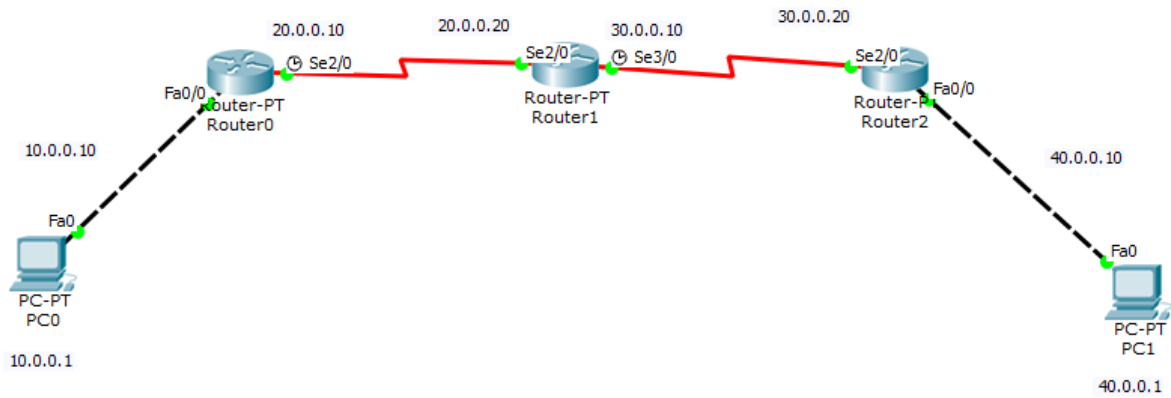


LAB 10:

Aim : Demonstrate the TTL/ Life of a Packet

Topology:



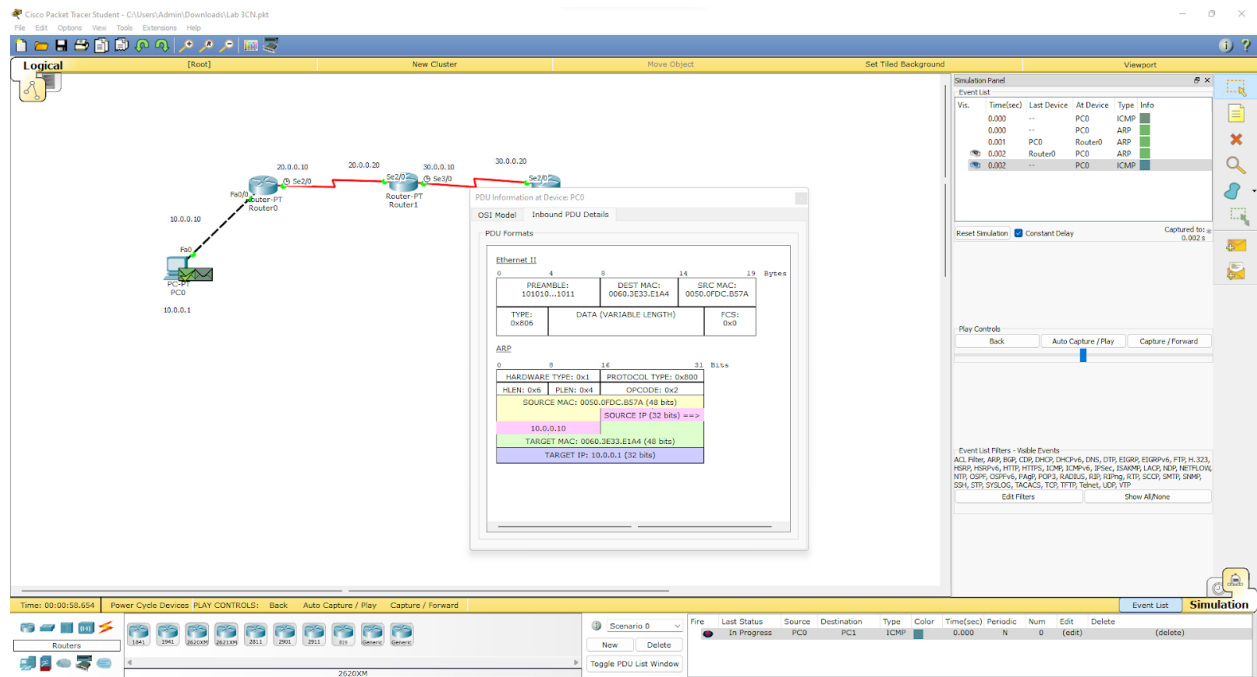
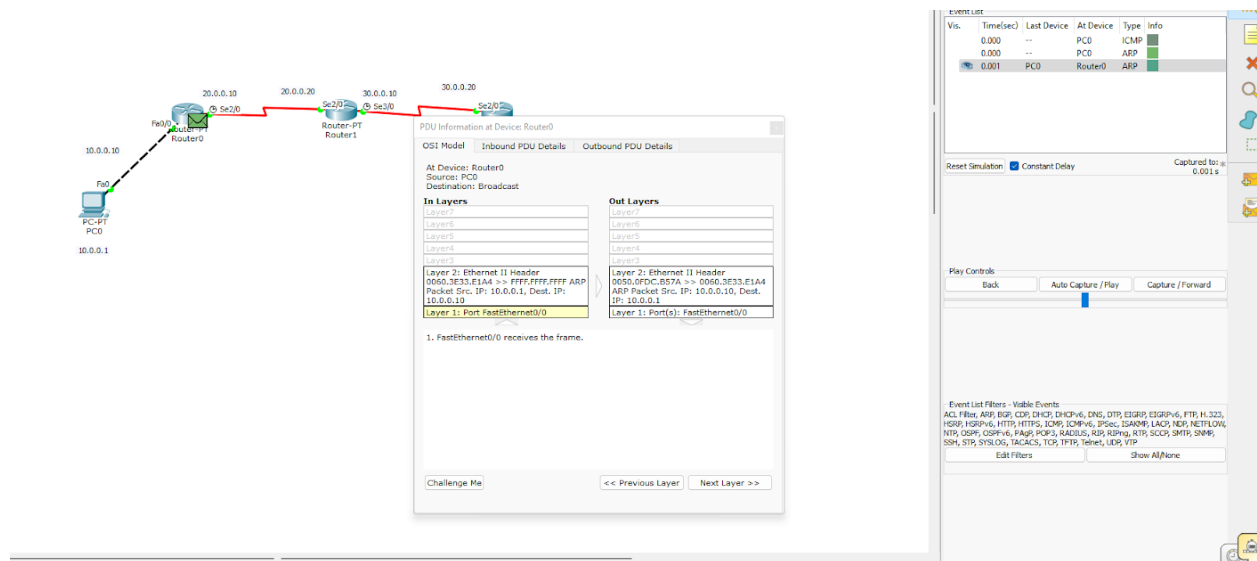
Configurations:

