

Demonstrate the TTL/ Life of a Packet.

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20/11/21 Exp 6

Demonstrate the TTL / life of a packet.

Aim: To show how TTL changes when a simple PDU is transmitted from one system to another over different networks.

Topology:

```

graph LR
    R0[Router 0] --- S0[Switch 0]
    R1[Router 1] --- S1[Switch 1]
    R2[Router 2] --- S2[Switch 2]
    R0 --- R1
    R1 --- R2
    S0 --- PC0
    S0 --- PC1
    S1 --- PC2
    S1 --- PC3
    S2 --- PC4
    S2 --- PC5
  
```

Procedure:

- 1) Cisco Packet Tracer
- 2) Arrange the devices according to the above Topography
- 3) Configure the routers according to gateways
- 4) Configure the RIP in Routers for all networks.
- 5) Go to Configuration mode
- 6) Select PDU & drag it to source PC & destination PC
- 7) Click play on the Simulation & capture all the important data.

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EXP-5
Demonstrate the TTL or Life of a Packet

Observation:

- ① We observe that after each network shift the TTL of the packet decreases by 1 from initial 255 till it reaches the destination network.

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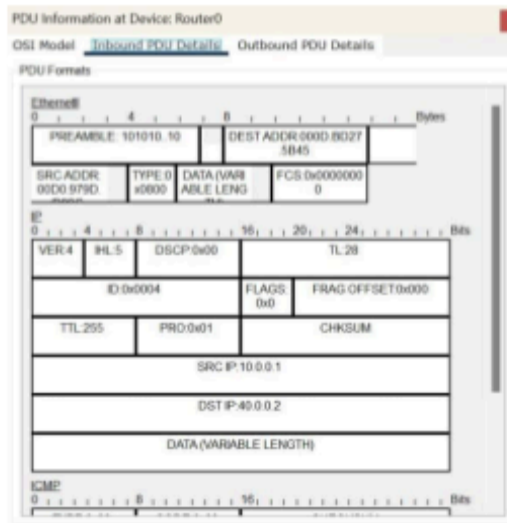
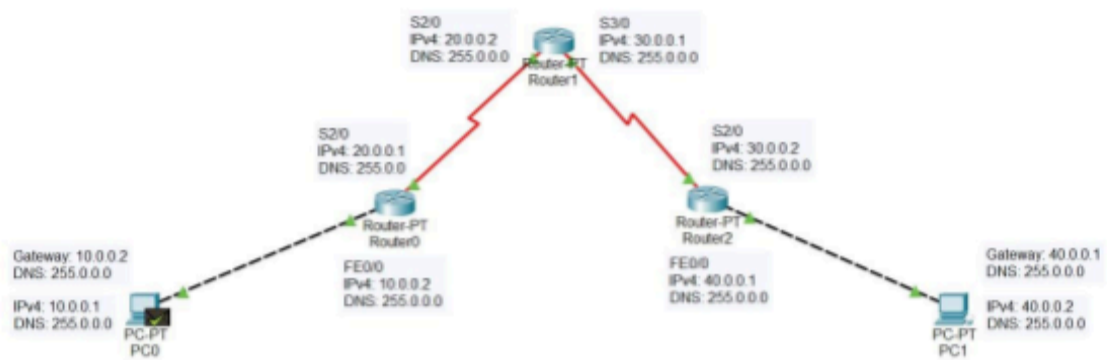


