WEEK 10

Demonstrate the TTL/ Life of a Packet.

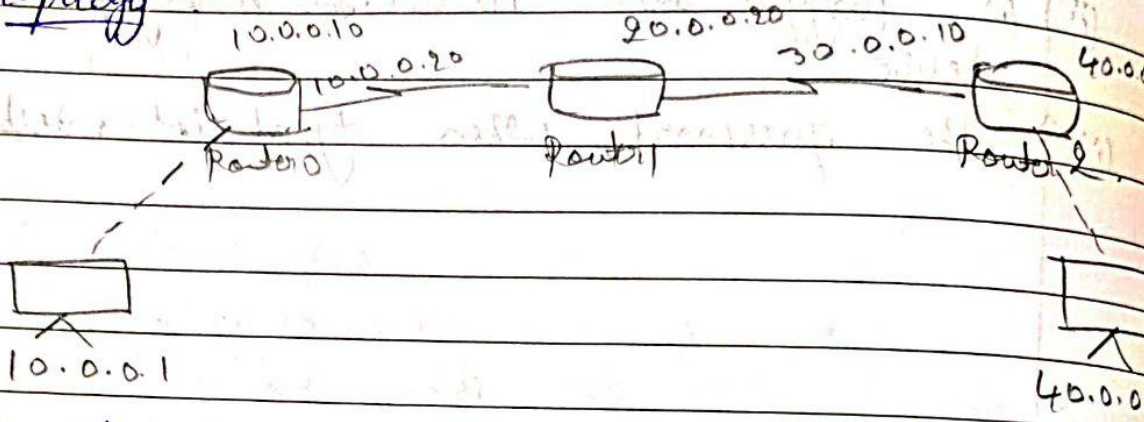
OBSERVATION:

Date / /
Page

LAB-12

AIM: Demonstrate the TTL / Life of a packet.

Topology :



Procedure :

(i) Creat a 2 pc's and 3 routers configuration in serial DTE b/w routers and copper cross over b/w router & PC.

(ii) Configure the IP address and gateway of PC and Configure the routers.

Router > enable
Router # config t
Router (config) # interface fastethernet 0/0
Router (config-if) # ip address 10.0.0.10 255.0.0.0
Router (config-if) # no shut
Router (config-if) # exit
Router (config) # ip route 30.0.0.0 255.0.0.0

Date __/__/__
Page _____

Router (config-if) # ip address 20.0.0.20 255.0.0.0
Router (config-if) # no shut
Router (config-if) # exit
Router (config) # interface serial 3/0
Router (config-if) # ip address 30.0.0.10 255.0.0.0
Router (config-if) # no shut
Router (config-if) # exit

Router (config) # ip route 10.0.0.0 255.0.0.0 20.0.0.10
Router (config) # ip route 40.0.0.0 255.0.0.0 30.0.0.20
Router (config) # exit
Router > enable (Router 2)

Router # config t
Router (config) # interface serial 2/0
Router (config-if) # ip address 20.0.0.20 255.0.0.0
Router (config-if) # no shut
Router (config-if) # exit
Router (config) # interface fastethernet 0/0
Router (config-if) # ip address 40.0.0.10 255.0.0.0
Router (config-if) # no shut
Router (config-if) # exit.
Router (config) # ip route 10.0.0.0 255.0.0.0 30.0.0.10
Router (config) # ip route 20.0.0.0 255.0.0.0 30.0.0.10

Date __/__/__
Page

Result :

PDU information at device : pc 0
outbound PDU details
TTL : 255
PDU information at Device : pc0
Inbound PDU details
TTL : 255
outbound pDU details
TTL : 255
PDU information at Device Router 1
Inbound PDU details.
TTL : 254
outbound PDU details
TTL : 253
PDU information at Device Router 2
Inbound PDU details
TTL : 253
outbound PDU details
TTL : 252
PDU information at device PC1
Inbound PDU details
TTL : 252