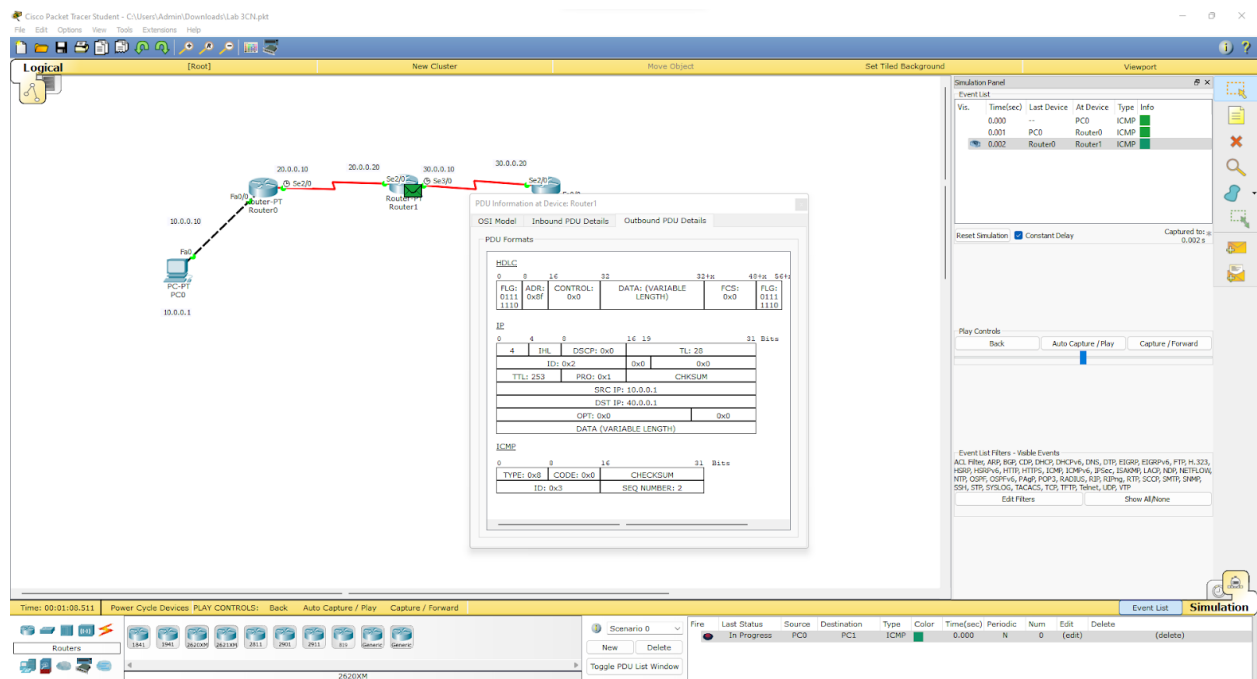
Configure the devices as per static / default / dynamic routing.

