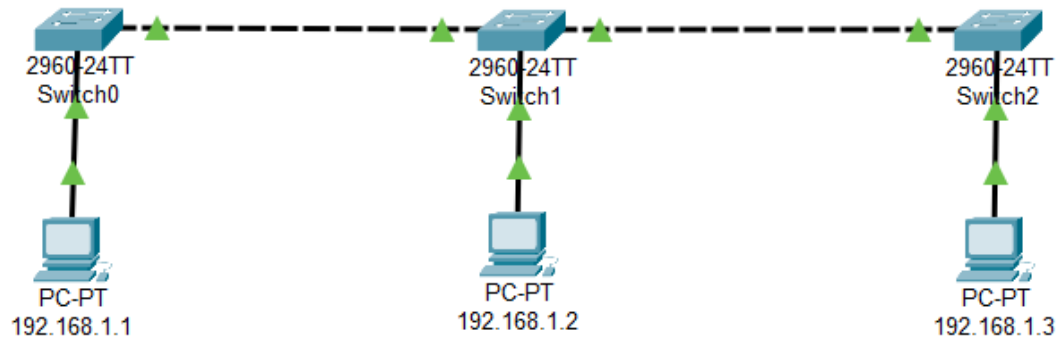
1. Create a simple network with switch and two or more pc. Also check connectivity between them using ping command or PDU utility.



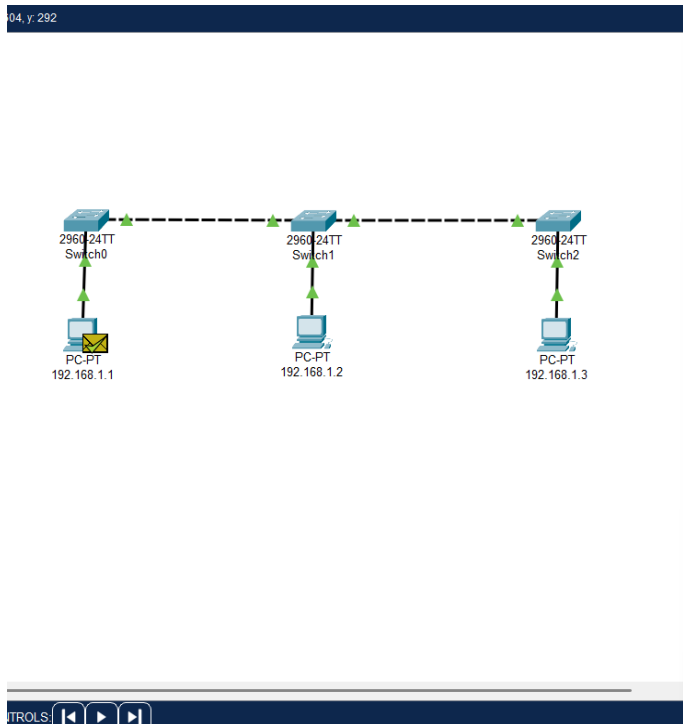
2. Implement different topologies in packet tracer.

Date: 25/06/2025

a. Bus



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PDU Information at Device: 192.168.1.1

OSI Model [Inbound PDU Details](#)

PDU Formats

EthernetII			
0	4	8	Bytes
PREAMBLE: 101010...10		SF D	DEST ADDR: 0001.43D0.7A BB
SRC ADDR: 0001.97E0.45A7		TYPE: 0x0800	DATA (VARIABLE LENGTH) FCS: 0x00000000

