

## WEEK 2

Configure IP address to routers in packet tracer. Explore the following messages: ping responses, destination unreachable, request timed out, reply

Observation book :

Week-2

3.1. Configure IP address to a single router.  
Explore the following:

- ping message
- destination unreachable
- Request timed out.

Topology:

Procedure:

- Select one generic router and 2 generic PCs. Connect the PC to router using copper cross over cable.
- Set the IP address and gateway in the config tab.
- To set IP of routers, and type the following commands

Step 1: Type enable, press enter  
 Step 2: Type config T  
 Step 3: Fast ethernet 0/0  
 Step 4: Set IP address, subnet mask as 10.0.0.10, 255.255.255.0  
 Step 5: Type No shut and then exit.  
 In order to see the connection status type show IP route.

- Ping 20.0.0.1 to send packets across in command prompt.

Output:

ping 20.0.0.1  
 Pinging 20.0.0.1 with 32 bytes of data:

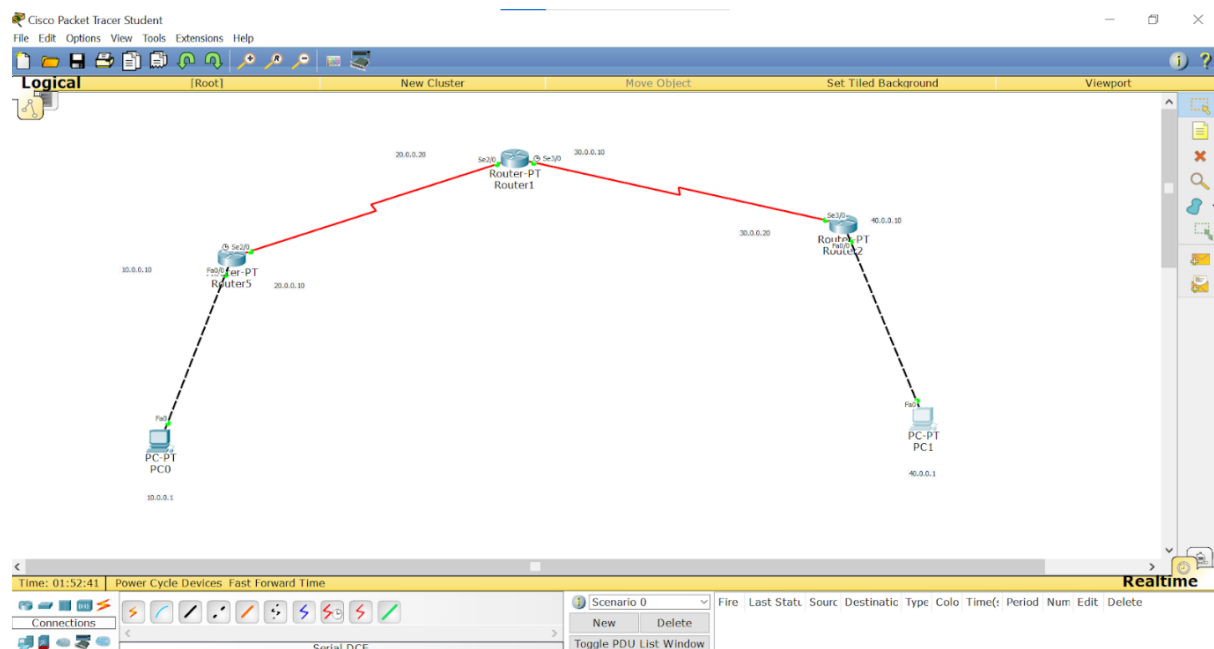
Request timed out  
 Reply from 20.0.0.1: bytes=32 time=10ms TTL=128  
 Reply from 20.0.0.1: bytes=32 time=10ms TTL=128  
 Reply from 20.0.0.1: bytes=32 time=10ms TTL=128

