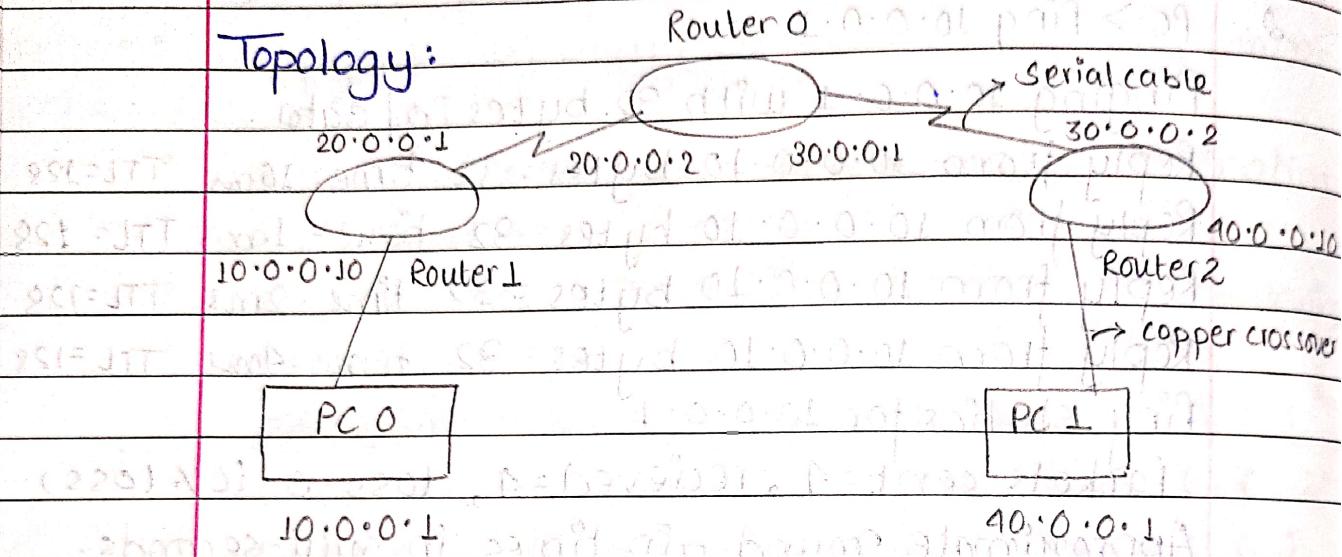


(Configure default and static route for a connection of routers.)

Aim: Configure default and static route for a connection of routers.

### Topology:



### Procedure.

1. Select 3 generic routers and two PCs as end devices.

Connect the PC's to different routers with copper cross-over and connect both the routers to the main router with serial cable.

2. Set IP address for PC and gateways.

3. Set the gateway IP addresses in all the routers taking 0's fast ethernet for the PC's and serial for routers.

4. Connect the PC's to the interfaces.

5. Config - steps:

```
>enable (router 1)
```

```
# config t
```

```
# interface fastethernet 0/0
```

```
# ip address 10.0.0.10 255.0.0.0
```

```
# no shut
```

```
# exit
```

```
# interface serial 2/0
```

Section

Connection

10.0.0.0

Crossover

Line

Upper

25

Lower

31

# IP address 20.0.0.1 255.0.0.0

# no shut

# exit

similarly for router - 0 or 20.0.0.0 - 3

> enable

# config t

# interface serial 2/0

# ip address 20.0.0.2 255.0.0.0

# no shut

# exit

# interface serial 3/0

# ip address 30.0.0.1 255.0.0.0

# no shut

# exit

for router - 2

> enable

# config t

# interface fastethernet 0/0

# ip address 40.0.0.10 255.0.0.0

# no shut

# exit

# interface serial 2/0

# ip address 30.0.0.2 255.0.0.0

# no shut

# exit

6. we need to set IP routes for all routes via routers.

For router - 1 & router - 2, we do default routing  
and for router - 0, static routing is done.

For router - 1

# config t

# ip route 0.0.0.0 0.0.0.0 20.0.0.2

# no shut

#exit  
show ip route

C 10.0.0.0/8 is directly connected, FastEthernet0/0  
C 20.0.0.0/8 is directly connected, serial 2/0.  
S 0.0.0.0/0 [1/0] via 20.0.0.2

Similarly for router 2

#config t  
#ip route 0.0.0.0 0.0.0.0 80.0.0.1  
#exit

Show ip route.

for router-0 (static routing)

#config t  
#ip route 10.0.0.0 255.0.0.0 20.0.0.0  
#ip route 40.0.0.0 255.0.0.0 130.0.0.0  
#exit.

Show ip route.

