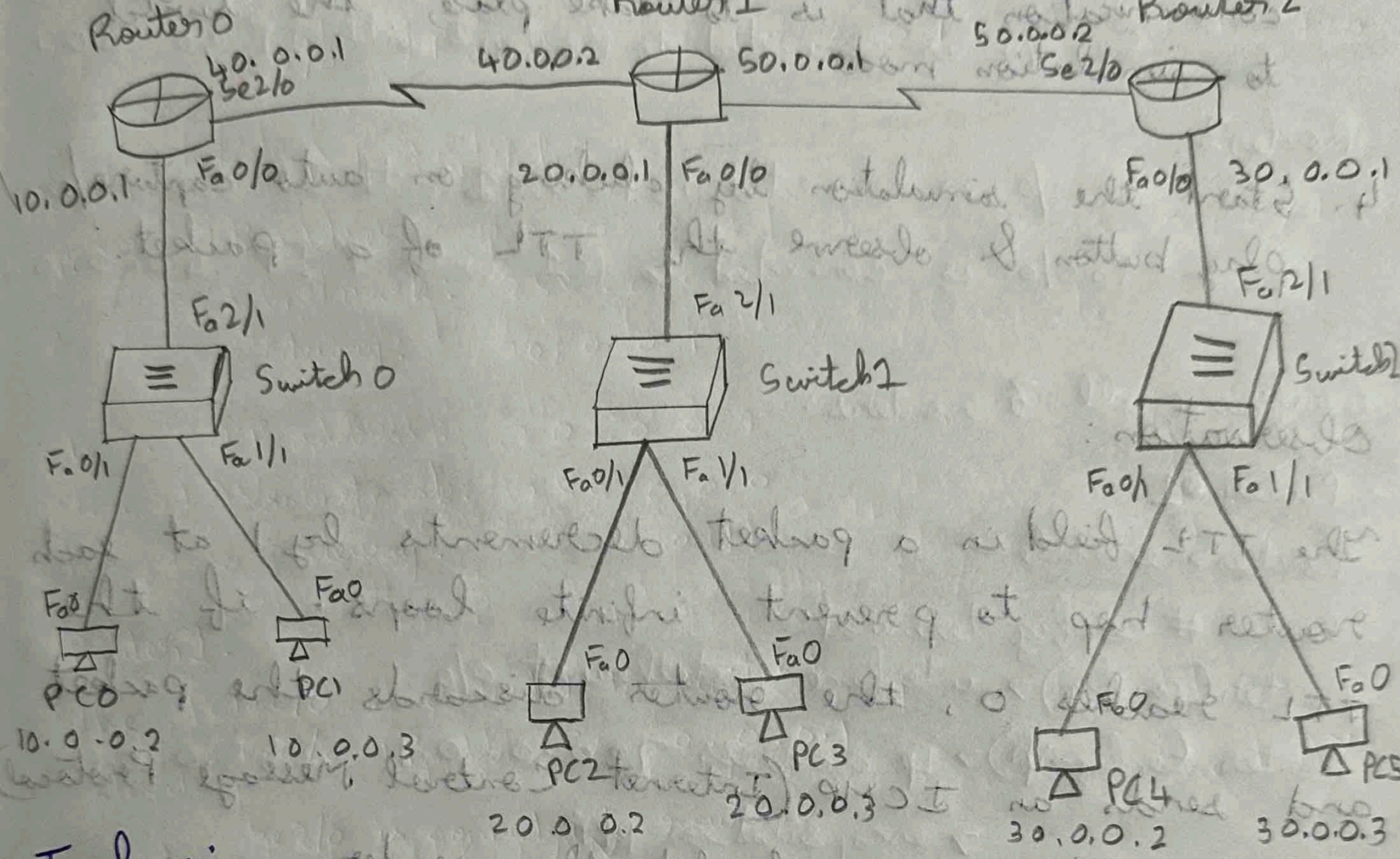
20/11/24

Experiment-6

a) Demonstrate the TTL or Life of a Packet

Aim: To determine the TTL or Life of a packet



Topology:

1. Connect Router 0 to Router 1 & Router 1 to Router 2 using a serial-dct cable.
2. connect Router 0 to switch 0 using copper straight cable. parallelly repeat for router 1 to switch 1 & router 2 to switch 2
3. Connect 6 PC's (2 each) to each of the switch using copper-straight cable & assign IP addresses

Procedure:

1. open cisco packet tracer & establish the topology as shown above

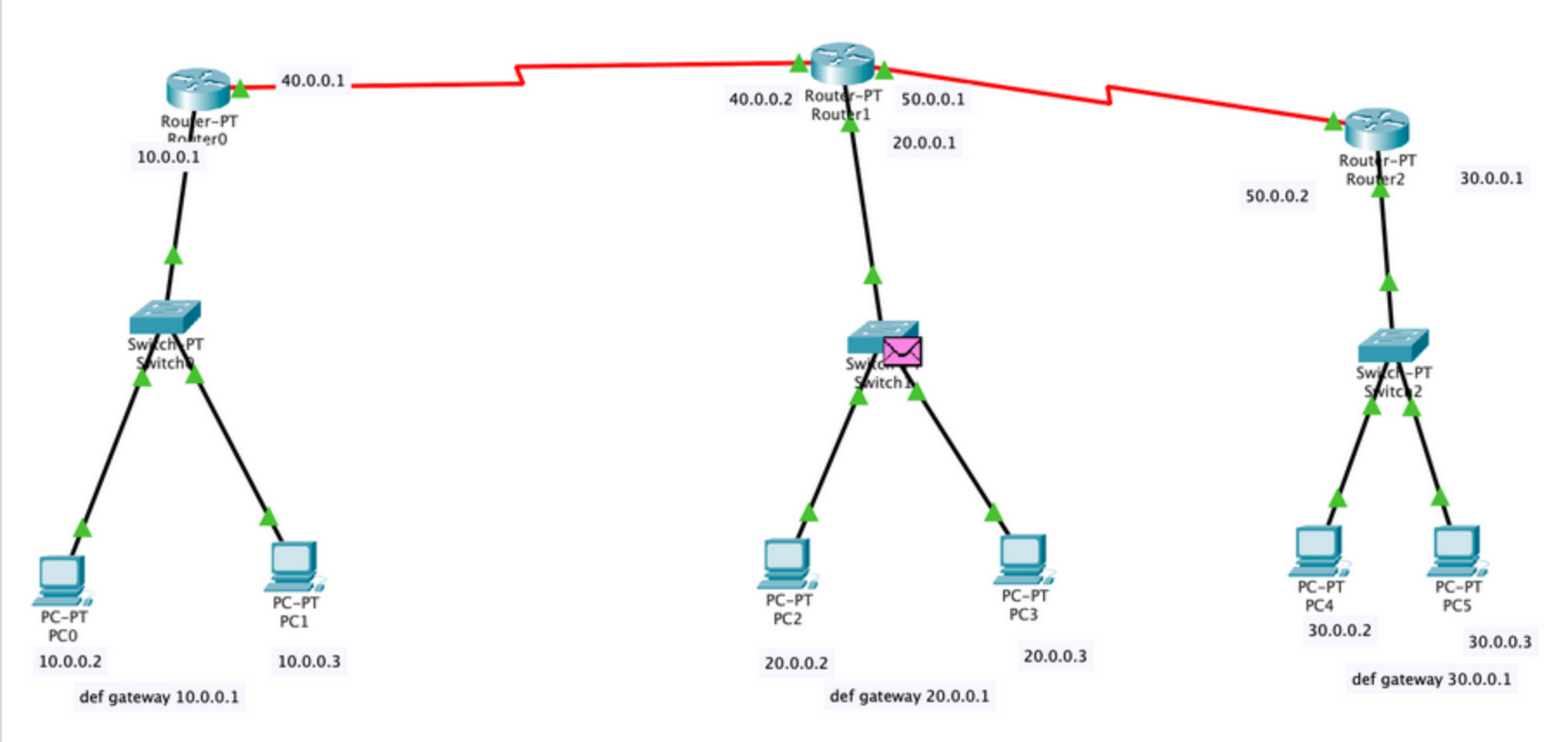
2. Select the simple PDU icon & select source and destination

3. Include the PCO and PCS as part of the communication that is to take place, the switch to simulation mode.

4. Start the simulation by clicking on auto capture/ play button & observe the TTL of a packet.

Observation:

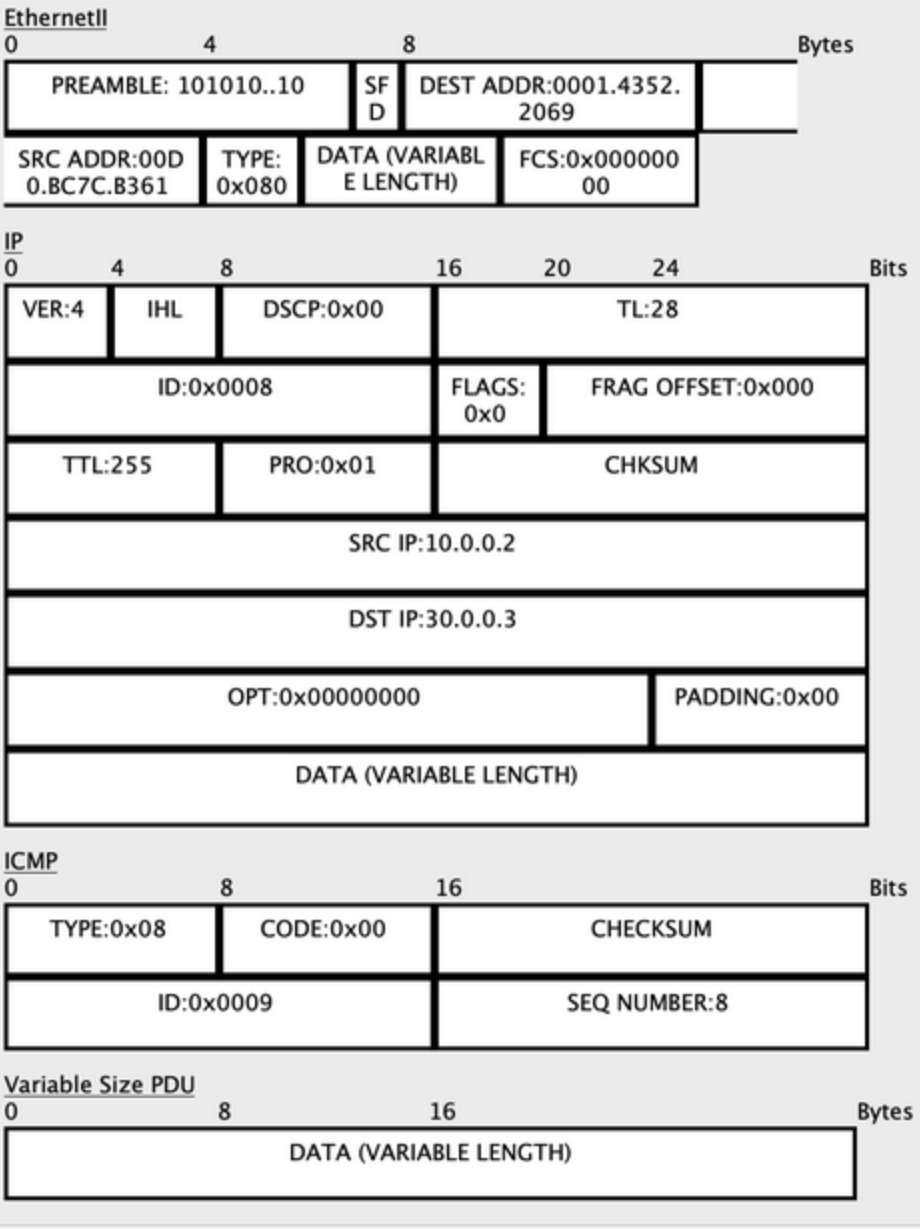
The TTL field in a packet decrements by 1 at each router hop to prevent infinite loops. if the TTL reaches 0, the router discards the packet and sends an ICMP (Internet Control Message Protocol) "Time Exceeded" message back to the sender.


40.0.0.1
Router-PT
Router0
10.0.0.1
40.0.0.2
Router-PT
Router1
50.0.0.1
20.0.0.1
Router-PT
Router2
50.0.0.2
30.0.0.1
Switch-PT
Switch0
Switch-PT
Switch1
Switch-PT
Switch2
PC-PT
PC0
10.0.0.2
PC-PT
PC1
10.0.0.3
def gateway 10.0.0.1
PC-PT
PC2
20.0.0.2
PC-PT
PC3
20.0.0.3
def gateway 20.0.0.1
PC-PT
PC4
30.0.0.2
PC-PT
PC5
30.0.0.3
def gateway 30.0.0.1

PDU Information at Device: Router0

OSI Model | Inbound PDU Details | Outbound PDU Details

PDU Formats



OSI Model | Inbound PDU Details | Outbound PDU Details

PDU Formats