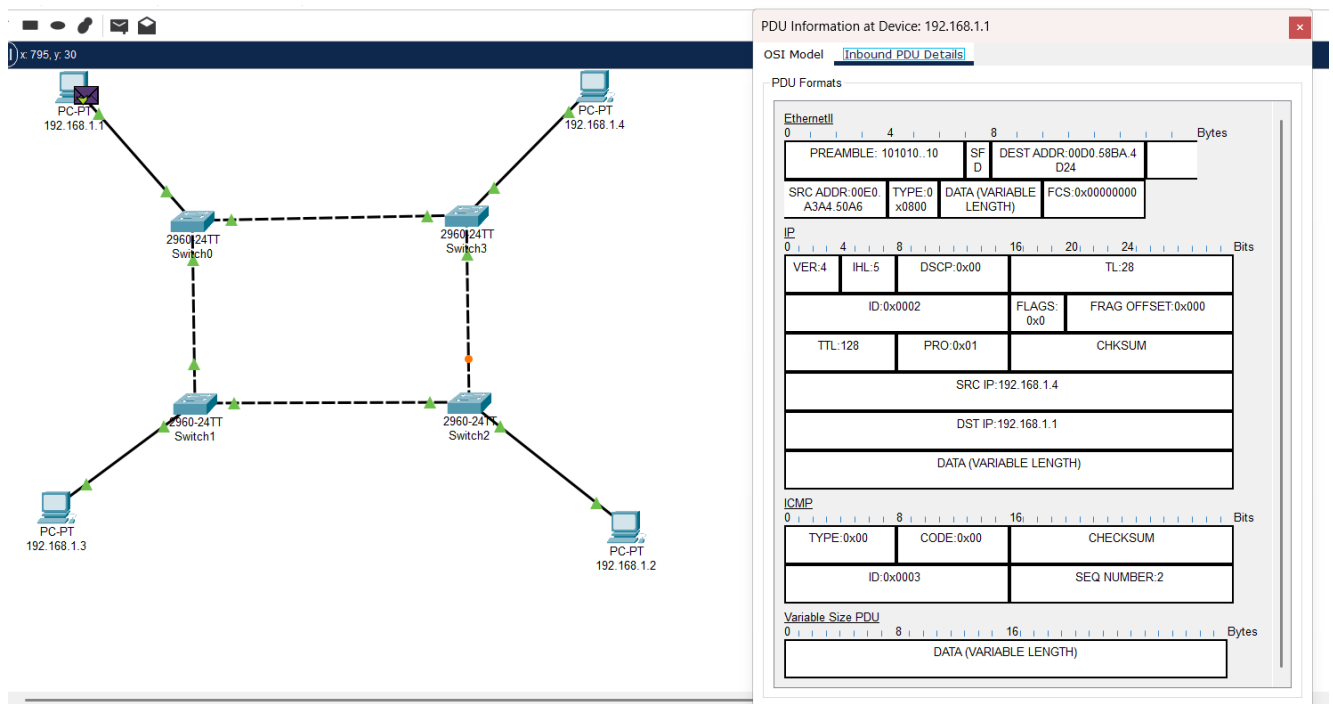
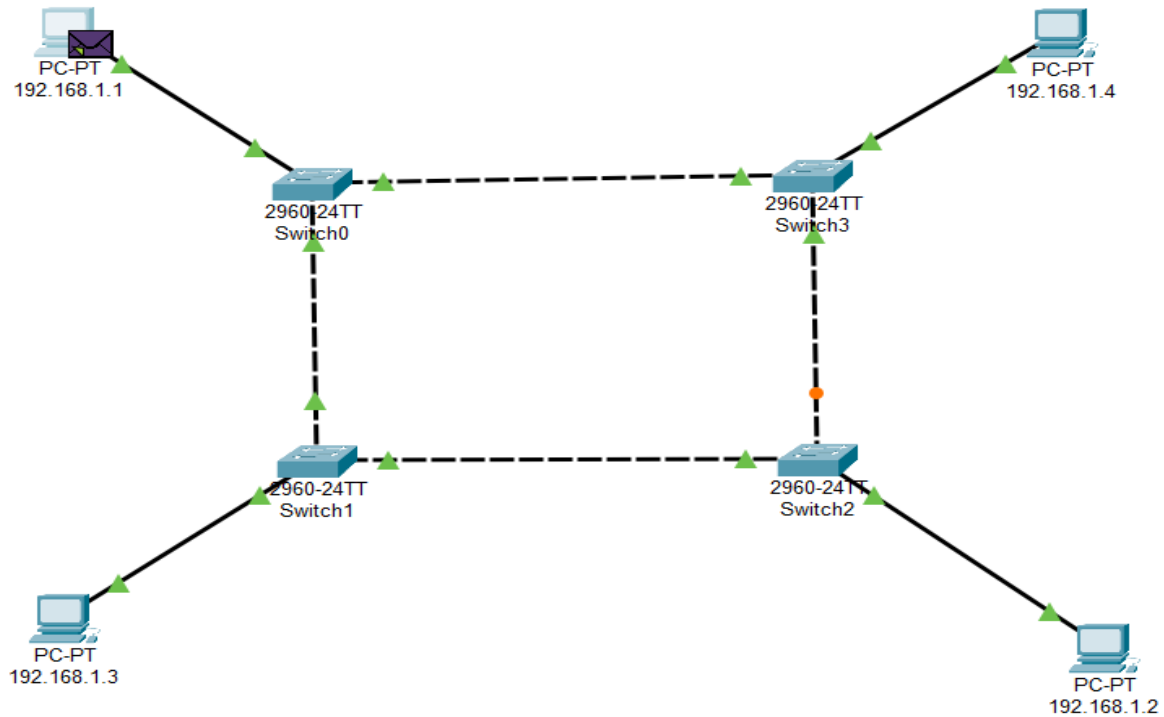
IP						
0	4	8	16	20	24	Bits
VER: 4	IHL: 5	DSCP: 0x00		TL: 28		
ID: 0x0005				FLAGS: 0x0		FRAG OFFSET: 0x000
TTL: 128		PRO: 0x01		CHKSUM		
SRC IP: 192.168.1.3						
DST IP: 192.168.1.1						
DATA (VARIABLE LENGTH)						