Above is done using static routing.

PDU Details:

Simple PDU sent from PC0 to PC1 in simulation mode.





Cisco Packet Tracer Student - C:\Users\Admin\Downloads\Lab 3CN.pkt

File Edit Options View Tools Extensions Help

Logical [Root] New Cluster Move Object Set Tiled Background Viewport

PDU Information at Device: Router2

OSI Model Inbound PDU Details Outbound PDU Details

PDU Formats

ETHERNET II

0	8	16	32	32+8	64+8
FLG:	ADR:	CONTROL:	DATA: (VARIABLE LENGTH)	PCS:	RLG:
0111	0x0f	0x0		0x11	0111

IP

0	4	8	16	19	31
4	0x0	DSCP: 0x0	TTL: 28		
TTL: 253 PRO: 0x1 CHKSUM					
SRC IP: 10.0.0.1					
DST IP: 40.0.0.1					
OPT: 0x0					
DATA (VARIABLE LENGTH)					

ICMP

0	8	16	31
TYPE: 0x0	CODE: 0x0	CHECKSUM	
ID: 0x3 SEQ NUMBER: 2			

Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device	Type	Info
-	0.000	-	PC0	ICMP	
-	0.001	Router0	Router0	ICMP	
-	0.002	Router0	Router1	ICMP	
-	0.003	Router1	Router2	ICMP	

Reset Simulation: Constant Delay Captured to: 0.003 s

Play Controls: Back Auto Capture / Play Capture / Forward

Event List Filters - Visible Events

ACL Filter, ARP, RST, CDP, DHCP, DNS, DTP, EIGRP, ESP, FTP, H.323, HTTP, ISDN, L2TP, LLDP, MIB, ICMP, IPsec, ISDN, L2TP, NTP, POP3, RADIUS, RDP, RDPing, RTSP, SCCP, SMTP, SNMP, SSH, STP, Syslog, TACACS, TFTP, Telnet, UDP, VTP

Edit Filters Show All/None

Time: 00:01:08.512 Power Cycle Devices PLAY CONTROLS: Back Auto Capture / Play Capture / Forward

Scenario 0

New Delete

Toggle PDU List Window

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

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
-	In Progress	PC0	PC1	ICMP		0.000	N	0	(edit)	(delete)

Cisco Packet Tracer Student - C:\Users\Admin\Downloads\Lab 3CN.pkt

File Edit Options View Tools Extensions Help

Logical [Root] New Cluster Move Object Set Tiled Background Viewport

PDU Information at Device: Router2

OSI Model Inbound PDU Details Outbound PDU Details

PDU Formats

ETHERNET II

0	8	16	32	32+8	64+8
FLG:	ADR:	CONTROL:	DATA: (VARIABLE LENGTH)	PCS:	RLG:
0111	0x0f	0x0		0x11	0111

IP

0	4	8	16	19	31
4	0x0	DSCP: 0x0	TTL: 28		
TTL: 127 PRO: 0x1 CHKSUM					
SRC IP: 40.0.0.1					
DST IP: 10.0.0.1					
OPT: 0x0					
DATA (VARIABLE LENGTH)					