Ping statistics for 20.0.0.1  
 Packets: Sent = 4, Received = 3, Lost = 1 (25% loss)  
 Approximate round trip times in milliseconds:  
 Minimum = 0ms, Maximum = 10ms, Average = 3ms

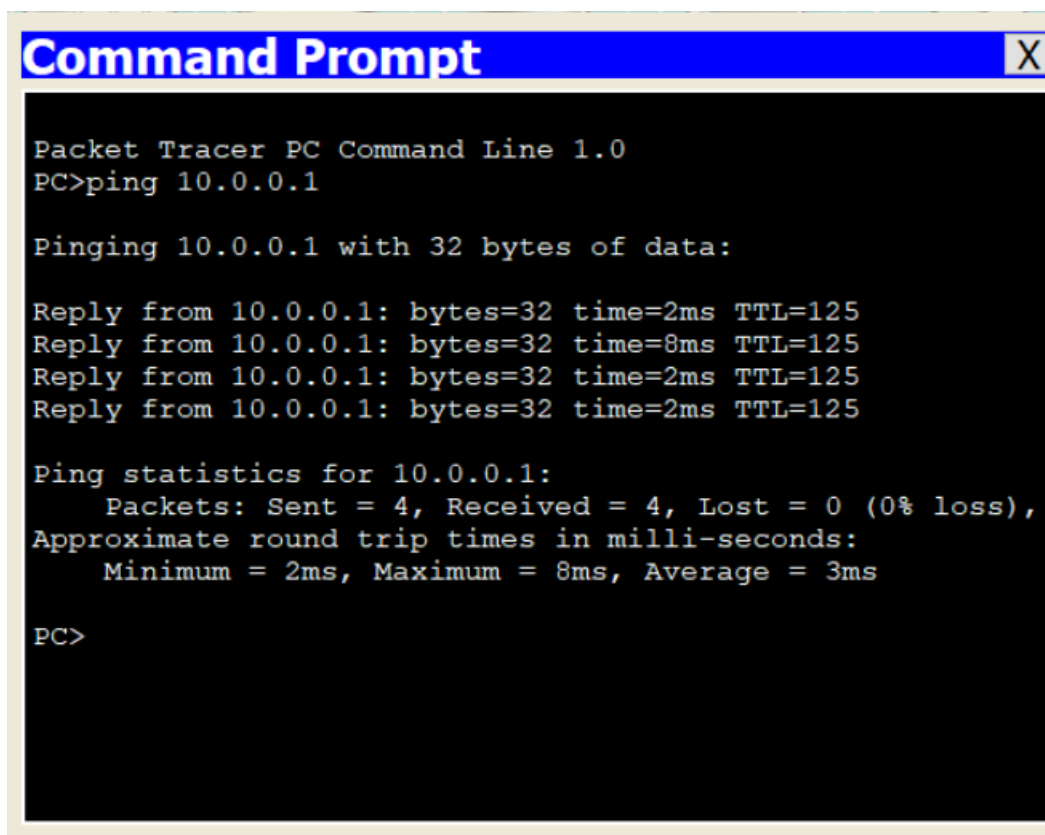
Observation:

- When destination address is pinged, 32 bytes get allocated. The first 8 bytes gives information about router and addresses. Rest are used for sending packets to destination address.

Topology :



Output :