ICMP			
0	8	16	Bits
TYPE: 0x00	CODE: 0x00	CHECKSUM	
ID: 0x0006		SEQ NUMBER: 5	

Variable Size PDU		
0	16	Bytes
DATA (VARIABLE LENGTH)		

Date: 25/06/2025

b. Ring



PDU Information at Device: 192.168.1.1

OSI Model: [Inbound PDU Details](#)

PDU Formats

Ethernet II

0		4		8		Bytes	
PREAMBLE: 101010...10				SF	D		DEST ADDR: 00D0.58BA.4D24
SRC ADDR: 00E0.A3A4.50A6		TYPE: 0x0800		DATA (VARIABLE LENGTH)		FCS: 0x00000000	

IP

0		4		8		16		20		24		Bits	
VER: 4	IHL: 5	DSCP: 0x00		TL: 28									
ID: 0x0002				FLAGS: 0x0		FRAG OFFSET: 0x000							
TTL: 128				PRO: 0x01		CHKSUM							
SRC IP: 192.168.1.4													
DST IP: 192.168.1.1													
DATA (VARIABLE LENGTH)													

ICMP

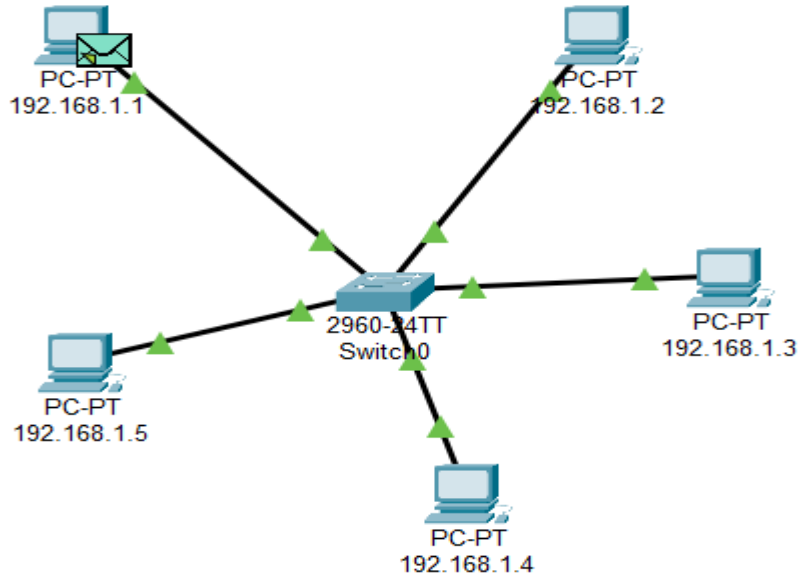
0		8		16		Bits	
TYPE: 0x00		CODE: 0x00		CHECKSUM			
ID: 0x0003		SEQ NUMBER: 2					