ICMP

0	8	16	31
TYPE: 0x0	CODE: 0x0	CHECKSUM	
ID: 0x3 SEQ NUMBER: 2			

Simulation Panel

Event List

Vis.	Time(sec)	Last Device	At Device	Type	Info
-	0.000	-	PC0	ICMP	
-	0.001	PC0	Router0	ICMP	
-	0.002	Router0	Router1	ICMP	
-	0.003	Router1	Router2	ICMP	
-	0.004	Router2	PC1	ICMP	

Constant Delay Captured to: 0.003 s

Auto Capture / Play Capture / Forward

Visible Events

ACL Filter, ARP, RST, CDP, DHCP, DNS, DTP, EIGRP, ESP, FTP, H.323, HTTP, ISDN, L2TP, LLDP, MIB, ICMP, IPsec, ISDN, L2TP, NTP, POP3, RADIUS, RDP, RDPing, RTSP, SCCP, SMTP, SNMP, TACACS, TFTP, Telnet, UDP, VTP

Show All/None

Time: 00:01:08.514 Power Cycle Devices PLAY CONTROLS: Back Auto Capture / Play Capture / Forward

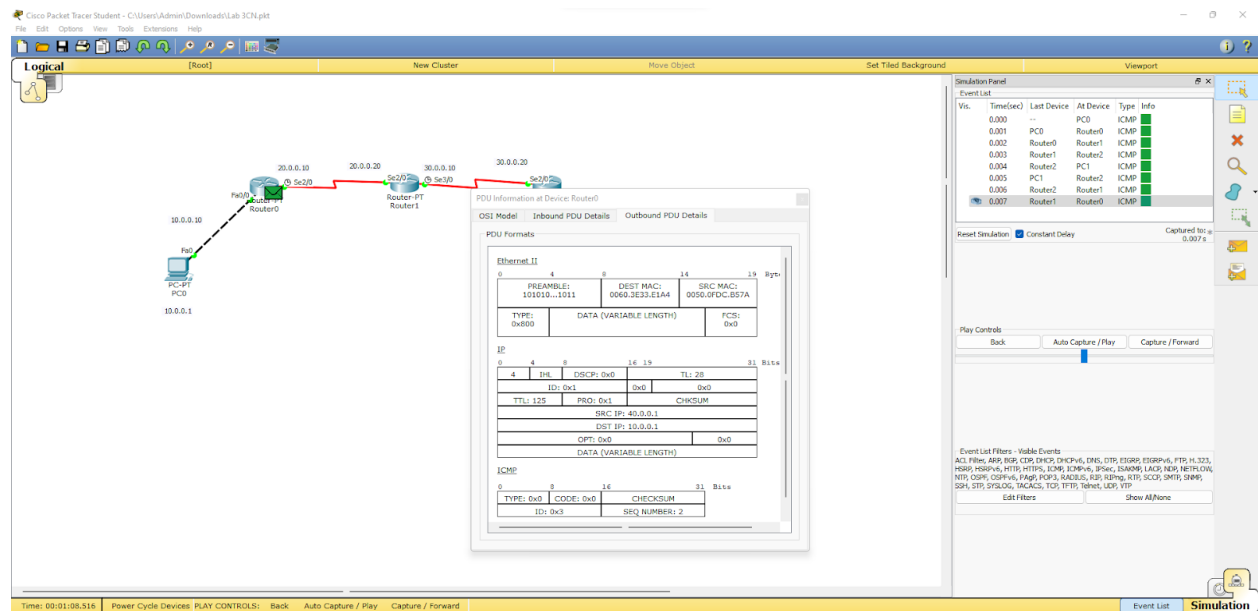
Scenario 0

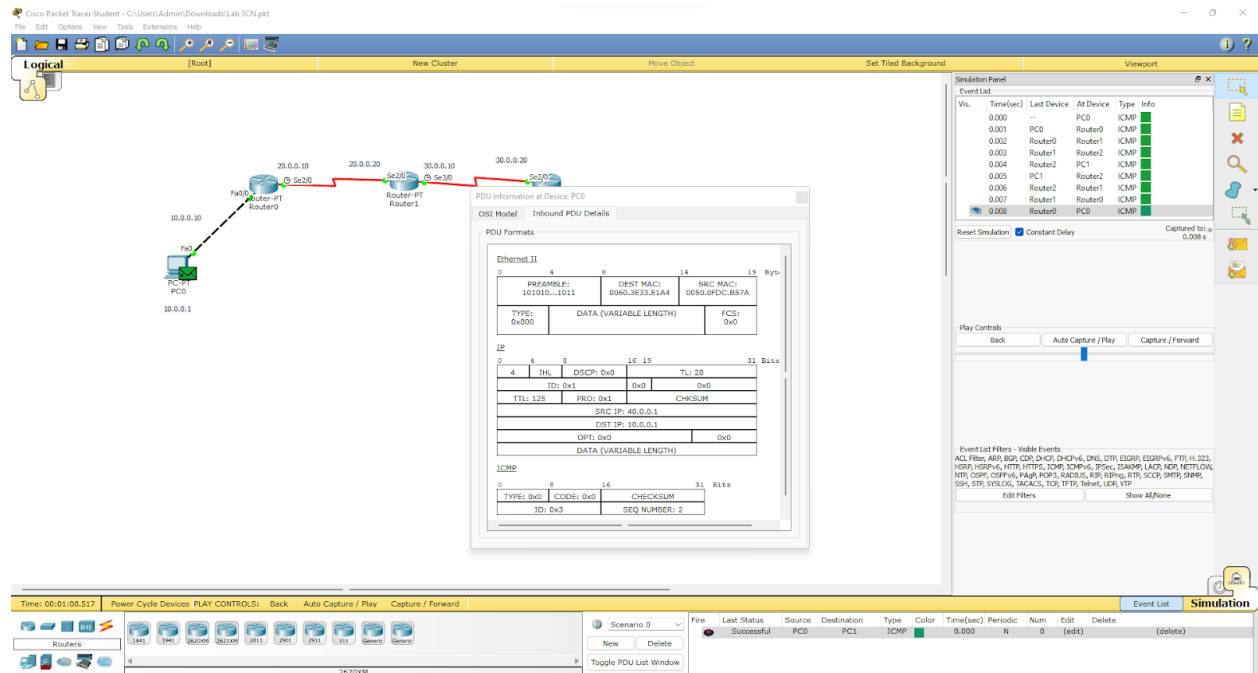
New Delete

Toggle PDU List Window