An example :- for Inbound details of Router 0

O/P

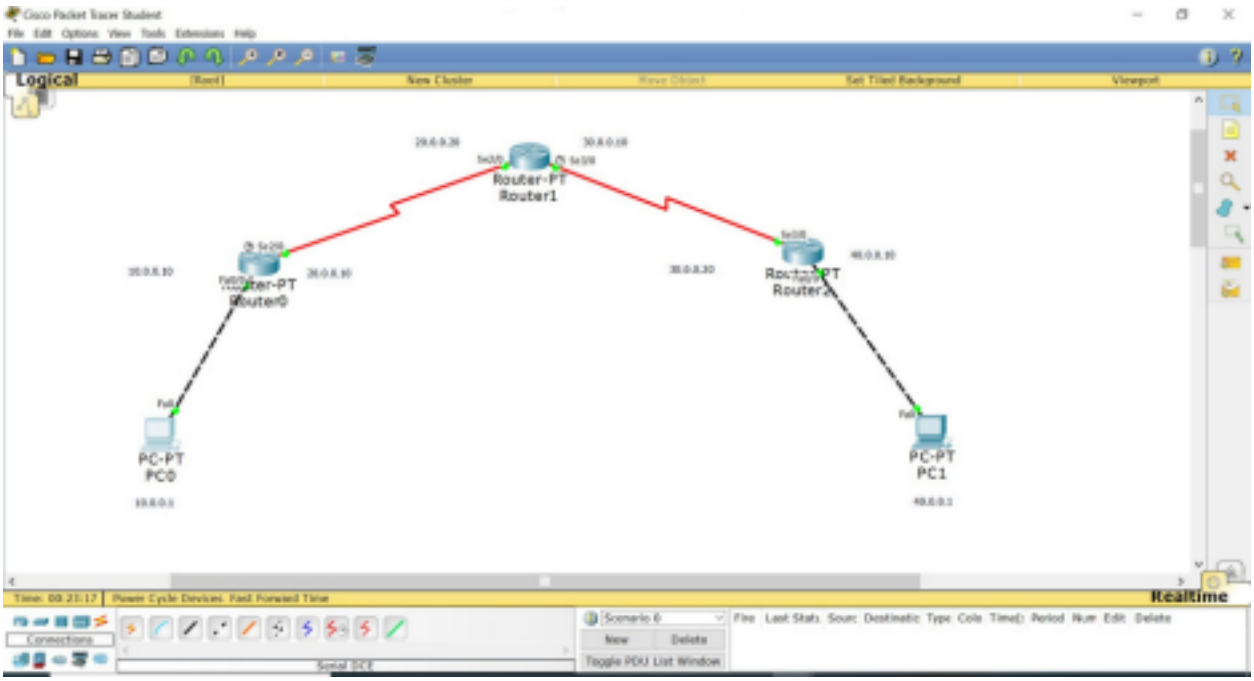
4	IHL	DSCP: 0x0	TL = 28
ID: 0xc		0x0	0x0