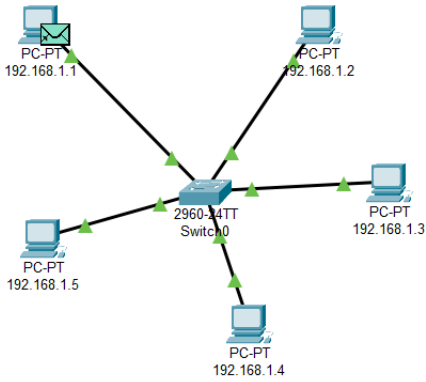
Variable Size PDU

0		8		16		Bytes	
DATA (VARIABLE LENGTH)							

Date: 25/06/2025

c. Star





PDU Information at Device: 192.168.1.1

OSI Model Inbound PDU Details

PDU Formats

EthernetII

0	4	8	12	16	20	24	28	32
PREAMBLE: 101010...10				SF D	DEST ADDR: 0030.F24A.0806			
SRC ADDR: 0001.4285.3C6D				TYPE: 0x0800	DATA (VARIABLE LENGTH)			FCS: 0x00000000

IP

0	4	8	12	16	20	24	28	32
VER: 4	IHL: 5	DSCP: 0x00			TL: 28			
ID: 0x000a					FLAGS: 0x0	FRAG OFFSET: 0x000		
TTL: 128			PRO: 0x01		CHKSUM			
SRC IP: 192.168.1.5								
DST IP: 192.168.1.1								
DATA (VARIABLE LENGTH)								

ICMP

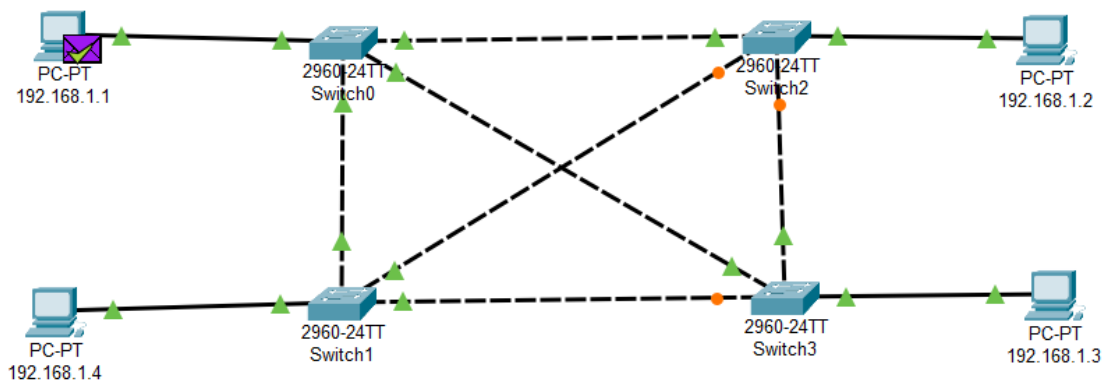
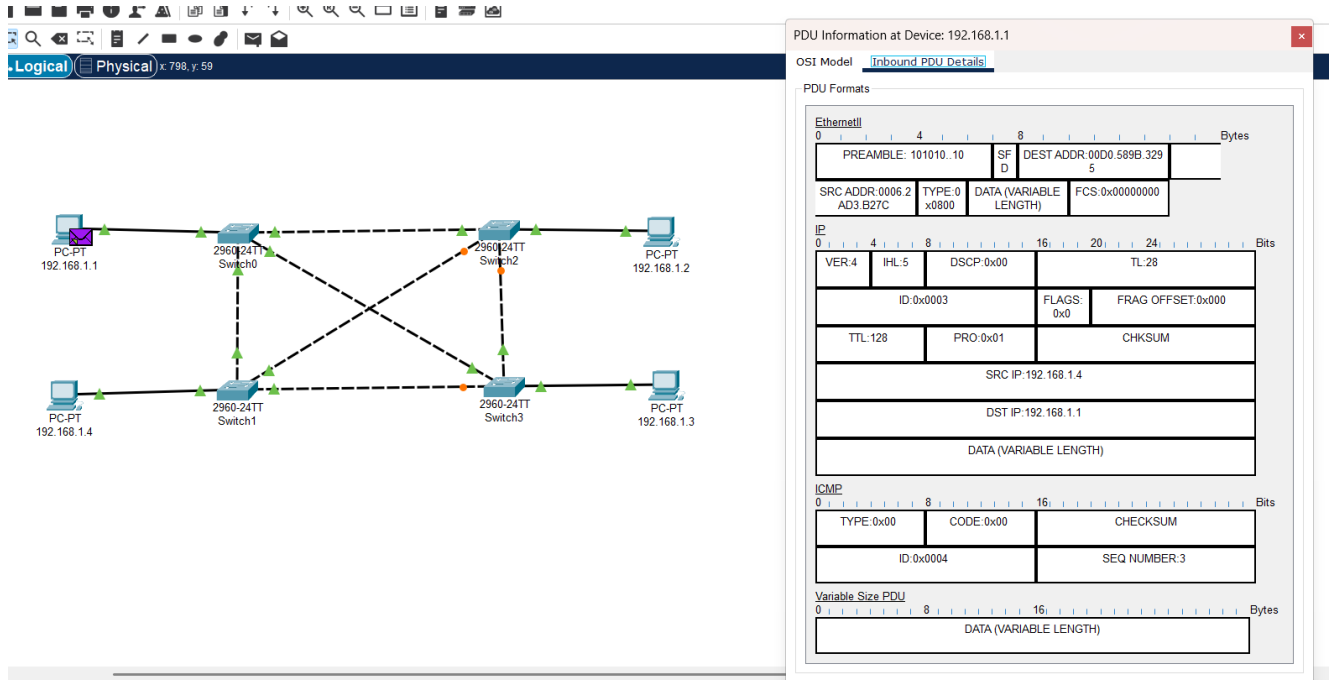
0	4	8	12	16	20	24	28	32
TYPE: 0x00			CODE: 0x00			CHECKSUM		
ID: 0x0011						SEQ NUMBER: 16		