The image shows a screenshot of a 'Command Prompt' window from the Packet Tracer application. The window has a blue title bar with the text 'Command Prompt' and a close button 'X' on the right. The main area is black with white text. The text shows the command 'PC>ping 10.0.0.1' being entered and executed. The output indicates that the ping was successful, showing four replies from 10.0.0.1 with varying round-trip times (2ms, 8ms, 2ms, 2ms) and a TTL of 125. Ping statistics are also displayed, showing 4 packets sent, 4 received, and 0% loss, with an average round-trip time of 3ms.

```
Packet Tracer PC Command Line 1.0
PC>ping 10.0.0.1

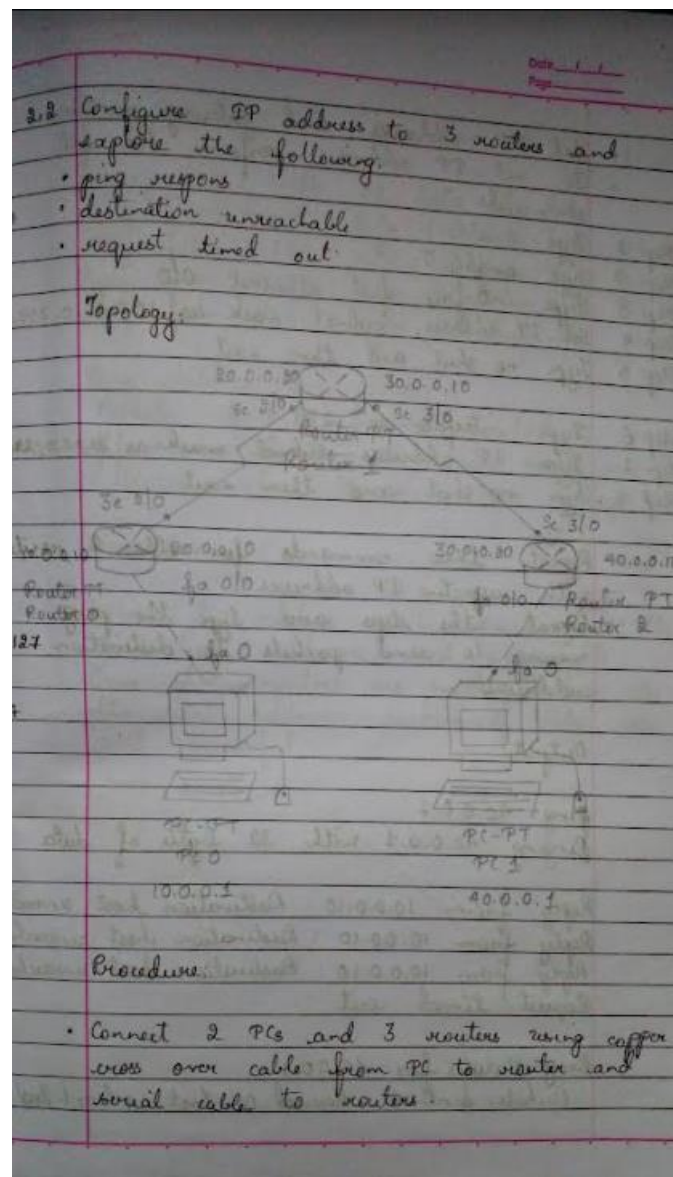
Pinging 10.0.0.1 with 32 bytes of data:

Reply from 10.0.0.1: bytes=32 time=2ms TTL=125
Reply from 10.0.0.1: bytes=32 time=8ms TTL=125
Reply from 10.0.0.1: bytes=32 time=2ms TTL=125
Reply from 10.0.0.1: bytes=32 time=2ms TTL=125

Ping statistics for 10.0.0.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 2ms, Maximum = 8ms, Average = 3ms

PC>
```

Observation book :



Date: / /  
Page:

- Set IP addresses and gateway numbers
- To set IP addresses perform the following commands

Step 1 Type enable  
 Step 2 Type configure T  
 Step 3 Type interface fast ethernet 0/0  
 Step 4 Set IP address, subnet mask as 10.0.0.10, 255.0.0.0  
 Step 5 Type no shut and then exit

Step 6 Type interface sc 2/0  
 Step 7 Type IP address, subnet mask as 30.0.0.10, 255.0.0.0  
 Step 8 Type no shut and then exit

- Repeat these commands for other 2 routers with respective IP addresses.
- Repeat the steps and type the ping message to send packets to destination addresses.