S 10.0.0.0/8 [1/0] via 20.0.0.0  
C 20.0.0.0/8 is directly connected, serial 2/0.  
C 30.0.0.0/8 is directly connected, serial 3/0.  
S 40.0.0.0/8 [1/0] via 30.0.0.0

→ Now we ping 10.0.0.1 from the command prompt of 40.0.0.1.

Request timed out.

Reply from 40.0.0.1 bytes=32 time=2ms TTL=125

Reply from 40.0.0.1 bytes=32 time=2ms TTL=125

Reply from 40.0.0.1 bytes=32 time=2ms TTL=125

Ping status for 40.0.0.1

Packets sent = 9, Received = 3 (lost = 1 125% loss).

Observation

Through default routing we configure the network here.

Config  
Aim

the ne

Topology

PC0

Proced

1. Select

switch

and su

2. Connec

3. Set IP

4. Now c

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5. Now cl

network

2016.1

Now in

>enabl

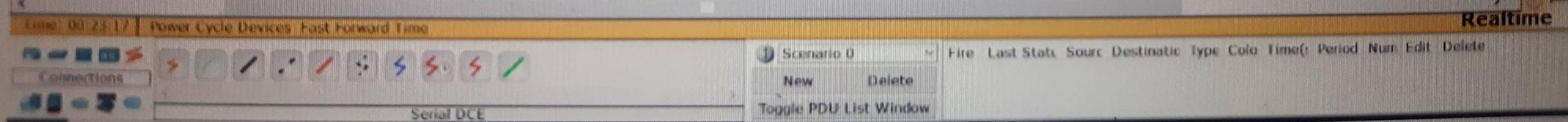
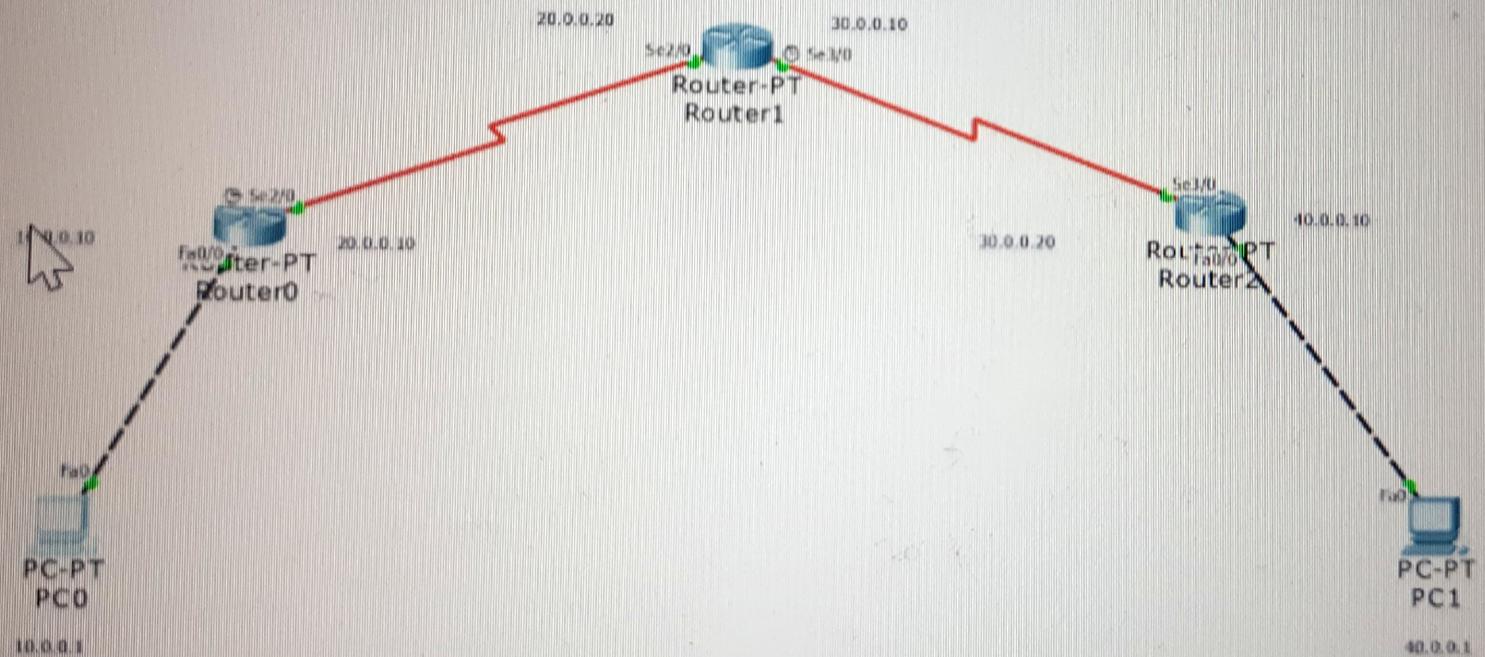
# config

