

### Program 3

**Aim:** Configure default route, static route to the Router(Part 1).

#### **Topology , Procedure and Observation:**

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

Topology:

The diagram illustrates a network topology with two routers, Router 1 and Router 2, connected via their serial ports. Router 1 is on the left, and Router 2 is on the right. Router 1 has a Fa0/20 interface connected to PC0 (10.0.0.1). Router 2 has a Fa1/0 interface connected to PC1 (20.0.0.2). The serial link between the routers is labeled with IP addresses 30.0.0.1 and 30.0.0.2.

Procedure:

- Add 2 PCs and 2 generic routers and add IP addresses.
- Connect PC0 to router 1 using copper-cross wire.  
Connect PC1 to router 2 using copper-cross wire.
- Connect router 1 to router 2 using serial DCE wire.
- Set up IP address, gateway, subnet mask of

both networks.

- v) In routers set up its IP address (fast ethernet)
- vi) Set up another network 30.0.0.0 by connecting 2 routers.

In CLI of router 1 enter

Router # enable

Router # config terminal

Router (config) # interface FastEthernet 0/0

Router (config) # no shutdown

exit

do the same for router 2

Router # enable

Router # config terminal

Router (config) # interface Serial 2/0

Router (config-if) # ip address 30.0.0.1 255.0.0.0

Router (config) # no shutdown

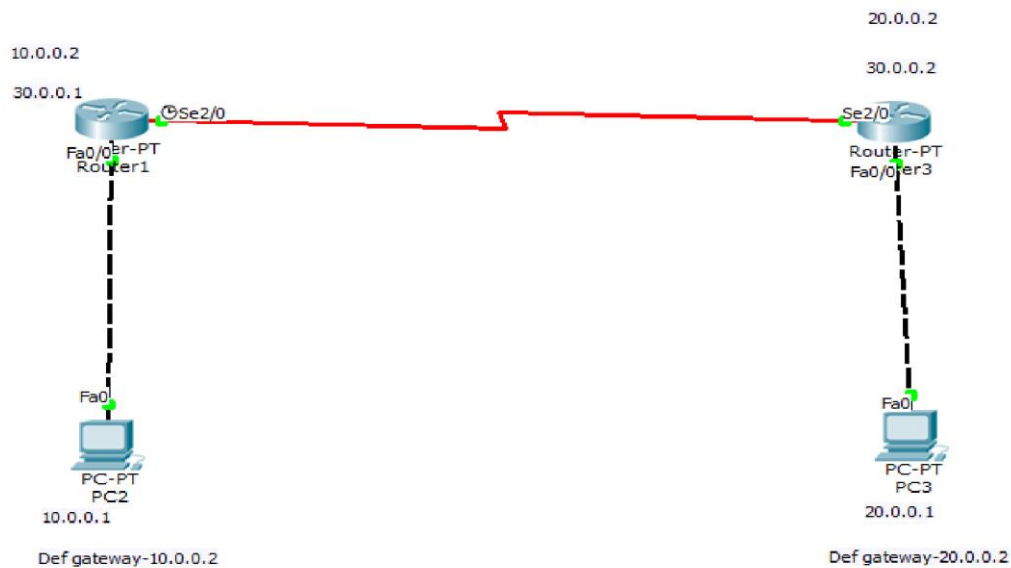
Router (config-if) # exit.

### Observation 1:

- \* On pinging PC0 to PC1, it shows that it is unable to ping and shows the devices are not reachable.  
Shows - "destination host unreachable".
- \* On pinging PC0 to Fa0/0 port of router the message is pinged (Pinging 10.0.0.2)
- \* On pinging PC0 to Se2/0 router 2, the

Procedure:

- on pinged and devices, the message is send.



PC2

Physical Config Desktop Custom Interface

### Command Prompt

```
Reply from 10.0.0.2: Destination host unreachable.  
Reply from 10.0.0.2: Destination host unreachable.  
Reply from 10.0.0.2: Destination host unreachable.  
  
Ping statistics for 20.0.0.1:  
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),  
  
PC>ping 20.0.0.1  
  
Pinging 20.0.0.1 with 32 bytes of data:  
  
Reply from 10.0.0.2: Destination host unreachable.  
Reply from 10.0.0.2: Destination host unreachable.  
Reply from 10.0.0.2: Destination host unreachable.  
Reply from 10.0.0.2: Destination host unreachable.  
  
Ping statistics for 20.0.0.1:  
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),  
  
PC>ping 20.0.0.2  
  
Pinging 20.0.0.2 with 32 bytes of data:  
  
Reply from 10.0.0.2: Destination host unreachable.  
Reply from 10.0.0.2: Destination host unreachable.  
Reply from 10.0.0.2: Destination host unreachable.  
Reply from 10.0.0.2: Destination host unreachable.  
  
Ping statistics for 20.0.0.2:  
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),  
  
PC>
```