Output:

ping 40.0.0.1  
 Pinging 40.0.0.1 with 32 bytes of data:

Reply from 10.0.0.10: Destination host unreachable  
 Reply from 10.0.0.10: Destination host unreachable  
 Reply from 10.0.0.10: Destination host unreachable  
 Request timed out

Ping statistics for 40.0.0.1  
 Packets: Sent = 4, Received = 0, Lost = 4 (100% loss)

Date: / /  
Page:

ping 10.0.0.1  
 Pinging 10.0.0.1 with 32 bytes of data:

Reply from 10.0.0.1: bytes = 32, time = 2ms, TTL = 125  
 Reply from 10.0.0.1: bytes = 32, time = 8ms, TTL = 125  
 Reply from 10.0.0.1: bytes = 32, time = 8ms, TTL = 125  
 Reply from 10.0.0.1: bytes = 32, time = 8ms, TTL = 125

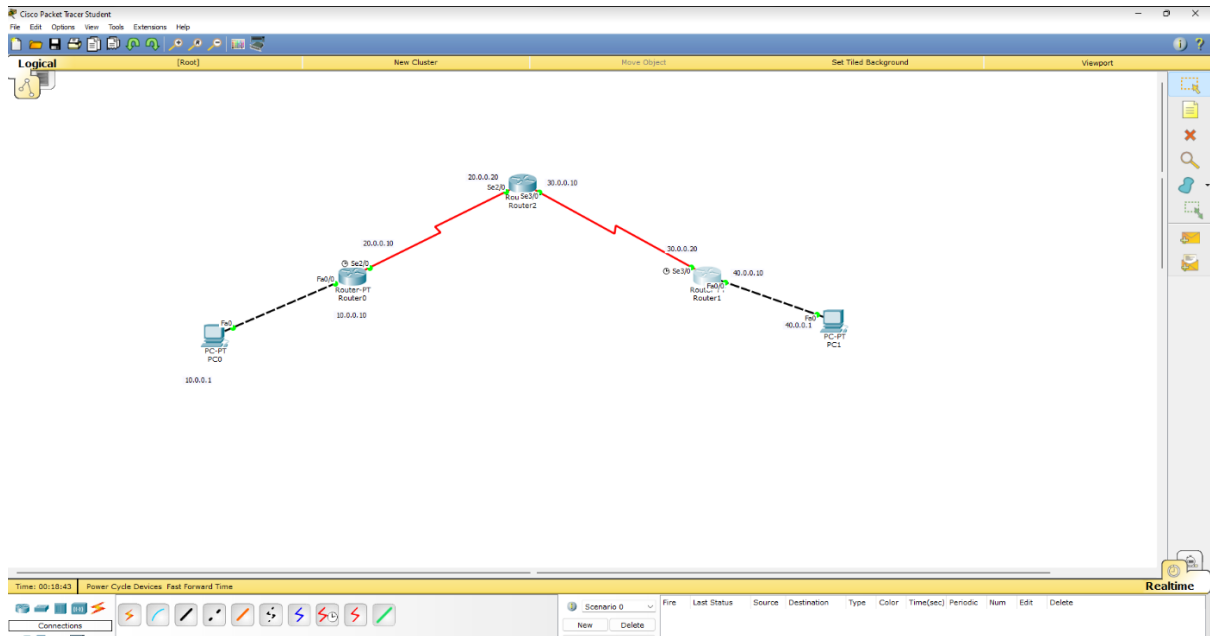
Ping statistics for 10.0.0.1  
 Packets: Sent = 4, Received = 4, Lost = 0 (0% loss)  
 Approx. round trip times in milli seconds:  
 Minimum = 2ms, Maximum = 8ms, Average = 3ms

Observation:

When the routers don't know about the destination addresses, host unreachable.  
 Once the routers are made to hop to the next addresses, packets of data are sent successfully.

0.3/4

Topology :



Output :

```
Command Prompt
Packet Tracer PC Command Line 1.0
PC>ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data:

Reply from 10.0.0.10: Destination host unreachable.
Reply from 10.0.0.10: Destination host unreachable.
Reply from 10.0.0.10: Destination host unreachable.
Request timed out.

Ping statistics for 40.0.0.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

PC>
```