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

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
-	In Progress	PC0	PC1	ICMP		0.000	N	0	(edit)	(delete)

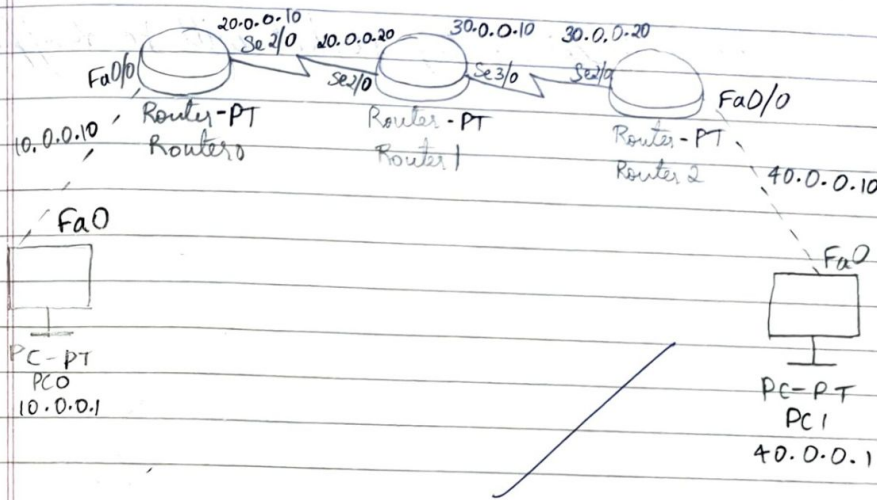




Lab 10

Aim: Demonstrate the TTL / Life of a Packet.

Topology:



Procedure:

- 1) Create the topology as shown and configure the PCs and routers as shown above static routing done. We can do any type.
- 2) In simulation mode, send a packet from PC0 to PC1. Simple PDU sent.
- 3) Click of on capture / Forward button on Simulation panel step by step.
- 4) At each step click on the packet to view the Inbound PDU details and Outbound PDU details.

Observation:-

- We can observe that there is a difference of 1 in TTL when the packet crosses every router.
- If TTL becomes 0, packet will be dropped.

NA
16/8/2023