Date __/__/__
Page _____

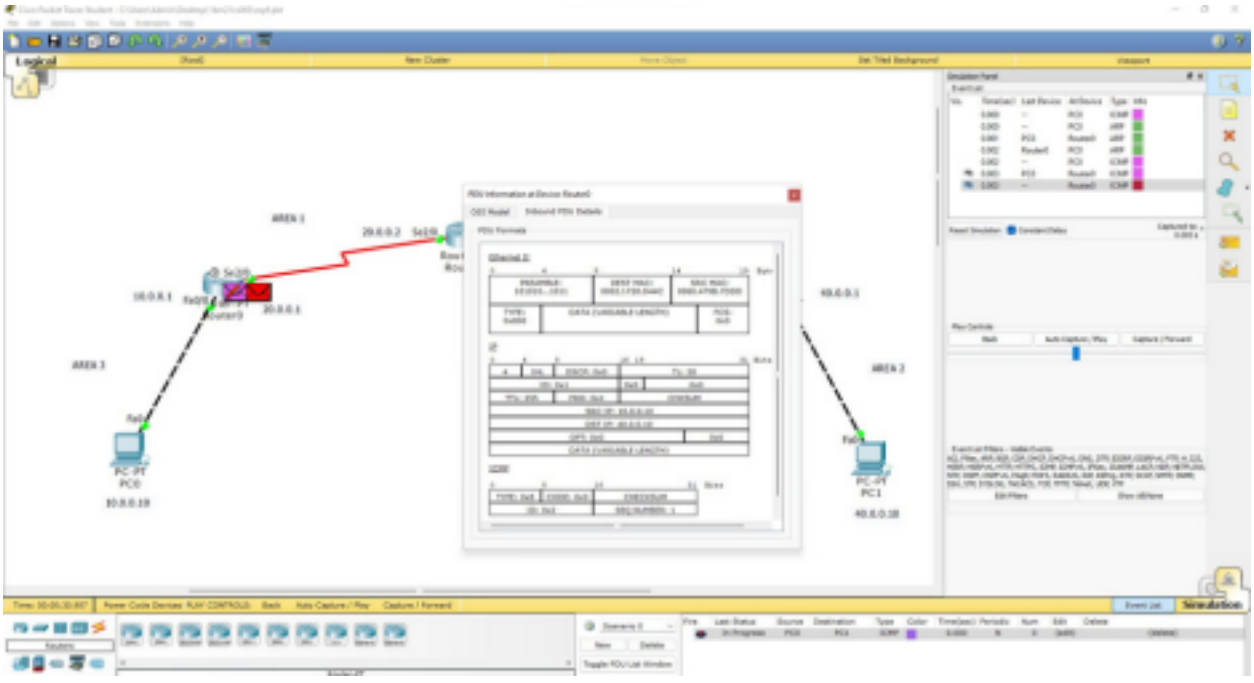
Observation

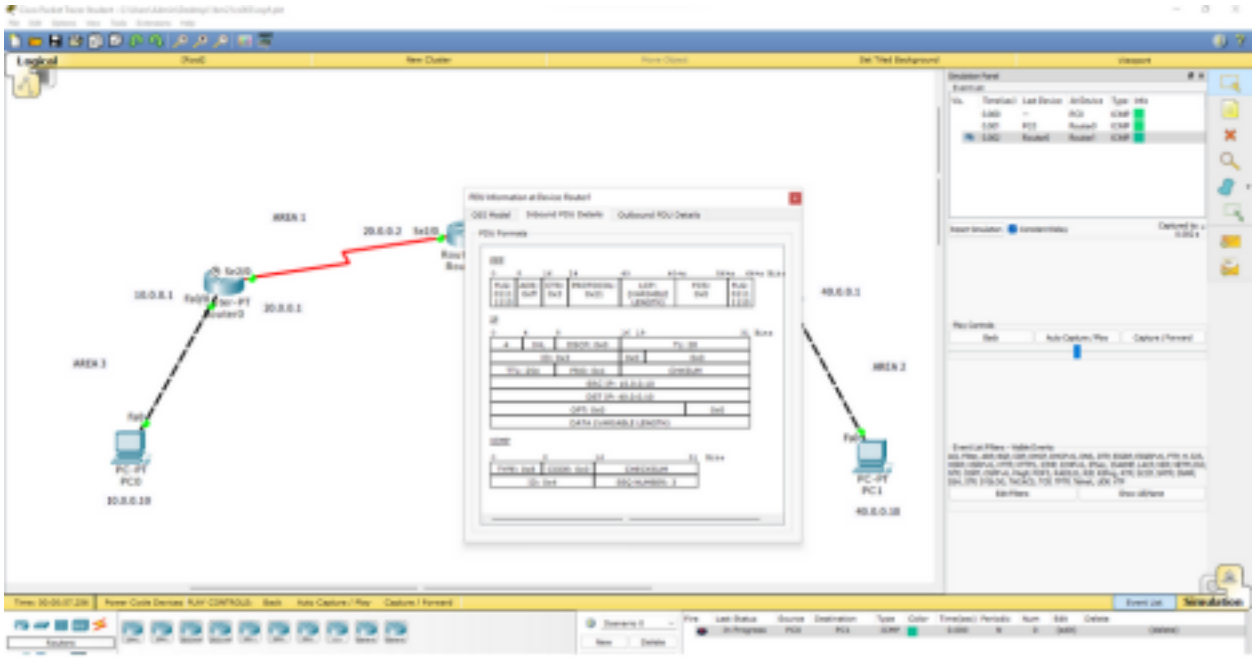
(1) The TTL is reduced by 1 in every router. Time to Live (TTL) is a mechanism which limits the lifeform or lifetime of data in a computer or network. It is a counter 255 is set as max TTL.

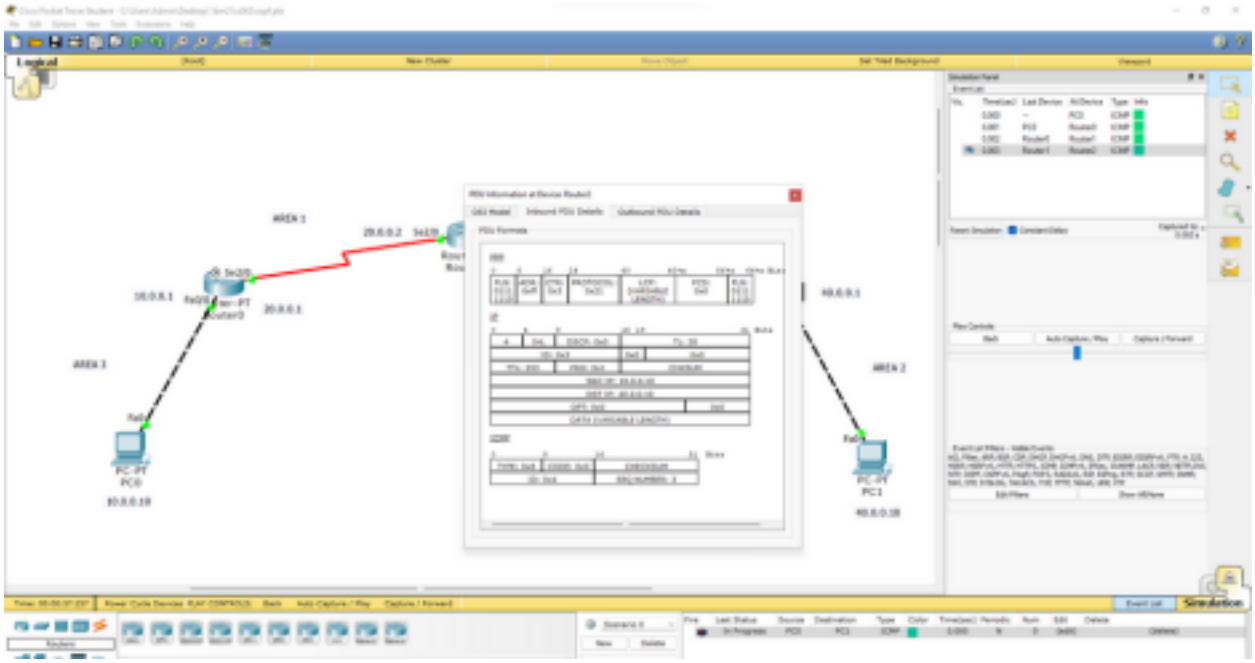
TOPOLOGY:

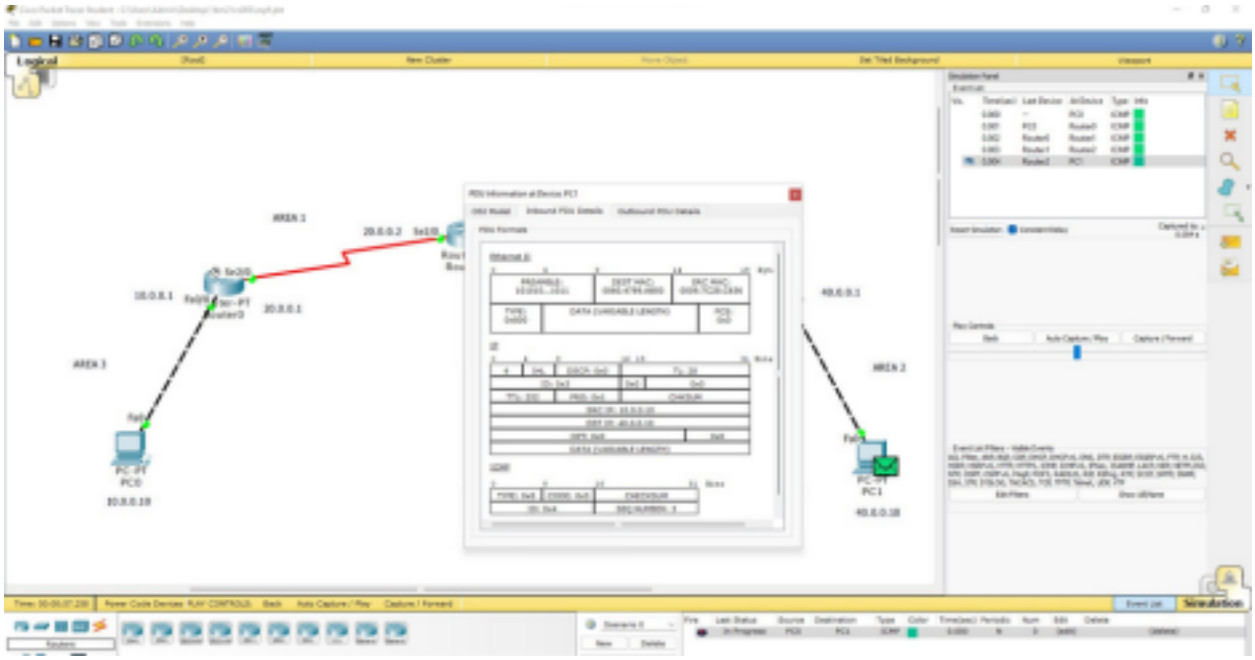


OUTPUT:




AREA 1
20.0.0.2
10.0.0.1
20.0.0.1
40.0.0.1
AREA 3
AREA 2
PC-PT
PC0
10.0.0.10
PC-PT
PC1
40.0.0.10


AREA 1
20.0.0.2
10.0.0.1
20.0.0.1
40.0.0.1
AREA 3
AREA 2
PC-PT
PC0
10.0.0.10
PC-PT
PC1
40.0.0.10


AREA 1
20.0.0.2
10.0.0.1
20.0.0.1
AREA 3
40.0.0.1
AREA 2
PC-PT
PC0
10.0.0.10
PC-PT
PC1
40.0.0.10