10.0.0.1   — ☐ ✕

| Physical | Config | Desktop | Custom Interface |

Command Prompt   X

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

Pinging 40.0.0.1 with 32 bytes of data:

Request timed out.
Reply from 40.0.0.1: bytes=32 time=15ms TTL=125
Reply from 40.0.0.1: bytes=32 time=11ms TTL=125
Reply from 40.0.0.1: bytes=32 time=2ms TTL=125

Ping statistics for 40.0.0.1:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),
Approximate round trip times in milli-seconds:
    Minimum = 2ms, Maximum = 15ms, Average = 9ms

PC>
```
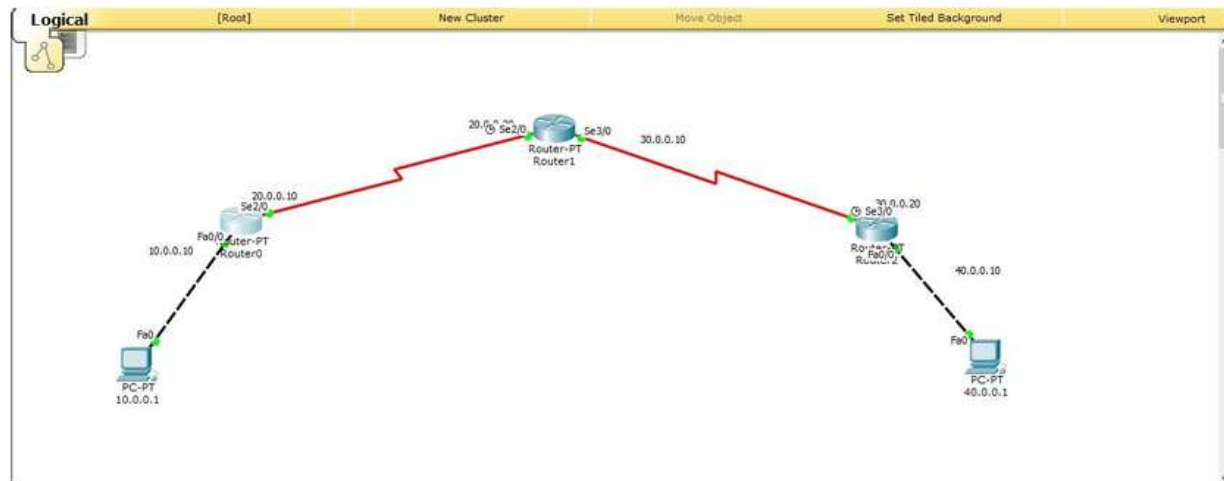
Topology:

Result:


```
IOS Command Line Interface

Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#
Router(config-if)#exit
Router(config)#interface FastEthernet0/0
Router(config-if)#exit
Router(config)#show ip route
                      ^
% Invalid input detected at '^' marker.

Router(config)#exit
Router#
%SYS-5-CONFIG_I: Configured from console by console

Router#show ip route
Codes: C - connected, S - static, I - IGRP, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is 20.0.0.10 to network 0.0.0.0