Figure 6.1: Inbound PDU, Router0

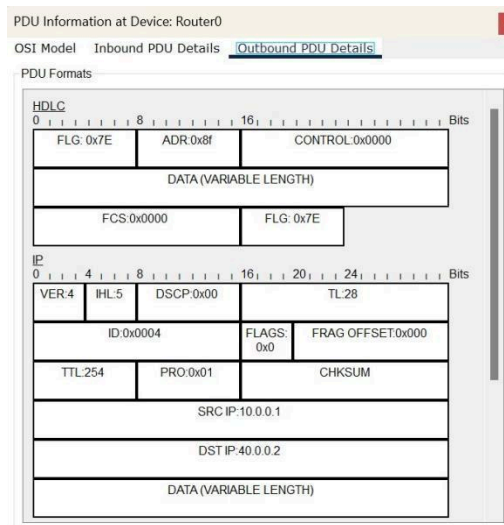


Figure 6.2: Outbound PDU, Router0

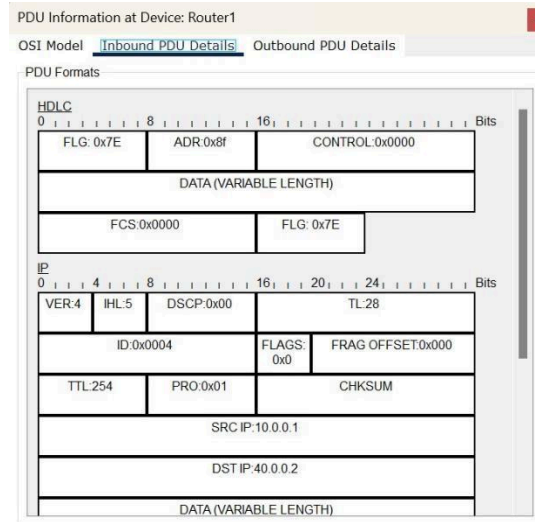


Figure 6.3: Inbound PDU, Router1

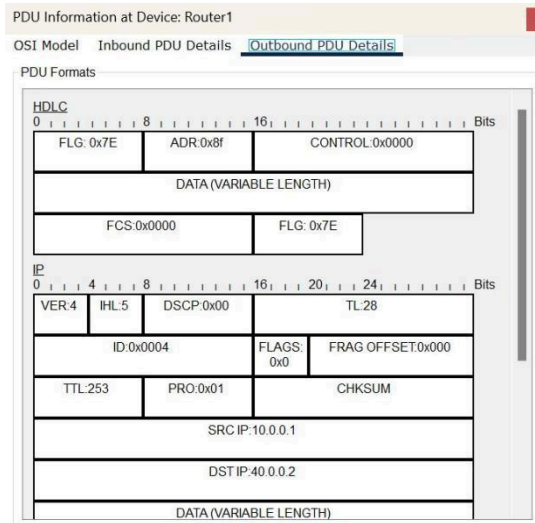


Figure 6.4: Outbound PDU, Router1

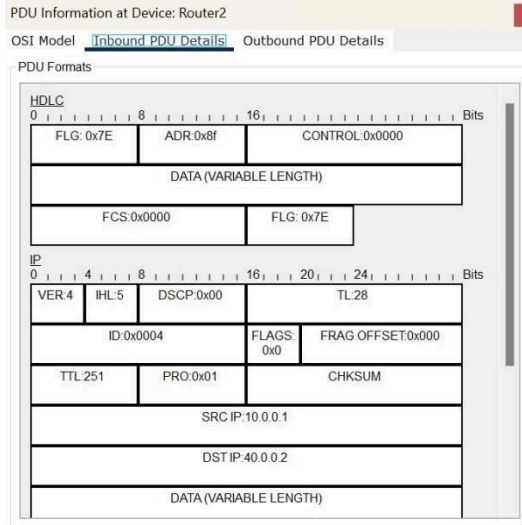


Figure 6.5: Inbound PDU, Router2

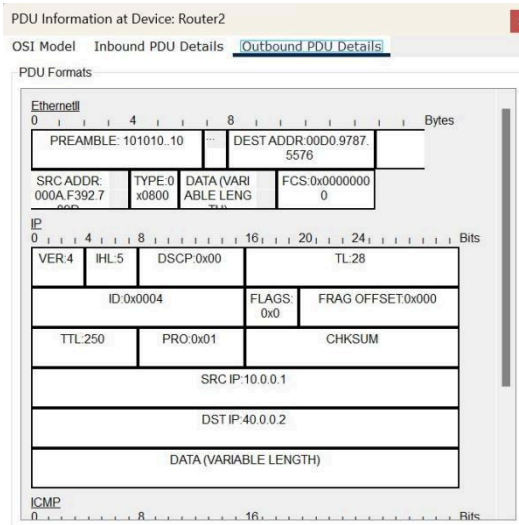




Figure 6.6: Outbound PDU, Router2

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

```
C:\>ping 40.0.0.2
```

```
Pinging 40.0.0.2 with 32 bytes of data:
```

```
Reply from 40.0.0.2: bytes=32 time=72ms TTL=123
```

```
Reply from 40.0.0.2: bytes=32 time=53ms TTL=123
```

```
Reply from 40.0.0.2: bytes=32 time=55ms TTL=123
```

```
Reply from 40.0.0.2: bytes=32 time=69ms TTL=123
```

```
Ping statistics for 40.0.0.2:
```

```
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
```

```
Approximate round trip times in milli-seconds:
```

```
    Minimum = 53ms, Maximum = 72ms, Average = 62ms
```