Variable Size PDU

0	4	8	12	16	20	24	28	32
DATA (VARIABLE LENGTH)								

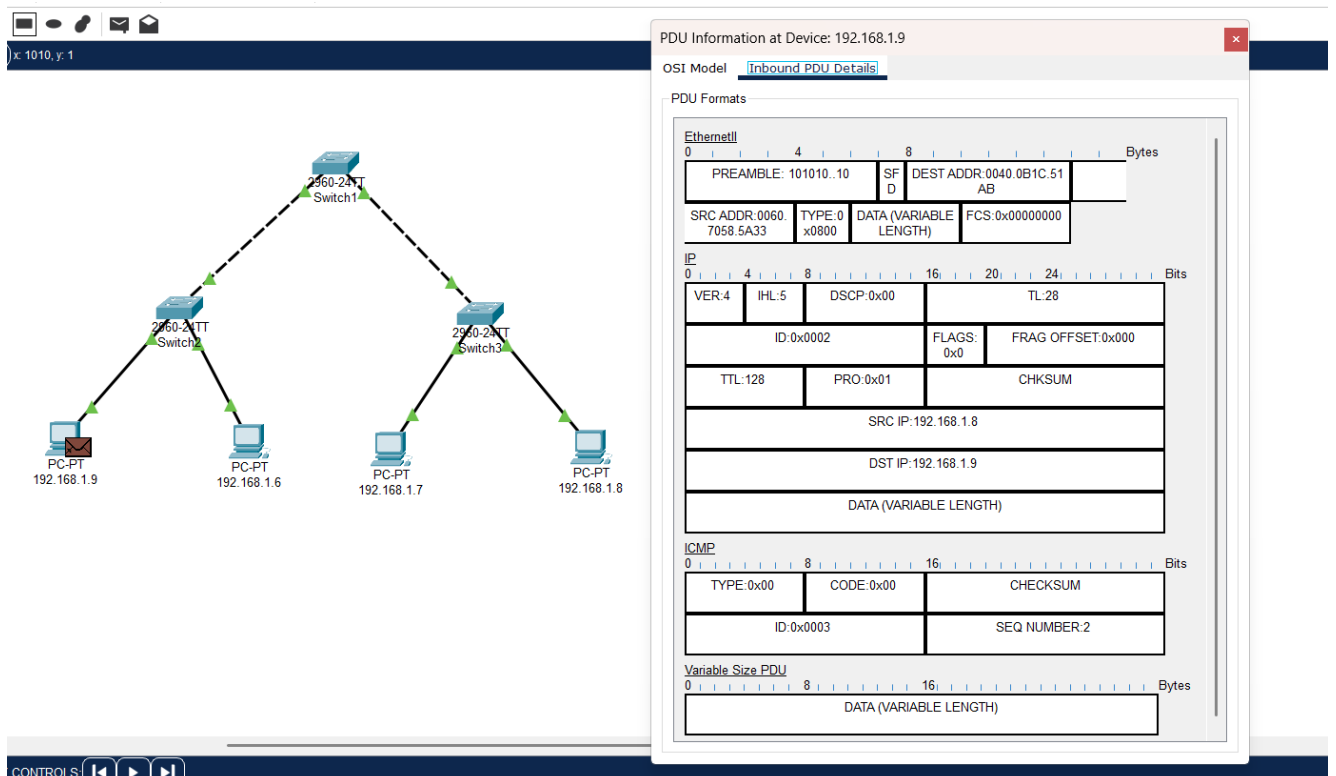
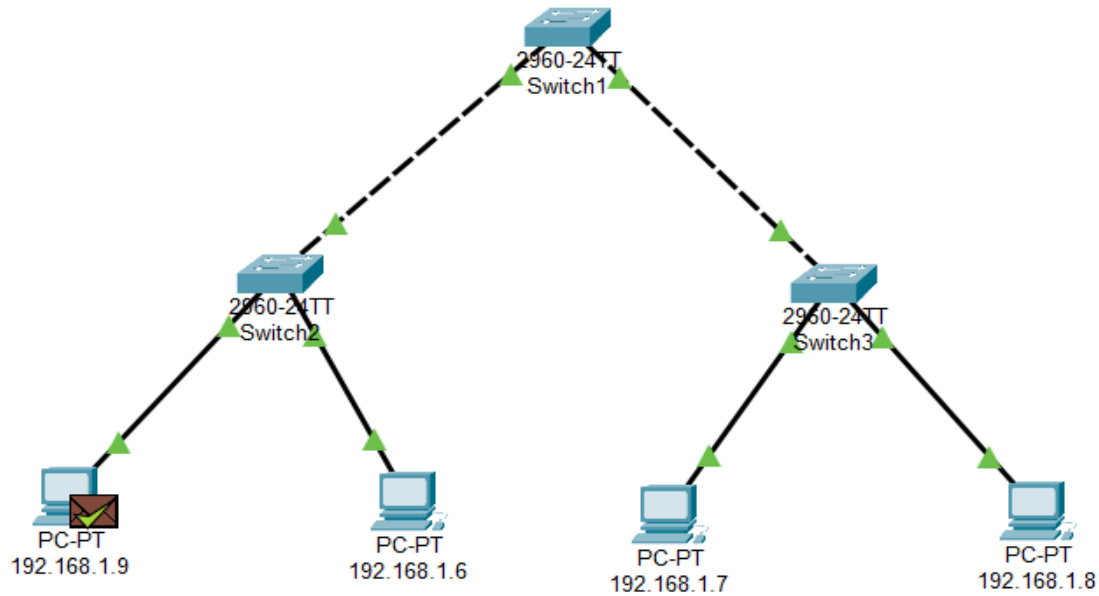
Date: 25/06/2025

d. Mesh



Date: 25/06/2025

e. Tree



PDU Information at Device: 192.168.1.9

OSI Model: [Inbound PDU Details](#)

PDU Formats

EthernetII

0		4		8		Bytes	
PREAMBLE: 101010...10		SF D		DEST ADDR: 0040.0B1C.51 AB			
SRC ADDR: 0060.7058.5A33		TYPE: 0x0800		DATA (VARIABLE LENGTH)		FCS: 0x00000000	

IP

0		4		8		16		20		24		Bits	
VER: 4		IHL: 5		DSCP: 0x00		TL: 28							
ID: 0x0002				FLAGS: 0x0				FRAG OFFSET: 0x000					
TTL: 128				PRO: 0x01				CHKSUM					
SRC IP: 192.168.1.8													
DST IP: 192.168.1.9													
DATA (VARIABLE LENGTH)													

ICMP

0		8		16		Bits	
TYPE: 0x00		CODE: 0x00		CHECKSUM			
ID: 0x0003				SEQ NUMBER: 2			

Variable Size PDU

0		8		16		Bytes	
DATA (VARIABLE LENGTH)							