C    10.0.0.0/8 is directly connected, FastEthernet0/0
C    20.0.0.0/8 is directly connected, Serial2/0
S*   0.0.0.0/0 [1/0] via 20.0.0.10
               [1/0] via 20.0.0.20
Router#
```

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

After routing :

PC > Ping 40.0.0.1

Pinging from 40.0.0.1 : Zbytes = 32 time = 16ms TTL = 125
Pining 40.0.0.1 with 32 bytes of data :

Reply from 40.0.0.1 : bytes = 32 time = 16ms TTL = 125
Reply from 40.0.0.1 : bytes = 32 time = 16ms TTL = 125
Reply from 40.0.0.1 : bytes = 32 time = 16ms TTL = 125
Reply from 40.0.0.1 : bytes = 32 time = 16ms TTL = 125

Ping statistics for 40.0.0.1
    Packets : Sent = 4, Recieved = 4, host = 0 (0% loss)
Approximate round Trip Times in milli-
Seconds :
    Minimum = 2ms, Maximum = 23ms, Average = 18ms

Procedure for multiple routers

- Place 2 PC-PT and 3 router-PT's onto the logical interface.
- Connect them with appropriate cable. Use copper crossover to connect PC-PT to router and serial DCE to connect the routers.
- Type the IP address & Gateway to all the devices in config.
- In CLI (command line interface) of each device and configure the IP address as well as "no shut" command to enable the interface and allow the gateway to communicate which results in green light.
- Once all gateways and router are green, the route can be set in each route to configure the & unknown network ID's which will help in routing the packets. This can be easily checked using the "show ip route" command.
- Ping the respective end device in the command prompt to check the routes.

Output before routing:

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
Reply from 10.0.0.10: Destination host unreachable
Reply from 10.0.0.10: Destination host unreachable

P

Procedure for Single Router

- Place 2 PC-PT & 1 router-PT onto the logical interface.
- Connect them with appropriate cable. Use copper crossover to connect PC-PT to router
- Type the IP addresses & Gateway to the devices in config.
- In CLI (Command line interface) of each device and configure the IP address as well as 'no shut' command to enable the interface. and allow the gateway to communicate which results in green light.
- Once all gate and router are green, the route can be set, and the packets can be from one PC-PT to another.

output:

P

PC > 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 = 0ms TTL=127
Reply from 20.0.0.1 : bytes=32 time-0ms TTL=127

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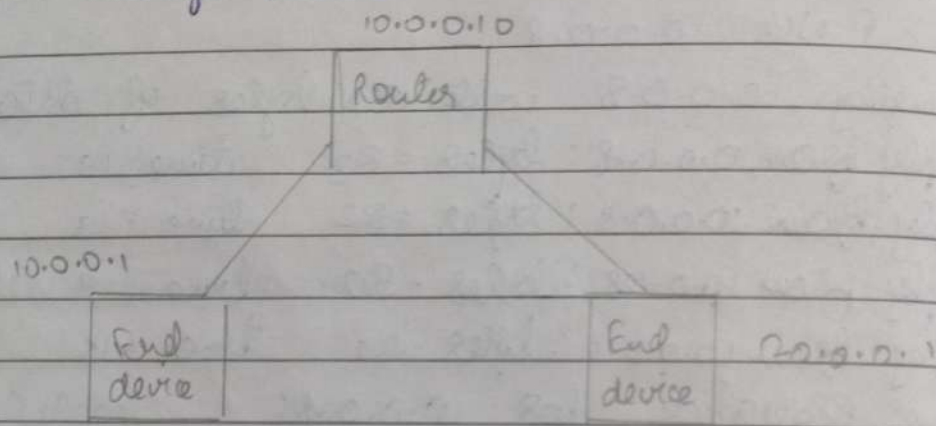Approximate round trip times in milliseconds:
Minimum = 0ms, Maximum = 0ms, Average = 0ms

Experiment - 3

AIM: Configure default route, Static route to the Router.

Topology

Single router


```
                    10.0.0.10
                   ┌─────────┐
                   │ Router  │
                   └─────────┘
                     /      \
10.0.0.1       ┌──────┐    ┌──────┐
               │ End  │    │ End  │   20.0.0.1
               │device│    │device│
               └──────┘    └──────┘
```

multiple routers


```
            20.0.0.10   20.0.0.20        30.0.0.20
10.0.0.10  ┌──────┐    ┌──────┐        ┌──────┐
           │Router│────│Router│────────│Router│  40.0.0.10
           └──────┘    └──────┘        └──────┘
              /          30.0.0.10          \
       ┌──────┐                          ┌──────┐
       │ End  │                          │ End  │
       │Device│                          │device│
       └──────┘                          └──────┘
       10.0.0.1                          40.0.0.1
```