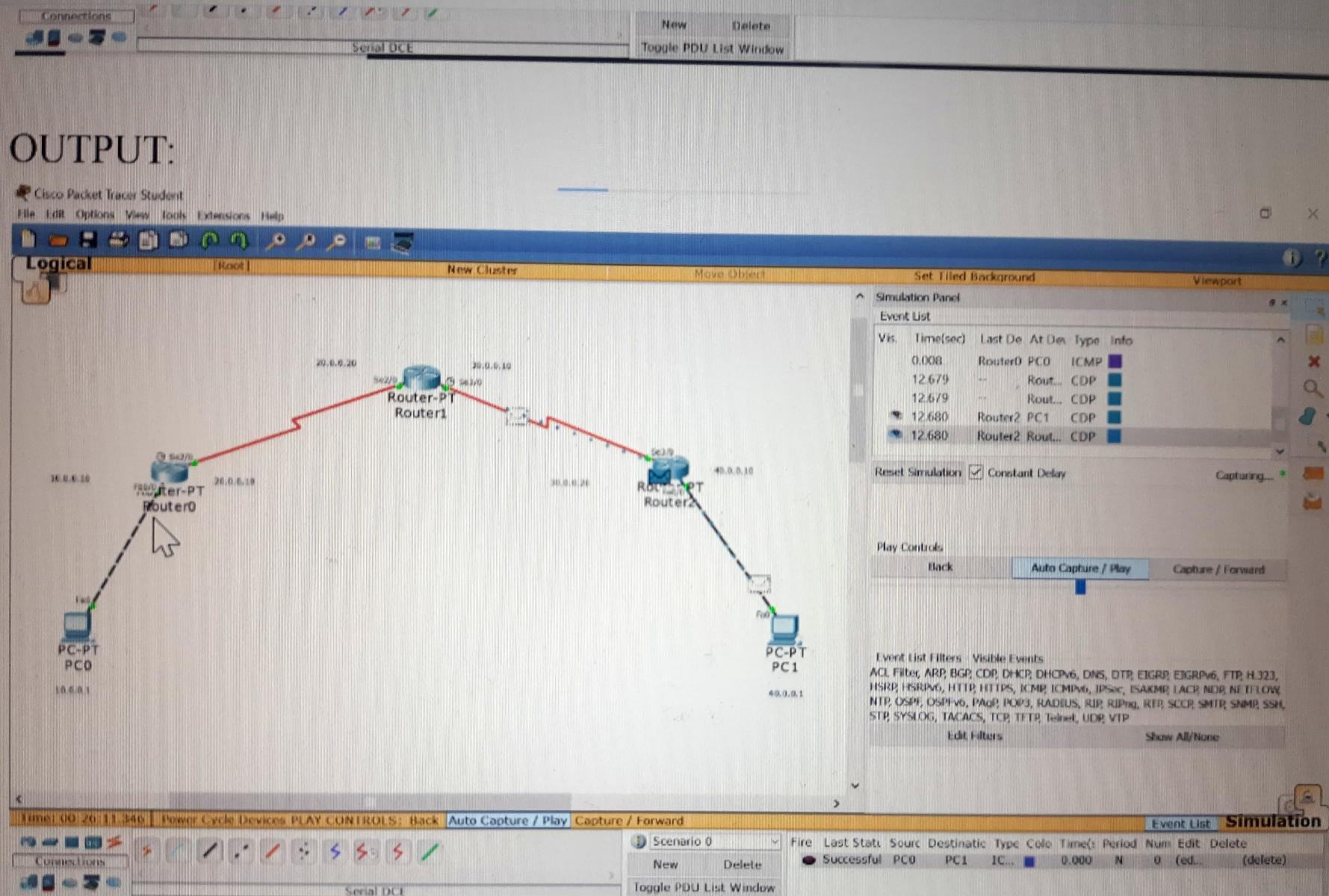
# inter

# ip a

# no

# exit





## 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:

Request timed out.

Reply from 40.0.0.1: bytes=32 time=2ms TTL=125

Reply from 40.0.0.1: bytes=32 time=16ms 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 = 16ms, Average = 6ms

PC>ping 40.0.0.1

Pinging 40.0.0.1 with 32 bytes of data:

Reply from 40.0.0.1: bytes=32 time=21ms TTL=125

Reply from 40.0.0.1: bytes=32 time=9ms TTL=125

Reply from 40.0.0.1: bytes=32 time=2ms TTL=125

Reply from 40.0.0.1: bytes=32 time=4ms TTL=125

Ping statistics for 40.0.0.1:

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

Approximate round trip times in milli-seconds:

Minimum = 2ms, Maximum = 21ms, Average = 9ms

PC>